DOCUMENT RESUME

ED 136 822 IR 004 621

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TITLE Visual Literacy.
SPONS AGENCY Association for Educational Communications and Technology, Washington, D.C.
PUB DATE Nov 76
NOTE 43p.; AECT Research and Theory Division Newsletter; vV n3 November 1976

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Audiovisual Aids; Cognitive Development; *Definitions; *Educational Research; *Educational Resources; Information Sources; Media Research; Nonverbal Communication; Research Needs; *Visual Learning; *Visual Literacy; Visual Perception

ABSTRACT

A series of articles examines visual literacy from the perspectives of definition, research, curriculum, and resources. Articles examining the definition of visual literacy approach it in terms of semantics, techniques, and exploratory definition areas. There are surveys of present and potential research, and a discussion of the problem of externalization. A model designed to generate hypotheses in visual languaging is presented, and there is an article on the potential use of holography in the classroom. Another article describes an attempt to interpret nonverbal language through the nonverbal analysis of photographs. Basic considerations in including visual literacy in the school curriculum are presented; two examples of teachers using the concept of visual literacy in teaching are given; and television is dealt with as a topic of concern. The series concludes with suggestions of resources in visual literacy, including organizations, programs, resource people, and a bibliography. (WBC)

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AECT RESEARCH & THEORY DIVISION NEWSLETTER

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Volume V, Number 3, November 1976

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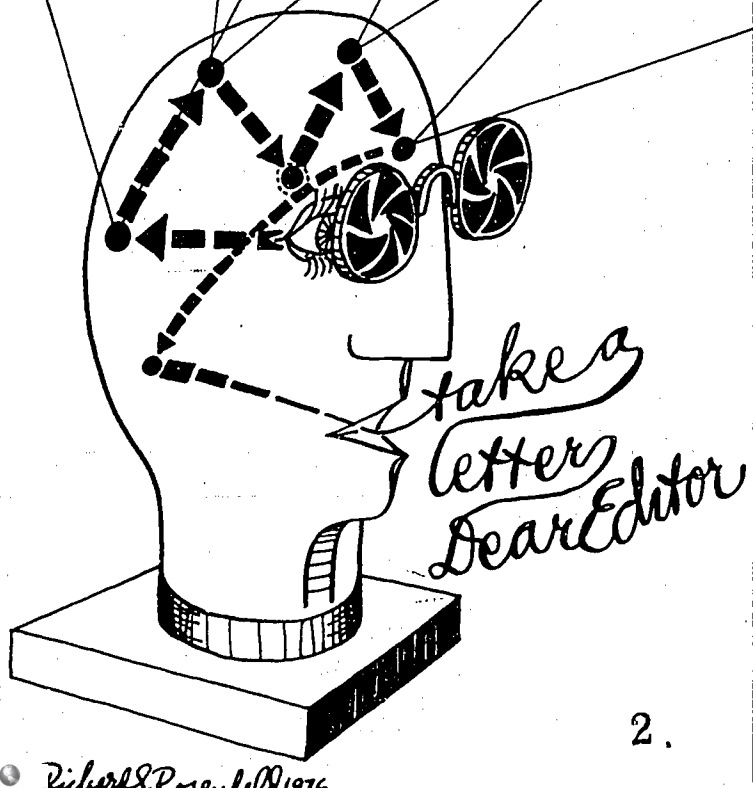

Visual Literacy

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Guest Editor's Comments

Richard J. Lamberski
Guest Editor

VISUAL LITERACY: EMERGING AND DIVERGING POINTS OF VIEW

by Richard J. Lamberski
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In the spring of 1976, the Editor of RTD Newsletter began to identify specific research areas which may be of particular interest to the Division's membership. One such interest area was identified as visual literacy. Visual literacy is related to the creation and use (by students, teachers, and designers) of visual communication activities, devices, and systems integral to the teaching-learning process.

Since the mid-1960's, there has been a growing interest in investigating the various techniques and methods involved in creating, organizing, presenting and evaluating visual learning experiences. This interest has spread to many different disciplines, learning areas, and professions. The concept of visual literacy has thus been fostered and encouraged by:

1. The founding of many multidisciplinary forums for the exploration, presentation, and discussion of all aspects of visual communication and their application thru the concept of visual literacy;
2. The current organizational bases and communication bonds of the many professionals in diverse disciplines who are interested in visual literacy;
3. The current government and agency funding of creative visual literacy projects, programs, and research;
4. The sustained effort by researchers and practitioners for the study and development of visual literacy and related visual languaging competencies;
5. The active promotion, establishment, utilization, and evaluation of projects that increase the use of visual languaging in education and communications;
6. The cognitive and cultural developments of all learners, at all ages, through visual literacy and visual languaging.

In addition, there are many philosophical reasons why the visual literacy movement has grown. Two of the most cited reasons are: first, the failure of researchers to communicate and relate the findings and implications of their studies to those individuals involved in the visual teaching-learning process; secondly, the term "visual literacy" is a label which many individuals can and do identify with. A similar labeling phenomenon has occurred with the term "instructional development." Visual literacy has then emerged from an apparent need and semantically represents many diverging points of view.

The articles for this special issue were solicited from authors and researchers throughout the country. Their contributions focus on the many faceted aspects of visual literacy: definitions, trends, studies, theories, curriculum integration, position statements, resources, etc. I believe you will find this special NEWSLETTER an interesting and stimulating conglomerate of material on this rather controversial topic.

Defining Visual Literacy

Lida M. Cochran

WHAT IS VISUAL LITERACY?

by Lida M. Cochran
The University of Iowa
Iowa City, Iowa

Ed. Note: Cochran's exploration of the meaning "visual literacy" is an examination of the semantics of this phrase, the inherent problems of defining the phrase, and finally the relative values which can be associated in using this phrase.

What IS visual literacy? The problem with this question is "IS". It implies that the questioner considers the name of an object or concept to be that object or concept. From general semantics, however, we learn that there is no necessary connection between a word and its referrent. There is nothing sacred about the relationship of a word to the object it represents. Words are the "vehicles for the conception of objects" (Langer, 1957, p.61). Thus the "meaning" for objects or abstract ideas is molded in the minds of individuals. Each person creates his/her own meanings for words - meanings derived from experiences. Meanings, for a word, then, are not identical for all people whether that word is "home", "freedom", "visual literacy", or even "verbal literacy".

The use of metaphors is one way we construct meaning for new ideas. Peckham (1970, p.XI) says, "...methaphor is not only a normal semantic mode but a mode essential for the existence and above all the extension of the semantic functions of language. It is the only way we have for saying something new." Each new concept must be described in terms already in general use. The metaphoric use of language excerpts a known attribute from one object and uses that attribute to describe the new idea. The metaphor, however, does not bestow all known qualities of the first object upon the new idea. When hearing the term "metal fatigue" no one attributes all the properties of muscles to metal nor do we argue that the phrase "running brook" implies that brooks have legs.

Language is dynamic. Meanings for words change through use. Postman (1971, p.26) refers back to the Latin root of the word, "literacy" to show how its meaning has evolved:

> In ancient Rome (literacy) referred to the letters of the alphabet and, by extension, to the epistles of earliest times. With the passage of the years, however, it came to be identified with literature and the increasingly crucial skills required in written communication. Little more than a decade ago, the term "universal literacy" simply meant the hope that all men could have made available to them the skills of reading and writing. But the term continues to change as the means of communication change. Today literacy is the skill with which man manipulates the many media of mass communication.

Postman's term "manipulates" is a multifaceted verb which I believe includes such actions as "understands", "interprets", "reads", "creates", "writes", "presents" and many others which might be summarized by the communication terms "decodes" and "encodes" or simply "reads" and "writes". The object for these verbs is important, also, "Media of mass communication" must be interpreted to include the symbols of interpersonal communication.

Unanimity as to the meaning of "visual" is not only impossible, but actually, unnecessary. It can serve as a generic term which subsumes pictorial representation, or body language, or the sign language of the deaf, or any other iconic or arbitrary symbol system perceived through the eyes. "Visual" focuses attention on the human modality for learning. I deplore the current emphasis on a "visual/verbal" dichotomy. Words and pictures serve complementary purposes. They provide different information, never exactly the same information about an object or an event. People convert this information into meanings, no meanings exactly alike for any two individuals.

Evidence of diversity in meanings for "visual literacy" was apparent at the 1976 Okoboji Conference. Each delegate was asked to define visual literacy. One group elected to analyze these definitions in an attempt to provide a composite definition. The analysis of the 62 definitions revealed 53 different phrases employed to define the adjective, "visual". Meanings for the noun, "literacy" were classified under three categories: 1.) A group of competencies (40), 2.) A process or method of teaching (11), and 3.) a movement (8). All of which is very similar to the fabled blind men reporting that the elephant is like, "a snake", "a tree", and "a wall".

The blind mean were all "correct" in reporting on one aspect of the elephant. The responses of the Okoboji delegates demonstrate that "visual literacy" is being used to refer to three quite different types of things: human abilities, teaching strategies, and the formal or informal promotion of an idea. This is a very interesting revelation. Three definitions (Okoboji, 1976) of visual literacy are needed, because definitions are coined to fit current popular interpretations.

It is interesting to note that while the debate continues as to whether there is such a thing as visual literacy, increasing members of teachers and students are using the term to refer to abilities, strategies, and associations which are meaningful and important to them.

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Hillel A. Schiller

THE DEEPENING NATURE OF VISUAL LITERACY

by Hillel A. Schiller
Parsons School of Design
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The City University of New York

Ed. Note: In this article, Hillel Schiller attempts to broaden the definition base of visual literacy, characterizing visual literacy as a perceptual teaching technique or strategy, whose basic principles are essentially esthetic in nature. The depth and complexity of his writing opens the door for much thought and discussion.

Visual literacy is a result. It is an effect of certain learning and teaching practices. To be sure, in some it is an intuitive accomplishment. But for most people, visual literacy must become first a belief and then, ultimately, a condition.

Being visually literate is an aptitude. It is a capacity to use imagery (visual and manipulative im-pression and ex-pression) to facilitate, deepen and complete comprehension and conceptual learning. By conceptual learning we mean the awareness of describable properties, relationships and connections among all visible and invisible phenomena in human experience.

The visual literist tries to develop in the learner a perceptually based learning-set by means of a great variety of organized, concretely expressive teaching techniques.[9] This mode of teaching, often non-verbally based, is a form of demonstrative instruction that motivates the learner in the direction of more acute observations. It refines and builds connections within the three-dimensional matrix we call the human brain. The efficiency of this perceptual learning process facilitates or distorts the potential for higher orders of thinking involved in all abstract learning.

Visual literacy is a trend[19] seeking to place more effective use of the esthetic imagination--centered in the right hemisphere of the brain--into the mainstream of general education. In contrast to traditional forms of educating, which place emphasis on verbal or analytical learning, it consists of synthesizing in-forming and pre-forming processes.

Its principles offer guidance for the design and use of more highly integrated interdisciplinary teaching strategies. These strategies are necessary to maximize the tranference of specific esthetic qualities and relations expressed by natural and man-made systems into well-designed teaching tactics and materials.

The major tactic is the utilization of sensorily based pictorial and diagramatic processes to intensify acts of learning: to multiply effective individual interactions, instructional moments and peak experiences. Visually literate teaching strategies always try to transform the initial confrontation with concepts and their relationships away from an abstract, verbal mode of presentation to a more concrete image-building one.

Images are always patterned. They display properties of structural similarity or difference in their infinite diversity. These properties can be used to connect and unify thinking, or to differentiate and separate concepts. Thus, these properties can be used to provide "families" of related images or patterns to organize and direct the kinds of connections made among our perceptual systems. Such a process of developing information James Gibson calls "resonating,"[8] a term which may ultimately drive out "associationism," considered by many to be the underlying central process in learning.[7]

Piaget[14] offers us his structural, transforming concept of scheme, or schema, as the interior representative event. Information theory[11] offers us the concept of patterned structure, which differentiates information from "noise." In General Systems theory,[1] the most relevant principle is the concept of isomorphism--the degree of exact similarity between the reality and expression or representation of any event.

A fundamental fact that brings order into the multidimensionality of reality is its hierarchal form 10. The importance of this basic conception cannot be overestimated.

As Nature's many levels of structure developed from the sub-organic (atomic) to the organic, to the supra-organic (cultural), each was manifested as a more complex order of systems. The elements that came into coordination to form these various levels and scales of system (from the atomic to the solar system) can be seen as smaller or larger patterned wholes. They are series of hierarchal structures one embedded within the other.

Thus, in learning to differentiate the details of pattern in one system, or at one level, we discover what we can characterize as synthesizing principles and use them to relate similar or different patternings throughtout the system of Nature. The properties of these patterns help us to describe the qualities of reality in a continuum ranging from the microscopic to the macroscopic. The characteristic forms of these properties and relationships are exprexsed by the highly detailed principles of esthetics,[5] which themselves have biologic foundations.[17] These are the essential principles that provide a "language" for visual literacy.

The patterns of physical reality have an ultimate objectivity, like the structure that is represented by Kekule's benzine ring. Such finite systems have been discovered, identified and utilized by artists, scientists, craftsmen and teachers for their own purposes. The elements of reality are perceived as percepts (properties or qualities of pattern) and "unitized" by language into words (symbols), which are organized by thought into conceptual networks (systems of knowledge). These conceptual networks have become humanity's intellectual heritage, and have enormously influenced human behavior... Often as Belief.

The effectiveness of visually literate, demonstrative teaching lies in the cognetting[16] capacity of a particular instructional sequence. "Cognetic" is an adjective meaning to have the quality of making a connection. Thus, "cognetting" capacity is a quality within an instructional act or material or sequence or teacher which makes connections with and for the student.

A major assumption underlying cognetic teaching is the belief in the interdisciplinary nature of all learning. Networks of concepts are pervasive, they interconnect, they interact. No matter what the language, the majority of human conceptualizations are universally, heuristically generative to an open mind. All concepts are relatable, have relationships within more than one hierarchy. They can be used to reflect nuances of reality through some path of disclosure. The possibilities inherent in the relatability of families of concepts is the next great challenge for curriculum revisers.

The transference to others of the connections among concepts, that is, the transference to others of the connections among concepts, that is, the transference of meaning

beyond a conceiver is, however, completely dependent upon the cognetic (imaginative) power of the conceiver as teacher. Beyond the clear need for interdisciplinary knowledge, a need whose fulfillment is still in its infancy, is the continuous need to integrate content and method. For the most efficient teaching in any subject, the strategy most likely to succeed will utilize perceptual demonstration--the use of percepts, imagery.

Wherever possible, a concept ought to be introduced by a visualizing process that will offer either an isomorphic (exactly like) representation, or an analogic (similar to) one. The significance of this mode of instruction, this comparison of forms, to effective learning, teaching and thinking has long been recognized and utilized by master teachers and theoretical innovators.

Historical precedents exist. I will mention just seven, whose statements and works illuminate this position. For teachers Comenius,[2] Pestalozzi,[13] Montessori,[12] and Dewey,[14] provide direct statements about the high importance of utilizing natural imagery. To enlarge our conception of thinking as well as teaching Einstein,[6] Herbert Read,[15] Edward de Bono,[3] and Lancelot L. Whyte[18] advance relevant visually oriented empiric and philsophical perspectives.

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Mary Louise Turner

VISUAL WHAT!

by Mary Louise Turner
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Ed. Note: Turner reflects an instructor's need to define and teach a multivariable concept: visual literacy. To this end, she has isolated the basic quantitative defining elements to include within a qualitative educational program in visual literacy instruction.

Visual literacy! What is that? This was the question asked by many students at the University of Nebraska at Omaha this summer when they saw it listed in the schedule of courses for the first summer session. Many others also wonder what visual literacy really is. The literal meaning suggests being literate in visuals: the ability to read and prepare visuals using their elements and techniques; and putting these together to form a whole with a specific, controlled message.

Being visually literate also demands awareness of the psychological and behaviorial principles that effect perception and communication. Subliminal and subaudio cues, embedding, synesthesia, see through and other techniques including body language might be subsummed here. The awareness of habitual eye movements as we persue messages, the effects of color upon us, and similar processes are important considerations in the preparation of visuals.

Some phrase these components in terms of language, syntax, vocabulary, and grammar. Whatever turns you on! You could say that pictures do show action by a subject toward a specific object modified in one way or another. But the principles used in the preparation and reading of visuals relates more to familiarity with design principles, the ability to use visual tools, and basic elements of composition. It is also desirable to recognize the inter-relationships achieved by the manipulation of these within a visual.

McLaren, an animator par excellence, demonstrates another dimension of visuals as he shows us how sound can be produced from visuals alone in his film, The Eye Hears, The Ear Sees. He has measured, recorded and classified tonal drawings which he incorporates into his films as the sound track.

We learn from Irving Kriesberg (1964), the artist, that "our eye responds to assemblages of lines, colors, shapes, spaces and masses. Real objects may be seen abstractly; abstract elements may be seen as reality." But what is seen by the eye provokes within us matching physical sensations. Line, color, and mass are perceived as energy. We sense pulsations, rhythms, and direction.

There is, of course, some basic idea to be conveyed by the visual but, as in all communication, we bring to it our own point of reference. We view it selectively. We tend to see what we need to see, and what we want to see. This should be kept in mind by the producer of the visual. It is like "reading between the lines" of printed materials.

"Time and space are merchandised" said Key (1973) with the media doing the selling and the print, if read, reinforcing the message communicated by the visual.

But are we really aware of the power of visuals? Do we plan meticulously for overall effect? Sure we believe that "a picture is worth a 1000 words." It has immediate, overall impact and involves us in a total experience.

Moreover, in today's world, we have microchip computers, as well as computers with sugar cube memories storing unbelievable amounts of data. We experience simulators which allow us to participate in, rather than read about, energy or other world problems. And we experience multi-screen, multi-image synchronized to sound visuals. These are programmed for a multi-sensory experience but have we discovered the maximal effect possible by a single visual prepared with tender-loving-care for specific effect?

It is no quirk of fate that painting, sculpture and the fine arts have played a major part in our history and lives. The ideas of the centuries are preserved for us in this manner from cave paintings to the great architectural masterpieces of yesterday and the celluloid dynasty of today.

"All media work us over completely. They are so pervasive ..... that they leave no part of us untouched, unaffected, unaltered," said Marshall McLuhan (1967). Electronic technology is the revolution of the twentieth century but demands differing inputs and responses. That input and response is primarily visual, three dimensional and all encompassing.

Visual literacy? It is the participation and emersion in communication via electronic technology. Moreover, the expertise of preparation of visuals for specific effects is the results of education in visual literacy.

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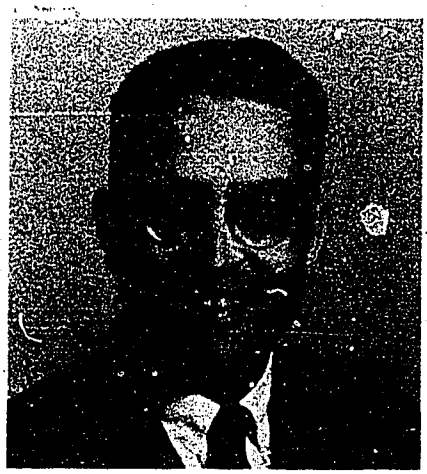


Robert C. Whitsitt

AN APPROACH TO THE DEFINITION OF VISUAL LITERACY

by Robert C. Whitsitt
Western Conn. State College, Connecticut
and
Post College, Long Island University, New York

Ed. Note: The author's definition of visual literacy emphasizes and emerges out of the dichotomy between print and non-print, though a multisensory process is suggested for learning. His definitions are more global in form, containing highly psychological and philosophical properties. A list of exploratory definition areas is provided.

Visual Literacy is a process for developing and communicating meaning in any way other than that of the print media. The visual component is really the utilization of specific visual capacities that operate on a multi-sensory basis. One or another sense capacity may seem to dominate, but the visual-mental ability is always involved.

The reservoir of meaning that is mentally stored is never static. It seems to be both an external and an internal process of dynamic modification of our perceptions of the significance of any act or thought. The impact of several contradictory opposities that are important may for now have to be determined according to preferred psychological systems. Some of these opposities include:

1. The impact of meaning derived from present or past experience.
2. The interpretation of meaning from a self-concept modality or from socially derived experience.

For practical definition the heart of visual literacy may be the unique meanings that all men ascribe to their views or understandings of what makes ideas, behavior, and objects what they are in terms of everyday living.

The definition of visual literacy as a pool of constantly evolving meanings that are sifted by the process of motoric, representative, or verbal communication has import for better learning. The realization of how one sees things may make one less subject to the illogic of prejudice and the blind reception of media propaganda.

The impact of a multi-sensory media world requires the definition and development of a wider range of interpretive skills. These skills dove-tail man's mental nature with his physical nature. This involvement makes it difficult to treat visual literacy in isolation as a separate subject. Therefore, the definition of such inter-disciplinary learnings of a multi-sensory process are imperative.

It is important in conclusion to list several questions that longer articles should discuss on the subject of definition:

a. The phenomenological basis for learning should be explored more fully.
b. The relationship of the physical-motoric act of seeing should be examined in terms of the mental process of creating meanings.

c. The dominant behavior for maximum efficiency in the intake and communication of information should be described.
d. Education must weigh the place of reading print versus other symbolic language forms.
e. The acceptance of visual symbols in a medium like video as language must be recognized. The exploration of such symbols as free association of stimuli capable of creating ordered meaning would be useful.
f. The motoric dominance of the visual and the corresponding supportive mental structure may be the key to this definition of visual literacy as a meaning determiner.

Each of these points must be researched and clarified if visual literacy is to be clearly defined.

Thoughts and Concerns on Research in Visual Literacy

John L. Debes

A MODEL FOR THE DERIVATION OF NEW RESEARCH HYPOTHESES IN COGNITION AND LANGUAGING

by John L. Debes
Coordinator, Visual Learning
Eastman Kodak Company
Rochester, New York

Ed. Note: John Debes, affectionately called the "Father of Visual Literacy" has proposed in the following discussion a model to generate appropriate and analogical hypotheses in visual languaging. He advocates that visual languaging is a palatable research dimension to pursue; as with any model, its validity is a test of time.

A principle and obvious tenet of the visual languaging concept is that expressing oneself in any language is at least as important as observing the expressions of others. In the past, for instance, although English teachers assiduously cultivated listening as a skill, it was listening that produced speaking, and listening that produces writing that gave them the comfortable perception that their students were becoming literate. The same with reading!

These intuitively generated convications have been supported by much research that tested whether speaking helps children write better and writing helps students speak better and so on. Nine thousand variations of these themes have been played out on the organs of hypotheses specific empirical research. Classroom practices based on these ideas, consequently, feel sure footed.

But, what about the new dimensions added by visual languaging? Clearly, if we had a model, appropriate and analogical hypotheses would be relatively easy to generate. A model I have offered in workshops for about a year, now, seems as if it might have some utility. (See Model on next page)

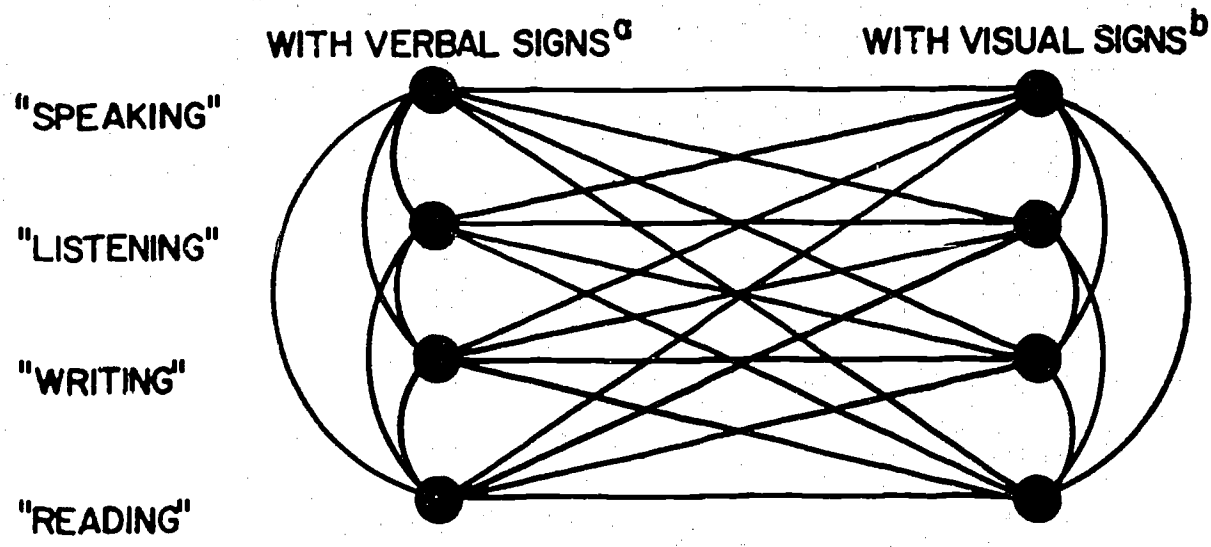
Each of the arching lines on the verbal side represents an opportunity for learning through analogically related verbal languaging behaviors and "systems." I have already spoken about these in the first and second paragraphs. We will return to these later.

Because visual languaging has not been investigated with comparable diligence, we know far less about the consequences for the learner of the analogical languaging experiences that are implied in the arching lines under visual.

But the host of questions, the vast opportunity, the great relatively unmined field is represented by the straight lines between the visual side and the verbal side. Some areas have been the site of some pretty thorough digging, but for the most part these lines delineate the dark continent, with all the implications of treasure that phrase evokes.

Every one of the lines on this simplistic "model" can be conceived of as a comparison hypothesis, and/or a mutual interaction hypothesis. With multiple variable analysis techniques of course, more is possible.

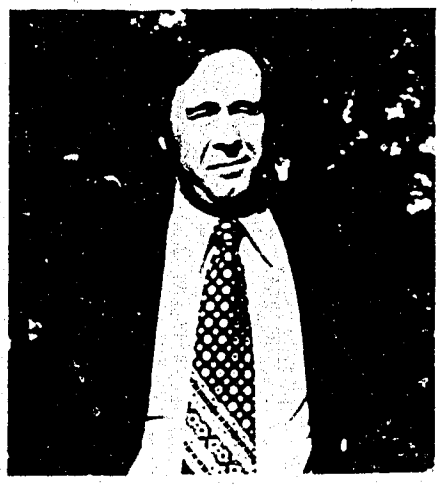
ANALOGICAL FORMS OF LANGUAGING BEHAVIOR



a. SEQUENCES OR PATTERNS OF WORDS
b. SEQUENCES OR PATTERNS OF BODY-LANGUAGE SIGNS, OBJECTS AS SIGNS, ICONICS, GRAPHICS

What can be accomplished if visual listening is used as an analogical base for verbal speaking? It's a question schools are beginning to study. What cognitive changes occur if children write visually and then write verbally? Can cognitive or communicative competencies be measured by matching visual writing against an analogically related visual composition?

Let no one ask if there are significant questions. Simple though this "model" may be, there are hundreds here. Each analogical relation is another languaging behavioral world waiting to be explored.



Donald J. Fork

RESEARCH IN VISUAL LITERACY: WHERE TO BEGIN?

by Dr. Donald J. Fork
Temple University
Philadelphia, Pennsylvania

Dr. David Jonassen
University of North Carolina
Greensboro, North Carolina

Ed. Note: Fork and Jonassen attempt to analyze the present status of visual literacy research. Their analysis includes an examination of the traditional approaches to theory and model construction, ending with a discussion of the two approaches to theoretical reasoning.

The increasing number of serious researchers from a multitude of disciplines that have taken an interest in examining the various phenomena associated with learning through visual means has demonstrated the need for establishing a new and distinct area of investigation known as visual literacy, while at the same time raising a number of important methodological and procedural concerns for possible research efforts in the future.

For example, even a brief survey of the literature related to visual literacy would reveal the wide diversity of fields represented and the myriad of approaches being attempted to conduct experiments and to interpret the data. The results of such efforts to date, however, have proven to be largely ineffectual in providing teachers and other practioneers with any established guidelines that they can apply. The absence of such procedural information can best be explained, perhaps, by the fact that there are presently no agreed upon means by which individuals involved with visual literacy research can relate to equate their findings.

While such conditions can be anticipated whenever a number of fields overlap and whenever a new field begins to emerge, the transition can sometimes be hastened by the formulation of a theory or set of theories that would attempt to explain or predict the phenomena being observed. Although it is recognized that there are no prescribed or established procedures for attempting to construct a theory of visual literacy, a brief look at some of the more traditional approaches to the process of theory and model construction might afford researchers in the field some specific directions that they may wish to pursue.

For example, in order to gain a greater degree of precision in our research terminology it may be necessary to adopt from other fields some of the more accepted definitions and distinctions made between such fundamental terms as theory, models, laws and principles.

Although there is an incorrect tendency to use these terms interchangeably, theory is usually considered a more general and inclusive term while the others are either subsumed by or generated from a specific theory.

Seen in this light a theory can be said to contain various constructs[1] as well as the capability of generating new and more refined hypotheses.[2]

It has been argued by some that the advancement of a theory can be attributed as much to the determination and will of a single individual as to the occurrence of a unique combination of factors and events that result in critical points being reached in the development of a field. An example of the former would be where there is an individual with the force and intellect of an Einstein who could further a particular theoretical approach and an example of the latter would be when the state of accumulated knowledge and the readiness on the part of researchers in a particular area of investigation would allow for the emergence of a new theoretical breakthrough.

In general, across all disciplines, one finds that the two most widely accepted modes of theory construction have been and continue to be the deductive and inductive method. The major distinction between the two approaches is that in the deductive mode the emphasis is upon the building of a system of constructs and relational rules which are conceptually and logically consistent but whose empirical verification is open to question, while in the inductive mode, theories are determined on the basis of summary statements or generalizations of empirical facts.

[1]A construct is a entity whose existence and properties cannot directly or automatically be empirically deduced and which, therefore, can only be described on the basis of a network of converging operations. Snellbecker, 1974, p. 35.

[2]A hypothesis is a statement about a suspected relationship between variables. Snellbecker, 1974, p. 32.

A theorist following the deductive approach for example, would attempt to build a theory that seems logical on an a priori basis and would then go about testing the correctness of his theory by performing experiments whose nature is determined by the theory. A theorist following the inductive approach, on the other hand, would attempt to use well-verified research findings in the development of a number of lesser theories that eventually would be incorporated into a more advanced theory that could account for all of the facts and statements found lower in the schema.

After first recognizing the implications such considerations have on their investigations, researchers interested in the field of visual literacy must weigh and consider the advantages and disadvantages of each theoretical approach in order to choose the one most appropriate to the needs of the field. Since we have begun to amass a rather large body of knowledge from what appears to be a largely inductive approach, perhaps, it would be helpful to pause long enough to see where we can begin to establish a theoretical framework for future research. In the meantime, will all the prospective Einsteins of Visual Literacy please come to the fore!

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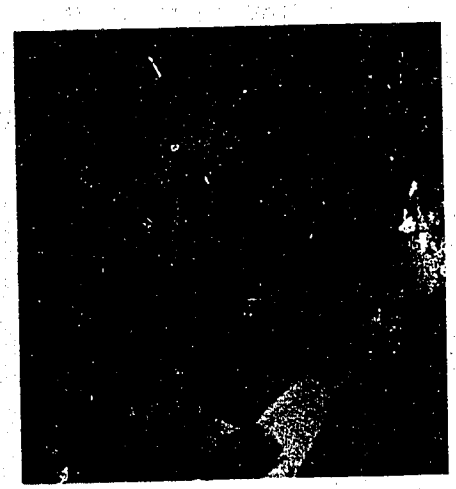

Bikkar S. Randhawa

VISUAL LITERACY: PROSPECTUS FOR THE FUTURE

by Bikkar S. Randhawa
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Visual Scholars Program
University of Iowa
Iowa City, Iowa

Ed. Note: Randhawa's comments offer a sound rationale as to why many researchers are now considering visual literacy as an area of great potential exploration. He alludes to the future formation of a visual literacy taxonomy, being made meaningful through a macroscopic interdisciplinary perspective.

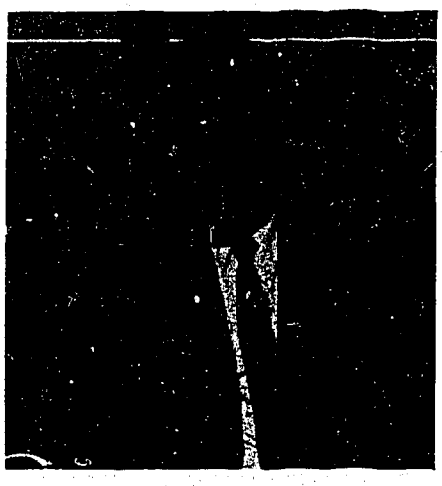
Visual literacy is concerned with the mode of visual expression and thought. It is the domain of our most powerful sense, vision -- a channel which provides at least 60% of the raw materials for our minds to process, integrate, and direct action. Thus, the executive system of the mind is more influenced by the inputs through the visual channel than the other four. But, this is not to deny that other channels are important. The point is, visual literacy is a legitimate concern of the educators. Its impact on education is hard to imagine at this stage of our focus on this very fundamental set of human abilities. So, visual literacy is a set of human abilities dealing with the mode of visual expression and thought.

Visual literacy abilities would consists of knowledge, comprehension, production (application), analysis, creative production and interpretation, and finally, appreciation and criticism. Thus, I am alluding to a taxonomy of visual literacy. The one proposed here is analogous to the Bloom's in the cognitive domain. This idea of taxonomy is not really an important concern of mine at this time. My concern is with a compilation of age specific visual literacy abilities from which a unique taxonomy may

emerge in the future. My concern is also with the understanding of the interactive and dynamic behavior of the visual image, the imager (perceiver), and the dynamic process of integration. My concern is to move the visuals from the position of the aids in education to the rightful status of a process and a vehicle in education. The climate is right to do this. The society is waiting for us to show them how this way of education will circumvent some of the gross injustices already done to many who have gone through our verbal institutions.

Let me also add that the society and the practitioners are also skeptical of the new proposals for educational innovations and solutions to our most pressing problems. They have seen many innovations come and go but without a significant resultant improvement in educational practice and process. The wheels keep on grinding somehow. A large number of causal and associative factors have been proposed for the decline in scores in the 3 R's on the conventional achievement tests. Everyday a new significant independent variable is identified which explains a significant proportion of variance in specific social and cognitive behaviors. A larger proportion of the variance which is unaccounted for is explained away in terms of yet unknown variables and more future research is said to be needed for that. The present status of the educational research is deplorable (Howe, 1976). The pieces are hard to fit and there are too many of them to make any sense. Macroscopic interdisciplinary approach to research in education seems to hold promise for the future.

The history of educational innovations and research should be considered in our efforts in visual literacy, vis-a-vis, visual education. We must consider in a macroscopic interdisciplinary perspective, the nature of the dynamic interaction among the visual image, the imager, and the process of integration. An approach to education involving visual -messages, -communication, and -language must not lose sight of the individual as have many educational approaches invoked for administrative expediency. We have done that for too long. Visual education must be based on sound theory and research.



Paul R. Wendt

A GREAT RESEARCH OPPORTUNITY

by Paul R. Wendt
Professor Emeritus of Education
Southern Illinois University

Ed. Note: In this article, Wendt elaborates on new areas of visual literacy research which have recently emerged. He suggests means for accessing visual aptitude and offers possible areas for future research.

As Jack Debes suggested in his talk at the annual conference of the International Visual Literacy Association held at Nashville, Tennessee last Spring, it is time for visual literacy researchers to pay greater attention to the well-known fact that verbal material is processed in the right hemisphere of the brain and spatial material in the left hemisphere. In Science (Vol. 192, No. 4239), Waber investigated the fact that girls score higher in the verbal part of intelligence tests and boys higher on the spatial part. She found this was due more to early maturation than sex per se and the difference persisted in later life.

As chairman of a teaching Instructional Materials Department which trained personnel versed in both Audio-Visual and Library Science, to me it was evident that male

students tended to specialize more in Audio-Visual whereas females elected many more library courses. Reasons often given include "women are culturally trained to be less interested in handling equipment." But perhaps it has much more to do with the spatial (visual) sex differences.

There has been a plethora of standardized tests of verbal ability for decades but none for what is now referred to as "visual aptitude," except for mostly irrelevant parts of intelligence tests.

In recent years, two objective tests of visual aptitude have emerged. Paivio, Nickerson and others (including this author) have used the picture recognition test. In this test a subject is shown some pictorial slides. These are then mixed with many new slides and the subject is asked to identify the old slides they have seen before. The recognition rate is astoundingly high, ranging from 96% over a short interval to 65% over a year. Another objective tool, developed by Sepe, shows the subject two slightly differing cartoons and requires them to identify the differences. Time elapsed is the entirely objective dependent variable.

Here at last are two research tools which could be used to measure visual aptitude. They need to be standardized against known groups of professional librarians and audio-visual specialists. Innumerable experiments are possible. The effects of personality, of background, of training could be explored. With these facts as a basis a real beginning could be made on that amorphous problem -- what makes an effective teaching picture. Eye movement research could play an auxiliary part. Probably in such a research program new objective measures of reactions to pictures would be discovered.

In visual literacy we need such a body of research. Without it the field lacks the validity that only objective research can give; with it the field can parallel the voluminous research in reading.

William C. Majure

VISUAL LITERACY: THE PROBLEM OF EXTERNALIZATION

by William C. Majure
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Southwest Iowa Learning Resources Center
Red Oak, Iowa

Ed. Note: Majure discusses an issue which he feels is the most underdeveloped research area in visual literacy: externalization. The phenomenon occurs when normal verbal processes are inadequate to communicate.

The University of Iowa's Scholars Program sponsored a recent conference on visual literacy (October, 1976). There were two days of impressive papers and provocative disucssions. One speaker, Roger Shepard of Stanford, used introspective reports of several creative contributors (Einstein, Maxwell, Galton, Mozart, and others) to illustrate the role of visual imagery in their creativity.[1] In one of these antodotes, the great man reported absolute clarity of vision. Attempts to communicate the vision, however, led to a problem. Normal verbal processes were inadequate. Apparently the great man had no other means of communication. He experienced the problem of externalization.

For purposes of this discussion, let's think of externalization as causing one's internal visual images to be made externally visable, available for another's perceiving.

The problem of externalization exists at yet a second level. It remains the most underdeveloped region of interest to visual scholars and visual literacy theories.

Of the conference's eight papers, Shepard's was the only one dealing with externalization. My discussion group properly depicted visual literacy to rest squarely on the foundation of psychology - defined in traditional terms of sensing, perceiving, and internal processes. Almost as a tangent issue, we briefly discussed externalization - as verbal descriptions of visual images; this despite the skill of reducing our conversation to two-dimensional visuals via chalk and blackboard. Artistic, photographic, and electronic processes were relegated to the peripheral sphere of visual literacy - the commercial, technocratic region of applied visual literacy. But the emphasis was not the externalization of internal visual images. Rather, these processes are seen as means of creating stimuli to be perceived.

Anthropologists, and others, have accentuated the speaking-language phenomena as the major distinguishing attribute of the human animal. We have convinced ourselves that man is a verbal animal. After all, virtually all animals see. As a result, we are locked-in to the communication processes of reading, writing, speaking, and listening. Education is especially locked-in to the reading and writing processes - in terms of method and content of education.

Alan Paivio's work has begun to question the assumption of verbal primacy.[2] Maybe man is in reality a visual animal. We recognize "seeing" as a process of sensing visual stimuli. So far we have ignored processes of externalizing visual images that might parallel writing and speaking.

Paivio's work must be continued and expanded. Externalization processes must be identified, developed, taught, and utilized. Needless to say, a mountain of research must be involved.

References:

1. Roger N. Shepard, "The Externalization of Mental Images," a paper presented to Visual Scholars Program Conference, Iowa City, Iowa, October 1 & 2, 1976.

2. Allan Paivio, "On Exploring Visual Knowledge," a paper presented to Visual Scholars Program Conference, Iowa City, Iowa, October 1 & 2, 1976.

H. Lois Brainard

PIAGET AND VISUAL LITERACY

by H. Lois Brainard
San Jose State University
San Jose, California

Ed. Note: The author has taken her developmental views of visual literacy and attempted to relate these views in terms of Piaget's theories of thinking. From Piaget we learn that perception, imitation and imagery are all components of intellectual development; Brainard considers these factors as foundation elements in visual literacy.

As an Epistemological Geneticist Piaget has spent over fifty years trying to determine how children develop the ability to think abstractly. Because of his background as a biologist studying mollusks he perceives human development in biological terms. To him intellectual growth is

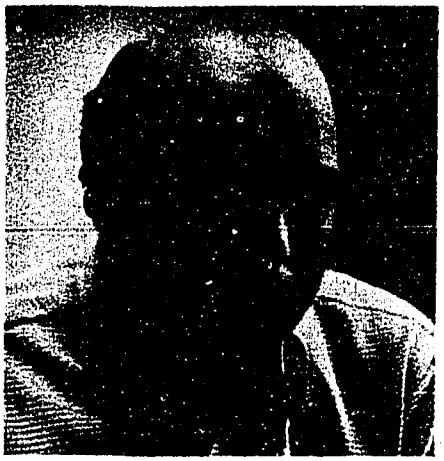
accomplished through the physical adaptation of the child to the environment which he calls accommodation, and the mental organization of experiences, which he calls assimilation. It is the constant interaction of these two abilities which leads to more advanced levels of thinking.

Piaget considers the levels of thinking as concerned with, first, sensorimotor; next, representation or symbolic; and lastly, abstractions or signs. To Piaget symbolic representation means a form which closely resembles the real thing, and signs are abstract forms such as words or numbers. As children move invariantly from sensorimotor (0-2 yrs.) through preoperational (2-7 yrs.), concrete operational (7-11 yrs.) and formal operational (11-15 yrs.-adult) stages of thinking, they are predominately involved in one of the three levels of development.

Visual literacy, then, is closely allied with the middle stage of development which involves representational thinking. According to Piaget it is only when the child has had wide experiences in each stage-many sensorimotor experiences, many opportunities to manipulate concrete materials and translate these experiences into representational form-that the child is capable of abstract thinking. However, it is during the sensorimotor stage that the foundations for visual literacy are being developed. At first the child cannot distinguish between himself and his surroundings. He will reach for an object only if he can see both his hand and the object to be grasped. If the object then disappears the search ends, for the child has no understanding of object permanence until around 18 months of age. The sensorimotor stage, then, involves the gradual coordination of sight with the other senses and the environment; intelligence is totally sensorimotor.

It is only as the child becomes capable of mental imagery that the level of thinking moves beyond sensorimotor actions toward logical thinking. It is mental imagery which leads to memory and reflective thought. We cannot remember our lives as babies because we had no mechanism which could record memories in retrievable form. Deferred imitation is the first indication that the child can refer to the past. The child can not imitate a past action or can use objects in imaginative, representational play (a stick becomes an airplane, a sea shell a cup, etc.). Language, play, and dreams begin at this stage.

The preoperational child is completely egocentric and can think only in one dimension. If two things must be compared, such as length and width, the child is unable to keep one dimension in mind while he considers the other. Drawing horizontal and vertical coordinates or keeping these in mind while using a camera would be difficult for the preoperational child. Egocentrism prevents children from seeing things from any viewpoint but their own, and since their concepts are not fully formed, representations of their concepts will reflect inaccuracy and inconsistency. They draw what they know, not what they see; Piaget refers to this as intellectual realism. Representational development must come from sensorimotor experiences which can be transformed into concepts. In preoperational children the image is a part of the representational schema necessary for the development of a concept; in concrete operational children the image is used to illustrate a concept which is more fully developed and has become internalized.



A. Porter McLaurin

HOLOGRAPHY: AN AREA OF VISUAL LITERACY RESEARCH

by A. Porter McLaurin
University of South Carolina
Columbia, South Carolina

Ed. Note: Holography, a three-dimensional visualizing technique more associated with amusement than education, maybe upon the threshold of practical application in the classroom. Such technological advancement needs to be documented as to its instructional effectiveness; McLaurin elaborates upon possible research areas.

When reflecting on the "visual literacy" movement, one is struck by the dependence of the proponents of the movement on the use of two-dimensional images. Almost all programs and studies appear to be concerned with film, television, and photographic study and appreciation. A secondary role is assigned to the study of body language and facial expression. Holography is, for all intensive purposes, a neglected medium in visual literacy literature.

Holograms have been utilized primarily in the physics laboratories and classrooms to demonstrate physical properties of coherent optics. While the use of such material has been available for only a short period of time (roughly one decade) the expansion of holography has been rapid. Once the domain of the physicist along, holography is now used in fields as diverse as engineering tests of material strength, the fine arts, and advertising. Holograms are different from the more traditional media in that they present full three-dimensional images from which the full detail of the image is available for scrutiny from a variety of angles. Cylindrical holograms permit 360 degree rotation of the object image for full viewing from all sides. Futurists are already predicting the development of holographic systems which will allow television to be broadcast in holographic form. Quite likely, other forms of holographic media will evolve.

The advent of white light transmission holograms, and the subsequent development of the integraph system by Jeong (1975, p. 106), has made possible motion picture holography and the deletion of coherent viewing requirements. The time has come when one must very carefully consider the uses of this new medium in the classroom.

These factors lead to a number of questions which deserve further study, if not original study. These include:

1. In what ways does interpretation of images presented in holographic formats differ from the interpretation of two-dimensional images?
2. What differences exist in the analysis of visual information rendered in various holographic formats?
3. Are holographic images as efficient and effective as two-dimensional images in communicating visual information?
4. Is holography a suitable medium for teaching basic concepts to children?
5. What can be taught through the use of holography which is not possible through the use of existing media?

In response to these questions, an initial study has been begun at the University of South Carolina under the aegis of the Research and Productive Scholarship Program. The results of the initial study should be available in early 1977.

Suggested Readings:

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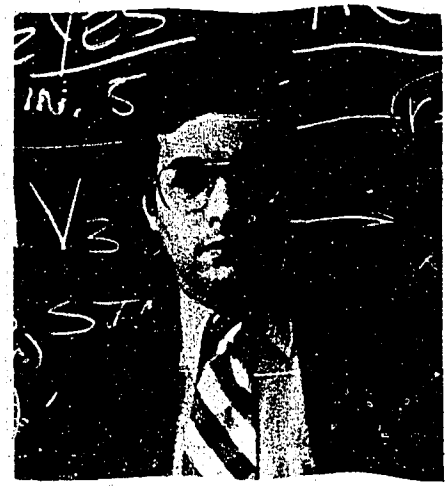
Kock, W.E. Lasers and Holography: An Introduction to Coherent Optics. New York: Doubleday, 1969.

Outwater, Christopher and van Hamersveld, Eric. Guide to Practical Holography. Beverly Hills, California: Pentangle Press, 1974.



Robert K. Passikoff

A VISUAL LITERACY TECHNIQUE FOR ANALYZING NONVERBAL COMMUNICATION: A NEW METHODOLOGY

by Robert K. Passikoff
Marymount Manhattan College
New York City, New York

Ed. Note: The study described in this summary offers a novel means of interpreting nonverbal language in an educational setting through a systematic, nonverbal analysis of the communicative properties of the photograph. Speculations as to the implication of pupil nonverbal behavior in relation to teachers' expectations, often culturally conditioned, are offered in light of the results. A bibliography can be obtained from the author.

In recent years, visual literacy has developed along two somewhat divergent but not mutually exclusive paths. While anthropologists and ethologists have sought to examine and define the properties of nonverbal, visual communication in much the way linquists have explicated verbal communication (Birdwhistle, 1970; Hall, 1959), clinical psychologists, psychiatrists and educational psychologists have been examining nonverbal communication behavior in relation to behavioral phenomena such as the "double bind" in schizophrenia and the self-fulfilling prophecy in classroom settings (Rosenthal and Jacobson, 1968). The measures employed for data collection have often involved the use of video-tape and rating systems. However, few studies have attempted to use film and rating procedures to focus on the extent to which the teacher's or clinician's behavior may be influenced by the pupil or client's nonverbal behavior, how nonverbal behavior may be a reflection of cognitive awareness and thereby ultimately, academic achievement or how measures employed in the study of kinesics, or body language, might be applied to the study of nonverbal classroom behavior. This study is an attempt to integrate these three concepts.

Studies have indicated that film and photographs stand in relation to visual language in a manner analogous to that of letters and words in relation to verbal language. That is, as accurate records of human behavior which allow for a clinical method of recording and ultimately for understanding nonverbal human communication. The camera thus used as a data collection device, isolates single moments in time as well as the physical manifestations of the nonverbal language. The photograph acts as a system of codification for the nonverbal language.

A method for photographing students which followed the standard ethological practice of using an angle lens and timed motor-drive and which was determined to be minimally distrubing to the educational environment was used for data collection. The students were from two inner-city junior high school science classes, designated as "inquiry"

and "lecture" to reflect the two differing teaching methodologies used in the classes. They were individually photographed in an order randomly determined and from randomly selected class periods over a data collecting schedule of five weeks.

Phase I of the study sought to determine if 25 professional persons, representing a broad range of the educational continuum, would be in agreement as to the affective states of the pupils in the photographs. A semantic differential rating scale especially designed for the study to reflect desired insights from Krathwol, Birdwhistle and Osgood, was used by the jurors for this purpose. The inter-rater reliability coefficient for these jurors' ratings was .92. A single photoanalysis score, derived from each juror's ratings of the photographs of a single student, was then correlated with the pupil's achievement in his science class. (That two differing teaching methodologies were used was incidental to the larger purpose of the study, although significant differences in achievement resulted for those in the inquiry class.) The correlation coefficients for the photoanalysis score and science achievement was .86 for the inquiry group and .71 for the lecture group. That the photographs not only "said" the same thing to those viewing them, but that the determinations of the affective states (Passive/active, bored/interested, satisfied/unfulfilled, pleasant/unpleasant, indifferent/involved) were in turn so strongly or positively correlated with achievement was heartening.

The second phase (II) of the study sought to examine what the jurors were looking at in order to determine the affective or nonverbal language of the photograph; in short, the nonverbal cues. The examination of nonverbal cues in each photograph by means of kinegraphs and the kinegraphic analysis performed to determine patterns of physical expression associated with high and low achievement levels indicated that on the "visual literate" level, kinegraphic patterns and reaction to cue alternations were highly correlated. The results of the subsequent submission of juror ratings of cue-altered photographs to statistical analysis (analysis of variance performed for each cue alteration) indicated that the alteration significantly affected the jurors' perceptions. There was agreement then, as to the way in which educators viewed nonverbal messages emitted by the hands, head, eyes and body tension. When the message was "changed" by means of cue alteration, the determination by the juror of the affective state similarly changed.

The significance of teachers receiving and understanding the visual, nonverbal messages inherent in a single cue alteration yield certain empirical relationships and some theoretical visual literacy consideration may be suggested: For instance we are interested in the extent to which physical manifestations of affective states remain consistent across cultural differences and when they may vary. Will the consistency of perceptions noted above for one group of educators be replicated for example by both Anglo and Hispanic teachers? To what extent do teachers' expectations of achievement as reflected in nonverbal "attending" reflect cultural bias? How might the techniques suggested herein be used in teacher-education settings?

From the visual literacy point of view, application of the photograph as a data source will allow researchers to detect, with greater reliability, various cues within other areas of nonverbal communication "defined" by physical manifestations and cue-patterns captured within the photograph.

Robert A. Senour

A VISUAL LITERACY STUDY WITH KINDERGARTEN AND FIRST GRADE STUDENTS

by Robert A. Senour
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Ed. Note: The instructional effects and development of visual literacy in early childhood education is an area of great potential; Senour's study reflects this. A copy of the entire study including some unexpected side effects, references, and summary comments are available from the author.

A two year planned photography program was conducted with 28 kindergarten and first grade students to determine whether reading and language development of a learner would be greater, the same or lower than learners not in the program. The method of instruction involved a system in which students were provided with a simple camera and film and given subjects for photographing. Once the students had produced the visual stimuli, the teacher reproduced, onto a sheet of paper, the comments the students made about the pictures. Through this procedure the learners were exposed to a vocabulary which they could verbalize although usually could not spell nor read. The individual sheets were collected into books which were developed into the initial reading books the learners used.

The twenty-eight students selected for the experimental group were from an elementary school with a 30-35% Mexican-American population. This experimental group was specifically selected because scores on reading readiness scales of Mexican-American students have historically been lower than those from Anglo students. The 28 subjects selected for the experimental approach were pretested using the Metropolitan Readiness Test Level L form A. The subjects were all members of one class in the selected elementary school. The control group were members of another kindergarten class in the same elementary school.

Two different walking tours were scheduled for orientation photo sessions for the experimental group in the fall term of the first year. Eight photo sessions were accomplished during the two year study. Examples of specific subjects for the sessions were, photos of old friends, tall and short people, signs, buildings, etc.

The findings indicate that the mean growth difference, by the experimental group, from pre to post tests, was 19 points greater on the metropolitan scale than the control group. The experimental and control groups were chosen from the same elementary school thus were assumed to be equated on socioeconomic background and intelligence. The populations were not mixed during the course of the two year study.

During the initial year the students had a difficult time maintaining an immobile stance while taking the pictures. Consequently, of the 12 frames each student had for each session the average was between 5-6 usuable shots from which they made their selections. In the second year the average number of shots rose to 10 for each student. Once the students selected the shots they wanted included in their books, the teacher posted or stapled each shot to a piece of paper and then printed or typed the comments which each learner made, concerning each shot, on the bottom of the paper under the picture.

The thoughts and language that each child produced became the basic ingredient for the reading program. This strategy is called the experience approach. It takes advantage of the various language productions of each child to build upon for teaching symbol identification, patterns of self expression and ultimately into production of books which the child has authored. Roach Van Allen has written extensively on the subject.

Andd Ward

A COMPARISON OF THE RELATIVE EFFECTIVENESS OF GRAPHIC, PHOTOGRAPHIC, AND NON-PICTORIAL TECHNIQUES IN TEACHING VOCABULARY WORDS TO THIRD AND FOURTH GRADERS

by Andd Ward
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Providence, Rhode Island

Ed. Note: Ongoing visual literacy research, as represented by Andd Ward, is exemplary of one area of study currently being considered. Results of the study are being tabulated; for information, bibliography and results, contact the author.

The problem of how to each vocabulary effectively is an old one which has been investigated by many researchers. With recent developments in instructional media and technology, more flexible approaches to vocabulary teaching can now be taken. The intent of this current study is to determine the relative effectiveness of three techniques for the teaching of vocabulary words. The techniques are (1) graphic, (2) photographic, and (3) printed words alone (the non-pictorial approach).

Basic assumptions made by the researcher and supported by the literature include the following:

1. There is a high correlation between vocabulary and I.Q.
2. Vocabulary is an integral part of reading skills.
3. Vocabulary study is most effective when done in a systematic, planned way.
4. The context clue approach is a useful method of word attack.
5. The use of picture context clues can result in more accurate and faster learning.

The methodology used in the study is based on the principle that viewing new vocabulary words in print, hearing the words pronounced, and saying the words aloud facilitates learning of the words. Ninety nouns, verbs, and adjectives that could be iconicized were selected from the Stanford Achievement Test "Word Meaning" subtest. Each treatment group viewed three slides for each of the 90 words presented. One slide contained the vocabulary word alone. A second contained the word and its dictionary definition. A third slide in each set contained the word used in a context sentence. One of the three treatment groups viewed graphic representations (line drawings) in addition to the words. Another treatment group viewed photographic representations in addition to the words. Besides veiwing the slides, third and fourth graders listened to cassette tapes of the words, dictionary definitions, and context clue sentence. At the end of each weekly lesson and reinforcement lesson, students worked on self-correcting worksheets (matching and sentence completion exercises).

Prior to the start of the 10-week experimental study, the WISC "Vocabulary" subtest was administered individually to students. Extent of work recognition and retention was measured by the Stanford Achievement Test "Word Meaning" subtest, Intermediate I and II, Forms Y and W, administered as pretest, posttest, and sleeper test.

Visual Literacy in the Curriculum

Francis M. Dwyer

IS VISUAL LITERACY TEACHABLE?

by Francis M. Dwyer
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Ed. Note: Dwyer elaborates on the basic considerations encompassing the possible teaching of a visual literacy curriculum. To make such a curriculum viable, he suggests several variables and questions to be explored relating to the teaching and defining of visual literacy.

Visual Literacy as a concept and as a process is currently being described and defined from a number of different reference points. For example, it has been defined as encompassing: visual production and visual expression by students, theory, administration of visual programs, visual testing and evaluation, curriculum development, human physiology, visual aesthetics, teacher training, etc.

Drawing its content from such varied sources raises the question of whether or not visual literacy is "too inexact" to teach. Certainly as an art, visual literacy would seem to be of the same empirical character as speaking, music, writing, philosophy, ethics, religion, etc. Admittedly, there is a lack of a central core of knowledge indigenous to visual literacy; however, there are some facts and tenative theories related to visual literacy which can be drawn from other disciplines which can provide a foundation of teachable content. The principles of visual literacy are fairly clear and some techniques for implementation, although imprecise, are workable. Futhermore, in addition to what appropriate pedagogical material there is which can be adapted from established disciplines, there is limitless subjective content not substantiated by "hard-nose data" but found to facilitate positive behavioral changes in student performance.

Although at this stage of development is difficult to describe in definitive terms the precise parameters of visual literacy; a number of tests for aptitudes--considered by some to be related to specific definitions of visual literacy (i.e., Embedded Figures Test, Hidden Figures Test, Successive Perception Test)--have revealed the relative universality of visual literacy, in that it appears that it is normally distributed and that all of us possess this talent to a lesser or greater degree. Generalizing from these findings we may hypothesize that an individuals' visual literacy capabilities vary more in ratio to his or her output of mental energy rather than in ratio to his or her inborn talent. Consequently, if a student learns a lot about what visual literacy is, this information is very likely to enable him to be more visually literate. Similarily, the contributions of an individuals ability to concentrate, his accuracy of observation, his retentiveness of memory, logical reasoning and sensitivity of association are all variables which need to be investigated. Beginning with the assumption of the universality of a characteristic identified

as visual literacy, there are a number of important questions which researchers might explore which would contribute significantly to the construction of an acceptable definition of visual literacy and which would begin to provide implementing a "workable" and "teachable" visual literacy program.

a. Is there a relationship between sex and visual literacy?
b. How does an individuals education level and background experience affect an individuals visual literacy level?
c. Does an individuals visual literacy level increase or decrease with age?
d. What effect does the "effort factor" have on increasing a persons visual literacy level?

Sheldon F. Katz

A MOSAIC PATTERN EDUCATION THROUGH VISUAL LITERACY

by Sheldon F. Katz
Teacher
260 North Main Street, Apt. B32
Spring Valley, N.Y.

Ed. Note: Katz works with junior high school students who have final responsibility both individually and in groups, for all projects conducted in his mosaic pattern education classroom. Conservative educators may consider his views bold, if not unmanageable; but the more progressive educator will find his philosophy and methodology consistant and innovative.

The first group of my TV-babies have now grown up and reached the age of approximately 26. This pioneer group has produced a different language, a different point of view, and, indeed, a new culture. Much fine literature and thorough research have shown that the current crop of students are no longer linear oriented. This does not deny the use of the printed word, but rather, students now do not need the archaic notions of a step-by-step, mind-confining logical culture.

The onset of media gives off an aura of totalness, immediacy, and infinite variety of information; kids are now permanently plugged into a universe. It is pathetic and ironic that they are forced to attend alien buildings that keep them cooped up mentally and physically thus forcibly interrupting the constant flow of communication that makes up their culture. Many writers have condemned the present school system while failing to provide any solution to boring education. Tear down the walls? Yes. But to provide some measure of a future for kids is also vital. One way to tear down a wall is to mediate the present day classroom and place the culture of the student at his or her own disposal. No definition has any realistic meaning except that which the user feels is important and related to how one wishes to control the use of the definition.

"Visual literacy" has as many definitions as it does users. Perhaps the definition can be incorporated into a philosophy of this author when it comes to what goes on in an eighth grade classroom of English. This is, "every youngster is entitled to have an opinion of his/her own, to think for him/herself, and to express those opinions and decisions through all of the available media." It works.

The mosaic pattern education is an extension of that philosophy. These eighth grade youngsters produce TV shows, hold news interviews with portapack TV's, shoot films, make collages, do slide-tapes, produce class newspapers and magazines, read a lot and write a lot among other projects and activities. No project is entered into unless a majority of the class feels that it is worthwhile at the moment, and there is always a project of some sort in action in the classroom. The students write, direct, act in, and produce all of their own work. The teacher is more of a resource person who will aid when asked, keep some sort of balance going, and who helps to channel the variety of ideas that continuously come forth.

Reading, as noted, is not ignored and is worked into the mosaic pattern. For example, book reports may be done as TV shows, commercials, or as a TV news broadcast. Each student is put on tape, by fellow classmates, and the tape is replayed for the class at the conclusion of the reports. Another book report might be done in small groups of two to four students and each group will read its own book and will demonstrate its report be means of a slide production. Those slides will be made without a camera and the report will have a narration on a cassette tape.

Other reports might combine the comic strips with the youngster's own imagination. Or the report could be done graphically to display a sharp line. Or it might be shown in a collage. Films are shown in the class occasionally and these classified as an art form. The idea is to provoke the student into an original opinion and not to have a predetermined message in mind. This is akin to having students observe a painting or listen to music in order to have them react personally and individually.

This is a visual generation that we are attempting to educate; some have called this environmental education in that the student meets his/her own environment in the school and some call this working with media which is obvious in meaning. Standard education seems to be fragmented and limited. What is needed at this time is an educational set up that will aid in reaching the total child and preparing that child for universal experiences. Mosaic patterns in a mediated classroom are steps in that direction.

VISUAL LITERACY AND TELEVISION

by Michael Lasser
The Harley School
Rochester, New York

Ed. Note: Lasser reveals implications, both cognitive and psychological, about the televised medium and how it relates and generates its own type of visual literacy.

Alfred North Whitehead wrote not all that long ago:

> Ideas which are not utilized are positively harmful. By utilizing an idea, I mean relating it to that stream, compounded of sense perceptions, feeling, hopes, desires, and of mental activities adjusting thought to thought, which forms our life. I can imagine a set of beings which might fortify their souls by passively receiving disconnected ideas. Humanity is not built that way.

Whitehead is both right and wrong. He is wrong because television does in fact create an audience which is often and even characteristically "passively receiving disconnected ideas." He is right because as a result of television we have become in

part "a set of beings." The results are not necessarily happy, though they are powerful. One major task of visual literacy, as a result, is to teach young people to bring a critical sense to bear effectively on their viewing, even to learn that there is such a thing as a critical sense. It can also help them learn to make distinctions between reality and televison's depiction of that reality; that is, to interpret, understand, and draw conclusions rather than merely receive.

It has always been senseless to be a Luddite. While it may be foolish to fight the machine, however, it is not foolish to fight what it may be doing to us. There is a difference between the box and what it depicts, even between the omnipresence of the box and the particular effects of its images on us. Educational television may well be a contradiction in terms: Walter Cronkite is no more the teacher ultimately than Johnny Carson. Cronkite is an honorable, competent man who takes his profession seriously, but if he had a lisp, one ear, and a bulbous nose he'd still be in Peoria.

Television usually conveys to its viewers a carefully crafted surface, a controlled selection from what is real. What does not fit within its ever-cool limits is distorted, ignored, implicitly ridiculed, or destroyed. Even when it transmits the event of the moment, often the event has meaning only beacuse television is there; it is <u>television</u> which has the meaning. More important, it allows the event to present itself under the notion--misguided and even irresponsible--that information, mere data, has value in the long run.

I am afraid that television has contributed to a passion for information as the goal rather than as the means. One of the easiest and most popular ways to get applause these days is to call young people "the best educated generation is history." It is also a self-aggrandizing and specious statement. Unless, of course, we have so forgotten how to make distinctions that we now confuse information, knowledge, and understanding. They are rarely identical.

Visual literacy, because it tries to teach us all to see, beacuse it may have a chance to deal with substance beyond mere enthusiasm, because it persuades us to examine powerful technological means of expression, may help students begin to learn that they are not television, that Steve Austin will dream their dreams only if they let him, and that only competent men and women can truly be free. At its finest and most responsible, visual literacy is a moral tool; it is one of the many ways we need to the future. Whitehead also wrote:

> The dominant note of education at is beginning and at its end is freedom, but...there is an intermediate stage of discipline with freedom in subordination....All mental development is composed of such cycles, and of cycles of such cycles.

Frank Weddell

TOWARDS VISUAL LITERACY

by Frank Weddell
Director of Photography & Music
Green Chimney School
Brewster, New York 10509

Ed. Note: Weddell represents a breed of educator who has the insight to observe that many students have special learning needs. Traditional means of teaching and evaluation with these special students can not effectively communicate the exchange of knowledge which has or has not occured. Weddell enthusiastically elaborates upon his methodology.

Writing and reading are, sadly, a chore to many students, and thus not the direct link to their learning. While not totally desirable as a trait, we must realize that the child of today and the adult of tomorrow may well not have time to read a book, magazine, or newspaper. He may not have time to labor through eight or ten textbooks to find the information for a project. Yet this same person could check microfilm data, televised data cards as to the location of information in whatever form it might be taking. Reading, writing, and math are as important as ever, but now can be taught in ways which would not reach certain students years ago.

After seven years of teaching in several types of schools using traditional methods, I began asking myself if I wanted to still be spewing forth the eight parts of speech and asking true or false questions concerning a book I knew my students were incapable of reading after having heard them struggle with oral class work to the point of humiliation to the child. After a series of unsatisfying jobs, I began working in Brewster, New York at the Green Chimneys School. This institution specializes in teaching brain damaged and emotionally disturbed youngsters from broken families. Dealing with them was indeed a new experience.

Winning their confidence was needed first in order to teach them. My hobby and favorite past time since childhood has been anything to do with audio-visual. My room as a child was filled with old radio phonographs and stacks of records. Later, tape recorders and amplifiers were strewn around as I experimented with recording. In recent years I began to envision how I could use these past pleasures of mine to teach youngsters who were in many cases non-readers.

Briefly, with a budget of only a few hundred dollars and no formal visual literacy training, I began. By scrounging around in dark corners and letting the word out what I was looking for I have in two years time; five 35 mm. cameras, two super 8 cameras, two enlargers and drum dryers. I purchased from government surplus; one 16 mm. sound projector, thousands of sheets of photographic paper which although expired still fulfilled my needs, several record players and a giant tape recorder. The crowning glory was the donation of an old video-tape deck and portapac. This coupled to some closed circuit monitors and some of my old amplifiers from home made

up what may look crazy, but what would be the envy of many well equipped high school audio-visual departments.

The next problem was setting up my classtime. I ordered every available free film which I felt I could possibly use and changed the name of the course I was teaching from Applied Photography to Visual Arts.

In the mornings I was teaching music; a course which can be deadly at the elementary level. By videotaping sections of programming from musical presentations and showing these to the kids while introducing them to various types of instrument combinations and styles, I accomplished three things. I entertained the troops, won their confidence by giving them a medium they understood and related to, and I taught them something.

What I now have today between the mornings and the afternoons is a great overlap between the two courses. The content is often dictated by what material I have on any given week. Sometimes I have ten excellent films and sometimes only one which might be over many of the student's heads. One fact remains, however, the student is learning when the material is presented properly.

I keep notes of what films or tapes or slides have been shown on any given week, and in presenting the new material I take pains to dovetail the past information together with the present. I try to show the interrelationships of subjects as we move from environment, to archeology, to science, to history and then to science-fiction. Strange though it may sound, it works.

Absenteeism from my class is among the lowest anywhere in the school. Students are, in fact, upset if they are deprived of their class session by my attending a meeting or substituting for an absent teacher. I also have repeaters to presentations who wish to view the material again and the child who is not making it in class who wishes to come to my department to "help me". While there may or may not be something for him to do, he still can feel a part of the medium and absorb from it.

To define then my course as visual literacy within the framework of the Green Chimneys School, I say simply that I teach through extensive use of properly introduced audio-visual aids, aspects of every side of life and the world in which we live; its past, present, and future. Proper introduction and follow-up are important as the teachers leave my room I hope they will take the experience of the children and build on it when back in the more traditional class setup.

I enjoy what I do and I feel that this enjoyment shows in what I teach and I find it reflects back to me in the pleasure I see in my students. I feel strongly that learning visually is a key to the future for the children of today. It is not expected that it will replace the ability to read, but that it will be thousands of steppingstones toward knowledge placed on a firm base of the three "R's".

Resources of Interest in Visual Literacy

Lon R. Nuell

THE INTERNATIONAL VISUAL LITERACY ASSOCIATION

by Lon R. Nuell
President-IVLA
Middle Tennessee State University
Murfreesboro, Tennessee

Ed. Note: The International Visual Literacy Association (IVLA) is an organization created to promote, develop, apply, evaluate and disseminate information and research of relevant practices and theories associated with visual literacy. IVLA is an affiliate of The Association for Educational Communications and Technology. To obtain additional information write to: The Center for Visual Literacy, Gallaudet College, Washington, D.C. 20002.

The International Visual Literacy Association is unique. It is primarily an educational Association, but one that is multi- and interdisciplinary in nature. Members come from disparate backgrounds which are representative of many areas not directly related to education itself, but involve a study of issues and generation of information which has direct input into the education system that we know.

From its inception, IVLA has had one primary purpose which continues to be the promotion of visual learning, thinking and communication, i.e., visual literacy, as being of great importance to children's education. Information generated independently of the Association and its activities supports the work of the Association and proves the viability of the concept of visual literacy.

Through its annual conference, IVLA brings together individuals from varied disciplines who are interested in visual education and are willing to talk with others about their work and its application to the field of education. The interaction of those involved in the conference is dynamic and long lasting. The effect profound.

The International Visual Literacy Association offers something quite unique to education in that learning has traditionally been print oriented. As habits and tradition can be broken, the Association offers both alternative and supplemental approaches to learning and communication.

Slowly, but in time, education will change. When it does there should be little doubt that active consideration will have been given to visual learning, thinking and communication and that they will be an integral part of the system at that time.

Join us, if you haven't. And, if you are a member, become active in the efforts of the Association. We need you.

THE FORMATION OF A NEW TASK FORCE ON THE THEORETICAL CONSTRUCTS OF VISUAL LITERACY

As a result of interest expressed at the 1976 International Visual Literacy Association Conference held in Nashville, Tennessee, a new Task Force is in the process of being formed for the purpose of identifying all those interested in the theoretical aspects of Visual Literacy as well as the possible implications such concerns might have on future research.

If you, or a colleague, would be interested in participating in the organizational and developmental phase of the Task Force's activities, contact:

Dr. Donald J. Fork
Chairman, Task Force on the Theoretical
Constructs of Visual Literacy
Department of Educational Media, RA411
Temple University
Philadelphia, Pennsylvania 19122

THE VISUAL SCHOLARS' PROGRAM

Ed. Note: The University of Iowa offers an interdisciplinary program in visual studies. The purpose of the program is to prepare students for teaching, research, development, and evaluation opportunities requiring an interdisciplinary perspective.

The goal of the program of studies is to prepare future teachers and researchers in the general area of visual studies with particular emphasis on visual learning, thinking, and communication (visual literacy broadly defined). The educational program will be interdisciplinary in nature such that each "visual scholar" will engage in a specified core of courses which will provide the knowledge base from cognate fields. In addition to the identified core, the program of studies will be developed in such a way that there is an opportunity to individualize each student's program so that particular strengths can be further strengthened and gaps in preparation removed.

Students in the program will have the opportunity to participate actively in the on going research program and a continuing seminar which will provide a forum for all persons in the visual scholars' program and all other interested faculty and students to share ideas and discuss future interdisciplinary research plans and emphases.

Further inquiries should be referred to:

The Visual Scholars Program
College of Education
The University of Iowa
Iowa City, Iowa 52242

Chuck McVinney

THE MEDIA RESEARCH CENTER

by Chuck McVinney
Director
Media Research Center
New England Screen Education Association
Concord Academy
Concord, Massachusetts

The Media Research Center and The New England Screen Education Association are two non-profit service institutions established to further the aims of media studies in secondary and elementary schools particularly. The Research Center was established by the E.E. Ford Foundation and is primarily responsible for the development and testing of classroom approaches to the study of the various media, including film, photography, TV and video. The center also houses a resource center for area teachers, including a screening facility and a library of short films for in house previewing. In addition the Center, in cooperation with the Screen Education Association produces newsletters and special monographs for its constituency.

The major goal of the Research Center is to disseminate information about media study as a serious component of the American educational system, and the main efforts of the Screen Education Association are directed towards identifying, training, and providing ongoing service to the educators actually working to implement such programs. As such the Screen Education Association provides in school consultations based on the needs of the teachers using that service, and carries out workshops and training programs continually.

At Concord Academy, a small private secondary school in Concord, Massachusetts, where these two institutes are based, an extensive model has been established over the last decade for other teachers to observe and investigate. Here over 40 courses have been written and taught to students in 9th-12th grades. The courses are as elementary as instruction in basic snapshot making and as sophisticated as advanced film genre study or instruction in advanced photographic chemistry. In between, courses in the history of cinema, super 8 filmmaking, Children and Television, and others, cater to the interests and needs of the students. Two full time teachers carry out 8 courses each semester, 16 different courses over the year. About 150 students enroll from a total school population of just under 300.

Materials are available from the Media Research Center and the New England Screen Education Association by writing to them at Concord Academy, Main Street, Concord, Massachusetts, 01742. There is a membership fee of $10.00 per year to cover costs of programs, publications, events and services. Other institutions pay a slightly higher fee. For more information, or an appointment to visit the Center, call 617-369-8098 or write. We look forward to interested colleagues who may wish to respond.

EDUCATING BOTH HALVES OF THE BRAIN

Ed. Note: The following is an announcement of a weekend symposium held November 20-21, 1976.

Our contemporary system of education teaches only half the brain. It is specialized for verbal-analysis, the process of examining, separately many aspects of a puzzle. What this process leaves out, of course, is an understanding of the relationship between things, the perception of whole systems.

Yet many concerned people in diverse areas of contemporary life, from students of the mind to those concerned with energy policy, to those concerned with health and healing note the loss of this holistic mode of knowledge. Our students are not being offered the education they require to understand the complex nature of the world and themselves, an education for the whole brain.

There is, however, a growing understanding among scientists and educators that the capacity to understand in a holistic manner can be educated, as the capacity for language can be trained. This symposium brings together the new scientific discoveries on the functions of the brain and consciousness, a knowledge of the differences in brain function between people, and innovative techniques in education in a new synthesis; we are now, perhaps for the first time able to draw methods and an understanding from both Western scientific and Eastern experiential traditions towards an education for the whole mind.

This symposium is intended for teachers, educational administrators, parents, and all those concerned with education. The speakers are leading thinkers on education, brain research, the study of consciousness and of teaching and human development in the East.

For further information contact:

Rita Ellix Katz
Division of Liberal Studies
School of Continuing Education
New York University
2 University Pl., Room 21
New York City 10003

Telephone: (212) 598-2371

INFORMATION FROM ERIC

All of the following reports were supplied to be ERIC Clearinghouse on Information Resources at Stanford University by the Children's Television Workshop, New York.

"Visual Literacy: Some Lessons from Children's Television Workshop". Children's acquisition of the basic cognitive operations may be changing due to television, particularly when animation is used. Among issues which must be considered are the nature of visual literacy acquired from television, and an examination of how television communicates and what its long-term effects are likely to be.
ED 122 806, EDRS price MF-83¢, HC-$1.67.

"Recording the Amount of Attention Given to Various Portions of the Screen". It is proposed that areas of the display screen designated by the production unit as important to some decision be isolated on one television monitor and the remaining area of the screen be isolated on a second monitor..
ED 122 808, EDRS price MF-83¢, HC-$1.67.

"Cues and Attention to the Visual Display in Children's Television". Research using the children's program, "The Electric Company," has shown that certain cueing techniques are powerful determinants of "looking" behavior.
ED 122 810, EDRS price MF-.83¢, HC-$1.67.

"Study Series Four: A Developmental Look at Eye Movement Patterns of Internally and Expernally Controlled Children Watching Two Instructional Modes".
To uncover the interrelationships of efficient eye scanning, internal control, and learning, a research model has been conceived which will test how much comprehension results when samples combining varying degrees of internal control and eye movement are exposed to different media presentations.
ED 122 811, EDRS price MF-.83¢, HC-$1.67.

"Visual Attention to Material in "The Electric Company," Summary of Attribute Research."
By observing the attentiveness of children watching "The Electric Company," the staff of Children's Television Workshop gathered detailed data on the visual appeal of the show.
ED 122 813, EDRS price MF-.83¢, HC-$1.67.

"Children's Attention to Television: The Effects of Audio-Visual Attention Factors on Children's Television Viewing Strategies".
Among the recommendations from this study were that the audio track should follow the onset of print with a delay long enough to orient to the print, and that cues should indicate the location of print.
ED 122 832, EDRS price MF-.83¢, HC-$1.67.

ORDERING INFORMATION: To order the above documents, send a check for the listed price (MF=microfiche, HC=photocopy), plus 21¢ postage, to: ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210.

OTHER INFORMATION about ERIC can be obtained from: ERIC Clearinghouse on Information Resources, SCRDT, Stanford University, Stanford, California 94305.

VISUAL LITERACY: BIBLIOGRAPHIES, REPORTS, & PEOPLE

Ed. Note: The following listing is not an all inclusive list of bibliographies, reports, and people. The material was contributed in in hopes of establishing a base for better research and communication for those interested in pursuing the area of visual literacy.

Bibliographies:

"The Effect of a Media Education Course on Children's Ability to Translate Concepts from a Written Language System into a Visual Language System," Ronald Polito, unpublished Doctoral dissertation, Boston University, 1976, University Microfilms # 76-21, 249.

Ed. Note: An 84 entry, annotated bibliography pertaining to visual literacy and media education appears in Appendix A of this document.

"Research on learning from pictures: A review and bibliography." Viewpoints (Bulletin of the School of Education, Indiana University), 1973, Vol. 49, No. 2, 94 pp.

"Visual Literacy: A Bibliographic Survey" available from D. Johassen and D.J. Fork, Department of Educational Media, Temple University, Philadelphia, PA 19122.

Extensive bibliographies and publications are available from The Center for Visual Literacy, Gallaudet College, Washington, D.C. 20002; (202) 447-0547.

"Delegates Resource List" distributed at the 22nd Lake Okoboji Educational Media Leadership Conference, August, 1976. Available from William B. Oglesby, Director, Audiovisual Center, The University of Iowa, Iowa City, Iowa 52242.

Reports:

"Research: Directions and Implications." A final group report in the 21st Annual Summary Report, Lake Okoboji Educational Media Leadership Conference, August, 1975. Available from William B. Oglesby, Director, Audiovisual Center, The University of Iowa, Iowa City, Iowa 52242.

"Visual Literacy: The Last Word," the 22nd Annual Summary Report, Lake Okoboji Educational Media Leadership Conference, August, 1976. Available from William B. Oglesby, Director, Audiovisual Center, The University of Iowa, Iowa City, Iowa 52242.

Ed. Note: This document represents the most extensive working paper collection to date in the area of visual literacy. Final group reports cover the following topics:

1. Implications for the Media Profession
2. Research and Theory in Visual Literacy
3. Source book for Implementing Visual Literacy (K-12)
4. Visual Literacy and Society: The Television Commercial
5. The Identification and Analysis of Selected Assumptions Underlying the Concept of Visual Literacy
6. Visual Primer: The Design and Integration of Visualized Instruction
7. Visual Literacy - Concerns in a Curriculum Design Process
8. Visual Literacy in Teacher Education
9. Visual Learning

People:

Ronald Polito
Boston State College
Boston, Massachusetts

Research Area: The history and development of film study, media education, and visual literacy at the elementary and secondary levels; also research pertaining to these programs.

W. Howard Levie
Audio-Visual Center
Indiana University
Bloomington, Indiana

Research Area: Experimental research dealing with memory for pictures.

Thomas Yih-wen Chen
Norfolk State College
Norfolk, Virginia

Research Area: How pictorial information is encoded, stored and retrieved by human subjects.

"The Business" in RTD

NATIONAL CONVENTION THEME SELECTED

THIRD CENTURY IMPERATIVE: EXCELLENCE IN EDUCATION

The coming year of 1977 marks the beginning of the third century of America's history as a nation. Looking toward the future of this country and its educational system, the theme for this year's convention is "Third Century Imperative: Excellence in Education." The following theme statement reflects the need for all educators to rise to challenge of excellence.

> Entering a Third Century, America is moving into a learning-intensive culture. This movement is creating a future which demands, above all, excellence in education for all people. The nature of this future will be shaped largely by the quality of human relationships and by the ability of an educated citizenry to cope successfully with the challenges of an increasingly complex society.
>
> Only the best methods from our educational traditions, blended harmoniously with the insights of a new era, will be sufficient to meet these challenges. The demands of this learning-intensive culture require a professional responsibility toward the pursuit of educational excellence. Such excellence can be achieved through the shaping of a desirable future, utilizing a balance and blend of materials, methods, and individuals.
>
> No single portion of the educational enterprise holds the key which alone will open the door to our common dreams and aspirations. The community of education is a complex, inter-dependent system involving all those concerned with learning - wherever and at whatever age it occurs. The creative participation of each segment of the educational community is essential for achieving the local, national, and world-wide goals of the next century.
>
> As a community of educators who work with tomorrow today, the Association for Educational Communications and Technology, acknowledges its leadership role in the development of new processes and new relationships to achieve those excellent learning systems required by a challenging future.
>
> The convention is dedicated to the principle that an open forum of information exchange and cooperative commitment will result in the growth of creative and desirable learning environments for the Third Century.

In keeping with this theme, convention sessions will focus on the sub-topics of lifelong learning; the quality of human relationships; cooperation with the educational community; and processes and techniques to foster excellence in education.

AECT NATIONAL CONVENTION, MIAMI BEACH, FLORIDA, APRIL 24-29, 1977

RTD PREPARES FOR NATIONAL CONVENTION

RTD promotes responsive and practical research and theory as it is related to the effective design and use of educational technology in teaching and learning.

Approximately sixteen hours of relevant research and theory literature will be accepted from the AECT general membership for presentation during the Research Papers Sessions.

RTD will also cooperate with other divisions and national affiliates for additional program time.

There will be an open board and business meeting on Monday, April 25, 1977 for all individuals interested in learning more about RTD.

Should you have program suggestions or questions about the convention sessions, contact:

Francis M. Dwyer
President Elect - RTD
114 Mitchell Building
The Pennsylvania State University
University Park, PA 16802
(814) 863-0668

RTD - CALL FOR PAPERS - 1977 NATIONAL CONVENTION

The Division of Research and Theory of the Association for Educational Communications and Technology (AECT) invites researchers to submit papers for presentation at the AECT National Convention at Miami Beach, Florida, April 24-29, 1977. The papers may require 15 minutes of presentation time and may deal with any phase of research in instructional technology. Completed research studies with data will be given preference. Presentations will be considered for inclusion in the program if received by December 10, 1976. This deadline will make it possible to use a "blind review procedure" to screen papers for program inclusion and to prepare the complete convention program before the convention.

The program will include both experimental (laboratory and developmental) and non-experimental (theoretical and methodological) papers. Considerations will also be given to evaluation projects (where data is available). Sessions will be organized to accommodate the wide variety of interests.

Those paper proposals which report primarily completed empirical research and theoretical positions should be submitted to the AECT Division of Research and Theory at the address below. Papers previously presented at other national scholarly gatherings may not be presented.

The author of each paper selected for presentation will be expected to provide a complete copy of this research report to a discussant by March 1, 1977. The discussants will be identified at the same time that notice is given of acceptance of the paper. The primary role of the discussants is to encourage submission of high quality studies and to stimulate dialogue and discussion.

Procedures for Submitting Papers

Reports of individual research projects will be 15 minutes in length with three to five minutes for questions. Those wishing to present papers must submit three copies of an abstract as follows:

1. A cover sheet containg the following information:
   a. Name and mailing address of the sender in the upper right corner.
   b. Title of paper as it is to appear on the program.

c. Name of author(s) title (Dr., Mr., Ms., etc.), and institutional affiliation(s) as they are to appear on the program.
d. A signed statement reading: "This paper has not been presented at other national scholarly meetings and if this paper is accepted and placed on the program, I promise to appear and deliver it. If unforeseen circumstances make this impossible, I will find someone else to read the paper and will notify the Program Chairperson of the replacement."

2. The abstract (1000-1200 words, typewritten and double-spaced on one side of white paper) containing the following information in order:
   a. Purpose
   b. Rationale
   c. Procedures
   d. Results
   e. Conclusions
   f. Not more than one page of supplementary tables, drawings, footnotes, etc.
3. A self-addressed postal card to be used to acknowledge receipt of the abstracts with complete addresses will receive notification from the Division concerning the acceptance or rejection of their papers for presentation.

Submit Proposals for Papers To:

Dr. William Daehling, Director
Instructional Improvement Program
Weber State College
Ogden, Utah 84403

THE RESEARCH & THEORY DIVISION NEWSLETTER IS ALSO SEEKING AND ACCEPTING CONTRIBUTIONS.

HERE'S THE PITCH

research and theory

The Research and Theory Division is one of several divisions of the Association of Education Communications and Technology. It is primarily interested in the promotion of responsive and effective research and theory in the educational technology field. Consider choosing Research and Theory as one of your divisions:

A The opportunity to submit research papers for presentation at the AECT National Convention.

B The opportunity to participate in planning the Research and Theory program at the AECT National Convention.

C The opportunity to compete for the annual cash prize and national recognition.

D An excellent newsletter that contains the most recent results of research projects in our field, reviews of new books, recent educational technology entries in the ERIC system, announcements of grant opportunities, summaries and reviews of educational communication and educational technology research.

E Information about the recent trends in media and program evaluation techniques.

F Contact with outstanding research and evaluation professionals in our field.

_____ **Enclosed is my $5.00 to join the Research and Theory Division.**

_____ **I have joined AECT with a comprehensive membership and wish to select Research and Theory as my free division.**

_____ **I am an AECT member and wish to be billed $5.00 for my membership in the Research and Theory Division.**

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