This document includes two presentations on research methods appropriate to research questions involving art classroom settings. "The Nuts and Bolts of Basic Research" (Read M. Diket) outlines the classification systems of research and establishes their basis in purpose and method. Systems represented are: (1) historical research; (2) descriptive research; (3) ethnographic research; (4) correlation research; (5) causal-comparative research; and (6) experimental research. Sharon D. LaPierre indicates that there is a unique knowledge base found in the arts that can be described as domain specific. Domain specific knowledge is that which is unique to the artistic process, such as the thinking and learning processes involved in the creating of art. This affects the way research is described, interpreted, or presented, and requires appropriate research methods to help art teachers evaluate and assess more effectively. LePierre's contribution, "Domain Specific Knowledge and Research Methods", presents research methods that can be integrated into the classroom setting in order to uncover, uncover, or disclose. (MM)
Research Methods & Practices for the Classroom Art Teacher

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9. The Nuts and Bolts of Basic Research
Read M. Diket

Educators try to push "bolts" into the holes in our knowledge base and to secure these bolts with logical and statistical "nuts." Experiments in laboratory-like settings test theory and lead to refinements in general understanding of educational outcomes. In a metaphoric sense, researchers can also use "wood screws." At these times they use research tools to describe, analyze, and interpret "what is." Additionally, educators may seek to construct generalizations out of real situations found in schools. Seeking real worlds represents the applied or practical form of research while experimental research secures some hold in the space of theoretical knowledge. Because education is itself an application area, "purer" or basic forms of research in the field are concerned with utility in the classroom. All methods are simply tools.

99. Domain Specific Knowledge and Research Method
Sharon D. La Pierre

What constitutes artistic research methods? There is a unique knowledge base found in the arts. It can be described as domain specific. Domain specific knowledge is that which is unique to the artistic process, such as the thinking and learning processes involved in the creating of art. Does this affect the way in which information or data is collected when doing research? Does this affect the way research is described, interpreted, or presented? Research methods appropriate to the visual arts can help teachers evaluate and assess more effectively. This presentation will acquaint teachers with research methods that can be integrated into the classroom setting in order to discover, uncover, or disclose.
I. The Nuts and Bolts of Basic Research

By

Read M. Diket
Basic research is oriented towards general educational goals. Not always of immediate and practical use, its primary purpose is to contribute to the development and refinement of theory (extension of the knowledge base). Basic research often uses laboratory-like settings.

Applied research seeks immediate usefulness and/or solutions to specific educational problems. In producing solutions to an immediate problem, applied research may contribute to the general knowledge base. Applied research stresses a specific setting and includes action research. Action research, conducted by teachers and administrators, aids in local decision making processes and very often (when combined with extensive review of research literature and strong methodology) interests other educators.

Evaluation research seeks to facilitate decision making regarding relative issues.

Evaluation research involves systematic collection and analyses of data to decide questions of cost, to compare curricula, or to make placement decisions. Reporting depends upon clear criteria for judgment.

Research and Development (R & D) stresses development of effective products for use in schools. Products developed to meet specified needs are field tested and revised.
CHARACTERISTICS OF A QUALITATIVE-QUANTITATIVE RESEARCH CONTINUUM IN EDUCATION ASSOCIATED WITH METHOD

Understanding Social Phenomena | Determining Relationships, Effects, Causes
Focus on Holistic Inquiry | Focus on Individual Variables
Context-Specific Interpretations | Context-Free Generalizations
Observer-Participant Roles | Detached Role of Researcher
Narrative Description | Control and Manipulation

QUALITATIVE
- ETHNOGRAPHIC
- HISTORICAL

QUANTITATIVE
- EXPERIMENTAL
- QUASI-EXPERIMENTAL
- CAUSAL-COMPARATIVE
- CORRELATIONAL
- DESCRIPTIVE

HISTORICAL RESEARCH

Procedure: Historical researchers objectively evaluate evidence in arriving at the most tenable account. Historical studies help educators to understand how and why educational movements appear and impact upon practice in the schools.

Data Sources: Written communications such as legal documents, records, minutes of meetings, letters, and interviews (oral testimony) are considered primary sources. Secondary sources contain information gleaned from primary sources and reflect historical states in our understanding of practices and events related to education.

Validity: The authenticity of documents is a problem of external criticism; problems associated with document authenticity or genuineness of data may be resolved by outside experts. Elements should be consistent with known biographical facts and the knowledge available in the period (its state of technology). Problems associated with internal validity are the responsibility of the researcher, including questions of expertise (authority), time delay, motives, and consistency within and among reports; the accuracy of the documents relates to internal criticism.

Inferential tests: None.

Limitations: Historians must qualify predictions and generalizations (patterns of factors may not repeat), depend upon the observations of others, and disclose when they fill in gaps in evidence by inferring; additionally, historians cannot control the conditions of observation, nor can they manipulate variables.

Sample Problem Statement: Organized programs of individualized instruction introduced in the 1960s are similar to the Pueblo Plan introduced in the 1890s, later known as the Winnetka and Dalton Plans.

Sample Hypthesis: Individualized instruction, introduced in the 1960s, was based upon previous practices that had been tried and discarded.

Note: Historical research differs from most behaviorist and social science studies in that its purpose is to record a "truthful integrated account of the relationships between persons, events, times, and places" (Best and Kahn, 1993, p. 85). In delimiting problems, formulating hypotheses or raising questions, analyzing data, testing hypotheses, and formulating generalizations based on probability historical research is arguably scientific. In reviewing the research literature, authors effect historical study.
**DESCRIPTIVE RESEARCH**

**Procedure:** Descriptive research determines and reports the way things are; this type is concerned with conditions and relationships that are observed, opinions that are recorded from subjects, processes and effects that are documented, and data that is categorized as evidence of trends.

**Data Sources:** Description depends upon appropriate sampling techniques and often uses the "accessible population" of a "target population." Typically, descriptive researchers assess attitudes, opinions, demographic information, conditions, and procedures. Data is often collected through questionnaire survey, interviews, or observation.

**Validity:** Must measure what already exists, so internal validity depends upon the instrument(s) used to collect and organize data. Another validity issue concerns naturalistic versus rationalistic observation. How reliable are the observations?

**Inferential tests:** Uses relationship analysis by regression or correlation table.

**Limitations:** There is no generalizability beyond what the reader infers from the report for assessment and evaluation research. When randomization is used in descriptive research, population characteristics are inferred from observations of samples. Variables and procedures are described in detail so that other researchers can replicate the study.

**Sample Problem Statement:** How do gifted, inner city high school students perceive their educational opportunities?

**Sample Hypothesis:** Inner ci , gifted students see educational opportunities afforded them as more limited in scope than expanded.

**Notes:** Assessment research describes the status of a subject of research at a particular time. It does not judge the situation, nor does it explain underlying reasons. No action is recommended.

Evaluation research examines the effectiveness of a program according to the institution's goals and intents; evaluation contains a value judgment about utility, desirability, and effectiveness. Researchers may recommend an action.

Descriptive research examines relationships between variables, tests functional hypotheses, and may develop generalizations, principles, and theories that have universal validity. Forms include developmental research, follow-up research, sociometric research, and observational research.

In some research classifications, direct types include ethnography or micro-ethnography, participant observation, and non-participant observation. Indirect types include content analysis and meta-analysis. Depending on how the data is organized, analyzed, and presented descriptive research is styled quantitative or qualitative.
**ETHNOGRAPHIC RESEARCH**

**Procedure:** Sometimes treated as descriptive research, ethnographic research describes in qualitative terms specific organizations, cultures, or perspectives. Educational ethnographers seek insights into educational systems, processes, and phenomena in specific contexts by making qualitative judgments and interpretations based upon observation. Ethnography refers to both the inquiry process and its product.

**Data Sources:** Subjects in a natural setting and their behaviors and habits of mind contribute the data which ethnographers organize and report. Observers may record field notes, conduct interviews, and systematically record observations. They can use records maintained by organizations, cultural groups, or individuals under study.

**Validity:** The researcher must not manipulate, simulate, or impose structure on the natural setting and its inhabitants. Investigators must represent multiple constructions adequately. To assess the external validity of a study, ethnographers attend to standards undergirding the conceptualization of the study and its components. They stress contextualization, interpretation of results in the context of the data collection and instrumentation. External validity can be strengthened by multi-site data collection. Internal validity deals with how well the findings match with reality and how well researchers are measuring what they think they are measuring; these researchers often use triangulation (qualitative cross-validation) of techniques or sources to assess the sufficiency of the data. Validity is examined in terms of the researcher’s experience rather than reality itself. Long-term observation or repeated observations, member checks of data, peer examination of emerging findings, participatory modes in writing up findings, and self examination of researcher’s bias are strategies which contribute to internal validity. An assumption underlying qualitative research is that reality is contextual, holistic, multidimensional, and changeable (rather than universal, singular, two-dimensional, and fixed).

**Inferential tests:** None. The investigator may report proportions and percentages.

**Limitations:** Ethnographic research focuses on how things are and how they got that way, not plans of action. The design limits generalizability except by reader inference. Cronbach proposes working hypotheses or perspectives, to replace notions of generalizability in social science research. People look for patterns to explain or guide experience of the world around them.

**Sample Problem Statement:** Often, ethnographic research does not originate from a strong theoretical base or urgent problem. The guiding question is "What is some kind of human phenomena, system, or process like in this setting."

**Sample Hypothesis:** Hypotheses do not necessarily precede the investigation. Hypotheses are generated and modified as the research proceeds.
Procedure: Correlational research is sometimes treated as a form of descriptive research. In correlational study, the investigator seeks to describe in quantitative terms relationships suggested by theory or derived from experience. Correlational studies often form the basis for prediction research.

Data Sources: Meaningful correlations are based upon appropriate sampling techniques and numbers, usually 30 subjects or more. Larger samples more closely approximate the "target population."

Validity: Must measure what already exists, so internal validity depends upon the instrument(s) used to collect and organize data.

Inferential tests: The researcher examines relationships by regression or correlation tests. A report usually includes a correlation coefficient (ranging from -1.00 to +1.00) computed between two or more variables. The test also yields r squared (amount of common variance explained). The r value, or Pearson r, is also called the product moment correlation. Sometimes a Spearman rho or eta ratio is computed to examine a non-linear relationship.

Limitations: Researchers obtain a limited generalizability with correlational research which depends upon how closely the sampled population matches the target population. However, the investigators and readers cannot conclude that X causes Y, only that variables are related.

Sample Problem Statement: There is a relationship between art ability and self-esteem.

Sample Hypothesis: Scores computed for individuals taking the Clark Art Test will correlate with individuals' scores on a self-esteem measure.

Notes: Correlational research attempts to determine if and to what degree relationships exist between quantifiable variables. It also tests functional hypotheses; and, correlational research can lead to experimental research which tests generalizations, principles, and theories that have universal validity.
CAUSAL-COMPARATIVE RESEARCH

Procedure: Sometimes treated as a form of descriptive research, causal-comparative study describes conditions that already exist. Also called "ex post facto" or after the fact, researchers first observe an effect and then attempt to establish cause. Causal-comparative research is useful when it is not ethical or humane to manipulate the cause (i.e. drug addiction; alcoholic parent), when information is needed to make decisions, and when guidance is sought for later experimental studies. Like experimental research, causal-comparative studies involve group comparisons. The major differences between causal-comparative research and experimental research are "manipulation" and "control." In causal-comparative research the alleged cause or treatment is not manipulated; groups already differ on some characteristic or in some experience. However, the researcher decides how the groups are formed by equating on extraneous variable, or matching, or by identifying criteria for homogeneous groups.

Data Sources: Groups are identified on some variable. Usually two or more groups are compared, rather than correlated. Comparison groups can be called the experimental and control groups even though the researcher does not manipulate anything. The independent variable is a pre-existing experience or characteristic. The dependent variable can be a test or data already available.

Validity: Lack of random assignment introduces problems with validity, both external and internal. Researcher must attempt to establish the degree of equivalence between groups.

Inferential tests: The t-test and ANOVA can be used in causal-comparative research.

Limitations: Caution is advised in reporting results because groups are not randomly formed. The researcher must conclude that X appears to cause Y; the true cause may be a hidden, or unobserved variable. Instruments that have not been validated are limiting.

Sample Problem Statement: Gifted, rural high school students take advantage of more educational opportunities (difficult content and course level) than peers who have not been identified as gifted.

Sample Hypothesis: Rural high school students identified as gifted have higher class rankings than their non-identified peers because they choose to take more AP or Phase 3 courses.

Notes: In causal-comparative research, the difference between groups (the independent variable) was not manipulated by the researcher. Cause-effect relationships established by causal-comparative research are at best tenuous.
Experimental Research

Procedure: Experimental research tests cause and effect relationships. Researchers manipulate at least one independent variable, attempt to control relevant variables, and observe effects on one or more dependent variables. The independent variable may also be called the "cause" or "experimental treatment." The dependent variable is also called the "criterion" variable, effect, posttest outcome, or difference. The purpose of the procedure is to confirm or disconfirm an experimental hypothesis.

Data Sources: Equivalent groups are formed randomly or by some other sampling procedure, exposed to a treatment, and compared on some outcome.

Validity: Generally considered as the most valid approach to statistical research, true experimental research controls for most threats to validity. Quasi-experimental designs control for some, but not all, threats to validity.

Threats to internal validity (history, maturation, testing, instrumentation, statistical regression, differential selection of subject, mortality, and selection-maturation interaction) may lead to observed differences that are not the result of the treatment.

There are also threats to external validity (pretest-treatment interaction, multiple treatment interference, selection-treatment interaction, specificity of variables, experimenter effects, and reactive arrangements). Population validity concerns to what persons results can be generalized. Ecological validity concerns the degree to which results are generalizable to other environments.

Researcher must balance control (internal validity) and realism (ecological, external validity). See especially validity problems with pre-experimental and quasi-experimental designs. True experimental designs control for most threats to study validity; however, these designs are the most difficult to arrange in educational settings.

Organismic variables, characteristics of subjects, and intervening variables coming between the independent and dependent variables also effect the validity of the experiment.

Inferential tests: Typical tests are t-tests, ANOVA tests, chi square tests, F tests (factorial analysis of variance).

Limitations: Treatments given for too little time (underexposure) and treatments not sufficiently different from control situations (operational definitions) may limit observance of effects.

Sample Problem Statement: A hands-on class or group research project is a more effective introduction to design problems in art education research than a lecture format.

Sample Hypothesis: Hypothesis usually sounds more global, "If you use X approach you will probably get better results than with Y approach."
II. Domain Specific Knowledge & Research Method

By

Sharon D. La Pierre
1. **The Politics of Research Method**

**A.** Quantitative vs. qualitative—descriptive & inferential stats—individual vs. mean score—subject vs. participant.

**B.** Validity and reliability—standardization vs. unfolding.
(See "Terms Related to Art and Affecting Reliability" considerations—page 3)

**C.** Authentic & practical vs. external validity concerns (transferable and generalizable findings).

**D.** Ethics of using qualitative method—informed consent—participant’s identity.

**E.** Quoting research from outside of the field—constructs very different in some instances from art.

**F.** Domain-specific knowledge and concerns for uniqueness.

**What is the nature of artistic intelligence?** It is not just emotional, feeling, affective behavior—more to it—learning and thinking styles—problem solving—creating—unique expressivity. What is the nature of being an individual and how does this uniqueness relate to the arts and creativity? It becomes a construct called **expressive spatial reasoning**. What is the basic problem involved in testing and researching the expressive spatial thinking process? An unseeable format that exists only in the mind. Imagery and memory schemata allow the researcher to have an outline or format for understanding the structure of the spatial thinking process.

**Construct: Expressive spatial reasoning**—thinking without words, non-discursive in nature. The process can be defined as the manipulation and organization of space to form complex and abstract mental imagery, a system of thinking based on figural structures or non-discursive, non-linear, non-literal modes of expression. What constitutes the construct?

- **Problem solving**—based on idiosyncratic behavior from within intrinsic knowledge.
- **Cognition**—the obtaining of knowledge through experience, environment, feeling, intuition, imagination, calculation, trial and error.
- **Thinking processes as learning style**—forming thoughts or ideas through sense experience and relating them as individual artistic style.
- **Imagery and visualization**—using all senses experience to model thinking and non-manipulation of these images.
- **Creating symbols**—creating an awareness of the creation of images through non-manipulation of mental imagery.
A theory of expressive spatial cognition based on the following:

- Drawing development as a child, a natural learning process
- Design principles as found in the visual arts, a syntax of figural structure that governs visual language
- Individual thinking patterns unique to artists: expressiveness, idiosyncrasy, behavior expressed in concrete forms, "expanded" or compositional thought.
- Doodling as a representation or manifestation of the thinking process on a spontaneous level, a gesture drawing or immediate thought.

2. Defining a problem that is specific to art—individually and uniquely focused.

A. "A Comprehensive List of Criteria for Developing a Research Problem Statement"—(See page 4). A problem statement is not the same as the purpose of a study and in the arts one can use visuals to define terms. Remember that art is creative and interpretive in nature.

B. "Example of a Problem Statement"—(See pages 5-8).

C. "Interpretive Research Method Based on Critiquing"—(See pages 9-12).
Terms Related to Art & Affecting Research Reliability

- performance-based
- content-based
- criterion-referenced

Idea, Process, Product oriented (Beattie, 1994)

- multiple perspectives
- personally relevant
- idiosyncratic
- egocentric
- perception-based

observation

understanding

imaginative

original

creative

intense

quality

values

themes, patterns

practice and mastery

automaticity of performance

visual

imagery

critical

integrative

synthesis

objectified or operationalized---meaning concrete form

expressive-based

skills

meaning

action

emotional

subjective

feeling

affective behavior

sensory

evolving thought

emergent

improvisational

open-ended

flexible

discovery-based

judgement

interpretive

explorative

sensitive

intrinsic

problem solving

space and spatial

potential

possibilities
A Comprehensive List of Criteria for Developing a Research Problem Statement

From
Book in Press..... Handbook on Artistic Research Methods

1. Give "real-life" descriptions of what happens when this problem situation exists. Go beyond mere details to include effects of the problem. Make the issue tangible to the imagination.

2. Identify the individuals who are affected by the circumstances of the problem.

3. Describe how these individuals are affected.

4. Give supporting evidence to establish that the problem really is an issue and that other researchers agree with your concerns.

5. Include questions to help illuminate the problem for the reader. Help the reader to understand the issue by problem-solving along with you. Let the reader see your line of reasoning.

6. Describe the problem in one of the following contexts:
   - historical
   - social
   - psychological (cognitive, intellectual, emotional)
   - philosophical (theoretical)
   - developmental
   - educational
   - interpretive (artistic perspective)

7. Describe the consequences of not solving the problem. Allow the reader to see the value of such research. This goes beyond just stating that it is a problem. You say it is a problem because...

8. Define any elusive terminology as you go along. This can be visual, as well as discursive.

9. Give examples to make theory more practical and concrete to the reader.

10. Identify the problem or issue as one facing a particular group such as educators, professional artists, students, etc.
Criteria Used

1. This is the overall problem that is being presented in the statement.

2. Identifying the particular group as collegiate art students (Criterion #10).

3. Describing the problem in an historical context (Criterion #6).

4. Giving an example to make the issue more concrete (Criterion #9).

5. Giving support to my claims (Criterion #4).

6. Describing how the student is affected by the problem (Criterion #3).

Example of a Problem Statement

Much of what is being produced in the art world today is based on conformity and trendy designing, on what the museum curators, art critics, and gallery owners are proclaiming as real, beautiful, and expressive of the times (Wolff, 1984). What is lacking in the art field is the expression of genuinely individual, original work or style. The cultivation of this idiosyncratic approach starts with the college art program, and many of these programs are deficient in the training and knowledge about what constitutes art of high quality in relationship to personal style. Many college art programs do not concentrate on the application of basic visual principles that allow the student to master mental fluidity and flexibility in manipulating concepts. Cultivation of knowledge to distinguish between "good" and "bad" designing or to be able to visualize and conceptualize the placement of space, forms, shapes, and color are important mental developments that are being ignored in collegiate visual arts education settings.

Design training is crucial because it is the link between expressing quality art based on principles and constructing meaningful and individually unique creations in the visual arts (La Pierre, 1983).

The traditional way of learning and teaching art has been to have students do derivative and imitative work. Historically, American art education has been characterized as having its roots in European method, that of precision, representation, and practice. It might be characterized as being more rigid in nature. All the way through school, students are encouraged to practice by reproducing great art from the past for painting classes, to categorize styles and artistic interpretations for art history classes, and to draw exactly what they see in front of them for drawing classes. According to a study by Doerter (as cited in Eisner, 1972, p. 193), the instructor's style of creating, painting in this case, greatly influences the style of the college student. This study implies that stylistic independence on the part of the student is difficult to sustain.

The chance does not occur for students to learn to develop a vitally unique approach to their work. Through the use of the traditional teaching method, the student is always conscious of how someone else visualizes the use of art elements. The basic...
art principles become something outside of the student's own work, outside of the student's own sense of creativity, vague intellectual concepts that only teachers can understand or that experience will teach, so the student tends to believe. Thus, the present day college art student is trained in the fundamentals of art appreciation on the level of the observer instead of the doer. Artistic development is not just the acquisition of skills and techniques in order to imitate good designing. Rather, it is the developing of a mind to achieve uniquely inspirational work that will express the conceptualization of the individual artist as self-visualized.

What are the consequences of not teaching or encouraging students to develop individual style? Without practice in generating an individual approach, the historical and technical aspects of making art take over merely as an habitual skill because the mind is not educated to design with freedom and flexibility in order to perpetuate a generous supply of problem solving alternatives. One of the biggest consequences of not teaching individual expression may be that society will run the risk of losing the knowledge of what quality art is because no one will be able to recognize it any longer; replication of ideas and substanceless interpretations will become the standard, replacing individually original creations that once inspired humankind.

Another consequence of ignoring the individual's style development is the frustration of the person doing the learning. Most students turn to art to begin with because of their innate uniqueness and thinking patterns. Without an avenue to express these qualities, frustration, anger, and eventual dislike for creating art will develop because he thinks that it cannot be done. Duncan (as cited in Cuzzort & King, 1980) believes that a failure to reach goals of expressing an ideal concept induces a sense of incompetence.

Most students come out of school believing that everything in art has been done. This is a concept that has been generated by the teaching method of replication and from a lack of understanding by the educational field about how to approach the subject of artistic individuality. One of the main things in the field of art that needs to be explored in depth is the individual's developmental process of perceiving what art is as an expression of personality and thinking habits peculiar to
that individual doing the creating. It is accepted widely that children naturally express these factors in their work, but the college student has to relearn them through education and rethinking the obvious (Edwards, 1979). According to Winner (1982, p. 387), "Because works of art are unique, aspects of the process by which they are made may be specific to the artist in question...individual differences may characterize artistic creativity to a far greater extent than ordinary domains such as perception, language, and memory."

Figures 1 and 2 are examples of how artistic mental conceptualization, or visual thinking used to reflect personal style, is performed by the artist as a mental seer (La Pierre, 1987). Figure 1 is a mental depiction of an ordinary chair, lamp, and table. Figure 2 represents the expansion, stretching, and distortion of the ordinary into the unique. The user of this technique solves visual problems not just with the orderly placement of familiar shapes, but as space, as the ins-and-outs of specific forms, as the three-dimensionality of thought, and as the possibilities for generating ideas. This process not only solves artistically visual problems, but it allows the user to do it in an individualized fashion, personal to his or her own thinking habits. As described by the philosopher and artist, Desiderius Orban (1975, p. 38), "Style and content are linked together with individual style of the artist and it is impossible to separate one from the other."

Thus, the issue of not fostering individual expression in the learning process of developing artists creates an educational problem that could lead to mere novelty created by an imitative
learning process. What happens to the possible artistic visionary genius or to the individual who may set a trend instead of following one? The questions arise as to how does the teaching of art, the methods or approaches, affect the individual student's approach to originality, and are these various methods of teaching those that develop potential for individually expressive styles? Or, do fashionable or recognized artistic trends affect the teaching methods and direction of the college art curriculum?

Problem Statement References


**Interpretive Research Method Based on Critiquing**

From *Handbook on Artistic Research Methods*

<table>
<thead>
<tr>
<th>Descriptive Narrations and Statements</th>
<th>Elucidation and Meaning</th>
<th>Findings</th>
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- Descriptive Impressions---Impressions that are described, but not interpreted.  
The purpose of description is to differentiate features and characteristics by comparing observations to impressions. | - Comparative questioning  
*Example:* What is the particular activity setting? How does this activity setting compare to other settings of the same nature? (This kind of comparison can draw on the personal expertise of the critic, as well as other research findings.)  
- Definitions of terms (by criteria) to focus and limit discussion.  
*Example:* An activity setting constitutes an environment where the individual or individuals are engaged in the learning process such as: (1) a teacher-student session (classroom); or (2) the manufacturing of a product session (either creating or practicing). | - Explanations to illuminate  
- Discoveries (unfoldment)  
- Open-ended patterns of growth |

The purpose of this kind of questioning method is to lead to in-depth discussion for interpretation and critical analysis of values and qualities. Comparative questions lead to statements that lead to interpretations, and in the end lead to critical judgements.

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Interpretive Research Method Based On Critiquing
By
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The process of critique is an observation method used to determine questions that lead to disclosures for the purpose of understanding relationships through comparison (a comparative questioning method). These differentiations are observed in an activity setting made up of one or more individuals. An activity setting constitutes an environment where the individual is engaged in the learning process such as: (1) a teacher-student session (classroom or private lesson); or (2) the manufacturing of a product session (either creating or practicing). These criteria represent various levels of learning.

Eisner (1985) explores extensively the concept of criticism as a valuable and revolutionary method of educational inquiry. He describes criticism as "an empirical method. The adequacy of criticism is tested on the work itself. If what the critic describes cannot be seen in the work, his criticism fails to perform its function. In short, what he points out must be capable of being seen (p. 84)." This could be considered a form of face validity where the investigation "appears to cover relevant content" (Borg and Gall, 1983).

Eisner's method of criticism requires the poetic vehicles of metaphor, simile, and suggestion to describe, interpret, and appraise what is being observed. The ability of the critic to use expressive language as a method of painting, rendering, or disclosing the illumination is very important to Eisner's method.

What if someone has the sensibilities to differentiate what is being observed, but may be less apt to articulate it in a discursive manner? Perhaps a method of comparative questions can allow an alternative form of criticism for research purposes to emerge. Although this method needs further study, it is described as follows.

Method

Description. This is a factual portrayal made up of rich, in-depth depictive information and statements about the properties that constitute the activity, setting and environment, or individuals. These data are verifiable through direct observation with no reference to interpretation or commentaries. For example, what are the conditions of the observation? What is the method of conveyance (communication) that underscores the impressions made on the critic? Are they visual or verbal? What are the features or characteristics of the conditions or individuals being studied? Are there distinctive peculiarities in regard to the situation? What, how, when, and where represent the information gathered in this section, and it is not unlike most other types of descriptive research methods.

What makes this method different from other forms of descriptive research is that the data attended to are representative of the critical researcher's involvement in processing the unfoldment of the story being observed. The expertise of the researcher is important and significant and requires training in methods of "extrapolated observation." Extrapolated observation is the ability to "feel" the observation as a multidimensional concept which translates the emotional awareness (impressions) into meaning for the purpose of clarification and understanding. According to Eisner (1985, p. 81), the critic must develop "very refined sensibilities, that is, he must be able to see the elements that constitute a whole and their interplay. Second, he must be capable of rendering his perceptions into a language that makes it possible for others less perceptive than he to see qualities and aspects of the work that they would otherwise overlook." The mastery of such descriptive ability as a critical researcher focuses upon "qualities within and about conditions beyond" (Clark and Zimmerman, 1988, p. 88).

Not all observed data is of equal importance and may not be reported. On the other hand, something that appears to be minor may turn out to be significant when combined with another gathered piece of information. This is what is meant by multidimensional and may only be sensed initially by the critic, but may
come together at another point in the research process (e.g. the formulation of comparative questions for instance) where an impression or imprint made on the critic may clarify the appearance of something being observed. So, impressions made on the critic may be described in detail in this section as well. These Impressions should be described as an observation without interpretation. They should be labelled as impressions. The critic's descriptive impressions, as well as the more factually observed descriptions, will be used to formulate the elucidations and meanings as described in the next section.

Data can be gathered through the use of triangulation. This qualitative method analyzes several sources of information in the process of describing and collecting data (Goetz and LeCompte, 1984). For example, the critic's Impressions are one source; direct observations are another source, and Interviews or conversations may be another source, and so on. Narration of the observation can be in a verbal form, similar to an experience in progress, where an audio tape recorder is used. Note taking might also be employed, but the critic needs to have an immediate way of preserving observation in a concrete form that is easy and fluid.

Elucidation and Meaning. This next step in the inquiry process requires the formulation of patterns so that concepts represent specific values or qualities. This is elaborated through the use of a comparative questioning method. The listing of questions and the comparing of these questions to corresponding questions helps to expunge explanations. These comparisons create metaphorical images where parallels may be drawn for interpretive purposes. The judgement as to the kinds of meanings is based on and influenced by the manner in which the observations were made and by the comparisons extrapolated from these observations. According to Welitz (as cited in MacGregor, 1988, p. 48), "the critic's explanations often involve interpretation. Interpretations function as hypotheses about what is important."

In order to increase the adequacy of the questioning process, definition of terms by criteria is needed to identify what is most important to be interpreted. There may be different and varied answers to each question, making this whole process an open-ended approach, and definitions will help to focus and limit the scope of the questioning method.

Once the comparative questioning process and the definition of terms have evolved, how can the observed activity of the individual or group be discussed or elucidated? The questions and definition of terms impose a created framework to discuss the substance of the observations for interpretive purposes. The critic's interpretations are a natural outgrowth of his/her involvement in the process, because the questioning process takes on this interpretive nature that forces the inquiry process of criticism to clarify, validate, compare, justify or assess. Comparative questions lead to statements that lead to interpretations, and in the end lead to critical judgements. For Sibley (as cited in MacGregor, 1988, p. 49), "effective criticism depends on one's ability to see the features...and to exercise taste when talking about these features."

Findings. The findings of this method represent a critical point of view that is derived from conceptual distinctions made by the comparative questioning process between descriptions and meanings. The findings may be of various meritorious qualities and values, not one specific truth, but rather a combination of discoveries. The critical researcher takes on the role of an expert in the purpose of developing deep associations, patterns, and comparisons, discussing the structures of similarities and differences.

Summary. The main task of the critic is that of observing certain features in order to discuss these features in a critical, in-depth manner, and then to interpret these as findings that illuminate. How the critic develops the inquiry task is of a personal nature requiring appropriate measures to describe, question, interpret, and judge. The ethical character of the critic is at stake in the reporting of the results because the process links the critic (as the interpreter) to the inquiry process in a very personal manner. This is not a method to be taken lightly because it requires much involvement by the critic. The process must be deeply respected in order to avoid any misinterpretation. What one sees is not necessarily the "truth." The combination of seeing and feeling (impressions) allows for recovery and the unfolding of knowledge. The table on the cover page of this paper outlines
the process in regard to this method.

References


