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Telecommunication technologies and art education: Making connections for inservice staff development

Broadus, Cassandra Ann, Ph.D.

The Ohio State University, 1994
TELECOMMUNICATION TECHNOLOGIES AND ART EDUCATION:
MAKING CONNECTIONS FOR INSERVICE STAFF DEVELOPMENT

DISSertation

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Cassandra Ann Broadus, B.F.A., M.A.

* * * * *

The Ohio State University

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To my late father, Lloyd Z. Broadus, M.D., who instilled within me the value of education and a love for knowledge
ACKNOWLEDGEMENTS

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CHAPTER I
INTRODUCTION

Recent developments in telecommunications technology, such as two-way interactive video networks and computer networking, enhance the possibilities for communication and information technologies for education. These technologies are already having an impact on math and science education (Ruopp, Pfister, Drayton, & Gal, 1993) and have unequivocal prospects for art education, as well. In light of these technological developments, there is a new vocabulary that is emerging throughout educational literature. Therefore, a glossary of terms related to telecommunication technologies and distance education is included in Appendix A.

Telecommunication technologies provide new options for inservice staff development programs. Developments in these technologies are particularly important for school districts who are obliged to offer quality inservice staff development for administrators, faculty, and staff. This involves staff development in all subject areas from math to foreign language to the visual arts. Supporting professional development for all teachers, including art teachers, is an on-going concern for school districts. Inservice staff development programs have "become a major activity, involving the time and resources of many people and making extensive demands on the school system budgets" (Fenstermacher & Berlinger, 1985, p. 282). However, as funding for education becomes increasingly limited, school districts must consider alternative possibilities for staff development without sacrificing the quality of inservice teacher training programs currently offered.
Guskey (1986) wrote that many inservice training programs fail because they do not take into account two significant ingredients: 1) "what motivates teachers to engage in staff development, and 2) the process by which change in teachers typically takes place" (p. 6). There are factors that should be of concern to all school districts actively engaged in planning staff development programs. First, teachers are obligated in many states to maintain and/or renew their teaching certifications by attending various professional development programs which offer Continuing Education Units (CEU's) and/or graduate credit through local universities. The CEU's and/or graduate credits ensure solid professional advancement, thus serving as motivational rewards for teachers who attend inservice staff development programs. Second, teachers prosper from opportunities for which they can come together to share ideas and discuss issues related to their classrooms. It is through classroom-based activity sessions such as these that teachers acquire new ideas for change.

In recent years, a number of technological advancements, such as satellite-delivered teleconferencing, interactive video networks, computer conferencing, and electronic networking, have changed the way some educators deliver instruction to their students. These "educators are calling for new approaches....Educators involved at every level of our school system see the enormous potential of information technology as one important tool to help facilitate the necessary transformation of education" (Ameritech, 1993, p. 1). This includes not only the transformation of education for students, but for inservice teacher education programs as well.

Telecommunication technologies greatly enhance the possibility for communication in a distance education setting. Distance learning technologies, such as interactive video networks and computer networking, can make considerable contributions to education in general and distance education in particular (Ameritech,
1993; Annenberg/CPB Math and Science Project, 1993). These technologies can provide outstanding resources for both students and teachers. Inservice teachers require continued up-to-date information in topics such as curriculum reform, current trends and issues, and school district mandates. According to Moore (1987a), an expanding need exists "for professional continuing education..." (p. 4). A U.S. government report on technology and education stated:

We need to find ways to maintain and upgrade the skills and knowledge of those already in the classroom....Distance learning technologies offer a resource for meeting these goals. (U.S. Congress, 1989, p. 87)

Staff development through distance learning can provide new formats for school districts to consider in staff development program planning. These include staff development programs offered via an interactive video network or a computer network. Networks can provide teachers with opportunities to participate in staff development programs which otherwise might be impossible due to time constraints and geographical location. Kelleher and Cross (1985) referred to teleconferencing as "a meeting of minds" (p. 3) which can move ideas, not people. Since staff development involves the updating and communication of information to inservice teachers, a technologically based format is appropriate. The advantages for using this type of educational format for staff development are highlighted throughout the literature (Davis, 1992; Fennimore, Donnelly & Jones, 1988; Hixson & Tinzmann, 1990; Jones, 1988; Lawry, 1985).

Interactive video networks have many lively offerings. Important advantages of these technologies for inservice staff development are:
1) Teacher isolation can be minimized when they are able to communicate with teachers in other schools and in areas other than their immediate geographical location, and

2) the interactive element...provides opportunities for teachers to hear, see, and talk with an expert in the field (Fennimore et al., 1988).

However, logistical problems have hampered teleconference program designers. These include (a) programming to meet schools' varying timetables, (b) assuring appropriate instructional needs, and (c) coping with technological limitations and ignorance of technology by district personnel. In addition, the interactivity that these technologies provide is often not fully utilized. For instance, in the case of traditional satellite teleconferences, the educational program is broadcast from a studio uplink to a satellite and bounced back to any number of receivers (downlinks) where it is watched as if it were a taped program. The interaction segment of the programming may involve a simple question and answer segment at the end of the teleconference.

Interactive video networks, however, have begun to change the look of teleconferencing. Since presenters and participants are linked in real time, the nature of each interactive video session is shaped by the participating "learners". In this situation, "a set script cannot predict what a student [or teacher] will ask or answer in any session or where the weight of the planned content will in fact fall" (Naiman, 1992, p. 11). With the emergence of two-way audio/video teleconference capabilities, new ways of presenting information and involving participants as well as new flexibility and responsiveness is now required. Therefore, redefining and rethinking instructional programming for staff development teleconferences is then necessary.

The simultaneous use of interactive video networks and computer networking presents numerous possibilities for staff development programs. "Electronic
communication [computer] networks provide a definite possibility for a partial solution to staying current" (Lilley & Dangler, 1989, p. 18), thus providing opportunities for the presentation and exchange of current education information. These technologies provide geographically distributed individuals opportunities to collaborate, in real time, using audio, video, text, and graphics during inservice staff development programs.

Existing computer networks such as Internet can provide teachers with a rapid forum for the exchange of ideas, a means of communicating with colleagues, and access to a wealth of resources worldwide. The Internet is the world's largest computer network and consists of a group of interconnected national, regional, and campus networks that use the same communication protocols. Only seven years ago, there were only a few thousand Internet users. Today the number of Internet users "has increased a thousand-fold" (Krol, 1992, p. 1). This network carries a wide range of informational opportunities for users. In addition to simple electronic mail (e-mail) exchange, users have access to: (a) bulletin boards (i.e., information groups who are interested in particular topics; (b) file transfer protocols (ftp) which allow the user to send files or graphic images to another person; (c) two-way synchronous conversations with other Internet users; (d) group conferencing; and (e) access to databases, libraries, and resource materials from all over the world.

Interactive video networks and computer networking can undoubtedly affect the organization and implementation of staff development programming in the future. A distance education format provides beneficial professional staff development opportunities.
For those of us who have worked in schools that keep teachers distant from one another and condemn us to the chill of isolation, the idea that a teacher in Arizona can seek the counsel of a teacher in Florida is nothing short of exhilarating. (Futrell, 1988, p. 2)

Teachers can begin to expand beyond the isolation of their classrooms to collaborative experiences with others. Distance learning technologies can assist in providing such collaborative ventures. Teachers who find themselves working in isolation in their buildings with little time for collaboration with other educators throughout the district now have extended opportunities for professional growth.

These opportunities should be available for all teachers from all subject areas, including art. However, staff development programs which have put distance learning technologies to use have predominantly been in the areas of math and science education. The utilization of these technologies within art education staff development programs has been extremely limited. Prior to this study, an art education inservice staff development model which used a interactive video network and computer networking for the delivery of content was not in place. This leads me to believe that art educators may have not yet fully realized the value and potential of these technologies for the delivery of art education content.

**Statement of the Problem**

Distance learning technologies are rapidly becoming important resources for schools everywhere. Many districts, however, have not yet made solid decisions about how to utilize these technologies to strengthen existing staff development programs and to meet the new challenges brought about by educational reform. In addition, content and instructional strategies amenable with these technologies have yet to be developed.
The time is right to address the problem of studying ways to utilize interactive video networks and computer networking technologies for the delivery of content for art education inservice programs.

This study was structured in three phases and organized around the following set of questions:

1. What interactive distance learning staff development models are in place and which one(s) may be more appropriate for staff development in art education? What aspects of art criticism literature are appropriate for inclusion in an interactive staff development program?

2. What technology and content factors should be considered when designing an effective interactive art education staff development model for the delivery of art criticism content?

3. How might I test the interactive staff development model developed for this study to determine if distance learning technologies, namely an interactive video network and computer networking, can effectively deliver art criticism content in an inservice art education workshop series?

4. Based on the outcomes of my study, how might the use of interactive video networks and computer networking for inservice staff development in art education unfold in the future?

**Purpose of the Study**

Telecommunication technologies, such as interactive video networks and computer networking, provide options for school districts to consider in staff development program planning. The purpose of this study was to find out if interactive telecommunication technologies, such as an interactive video network and computer
networking, can be effectively merged with art criticism content for a six-week art education inservice staff development program. Art criticism content is interactive in nature and, thus compatible with the interactive technologies used in this study. Critical inquiry sessions can provide for interactive dialogue to be distributed via the interactive technologies. My study provides insight as to how art criticism instruction can be conducted in telemediated environments.

Significance and Justification

The emergence of telecommunication technologies, such as interactive video networks and computer networking, and the potential future convergence of these technologies could provide the educational field, including art education, with staff development alternatives that, in the past, were not available. This study permitted an in-depth examination of one use of telecommunication technologies for inservice staff development in art education in a limited geographical region and raised a number of questions for further research.

The instructional model developed for this series provides a prototype which incorporates interactive content with interactive technologies, and provides an alternative for staff development planners to consider. An interactive inservice staff development model, such as the one developed for this study, is not currently in place, and I found no similar staff development models described in the art education literature.

Description and Organization of the Study

This study centered around the development and implementation of a six-week staff development series that focused on art criticism content and critical inquiry.
methods for the classroom. The six-week series had two unique characteristics: (a) the use of two telecommunication technologies - an interactive video network and computer networking for the delivery of art criticism content, and (b) the incorporation of face-to-face sessions in conjunction with telemediated sessions. (For the purpose of this study, large group interactive sessions refer to instructional sessions conducted via the interactive video network. Small group face-to-face sessions refer to break-out sessions conducted at area sites.) During the series, the art criticism content was delivered using interactive distance learning technologies. Via the interactive video network, teachers in four area sites in Ohio were provided opportunities to communicate using audio and video and work collaboratively with the presenter and participants (see Figure 1). Using computer networking, workshop participants were able communicate and work collaboratively in a text-only interactive environment.

![Interactive Great Seal Network Sites Utilized During the Six-week Staff Development Series](image)

*Figure 1. Interactive Great Seal Network Sites Utilized During the Six-week Staff Development Series*
To help organize and provide a framework for the research questions, this study was chronologically divided into three stages: Phase I, II, and III. (See Chapter III for a diagrammatic representation of the research timeline and scope of events.)

During Phase I of the study, I conducted a review of literature from the areas of teacher education and communication to discover what interactive telecommunication staff development models are in place and which one(s) might be appropriate for staff development in art education. Phase I also included an in-depth review of art education literature to examine select art criticism models and content from the field of art education. (Criteria for which these models were selected from the literature is included in Chapter III.) Content and concepts from the art criticism literature review were then selected and used during the development of a six-week interactive staff development model in Phase II.

In Phase II, I designed an inservice staff development instructional unit for the six-week series. Content for the series was taken directly from the art criticism literature and the organization for the study was completed after reviewing communication and teacher education literature. Phase II entailed the development of the interactive inservice staff development model that brought together interactive technologies with interactive art criticism content and incorporated both face-to-face and telemediated learning environments.

Phase III - the implementation phase of the study - lasted for six weeks and involved conducting the study and gathering data to determine outcomes of implementing the model.

Since art criticism is "informed talk and writing about art for increased understanding and appreciation of art" (Barrett, 1992, p. 115) and is interactive in nature, it was not only appropriate content for this staff development series but also
compatible with the interactive technologies used in this study. Art criticism allows people to examine their encounters with art and put these experiences into language. Thus, art criticism content cuts across the curriculum, making critical inquiry procedures and content important to classroom teachers as well as art specialists. The participant audience for the study included elementary classroom teachers, secondary teachers from various content areas, art specialists, and administrators from Ross and Pickaway County and Chillicothe City Schools. Because of this diversity, it was especially important that the series' art criticism content be relevant and applicable to each and every participant. Hence, the series not only presented art criticism content, but also provided opportunities for participants to draw upon their knowledge of other content areas (viz., language arts) and make interdisciplinary links between language arts and art criticism. For this reason, the six-week series was titled "Visual Art and Language Arts: Making the Connection".

Background to the Study

The Great Seal Education Network of Tomorrow

The Chillicothe Telephone Company, in celebration of its 100th anniversary in 1995, donated the use of advanced, broadband fiber optic telecommunications facilities to connect Offices of Education and high schools throughout Ross and Pickaway Counties. This network institutes an interactive two-way video distance learning environment called The Great Seal Network of Tomorrow. The network uses fiber optics to interconnect various educational centers across Ross and Pickaway Counties in Ohio. Currently, the following locations are connected via the network: (a) Chillicothe High School, (b) Huntington High School, (c) Zane Trace High School, (d) Uniota High School, (e) Ohio University-Chillicothe campus, and (f) Pickaway-Ross
Joint Vocational Center (Great Seal, 1993). However, only four of these locations were utilized during this study.

The Great Seal Network goals and objectives relate to education, life-long learning, economic development, and community outreach. The six-week workshop series conducted during this study specifically relates to the following goals of the network:

* To provide an interactive audio-video network to network members to allow opportunities for distance learning.
* To facilitate interaction among business experts, educators, and students.
* To establish a vehicle for quality teacher inservice.

(Great Seal, 1993).

Activities for member schools utilizing the network include: (a) expanding and enhancing curriculum offerings; (b) providing opportunities for video conferencing in various disciplines; (c) providing staff development programs, including credit courses; (d) sharing educational resources (i.e., technology, human, and curricular); (e) providing remedial services and tutoring; (f) providing access to educational networks for research; (g) providing access to global communication networks; and (h) providing parenting classes, adult basic education classes, continuing education classes, and community meetings (Great Seal, 1993).

**Computer Networking**

The school districts and offices of education of the Great Seal Network consortium currently have electronic mail (e-mail) and Internet access through the South Central Ohio Computing Association (SCOCA). SCOCA provides various computing services for districts throughout South Central Ohio. These services include electronic
mail; budgetary and payroll programs; student records including attendance, grade
cards, and scheduling; and reports to the Ohio State Department of Education.
According to Steve Marion, SCOCA accounts manager, SCOCA does not issue
accounts to individual district personnel without signed permission letters from district
superintendents (personal communication, November 3, 1993). With superintendents'
authorization, teachers can acquire a SCOCA account and have access to electronic
mail; data networks such as OARnet, Internet, EDnet, libraries, and other data sources.
For this study, permission letters were acquired and accounts issued to each workshop
participant. (For further SCOCA account acquisition information, refer to Chapter IV.)

Limitations to the Study

On-site locations used during the series were limited to the interactive video
classrooms of The Great Seal Network of Tomorrow. Participants were self-selected
by virtue of their having registered for the series. Therefore, the study is limited in its
representativeness and does not allow for universal generalizations to the population of
all staff development teleconferences and all potential users. However, it must be noted
that since the physical arrangements of interactive video classrooms are somewhat
similar in nature, the results of this study may have transferability (Donmoyer, 1990) to
analogous situations.

As the researcher, my connection with the series might have been a barrier to
frank responses from those participants who participated in the study. For this reason,
multiple approaches to data collection were used to document the activity over the six
weeks series (see Chapter IV for a description of data collection methods).
Summary

In this chapter, I presented an introduction to the study and posed research questions that served as a framework throughout the study. Background information surrounding the study was presented as well as a justification for and limitations to the study. In the following chapter, literature from the fields of education and communication will be selected, reviewed, and analyzed toward the development of the staff development model.
CHAPTER II

PHASE I: A REVIEW OF EDUCATION AND COMMUNICATION LITERATURE

This chapter presents supporting literature from the fields of teacher education and communication. The first section begins with an attempt to define staff development as it applies to inservice teacher education and presents select approaches currently being used by school districts in staff development programs. The discussion then turns to an examination of distance education literature and presents recent movements to utilize distance education for inservice staff development. Last, I present group communication issues from communication literature.

Issues from this literature were considered during the development and implementation of the staff development model. Therefore, throughout Chapters II and III, I have interspersed personal anecdotes and implementation ideas with related literature. I believe that these help set the context for the study and correspond with the narrative format used in subsequent chapters.

Defining Inservice Staff Development

During the 1980s, staff development was the focus of numerous research reports, articles, books, conferences, and workshops. State legislators and administrators of local school districts saw staff development as a key aspect of school improvement efforts (Sparks & Horsley, 1989).
The terms "inservice education", "staff development", and "professional development" tend to be used interchangeably to describe both the process of individual development and organizational change. Cawood and Gibbon (1981) described staff development as a continuous, experiential involvement by a teacher in the process of growing. Morant (1981) referred to inservice education as the education intended to support and assist the professional development that teachers ought to experience through their working lives. Sparks (1984) considered it to be any training activity that helps teachers improve their teaching skills.

Traditionally, however, these "training" activities have favored a "top down" approach with the "transmission of knowledge to passive receivers [teachers]" (O'Sullivan, Jones, & Reid, 1988, p. 116). The results of an early American review by Joyce, Howey, and Yarger (1976) provided a discouraging account of inservice programs. Data reported were clearly negative, describing the programs as weak and as relative failures. The phrase "inservice teacher training" or "staff development" unfortunately carries a great deal of negative undertones.

It implies a process done to teachers; that teachers need to be forced into developing; that teachers have deficits in knowledge and skill that can be fixed by training. Now, as a teacher, how eager would you feel about co-operating in a process in which you are presumed to be passive, resistant, inadequate, and one of a faceless, homogeneous herd? This is hardly an ideal set of conditions for adult learning, support, or development. (Clark, 1992, p. 75)

Educational leaders, however, have begun to recognize the need for alternative formats for inservice staff development. Recent trends in staff development advocate a move from authoritarian modes of delivery towards more interactive, process-oriented, participatory models. In these situations, the teacher or participant is "now seen as an
active learner and one who already possesses considerable talents and skills in the management of knowledge and learning." The task of the presenter or staff development personnel, then, "is to construct activities which allow these [talents and skills] to be identified, shared, practised, and 'owned' by the group" (O'Sullivan, et al., 1988, p. 119).

Sparks and Loucks-Horsley (1989) discussed five models of staff development, one of which was the training model. This model involves teachers' acquisition of knowledge and skill development through individual or group instruction. Typically, this staff development model is implemented based on a clear set of objectives. Based on their research, Joyce and Showers (1988) determined that, depending upon the desired outcomes, the training model might include an investigation of theory, demonstration or modeling of a skill, practice of the skill, input, and technical assistance in the workplace. Sparks and Loucks-Horsley (1989) pointed out two underlying assumptions that undergirds the training model: (a) "...there are behaviors and techniques that are worthy of replication by teachers in the classroom", and (b) "teachers can change their behaviors and learn to replicate behaviors in their classroom that were not previously in their repertoire" (p. 48).

Staff development programs need to not only deliver pertinent content in an interesting yet informative format, but should pay attention to the teacher's needs as a learner, individually and in groups with each other, thus promoting personal discovery and growth for each and every participant. Diamond (1991) wrote, "...Personal development has remained the missing link in teacher education" (p. 11). He discussed an approach to teacher education called Personalistic Teacher Education (PTE). This approach adopts a humanistic perspective and outlines effective inservice education as a highly personalized affair. PTE argues that teachers each develop in a unique way and
that they must be helped to formulate personal agendas, adequate selves, and keen appreciations of the needs of others. Diamond (1991) contended:

Educating effective teachers involves promoting their 'becoming' or their personal discovery rather than training them precisely in how to teach. Teacher education should emphasize meanings rather than imitated behaviours and should focus more on the teachers' subjective experiences and less on objectively gathered or received information about teaching and learning. (p. 11)

Teacher education literature is rich with examples of collaborative ventures between universities and public schools (Galbraith, 1993; Holmes Group, 1990). But, staff development models that center around collaboration between and among inservice teachers and emphasize a "teamwork" approach have become more and more popular over the years (Dillon-Peterson, 1981; Harris, 1989). Because of time constraints during the school day, teachers have few opportunities to work collaboratively in groups for tasks such as curriculum development. Consequently, staff development programs that offer opportunities for collaborative pedagogy are welcomed by teachers. For example, during the summer, the Ohio Partnership for the Visual Arts provides extensive staff development institutes in Discipline-based art education for teachers throughout Ohio. Each institute provides opportunities for art teachers and classroom teachers to work collaboratively to develop units of instruction, many of which are interdisciplinary in nature.

Personal and professional growth of teachers, skill development, acquisition of new knowledge, and opportunities for collaboration are important components of an inservice staff development program. The question is, How might ideologies, such as
those presented here, be integrated within a single inservice staff development workshop series? Sparks and Loucks-Horsley (1989) suggested:

We need to know more about the impact on teachers of blending the models...in a comprehensive staff development program. How are teachers' attitudes, knowledge, and skills altered when [we]...blend various models as the means of reaching one or more 'growth' goals? (p. 55)

If staff development programs are to be deemed worthwhile, teachers must find meaning within the content, take ownership of the ideas being presented, understand how those ideas have specific value for their own professional growth, and have opportunities to work collaboratively. I carefully considered these components and others found throughout the literature as I developed the curriculum for the six-week workshop conducted during this study. Also, I took into account personal inservice education experiences from the past.

Throughout the six years that I taught in public school, I was required to attend various inservice workshops conducted by my school district. Topics for these workshops included everything from how to file district-mandated reports to teaching the ESL student to using assertive discipline techniques in my classroom. Very seldom did I have the opportunity to attend a workshop intended solely for visual art specialists. More importantly, very seldom, if ever, did I attend a workshop that compelled me to really want to know more about the topic or that appeared to have my professional growth as an utmost priority. Most of the workshops that I attended during this time were lecture format and were not inquiry-based. I can recall only one workshop that was process-oriented with hands-on activities and questions that really invited me to think. The memory of sitting in the back of an inservice workshop, "bored to death", writing a letter to my mother continues to haunt me, and it is this
memory, among others, that has made me keenly aware of the need for transformations in inservice staff development.

**Distance Education**

Alternative options for staff development that have, in the past, been unavailable are now being used to facilitate inservice staff development programs. Such options include the use of distance learning technologies, such as interactive video networks and computer networking, for the delivery of these programs. A teacher-participant at an Illinois teleconference noted:

*The teleconference created collaborative efforts that did not exist before and could be a catalyst for many good things to come. It was self-supporting. I felt a sense of connectedness that was different from all other inservice sessions or presentations.* (Jones, 1988, p. 8)

These technologies provide a new vehicle for the exchange and delivery of content, thus demanding the development of new workshop formats.

**Defining Distance Education**

Throughout the literature, the terms distance education, distance instruction, and distance learning are used interchangeably. In a study published by the Office of Technology Assessment (OTA), distance learning was defined as "the linking of a teacher and students in several geographic locations via technology that allows interaction" (U.S. Congress, 1989, p. 4). Garrison and Shale (1987) listed three characteristics of distance learning that can be used to represent not only a teacher-student classroom teaching situation, but also an inservice staff development program involving inservice teachers as adult learners.
1. Distance education implies that the majority of educational communication between [and among] teachers and student[s] is not continuous.

2. Distance education must involve two-way communication between [and among] teacher and student[s] for the purpose of facilitating and supporting the educational process.

3. Distance education uses technology to mediate the necessary two-way communication. (p. 11)

Until recently, the literature on distance education technologies has commonly referred to satellite video teleconferencing and audioconferencing technologies. However, with the advent of interactive video networks and computer networking, the focus is rapidly changing.

**Historical Overview of Distance Education**

Although distance university study in America began in 1874 at Illinois Wesleyan University (Encyclopedia Britannica, 1970), the term distance education did not first appear until 1892 in the catalogue of the University of Wisconsin (Rumble, 1986) and was reportedly used by the director of the University of Wisconsin-Extension, William Lighty, in 1906 (Moore, 1987b). Formal American distance study can be traced back to the Society to Encourage Study at Home. Anna Eliot Ticknor, the mother of American correspondence study, founded the society in 1873 and inaugurated the interchange of comments and grades with students (Aggasiz, 1971).

During the 1960s and 1970s, the term became increasingly popular in Germany and France. Early distance education programs consisted of correspondence courses which utilized print materials, phonograph records, and a broad array of other items.
Verduin and Clark (1991) wrote, "Since print materials constituted the vast majority of items exchanged by teacher and learner in correspondence study, print study and correspondence study came to be regarded as synonymous" (p. 8). It was not until 1983 did the Educational Resources Information Center (ERIC) begin to use the term "distance education" as a descriptor (Verduin & Clark, 1991).

Since its opening in 1971, the Open University of the United Kingdom (OUUK) continues today to serve as a model for distance education programs around the world (Keegan & Rumble, 1982), combining original high-quality texts and videotape materials with weekly tutorial sessions (Verduin & Clark, 1991) for an academically rigorous curricula. Distance education programs around the world have used the Open University as a model. Verduin and Clark (1991) wrote, "Because of the high quality of its publications and the many laudatory articles written about it, the OUUK is probably the only distance education unit that is positively viewed by American academics in general" (p. 55).

The 1980's brought a whole new dimension to the term "distance education". Technological advancements provided for a more accessible use of two-way audio/one-way video, two-way audio/video, and computer networking within the framework of distance education. The federal government and the private business industry have been using distance education for the training of both military and civilian personnel for a number of years. Established federal networks "for training and management communications are important because they are national and regional" (U.S. Congress, 1989, p. 146-147). In the past, video and audio teleconferencing participants have included federal and state policymakers; "this involvement tends to demystify such technologies for the very officials whose attitudes can have significant influence on distance learning efforts" (U.S. Congress, 1989, p. 146-147). This established
telecommunications involvement at the federal and state level is having direct implications for the development of teleconferencing and computer networking in the public schools.

For the 1990's, distance education continues to change almost daily. Miles of fiber optic cables have already been and continue to be laid. Interactive classrooms are being installed. Districts are rapidly equipping classrooms with computer hardware for access to networks such as Internet. With the advent of these technologies in the educational arena, school districts across the country find themselves racing to keep up with the latest technologies.

Distance Education Examples

Much of the distance education literature, as it relates to inservice staff development, documents demonstration projects in which satellite videoteleconference technologies were used. There is a substantial lack of research in the use of interactive video networks and computer networking for staff development programming and, particularly, for in-house staff development programming conducted by a district for district personnel. Acker and McCain (1993) noted particular reasons for this dearth of literature on two-way interactive networks:

First, video, and especially two-way video, is one of the newest and least understood of the delivery mechanisms for distance education, so few educators have had a chance to experiment with it. Second, K-12 education is the most financially constrained and appropriately conservative sector of American education. Thus, the great majority of two-way video experiments have involved adult populations, enrolled in college credit courses....In summary, the literature on two-way video is still in the 'pioneering' phase...(p. 4)
Pitcher, Rule, and Stowitschek (1986) presented the results of an inservice training project conducted with rural teachers of handicapped children by the staff of a federally-funded project of the Outreach, Development, and Dissemination Division of the Developmental Center for Handicapped Persons at Utah State University. This project utilized a two-way audio-video telecommunications system which included telephone and electronic mail. The project helped preschool teachers to use two methods of instruction (coincidental teaching and microsession teaching), a curriculum for handicapped children, and the Let's Be Social program - a program designed to teach low-interacting children motor and verbal responses to social encounters. Pitcher et al. (1986) concluded that "the telecommunications system seemed to provide a viable approach to providing interactive instruction and consultation to service providers in rural settings...Interactive, televised classroom sessions can provide consultants with sufficient information to formulate individual training plans for rural teachers" (p. 8).

Distance Education and Inservice Staff Development in the Visual Arts

It is apparent that few distance education staff development programs have been conducted in the field of art education. Of those conducted, most utilized satellite video teleconferencing technologies. The following accounts of distance education used in art education inservice programs were constructed from brochures, personal communication, and accounts from distance education programs for which I have been personally involved. I was unable to locate any published evaluative reports of the outcomes of these efforts.

Old Dominion University (1992) conducted a one-way video/two-way audio satellite teleconference entitled "Assessing the Visual Arts". Participants included K-12
Art educators, school administrators, pre-service art education students, and college and university art educators. This videoconference provided participants with a step-by-step approach for implementing an art assessment program. Objectives for the videoconference included:

* Clarification of terms and concepts in art assessment.
* Discussion of the role, function and purpose of assessment.
* To provide recommendations for designing, establishing, maintaining and evaluating an art assessment program.
* Discussion of the importance of a multicultural sensitive program.
* Identification of the benefits and challenges of an art assessment program.
* Presentation of options/strategies for clarifying goals to meet the objectives of the curriculum within a program. (Old Dominion, 1992)

Art educators were encouraged to participate to learn assessment approaches and become familiar with the tools necessary to evaluate their own art program. Administrators were encouraged to participate (a) to learn assessment strategies that may be worthwhile in other programs in their school, and (b) to recognize the serious need for assessment as a way to improve instruction and practice. Panelists included distinguished art educators in the field including Elliot Eisner, Gilbert Clark, Enid Zimmerman, Harry Clark, and Jessie Lovano-Kerr.

In a collaborative effort, the North Texas Institute for Educators on the Visual Arts and Prairie Visions: The Nebraska Consortium for Discipline-Based Art Education conducted a one-way video/two-way audio satellite teleconference entitled Schools, Museums, Art, and Children: A Dialogue of States. As part of the Getty Center for Education in the Arts' Regional Institute Grant Program, both of these institutes are currently involved in an extensive Discipline-Based Art Education (DBAE)
staff development program. The October 21, 1992 teleconference provided teachers across the country with opportunities to view and discuss "a rich menu of teaching episodes, staff development events, and museum visits" (SERC, 1992) videotaped in Nebraska and Texas secondary schools, elementary schools, and museums. The audience interaction provided a national dialogue on what constitutes an exemplary comprehensive arts education.

On April 28, 1994, the Getty Center for Education in the Arts sponsored a national satellite teleconference entitled All Participants' Day. The satellite teleconference served as a vehicle "to connect [visual art] practitioners, administrators, and theoreticians across the country and to begin building a sense among [past summer Regional Institute] participants that everyone involved in DBAE, whether in the classroom, museum, or university, is part of a large national community of educators engaged in reform" (personal correspondence with Anne Bassi, August 25, 1993). Teleconference goals included:

1. To begin a community-building campaign for individuals across the country involved in DBAE.
2. To create a receptive environment for the upcoming "Network".
3. To reassert the Getty Center's leadership role in DBAE.
4. To reveal major (i.e., central) outcomes from the Regional Institute Grant Program.
5. To validate accomplishments and results from the Regional Institutes.
6. To provide an opportunity for networking among the national community.
7. To reinvigorate DBAE individuals who may be "burning out".
8. To focus on the various models ways that DBAE is being implemented.
One of the main goals for the *All Participants' Day* teleconference was to begin building a national community among DBAE individuals across the country (Getty, 1994). The teleconference emphasized this community-building effort by emphasizing the accomplishments of and commonalities among individuals involved in DBAE - in turn, making teleconference participants feel as if they are really a part and have ownership in this national community. To accomplish this task, specific attention to DBAE community-building components was incorporated throughout the teleconference format including:

* individuals sharing unique DBAE experiences with others through audio hook-ups,
* a montage of video clips to showcase accomplishments at individual sites,
* testimonials from individuals concerning DBAE's contributions to their teaching, and
* personalized visuals including maps and site-specific visuals.

An estimated 8,000 teachers and administrators participated in the teleconference at 220 downlink sites across the U.S. and Canada (Leilani Lattin Duke, personal communication, May 24, 1994).

As far as inservice staff development programs other than those sponsored by a university or organization (i.e., an inservice program offered in-house by school districts for district personnel), it is apparent that, after a review of related literature, little or no research or published reports, specifically relating to distance education in an in-house staff development program, is available. That is not to say, however, that school districts are not utilizing these technologies for staff development, it appears that they simply are not publishing the outcomes of their efforts.
Efforts in central Ohio are taking place to implement the use of distance education technologies. For example, the Columbus Public Schools (CPS) conducted a one-way video, two-way audio inservice workshop teleconference entitled "Aesthetics: Theory to Practice" on March 3, 1993. This workshop was broadcast from the Columbus Educational Satellite Network (CESN) located at Ft. Hayes Educational Metro Center and was co-sponsored by CPS and The Ohio Partnership for the Visual Arts (OPVA) and focused on aesthetics and practical approaches for aesthetic inquiry in the classroom. The teleconference included video excerpts from an aesthetics presentation by Dr. E. Louis Lankford, professor of art education at The Ohio State University. In addition, a panel of five Columbus teachers discussed their use of aesthetics in the classroom. Participants were able to see how aesthetics looks in the classroom by examining video taped excerpts of aesthetic lessons from the panelists' classrooms.

CESN, designed as a one-way video, two-way audio interactive television system, uses live interactive instruction via satellite, cable television, and telephone telecommunications in order to reach participants in all 140 elementary and secondary schools throughout the Columbus Public School district. At each receiving site, the library is connected to the television studio in such a way that the presenter/panelist at the studios and all participants at each receiving site can be continuously on-line with each other via this technology. The presenter/panelist is seen and heard by participants via cable television by tuning their televisions to Educable Channel 25. Responses from participants travel through the site's dedicated telephone link back to the studio at Ft. Hayes where it is heard by the panelist/presenter. This network serves "to coordinate the talents of local, regional, and national participants in order to share ideas and teaching strategies" (Columbus Educational Satellite Network, 1993, p. 2).
The Columbus Distance Learning Project's technology at CPS has now been expanded to include a two-way interactive fiber optic network. In August 1993, Ohio Bell assisted in the development and installation of a fiber optic two-way interactive video system that now links four Columbus Public School career education centers with other educational resources in the city. This project titled *Project BEST: Better Education Through Telecommunications* now compliments the already established Columbus Distance Learning Project.

This fiber optic network allows the Columbus Distance Learning Project the options of two-way interactive courses for both inservice staff development and classroom instruction. In a recent interview published in "Communications Technology in Higher Education", Dr. Michael A. Burke, Director of Library Media Services for the Columbus Public Schools, said:

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By using fiber optic technology to connect our existing satellite sources into a two-way interactive system, we now have access to a limitless number of possibilities....The Columbus Distance Learning Project creates an alternative delivery system that will help us to achieve equity in education, create new methods for staff communication and development, increase community involvement in education, and provide lifelong learning opportunities for the community. (Pulio, 1993, p. 2)
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In a recent conversation, Dr. Burke reiterated the numerous possibilities that this interactive network could have for future CPS inservice programming in the arts (personal communication, June 14, 1993).
Throughout the literature, qualitative methodologies have been used to describe computer networking projects in both the business and educational arenas. Descriptive accounts of the organization of these projects and their impact on participating audiences is pertinent for others who may be in the beginning stages of creating similar activities (Stem, 1986). The need for this type of research is substantiated by the following example. In a July 26, 1993 message posted to the Consortium for School Networking (COSN) listserv (COSNDISC), Currie Morrison from the University of Pittsburgh posed the question "How do we put a network plan together for our school?" as being an important issue "on the K-12 [networking] scene"? The results of research into existing computer networking projects might possibly assist Ms. Morrison in answering her question.

COSN chair, Connie Stout, presented testimony on H.R. 1757, (the High Performance Computing and High Speed Networking Applications Act of 1993), in hearings before the Committee on Science, Space, and Technology Subcommittee on Science. Prior to her testimony, Stout solicited input from the network community and included this feedback in her testimony. Her testimony emphasized K-12 networking needs. The following point was among her recommendations: "Demonstration networking projects must contain the research and analysis needed to appropriately decide how the network would scale up to universal access" (G. Sackman, AERA ENETSIG moderator, personal communication, July 26, 1993). Stout's findings suggest that research must play an important role in the educational computer networking agenda.
Computer Networking Illustrations

Educational networks can be grouped into the following three general categories:

1. Administrative networks
2. Multipurpose networks
3. Teacher networks

Typically, administrative networks are used in day to day educational management from the state to the local level. An example of such a network is the South Central Ohio Computing Association (SCOCA) - the computer network utilized during this study. SCOCA provides various computing services for districts throughout South Central Ohio including electronic mail; budgetary and payroll programs; student records including attendance, grade cards, and scheduling; and reports to the Ohio State Department of Education.

The second category embodies networks that are multipurpose and are quite often used by both teachers and students. Examples include IdeaNet, K-12Net, and the Kids Network.

The third category focuses on networks that primarily cater to the professional growth and discourse among teachers. Since one component of this dissertation centers on computer networking as it specifically applies to inservice staff development, it is appropriate that I focus my review on selections from this body of literature. It is important to remember, however, that the literature on computer networking inservice programs primarily documents current projects that are still in process and is not evaluative in nature.

For example, JASON ONLINE is an integral component of a comprehensive, national teacher inservice training program administered by the JASON Foundation for
Education and sponsored through the Eisenhower Program for Mathematics and Science Education - United States Department of Education. This program is designed to introduce teachers to the world of telecommunicating and to provide additional resources such as classroom tips, lesson plans, and online support for teachers.

JASON ONLINE provides teachers with two services or tools: (a) an e-mail system that links teachers around the world with other computer users including scientists, and (b) a bulletin board system that serves as a forum for teachers to share ideas and curriculum information.

Another project which serves practicing teachers is the TERC (Technical Education Research Centers) LabNetwork Project. This project was designed, in part, to build a professional "community of practice" among high school physics teachers through a telecommunication network (Ruopp, Gal, Drayton, & Pfister, 1993). LabNetwork’s three interrelated goals include: "(a) encouraging the use of student projects to enhance science learning; (b) building a professional community of practice among high school science teachers; and (c) exploiting the potential of one of today’s new communication technologies: connecting teachers via telecommunication" (Ruopp, Pfister, Drayton, & Gal, 1993, p. 2).

As the first national network designed for high school science teachers, LabNetwork "is a dynamic medium for building and sustaining a community of practice for teachers separated by thousands of miles" (Ruopp, Pfister, Drayton, & Gal, 1993, p. 4). It provides rural teachers with an interactive network community where they can interact with others professionally. The format incorporates annual face-to-face workshops with on-line professional activities. The face-to-face workshops offer computer and software training, and help in establishing a "professional community" among the teachers that is then continued in the telemediated computer environment.
These experiences aid in establishing what communication literature refers to as "social presence" (Short, Williams, & Christie, 1976).

**Influencing Factors**

There are a number of issues that must be considered when planning educational programs for groups in telemediated environments, one of which is communication and group dynamics. In a two-way interactive video network or a computer network, groups are dependent upon the technology for effective communication. The intervention of these technologies often effect a group's dynamics. With this in mind, throughout the planning and implementation phases of this study, I had to consider not only the process or mechanism by which the art criticism content was to be delivered (i.e., the interactive video network and/or computer network), but also the process by which the participants would interact and communicate in these environments. I had to consider how the groups' interaction might be altered as a result of the intervening technologies and how interactions might differ from those in a face-to-face setting.

Group dynamics refer to communication within a group among its members including the development of group norms, communication climate, and the role of individual members (Bormann & Bormann, 1992). Throughout the six-week series, participants were asked to communicate in groups to make decisions, solve problems, and share information. In the following section, I discuss, in general, group norms and group communication. Then, I look at how these may be altered in multi-site telemediated environments.
Group Communication

Barker and Barker (1993) defined a group as "any number of people who have a common goal, interact with one another to accomplish their goal, recognize one another's existence, and see themselves as part of a group" (p. 179). One of the most important features of group dynamics is the power of verbal and nonverbal communication. When group members communicate, they are actually making connections - a process that often begins with interpersonal exchanges, thus allowing group members to share ideas, establish social and task-related relationships, and move forward toward accomplishing their goals.

Dialogue will depend on the group's goals and objectives. For instance, if a group is conducting a one-time meeting, members are aware of time constraints and are more apt to find task-oriented discussion more relevant than social dialogue. Creative groups are those organized to come up with creative ideas and solutions to specific problems. Often, members in a creative group will, although together, work independently drawing or writing down ideas. Afterwards, a time for sharing ideas with others provides group interactivity.

There are other factors that affect a group's interactivity and ability to work together. Barker and Barker (1993) reported that different personalities of group members as well as cohesion within the group (i.e., the degree to which group members identify themselves as a team) can greatly determine the performance of a group. Groups require time to feel comfortable working together before they are thrown into a decision making situation. "Decisions emerge from group interaction in the same way that roles emerge and normative behavior develops" (Bormann & Bormann, 1992, p. 156).
Throughout the six-week series, face-to-face small group sessions gave participants at remote sites opportunities to work together in problem-solving activities. During these sessions, teachers shared specific ideas in a give-and-take environment and applied personal experiences to the concepts being discussed. Small group dialogue, then, became an integral part of assigned group activities.

Group exchange also includes non-verbal interactions. In a face-to-face setting, an individual can intentionally or unintentionally transmit nonverbal communications, such as a facial gesture or something as simple as the tapping of a pencil on the table, to convey certain cues to others. These cues may prove to be more informative than any verbal interaction that takes place.

Proxemics, a term coined by the anthropologist, Edward Hall, refers to man's use of space as a specialized elaboration of culture (Hall, 1966). The way in which group members physically position themselves in relation to each other is a form of nonverbal communication. Relationships between group members can be unveiled and often interpreted by simply observing who sits near one another, across from each other, or at the end of the table.

**Group Communication in a Telemediated Environment**

Today, technologies, such as interactive video and computer networking, serve as the vehicle for delivery of communication between groups, thus organizational communication norms are being reshaped. Telecommunication technologies create altogether new options in organizational structure and behavior (Sproull & Kiesler, 1992). To illustrate such influences, I will discuss (a) the effect on the social organization of groups, (b) its effect on general group dynamics, and (c) interactivity and communication.
Sproull and Kiesler (1992) presented a two-level perspective that focused on contemporary organizations and contemporary computer-based communication technology. First-level effects of communication technology are the anticipated technical ones, such as the justification of a new system based on efficiency or productivity gains. Quality communication among individuals, either interpersonal or in a group, is dependent upon the message being received without distortion or loss of information. In an environment in which technology becomes the medium for the transfer of messages (whether verbal, non-verbal, or text), transmission quality becomes an important variable. Second-level effects, those that deal with social and organizational changes, come about "because new communication technology leads people to pay attention to different things, have contact with different people, and depend on one another differently" (Sproull & Kiesler, 1992, p. 5).

The Effect on the Social Organization of Groups

Early researchers (Cherry, 1971; Westrum, 1972) expressed concerns over power and control in a telemediated environment. Westrum (1972) discussed how, with expanded telecommunication capabilities, control in the organization tends to switch from lower agents to the higher echelons of the organization. Today, this concern continues to be addressed by educators who are concerned with the "talking-head syndrome". For example, after an examination of district policy for staff development in California, Little revealed that central office administrators and staff development specialists designed and delivered over two-thirds of staff development programming across 30 districts (cited in Fullan, 1990). This type of "top-down" format implies that administration knows what teachers need in the way of inservice
training and, therefore, teachers' input and recommendations are inconsequential. Short, Williams, and Christie (1976) pointed out that the opposite effect could take place, "increasing rather than removing freedoms, and allowing the periphery greater control over the centre" (p. 14).

The Effect on General Group Dynamics

In any telemediated environment, social contact patterns among members of a group are changed. For instance, interpersonal communication is primary to the development of small group interaction. Speaking with someone face-to-face allows for the creation of a "presence", a closeness in which a focal relationship is established.

Short et al. (1976) referred to the theory of social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationship" (p. 65). They hypothesized that communications media differs in the degree of social presence and that these variations are significant in discovering the way individuals interact. A telecommuniations medium that highly mimics face-to-face imitation (one in which video as well as audio is prevalent) is said to have a higher degree of social presence than one that offers no video communication capabilities at all. The degree of social presence can be rated according to the following factors: unsociable-sociable, insensitive-sensitive, impersonal-personal.

Olgren and Parker (1983) wrote, "By presenting a social presence, videoconferencing most closely resembles face-to-face meetings and can seem to be more personal and intimate" (p. 194). "Resemble" and "intimate" are the key words here. Although an interactive video environment may set out to "resemble" a personal face-to-face presence, it does not provide an environment for what most would consider an "intimate" conversation.
Short et al. (1976) listed the social presence of a communications medium as a factor which contributes to intimacy. They used Argyle and Dean's approach-avoidance theory to describe how, when two individuals interact, they are "both attracted to and repelled by the other" (p. 72). Throughout the interaction, they make adjustments (i.e., physically distance, eye contact, etc.) until the level of intimacy is acceptable for both of them. In a telemediated environment, intimacy is technologically managed by the medium. For example, eye contact is dependent upon camera placement. The person responsible for working the camera has in his/her control the ability to create perspective illusions of distance. For instance, zooming in on a participant during an interactive video session may give the illusion of being physically closer even though they're not. Because we are able to communicate while being physically separated, a technological presence is created. Throughout the six weeks, face-to-face physical presence was substituted by what I refer to as a "technological presence". The interactive video classrooms of the Great Seal Network provided individuals the opportunity to see as well as hear each other and provided for collaborative efforts that would not have existed in a satellite teleconference.

A technological presence is not meant to replace physical presence. Acker, Slaa, and Bouwmann (1993) wrote, "Electronic meetings span distances but they leave collaborators in bubbles....They are not permeated so that collaborators can share space" (p. 106-107). Therefore, face-to-face interactions are important for establishing relationships between individuals prior to having them interact in a telemediated environment.
Interactivity and Communication

Throughout the communication literature, interactivity has been a key factor in most of the research studies, as illustrated by Acker and McCain (1993). After a review of studies relating two-way video's general contribution to education, Acker and McCain noted that researchers emphasized the importance of an interactive format for education. "Interaction is central to the social expectations of education in the broadest sense and is in itself a primary goal of the larger educational process" (Acker & McCain, 1993, p. 11).

But, to what extent do technologies, such as interactive video networks and computer networking, affect interactivity and group dynamics? How are group dynamics altered as a result of technology? These important questions are ones that researchers are beginning to address (Hult, 1988; Johnstone, 1991; McClearly & Eagan, 1989).

Communication technologies have an effect on the social contact patterns within and between groups. Therefore, typical group interactive patterns may change as a result of the intervention of technology. Norms that have been established in a typical face-to-face setting are often revised or altered to fit the groups' needs - needs that may be different in a telemediated environment. Barker and Barker (1993) wrote that norms can "help to facilitate survival and protect the group from outside interferences" (p. 187). While they weren't referring to technology specifically as an interference, the same notion applies. I offer the following scenario to exemplify how group norms could be changed in an interactive video classroom environment.

A group of teachers attending an inservice workshop at receiving site "A" are asked to discuss their collaborative project with a group of teachers at receiving site "B". Group "A" members know that the only way to report to group "B" is via the
two-way interactive network, but they are uncomfortable with the idea of being "on camera". Their concern for being "on camera" becomes a recurring factor throughout the entire collaborative activity. In the end, the group's reporter is chosen not because of his contribution to the activity, but because other members feel that he will look good on camera.

Although this is a hypothetical situation, it is a scenario that is highly probable. "When technological change creates new social situations, traditional expectations and norms lose their power" (Sproull & Kiesler, 1992, p. 39). As a result, groups invent new ways of behaving. As mentioned earlier, non-verbal cues provide communication between group members significantly as important as verbal interaction. Bormann and Bormann (1986) wrote that the scope of nonverbal communication includes those unconscious behaviors that others may interpret as meaningful.

Hall (1966) wrote, "Touch and visual spatial experiences are so interwoven that the two cannot be separated" (p. 60). Technology, however, brings Hall's point into question. By creating simulated auditory and visual spaces, interactive video networks technologically forge face-to-face interactions. Consider for a moment Balint's two perceptual worlds - the sight oriented and the touch oriented (cited in Hall, 1966). If an individual's perception is based on a more touch-oriented environment, where does that leave him/her in a telemmediated environment? And, what about olfactory communications? Although not frequently perceived of as a signal or message system, "smell evokes much deeper memories than either vision or sound" (Hall, 1966, p. 45). Currently, these forms of sensory communication are omitted in a technological environment. In an interactive video network setting, efforts need to be made to ensure that verbal, as well as non-verbal communication, is part of the two-way interaction.
Summary

The previous chapter includes a discussion from communication, educational, and distance education literature. Components and issues from this body of literature were taken into consideration during the development and implementation of this study's inservice staff development series. However, the technology served as only the means for the delivery of art criticism content. The content - art criticism - is the topic of Chapter III.
CHAPTER III
PHASE I: THE CONTENT COMPONENT

This chapter is a continuation of the Phase I literature review. Chapter II provides some insight as to how telecommunication technologies are being used for inservice staff development programming in art education. However, these technologies, no matter how promising they may be, only serve as vehicles for the delivery of content. They should never be confused with the importance of a program's content. If a staff development series is to be successful, the content must have relevance for the participants. If teachers are able to see how the content directly relates to their classrooms, they are more apt to be enthusiastic about participating in the staff development program.

First, I define art criticism within the context of art education. Second, I present select art criticism models from art education literature. Select art criticism content and concepts were drawn from these models and used during the development of a six-week interactive staff development unit in Phase II. Second, I present a series of art criticism principles that evolved out of the art education literature review. These principles formed the basis from which I structured the art criticism content for the workshop series and served as a content checklist for me throughout the development of the staff development unit.
Art Criticism and Visual Arts Education

Art criticism aims toward helping the viewer form an understanding and appreciation of individual art works, objects, and events (Anderson, 1993). Weitz (1964) defined art criticism as "a form of studied discourse about works of art. It is a use of language designed to facilitate and enrich the understanding of art" (p. vii). In a practical sense, art criticism is a physical activity in which critical inquiry skills are acquired and techniques refined through practice and application (Anderson, 1991).

Critical discourse, either in the form of verbal dialogue or writing, provides for an increased understanding and appreciation of a work. Critical dialogue activities are often based around existing critical inquiry models (Barrett, 1990; Broudy, 1985; Feldman, 1992; Hamblen, 1984) and involve the elements of description, interpretation, evaluation, judgment, and/or theorizing about art. These elements, or a combination thereof, can serve as procedural directives for engaging in art criticism.

The incorporation of art criticism within school curricula has been largely due, in part, to a visual arts education approach called Discipline-based art education (DBAE). Discipline-based art education advocates content for visual arts instruction from the discipline of art criticism as well as aesthetics, art history, and art production (Getty Center, 1985). This instructional approach emphasizes the overlapping of content from each of these disciplines to provide for an integrated approach to learning (Clark, Day, & Greer, 1988). Clark et al. (1989) wrote:

As the goal of understanding art implies, DBAE is not intended to become the study of four separate art fields. It is, instead, a way to study the subject of art, with valid content for such study being grounded in the disciplines of art. It is the task of art educators to develop and implement ways to integrate learning
from the four fields and allow each art discipline to complement the others as students engage in interrelated art learning activities. (p. 150-151)

Content from each of the disciplines can be interwoven during inquiry sessions to create a content tapestry, one which can serve as a strong visual arts curriculum. Therefore, it must be said that the extent to which the disciplines overlap will be greatly affected and will change according to each situational context.

This led me to the question "Is there one critical inquiry methodology that functions for all works of art?" Kleinbauer (1989) wrote,

No single method or approach is always applicable or relevant to a given area of inquiry. Informed critics and historians alike adopt different approaches at different times and commonly use several approaches in their examination of a single work, group of works, or movement or school of art. (p. 214)

Therefore, throughout the six-week series, I approached critical inquiry with an "open model for inquiry". Different artworks objects used throughout the six-weeks lended themselves for distinct forms of critical inquiry. For instance, using a strict formalist model of art criticism to look at the postmodern work of Hachivi Edgar Heap of Birds would have been imprudent. Because Heap of Birds' work is so intertwined with Native American issues and culture, a contextual approach for analysis was preferred. However, if I had chosen a modern work by Kandinsky for inquiry, a formalist approach would have been more appropriate. Lippard (1971) advocated an open form "rather than establishing a pedantic system that allows for no variation and is perfect only in its restrictions" (p. 26). When Lippard writes criticism, she has no "critical system" (p. 12) that she finds necessary to follow. Rather, she refers to criticism as a "form of fiction" (p. 12). Before I began designing the staff development unit, however, I established criteria for the selection of art criticism content for the series.
The criteria included: (a) relevant content practice activities that were interactive in nature and that could be carried into telemediated learning environments, (b) art criticism content that evidenced strong multi-cultural components, and (c) critical inquiry methods that placed significant emphasis on contextual analysis, and (d) art criticism content that would encourage interdisciplinary links with language arts concepts (e.g., verbal fluency and development of writing skills).

Content for the series' inquiry sessions predominantly centered on art criticism and critical inquiry models incorporating description, analysis, interpretation, and judgment. However, it is difficult to conduct an open model of critical inquiry without incorporating historical, cultural, and aesthetic content. Therefore, additional content for the series' inquiry sessions was drawn from historical and aesthetic domains to strengthen the discourse.

Much of the content for the six-week series was derived from the models reviewed in this chapter because they have been recognized as effective means for conducting critical inquiry, and they contain interactive content practices that can easily be carried into interactive telemediated learning environments. Planning a staff development instructional unit that would bring together interactive art criticism content and interactive distance learning environments was, for me, a predominant issue. However, I did not feel that all of the content criteria that I had established, such as the strong multi-cultural components, were met through Feldman, Hamblen, and Barrett's models. Therefore, additional information was drawn from other scholars both inside and outside the field of art education and is interspersed throughout this chapter.

Throughout art education literature, a number of models and guidelines for teaching art criticism are evident. The following review is meant to highlight only select models that I felt met the content criteria established for this study.
Feldman's Model for Art Criticism

Feldman's theoretical model for art criticism has been widely referenced throughout both education and art education literature (Anderson, 1991, 1993; Cole & Schaefer, 1990; Dobbs, 1992; Hamblen, 1984). This strategy for accessing works of art includes four components: description, formal analysis, interpretation, and judgement.

According to Feldman (1992), art criticism should involve an orderly and sequential process. In order to make the most out of experiencing and observing a work of art, a systematic approach should be employed. This approach sequentially moves the viewer from description to judgement. "To some extent these stages overlap, but they are fundamentally different operations; their sequence proceeds from the specific to the general and from easy to difficult" (Feldman, 1992, p. 487).

The initial stage of Feldman's model, description, focuses on seeing what is in a work of art. It allows for the viewer to discuss that which is first evident and perhaps most apparent about the image. This includes subject matter (i.e., naming the most obvious things in the work) and elements of design (i.e., lines, shapes, colors). Elements within a work can be described in and of themselves without being judged, thus allowing the viewer "time to let the visual facts soak in" (Feldman, 1992, p. 488). During description, technical qualities of a work, such as the media employed and the techniques used, are also discussed. Feldman suggested, however, that descriptive discussions should deal with technique only in terms of its visible effects.

Feldman's second stage, formal analysis, evolves from description. While description allows the viewer to identify specific parts of the image, formal analysis moves into the relationship among these parts within a work. Writing about Feldman's model, Dobbs (1992) described how formal analysis encourages the viewer "to identify
the overall and pervasive characteristics of the work" (p. 80). According to Feldman, analysis focuses on the principles of design (i.e., balance, unity, repetition, etc.), thus accounting for the way the total work is structured.

Feldman's third stage, interpretation, encourages viewers to find the overall meaning of a work of art. Interpretation should challenge viewers to extend upon their own personal interpretations as well as consider what the artist may have been trying to convey through the work. Feldman (1992) noted, however, that the artist may not necessarily be the best authority on interpreting his/her own work. Therefore, it is through interpretation that we are able to deal with the formal and sensuous qualities of the art work in terms of their effect on our own feelings and intelligence.

The final stage of Feldman's model, judgement, refers to "giving...[a work of art] a rank in relation to other works of its type" (Feldman, 1992, p. 503) - in Feldman's view, judging a work comparatively with another. In Feldman's earlier writing (1970), he described judgement as a decision making process about the value of an art object. "For many of us, deciding whether a work of art is worth serious attention is one of the most important problems of art criticism" (Feldman, 1970, p. 370). He emphasized judging a work based upon a particular philosophy of art, (i.e., formalism, expressivism, instrumentalism) as opposed to one's own personal authority.

While Feldman (1992) stated that judgement "may be unnecessary if a satisfying interpretation has been carried out" (p. 504), Anderson (1993) claimed that all criticism must include evaluation and judgement. In fact, Anderson proposed an "exploratory criticism" model which begins with an initial evaluative response. After the initial evaluation is stated, descriptive, formal, interpretive, and contextual analysis takes place to support the response. Unlike Feldman, Anderson incorporated
contextual analysis as an important component for art criticism - a more structuralist approach to criticism. He proposed that structuralist educational criticism and traditional empirical criticism models (Hamblen, 1984) are more suitable for today's public schools because they look at formal, contextual, and thematic relationships. By unifying these relationships, such models construct meaning.

Hamblen's Questioning Strategy Model

Hamblen's (1984) empirical model for art criticism is built within the framework of Bloom's (1956) taxonomy. Her proposed rationale and theoretical base for this model is based around a sequential set of questioning strategies which corresponds to the hierarchical categories of Bloom's taxonomy. Key factors of Hamblen's model included: (a) questioning strategies that are attentive to various levels of thinking (i.e., from lower knowledge level questions to evaluative level questions requiring higher-order thinking), and (b) a teaching methodology within an art criticism format that assures active participation of viewers, namely students.

In her article, Hamblen (1984) described how most art criticism formats include "the basic components of critical thinking: description, interpretation, and evaluation" (p. 46). Therefore, Bloom's taxonomy, based around the processes of critical thinking, learning, and understanding, provided an ideal format for Hamblen's art criticism questions.

Hamblen emphasized that her questions should serve as a reference point for the development of many other possible questions. They should, however, be used with the sequence and question selection determining the direction of the discussion. Preliminary information on the source of the object and other basic facts should be given prior to beginning the dialogue. Suggested questioning strategies should
encourage teacher-student interaction in a developmental sequence and be "conducive to substantive question-answer dialogues in the art classroom" (Hamblen, 1984, p. 49).

**Barrett's Model**

Barrett (1994a) introduced several different approaches to art criticism and presented some situations in which he has used these approaches. He emphasized that people of all backgrounds and ages can critically encounter artworks of all kinds. Through critical dialogue of artworks, individuals expand their understanding and appreciation of art. Critical dialogue gives individuals ways to enter into works, a means to prolong their attention, and a way to proceed productively in thinking about and interacting with art.

Although Barrett advocated using different critical inquiry approaches depending upon the audience, he suggested the following activities:

1. **Description**
   Description begins with subject matter when using representational work rather than form.

2. **Interpretation**
   Barrett considers interpretation to be the most important aspect in viewing a work of art. Art demands interpretation and there is no one correct conclusive interpretation (Barrett, 1994b). Some interpretations are better grounded in evidence and more convincing than others. Interpretive discussions allow for the understanding of meaning and effect through what the art expresses. What does their piece express and how? He encouraged participants to challenge interpretive assertions that are not based on evidence or ones that may be too far removed from the work in question (Barrett, 1994b).
Barrett (1990) explained that "evaluation and judgement are synonymous. When critics evaluate an artwork they make statements of appraisal, stating how good it is or isn't" (p. 96).

Theorizing about art

Aesthetic inquiry about art attempts to define what art is and what it should be. "Theories can...be partial, incomplete, and fragmented....Whether consciously held or not, they affect how we make photographs [or art] and how we understand them" (Barrett, 1990, p. 122).

Criteria for criticism must be adaptable for various media, styles, and forms of art, therefore flexible enough to "encompass rapid and radical change" (Lippard, 1971, p. 23). In a classroom setting, additional factors must be taken into account, such as grade level appropriateness, maturity levels of students, and students' prior experience with "reading" works of art. While Barrett (1994b) suggested some specific principles for interpreting art, a more generalized series of art criticism principles is presented here. These are dominant concepts from art criticism literature that I felt were essential components of a successful critical inquiry session and could serve as important guides for designing an art criticism staff development unit. They were drawn not only from the models presented earlier in this chapter, but from additional literature both inside and outside the field of art education. The principles served as a checklist for me during the development of the instructional unit and formed the basis from which I structured the art criticism content for the workshop series.
Principles of Art Criticism

Criticism is the result of considerable looking and thinking about art.

This was an important component of each of the critical inquiry models reviewed. In order to talk or write about a work of art, the viewer must take time for an in-depth look at the art work or object. Only after this time can the viewer construct a personal interpretation or meaning of the work.

Criticism enlarges and deepens our responses to art, helping us to see/feel/understand a work of art.

Gadamer (1977) noted that for us to understand what the work of art says to us is therefore a self-encounter. An artist may bring his own ideas and/or experiences into a work of art, but the work itself has its own expressive powers. Criticism can assist in an understanding of these expressive powers.

Language plays an important clarification role in the art criticism process.

Criticism should provide for a conversation-like discussion about a particular work of art - "direct, fresh, personal, incomplete" (Stevens in Barrett, 1990, p. 10). Critical dialogue and/or writing sessions should provide students with opportunities to express an independent point of view without fear of being belittled by others.

Descriptions contain significant information that can assist a student toward an informed understanding and appreciation of a work (Barrett, 1990).

Through description, young viewers of art can begin building an art knowledge-base upon which they can build.

An interpretation looks at what the art image is all about and helps to explicate the meaning of the work.

One work of art may evoke a variety of interpretations, from ones that concur to those that may be contradictory. A diversity of interpretations concedes that the
work can be "a rich repository of expression that allows for a rich variety of response[s]" (Barrett, 1994b, p. 9). According to Danto (1986), an interpretation shapes a work of art. Just as the artist's decisions concerning media, regional qualities, etc. affect the art work, the properties within the work affect one's interpretation. Interpretation itself modifies an object into an art work and is inseparable from the work.

**Contextual analysis serves as an important part of the critical inquiry process.**

Criticism can help us understand the purpose of a work. Wasson, Stuhr, and Petrovich-Mwaniki (1990) advocated the study of art from a socio-anthropological basis, focusing on the sociocultural context in which the art was produced. This method of instruction "provide[s] us with a deeper understanding of the values and beliefs that affect a society's aesthetic production and its significance in its sociocultural context" (p. 236). In the case of most non-western images, the historical and cultural context from which the work came is pertinent to our understanding its meaning. Current social, racial, political, and gender issues often serve as a catalyst for contemporary artists (e.g., Hachivi Edgar Heap of Birds, General Idea, Barbara Kruger). Through their art, they are able to address such issues. Placing contemporary art in context provides for a better understanding of the work.

**A variety of images and objects from both non-western and western cultures provides a rich base for art criticism in the classroom.**

Those objects which, in the past, were not considered "art" by critics, are today being reevaluated and reconsidered. Conventional canons of acceptance are being revised in today's contemporary culture to encompass works traditionally not thought of as "art". Danto (1986) believed that when a work has been deemed as art, this alone makes an aesthetic difference. Art is offered for timeless presence. We are able to find
historical traditions, ideals, etc. which, in turn, affect our interpretation and our language about a work of art. Although we may understand these cultural and/or historical restraints, it is the work's unrestricted presence which requires a language of interpretation to avoid misunderstanding about the work and what it is saying. The artist is not always the best authority on the meaning of his or her work (Feldman, 1992).

Determining meaning in a work of art should not be based solely around the artist's intent. While the artist's intentions should play a role in criticism, it should not be the criterion by which all other interpretations are based (Barrett, 1990). It is not what the artist is saying about the work that is the language of art, but rather what the work has to say alone (Gadamer, 1977). After a thorough analysis, students should have opportunities to form their own interpretations about a work before an artist's intentions are made known, if they are known at all.

Theorizing about art should help us to think about what art is and/or should be.

Danto (1986) discussed in length Duchamp's "Fountain", emphasizing that an appreciation and interpretation of a work must embrace those philosophical tensions that the work presents. As Danto pointed out, Duchamp seized upon his readymades because he viewed them aesthetically indifferent. Theorizing about art, asking questions such as Is it art? is an important part of criticism (Barrett, 1990).

Summary

In this chapter, I have reviewed select art criticism models from art education literature. Criteria for reviewing these models and additional information from art criticism literature were presented. Concepts were drawn from these models and used during the development and implementation of the six-week interactive staff.
development unit. In addition, the chapter outlined a series of art criticism principles that evolved out of the literature review. These principles formed the basis from which I structured the art criticism content for the workshop series and served as a content checklist for me throughout the development of the staff development unit.

The following chapter outlines the interactive curriculum model utilized during the six-week inservice staff development series and methods employed for documenting its use. Content for the series was based on the ideas presented in this chapter.
CHAPTER IV

PHASE II: DESIGNING AN INTERACTIVE STAFF DEVELOPMENT MODEL AND METHODS TO DOCUMENT ITS USE

This chapter outlines the interactive curriculum model utilized throughout the inservice staff development series. This curriculum model was designed to accommodate for a diverse participant audience, combining not only a basic introduction to art criticism and critical inquiry processes for the classroom, but also activities that would strengthen and expand the more experienced participant's knowledge of art criticism content. Techniques used for data collection throughout the six weeks and methods for evaluating the outcomes of the series are presented.

Developing an Interactive Model for Staff Development in Art Education

This study was conducted in a unique setting, one in which two telecommunication technologies were used for the delivery of art criticism content. One of the goals of the study was to look at the implications of these technologies for art education inservice staff development programs. However, a curriculum model for such an inservice was not in place. After an extensive review of the literature, the field of art education research appeared void in this area. Therefore, an art education inservice curriculum model utilizing an interactive video network and computer networking was developed.
I designed the curriculum model for the six-week series that (a) provided strong content in art criticism for workshop participants, (b) embodied an interactive rather than a passive format for participants, and (c) incorporated the use of two telecommunication technologies for delivery of content. The model incorporated face-to-face instructional sessions with telemediated instructional sessions, thus encouraging interactivity in the following settings:

1) face-to-face interactivity in large group sessions,
2) large group interactivity among and between the remote sites via the interactive video network,
3) small group face-to-face interactivity among and between participants at each remote site, and
4) one-to-one interactivity between computer network "buddies".

Figure 2 visually illustrates how these four strategies provided the make-up for the interactive staff development model.

Figure 2. Interactive Staff Development Model Utilizing Four Interactive Instructional Strategies.
While the interactive video classrooms and the computer network played an important role in the implementation of this series, the technologies merely served as a vehicle for the delivery of the visual art content. While the curriculum model was developed to incorporate the use of these interactive technologies, more importantly, it provided significant art criticism content for the workshop participants.

Today, many school art programs remain studio-oriented with art criticism often left by the wayside. This may stem from the fact that many teachers are unfamiliar with art criticism and methods for conducting critical inquiry in the classroom - a "result of a lack of training involving the use of criticism" (Katz, 1986, p. 10). If teachers are to practice critical inquiry effectively in their classrooms, they must first understand what art criticism is all about.

A proper understanding of the nature of criticism, then should help educators to focus on questions of educational value and to devise methods of criticizing that are appropriately responsive to the needs of the schools. (Geahigan, 1983, p. 21)

Art education inservice programs can help familiarize teachers with the nature of art criticism and models and principles that will assist them in achieving worthwhile critical inquiry sessions in their classrooms. Teachers need some understanding of how inquiry practices can be used with different artworks in assorted situations (e.g., an art classroom or a K-12 language arts classroom). Art criticism content is interactive in nature and, thus compatible with the interactive distance learning technologies used in this study. Critical inquiry sessions can provide for interactive dialogue to be distributed via the interactive technologies. Content goals for my interactive staff development curriculum model included: (a) to incorporate relevant content practice activities that were interactive in nature and that could be carried into telemediated
learning environments; (b) to effectively make critical inquiry practices appropriate for an interactive distance learning environment; (c) to make sure that the art criticism content was relevant for a diverse participant audience; (d) to include art criticism content that evidenced strong multi-cultural components; (e) to embody critical inquiry methods that allowed for an emphasis on contextual analysis, and, (d) to incorporate art criticism content that would encourage interdisciplinary links with language arts concepts (e.g., verbal fluency and development of writing skills).

Making Connections through Content

Content for the teleconference series focussed on the discipline of art criticism. Since "art criticism is informed talk and writing about art for increased understanding and appreciation of art" (Barrett, 1992, p. 115) and is interactive in nature, it was appropriate for the series. Criticism allows people to examine their encounters with art and put these experiences into language. The six-week curriculum allowed for critical dialogue about art, both talking and writing, to take place during face-to-face interactions as well as through the interactive video network and computer network. It included: (a) critical dialogue sessions in which teachers talked about works of art using the two-way interactive video system; (b) the use of art criticism games during individual small group breakout sessions at sites; and (c) collaborative activities via the computer network (see Appendix B for the complete workshop agenda).

The six-week series began with an introduction to Discipline-based art education in Session 1. Additional activities centered on aesthetics and the potential applications for aesthetic inquiry in the classroom. Since vivid case scenarios are a suitable way for introducing individuals to aesthetic inquiry (i.e., questions, stories, or scenarios which capture their attention and cause individuals to think about important
issues in art, scenarios like "Ruby the Elephant" (Lankford, 1992) and "The Unknown Tin Man" were used (see Appendix B). Video excerpts from a middle school art lesson using "The Unknown Tin Man" scenario were shown. Participants were asked to consider how aesthetic scenarios can be incorporated into their existing curricula and possible correlations with other subject area content.

Session 2 was conducted as a hands-on network training session at the Chillicothe High School computer lab. A detailed description of this session can be found later in this chapter.

Session 3 provided an introduction to art criticism for those participants who had little or no experience with critical dialogue. Video excerpts from an interview with Dr. Terry Barrett, in which Dr. Barrett discusses the various components of critical inquiry (viz., description, interpretation, evaluation, and theorizing about art) (Barrett, 1994), were shown. Next, participants played the Token Response Game during an on-site small group break-out session. This activity was used to initiate dialogue with participants. During Session 3, participants also looked at and discussed works by Hachivi Edgar Heap of Birds (see Appendix C). The beginning dialogue began with simple questions such as "What do you see?", thus promoting a non-threatening environment.

In Session 4, critical dialogue was continued but with a special emphasis on interpretation. Interpretation is an important part of forming an understanding of a work of art. Personal interpretations allow viewers to "read" the work, object, or event and form interpretations from their own point of reference. During the session, teachers learned that interpretation is a procedure for building arguments on the basis of evidence in and around the artwork (Barrett, 1988). Works by artists, such as Hachivi Edgar Heap of Birds, were used because they lend themselves to a more interpretative
model of inquiry. Experiences, such as those in Session 4, were designed to help enlarge and deepen the participants' responses to artworks, helping them to see, feel, and understand a work of art.

A variety of images and objects from both non-western and western cultures provides a rich base for art criticism in the classroom. The overlap of historical inquiry with critical inquiry and contextual analysis is important for forming an understanding of non-western images. Session 5 provided teachers with opportunities to look at and talk about non-western images with an emphasis on contextual analysis. For example, the Context Bag Activity packets were used during the small group break out session. Throughout the session, skills for looking at and discussing non-western images were modelled.

For the final workshop session, all participants convened at Chillicothe High School. Participant teams or "buddies" presented collaborative lesson plans that they had developed over the six-week period. In addition, participants completed workshop evaluations, and refreshments were served.

**Interdisciplinary Connections**

The six-week curriculum model incorporated various workshop sessions in which time was allocated for participants to discuss how critical inquiry might connect with language arts curriculum objectives, such as the development of verbal fluency (in Session 3) and the development of descriptive, narrative, and argumentative writing skills (in Session 4). Since many of the teachers attending the workshop currently teach language arts, they were able to make significant contributions to these
brainstorming sessions by drawing upon content from language arts and making specific connections with art criticism.

**Making Connections Through Technology**

As indicated in Chapter I, the unique characteristic of the six-week series was the use of two telecommunication technologies, an interactive video network and computer networking, for the delivery of content. During workshop sessions, the video network provided opportunities for workshop participants to interact with presenters as well as with participants at other sites. During the week after each workshop session, participants completed a series of computer network exercises designed to orient them to computer networking. Goals for the series of weekly exercises included: (a) collaborative writing between network "buddies", (b) an orientation to computer networking, and (c) personal communication between participants and workshop staff.

While twenty-seven (75%) of the participants stated that this workshop was not their first experience with computers, only six (16%) of them were familiar with computer networking and electronic mail. Therefore, in order to complete the networking activities that had been initially proposed, some hands-on training sessions were required. Initially, plans were made for the first face-to-face session to be a computer networking training session; this would have been prior to beginning any art criticism content. However, weather related school closures made this impossible. Therefore, the computer training session was postponed until the Session 2.

Since all computer terminals at Chillicothe High School (CHS) are networked to the South Central Ohio Computing Association (SCOCA), this location provided the perfect setting for a hands-on computer networking training session. The session began with questions, such as What is a Local Area Network? and What is the
Internet? A review of current legislation for the National Information Infrastructure (NII) and the proposed educational applications for its use were also discussed. Workshop participants learned basic electronic mail skills, such as (a) how to log-in to the SCOCA network, (b) how to send e-mail to SCOCA account holders, (c) how to send e-mail to individuals outside the SCOCA local network, and (d) how to reply to and forward e-mail.

Development of Resources for the Workshop Series

Videotape Segments

A variety of resources were developed and used throughout the six-week series. These resources included videotapes and instructional games.

Excerpts from inservice staff development video tapes that I produced for The Ohio Partnership for the Visual Arts were utilized during select workshop sessions.9 These excerpts included (a) selections from a lecture by Dr. E. Louis Lankford, professor of art education at The Ohio State University, in which Dr. Lankford presented an aesthetic scenario about Ruby the Elephant; (b) selections from an interview with Dr. Terry Barrett, professor of art education at The Ohio State University, in which Dr. Barrett discussed concepts with which to critically engage in talking and/or writing about works of art, (c) classroom excerpts of students and teachers carrying out practical applications of critical and aesthetic inquiry, and (c) classroom excerpts of a lesson that emphasized interdisciplinary connections between the visual arts and language arts.
Context Bag Activity Packets

Instructional hands-on resources for workshop activities were developed and used during small group break-out sessions. These resources included creating multiple packets for the Context Bag Activity. The Context Bag Activity packets were created to help participants form a better understanding of the art work of Hachivi Edgar Heap of Birds. Each Context Bag packet contains nine context cards that relate, in some way, to Heap of Birds and/or his work. Information for the enclosed cards was selected after a conversation with Heap of Birds, an in-depth look into Heap of Birds' Cheyenne background, a study of his ideologies, and a review of his exhibitions (see Appendix C for a look at the complete Context Bag Activity).

In the case of contemporary and non-western images, the context from which the work came is pertinent to our understanding of its meaning. Contextual analysis, then, can serve as an important part of the critical inquiry process. In many instances, art criticism helps us understand the context and/or purpose of a work. Current social, racial, political, and gender issues often serve as a catalyst for contemporary artists (e.g., Hachivi Edgar Heap of Birds, General Idea, Barbara Kruger). Through their art, these artists are able to address such issues. Placing contemporary art in context provides for a comprehensive understanding of the work. Wasson, Stuhr, and Petrovich-Mwaniki (1990) suggested the study of art from a socio-anthropological basis, a method of instruction "provide[s] us with a deeper understanding of the values and beliefs that affect a society's aesthetic production and its significance in its sociocultural context" (p. 236).
Techniques for Data Collection

Research traditions often are drawn from various disciplines, such as sociology, anthropology, psychology, agriculture, and linguistics. A combination of methods derived from these research traditions can assist in answering a range of research questions through various means of data collection. The significance of qualitative methodologies is that the outcome of a study is based on the unfolding of "social" events and is not statistical, thus validity is often an issue. Therefore, the researcher should go beyond one single process for data collection. Through triangulation (i.e., a multi-research, thus multi-instrument approach), data can be obtained from various sources to provide strength and justification for the study. By combining qualitative measurements (i.e., gathering information through interviews, participant observations) with quantitative measures (i.e., gathering statistics through survey), the researcher can enhance both the validity and reliability of the study (Frey, Botan, Friedman, & Kreps, 1991). Reinharz (1992) wrote, "Multiple methods increase the likelihood of obtaining scientific credibility and research utility...[and] work to enhance understanding both by adding layers of information and by using one type of data to validate or refine another" (p. 197, 201). The utilization of multiple methodologies can enable the researcher to "link past and present, data gathering and action, and individual behavior with social frameworks" (Reinharz, 1992, p. 197).

For this study, a multi-method research approach was designed with data collection and analysis techniques drawn from ethnographic, case study, and survey methodologies. As the research progressed, insights were drawn to strengthen the design and provided for a continuous analysis of events throughout the research period. This on-going analysis of the triangulated data allowed me to note emerging patterns and associated meanings rather than gathering data to prove or disprove a hypothesis.
stated beforehand (Glaser & Strauss, 1967). Miles and Huberman (1984) suggested that, although words may be more unwieldy than numbers, they permit the researcher to provide "thick description" (p. 54). An important characteristic for reporting this type of research method is that the data are chiefly words, not numbers. This approach ensured an emphasis on descriptive methods and provided for an in-depth look at the use of both computer networking interactive video technologies for inservice staff development in art education.

**Action Research**

Carr and Kemmis (1986) defined action research as follows:

> Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out. (p. 162)

May (1993) noted that only a few teacher education programs have explored action research, and "even less attention has been given to practice-centered inquiry in public school settings and staff development programs" (p. 115).

As the researcher, I was immersed in the planning and implementation of the teleconference series. Throughout the series, I was involved in what became an ongoing cycle that included reformulating the plan, revising action, more fact-finding, and re-analysis (Tripp, 1990). This reflective cycle meant that I was frequently asking questions of myself such as Which of the strategies that I used today proved to be
effective? Which ones were ineffective? How might I better utilize the network for next week's activities? From day one, my role as the researcher became intertwined with my responsibilities as the instructor.

While this study mainly utilized research techniques taken from ethnographic and survey methodologies, the study had elements about it that were similar to those found in action research models. Figure 3 on the next page illustrates the relationship between key concepts of action research, as outlined by McKernan (1991), and elements in this study.
### Key Concepts of Action Research
(McKernan, 1991)
- Increase human understanding through reflection
- Focus on problems defined by those experiencing them
- Reflective evaluation

### Action Research Elements of this Study
- Teaching and researching became unified.
- Refinements of weekly agenda were needed to meet individual needs of participants.
- Instructor and workshop participants made suggestions for utilization of technology.

### Eclective/Innovative Methodology
- Participatory Nature
- Dialogue/Discourse-based nature
- Conducted in-situ

- Participant observer applied to multiple participants working with researcher to collect data.
- Participants shared their understanding of events and actions through reflective journals and dialogue with the researcher.
- Understanding was achieved through on-going dialogue via e-mail and during school visits by researcher.
- Research was conducted in school setting.

**Figure 3. Key Action Research Components Used during this Study**
Oftentimes, I would make "adjustments" to the next week's agenda based on workshop activities and participants' comments from the previous week, thus, better meeting the needs of the participant-learners. Being conscious of what the participants were saying and doing in the weekly sessions and reflecting on these workshop events and/or comments proved to play an important role in the constant refining of the weekly agendas. My research plans did, in fact, become the "lesson plans" for the series.

As illustrated in Figure 3, other components of this study aligned themselves with an action research approach. These included (a) the innovative way in which workshop participants served as on-site participant observers, (b) the fact that these observers worked collaboratively with me to assist in data collection through their reflective journals, (c) a consistent on-going dialogue between the participant observers and me via e-mail correspondence and during both my technical assistance visits to their schools, and (d) the fact that the research was conducted *in situ* illustrating a single case study.

Case studies usually embody a fully developed description of a single event, group, or organization. It can investigate "a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1984, p. 23). Sevigny (1977) wrote:

The strength of the case study design is that its flexibility increases the potential for heuristic discovery by submerging the investigator into phenomena as they occur naturally and holistically in the setting. (p. 78)

Case study designs provide flexibility which are worthwhile when the variables themselves are the focus of discovery rather than the confirmation of a speculative
association between two or more of them (Sevigny, 1977). Data pertinent to the case can be gathered, organized, and analyzed in terms of the research case.

The resulting story presented in this document is a descriptive account of one case in which telecommunication technologies were utilized for inservice staff development in art education.

**Participant Observation**

Although two-way interactive video networks allow participants to see and talk with each other, much of the communication between sites is dependent upon camera placement and room arrangement. Not all of the interactions that took place at each receiving site, both verbal and non-verbal, were necessarily picked up through the cameras. While I was technologically linked to each of the sites, I could only physically be located at one site at a time. Therefore, observational documentation and reflective comments from on-site participant observers were needed to fill in any informational gaps.

Traditionally, the researcher exclusively plays the role of the participant observer by (a) engaging in activities appropriate to the situation, and (b) observing the activities, people, and physical aspects of the situation (Spradley, 1980). While the broad concept of participant observation was adopted for this study, the multiple settings (i.e., four fiber optic classrooms) required that more than one individual play the participant observer role. The on-site observers played an important duty in recording information that may not have otherwise been obtained through survey, interviews, or video analysis.
Spradley (1980) presented five types of participation and the degree of involvement to which a participant observer can be involved. Table 1 examines these five types of participation that range along a continuum of involvement.

Table 1. Levels of Participant Observer Involvement

<table>
<thead>
<tr>
<th>Participant Observation - Types of Participation Spradley (1980)</th>
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<tbody>
<tr>
<td>DEGREE OF INVOLVEMENT</td>
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<tr>
<td>High</td>
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<tr>
<td></td>
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<tr>
<td>Low (No Involvement)</td>
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As indicated in Table 1, "the highest level of involvement...probably comes when...[the participant observers] study a situation in which they are already ordinary participants" (Spradley, 1980, p. 61). Therefore, on-site participant observers were chosen from individuals who had registered for the series and who had opted to receive graduate credit for their participation. As participant observers, they were responsible for (a) describing the physical arrangement of the fiber classrooms, (b) making note of any technical difficulties (i.e., audio and/or video problems), (c) recording teacher and group interactions, (d) commenting on teacher attitudes toward content activities and/or
the technology, and (c) recording any other information that they felt was pertinent to
the study. Their observations were "relevant in terms of the internal functions,
interpretations, and meanings for the participants themselves" (Sevigny, 1977, p. 84).

Reflective journals were designed and distributed to each participant observer
(see Appendix E for the graduate journal). Because most of the participant observers
had little or no experience in ethnographic research techniques, the journals contained
questions and suggestions to assist them in the data collection process. These questions
were intended to serve as a starting point for the observers and were not meant to take
the place of their personal reflective comments. Extra space was provided in the
journals for personal reflective comments and suggestions. In addition, a meeting was
held with the participant observers as a group after the first face-to-face workshop
session to answer any questions and discuss their responsibilities.

The Changing Role of the Participant Observer in an Age of Technology

The role of a participant observer is somewhat different when the research is
conducted in telemedicated environments. Traditionally, participant observers immerse
themselves in a single location in which they are predominantly involved in face-to-face
interactions. Today, however, technological advancements, such as interactive video
networks and computer networks, allow individuals at multiple research sites to
synchronously be "together" via technology. As stated earlier, since it is impossible for
one participant observer to physically be at more than one research site at once, multiple
participant observers are necessary to record and document on-site happenings.
In such situations, technology can assist the researcher in the documentation of events
and interactions that are pertinent to the study (e.g., videotape documentation of
interactive sessions, documentation of electronic mail correspondence).
In multi-site research settings, however, there are limitations that the researcher must accept. First, the video documentation is contingent upon that which is captured through the various camera angles at the research sites. This documentation may or may not guarantee an accurate picture of the research setting. (See Chapter V for a further discussion of camera angles.) Second, since the researcher cannot physically be at all sites at one time, data normally collected during face-to-face interactions and unstructured interviews must now be replaced with video documentation data and data collected by multiple on-site participant observers.

Videotape Documentation

Three of the six workshop sessions were conducted in interactive video classrooms of The Great Seal Network, thus providing a unique opportunity for these sessions to be recorded on videotapes. The resulting tapes served as an efficient recorder of interactions and events that occurred during the three sessions. Since I was involved as an instructor throughout the series, it was difficult for me to stand back and closely observe interactions that took place during the sessions. Therefore, the videotapes allowed me to view and reflect upon these three sessions and observe elements that I may have missed while teaching.

The video documentation contributed to the collection of data for this study. Information selected from the tapes was triangulated with other data for analysis. This information helped to confirm and negate important data that led to the identification of themes (see Chapter V for a complete presentation of data).
Computer Networking Discourse

Throughout this study, both computer networking and an interactive video network were utilized for communication and collaborative work between participants and workshop staff. Therefore, the evaluation of participants' attitudes toward and their use of computer networking contributed important information to the study.

Throughout the computer networking research literature, various methodological approaches are evident. According to Rice (1989), "Researchers in this area have tended to place emphasis on the "technological idiosyncrasies [of the various technologies] rather than communication commonalities....Thus, the developing body of research on the uses and implications of CMCS reflects variations in three areas: disciplinary paradigms, technological distinctions, and evaluation approaches" (pp. 436-437). Formative research about computer mediated communication systems (CMCS) contributes information about needs assessment, implementation, and the design and improvement of project components and system development (Simpson & Pugh, 1992).

Research relating to the social and communicative facets of computer networking is now beginning to balance with research that investigates the technical aspects of communication processing and system development. Both qualitative and quantitative methodologies are providing pertinent information about interpersonal and social communicative patterns of individuals and/or groups. This research has provided insight into the utilization of computer networking environments in educational settings (Honey & Henriquez, 1993).

The CMCS activities employed in this study specifically refer to computer networking (i.e., electronic mail, listserv's, telnet, etc.). Data analysis from these activities focussed on how the computer network served as a tool for communication
and for collaborative work among participants, rather than investigating the technical aspects of communication processing and system development.

Electronic mail provided a means of communication among workshop participants and staff throughout the six-week series. During the first face-to-face session, participants were divided into two-person teams. The teams provided each participant with an Internet "buddy" for whom s/he could communicate. Teams also worked collaboratively via the network to complete networking assignments. Team members were asked to forward copies of their e-mail correspondence to my OSU e-mail account. The messages were then copied and organized for data analysis purposes.

Interviews

Interviews with select participants were conducted on an individual basis and at the participants' convenience. The interviews allowed me to gain personal insights and attitudes from these participants concerning the workshop series. The unstructured interview in which "the interviewer has almost complete latitude in deciding what questions to ask" (Borg & Gall, 1989, p. 397) best fit the paradigm of this study. This method of interviewing allowed me to develop friendly conversations with the participant informants. Through these conversations, an interrogation type atmosphere was avoided.

All of the informants interviewed gave verbal permission for their interviews to be tape-recorded on audio cassettes. The interviews were taped so that I could engage fully in the conversation with the informants without the distraction of note-taking. Later, the tapes were transcribed for analysis.
Survey

Survey research methods are grouped under the umbrella of quantitative research. Researchers interested in specific facts that describe a group employ survey methods. Jaeger (1988) described how survey research can be used jointly with other qualitative methods to provide a realistic look at individuals as they are in a natural, unobtrusive setting.

In education, survey research can provide descriptions that produce important leads in identifying emphases in school curricula (Borg & Gall, 1989). In distance learning research, survey techniques can and have been used to assess the effectiveness of teleconference course formats and presenters, and to access the perceived effectiveness of the teleconference systems (Silvernail & Johnson, 1992).

For this study, pre-workshop survey questionnaires were used to gather standardized demographic information as well as assess participants' knowledge of and past experience in using art criticism in their classroom and with interactive video classrooms and/or computer networking.

Post-workshop survey questionnaires were designed to discover participants' (a) attitudes toward the workshop format, (b) ideas for implementing art content presented during the series, (c) experiences with computer networking, and (d) perceived uses of the interactive video classrooms and the computer network. The survey questionnaire gave participants the opportunity to anonymously render information and opinions that, otherwise, they would not have felt comfortable revealing in an interview situation (see Appendix E for Participant Information Sheet, pre and post-workshop survey questionnaires).
Generalizability

An important factor in any research study is whether a study's findings can be
generalized from one population to another. Experimental studies carefully control extraneous variables that might effect results. Borg and Gall (1989) wrote:

As more rigorous controls are applied to the experiment, less carryover can be expected between the experiment and related field situations. In other words, the behavioral sciences are constantly faced with the choice of obtaining rigorous laboratory control at the cost of realism or of maintaining realistic experimental situations at the cost of losing scientific rigor in the process. (p. 649)

When one tries to apply this restricted notion of generalizability to qualitative methodologies, there are problems. Donmoyer (1990) discussed the problem of complexity, a challenge that has arisen to question the traditional notion of generalizability. When research deals with human interaction, complexity is increased because of the numerous possible variables. Since "human action is construction, not caused" (Cronbach, cited in Donmoyer, 1990), rigid generalizations can not be made. Each human being is unique in many areas, especially in development, social and emotional behavior, cognitive abilities, and personality (Ary, Jacobs, & Razavich, 1985). Each situation is also unique. Social, political, and cultural changes from one population to another serve to complicate the situation. With this in mind, strict generalizability from one population to another does not make sense.

Since this study was largely concerned with a situational context (i.e., a single inservice staff development series) with human interaction as a key component, a naturalistic generalization - one that takes the form of an expectation rather than a prediction (Donmoyer, 1990) - was more appropriate for the purposes of this study and
its audience. Instead of being overly concerned with generalizability, in the traditional sense of the word, I think that a concern for "transferability" (Donmoyer, 1990, p. 185) was more appropriate for this study. In other words, transferring or asserting similarities between two contexts would replace a strict generalization. In dealing with generalizability, questions that I addressed were "How might the data obtained from this study help others understand the implications of telecommunication technologies for staff development in art education?" and "In what other settings might this inservice model work or not work?"

Considering the research problem, methods and techniques employed were chosen for their appropriateness to the research task. A combination of research methodologies previously discussed helped to assure that the study's data had within them evidence of multi-dimensional interrelationships and provided a more holistic look at the research situation.

**Validity and Reliability**

Validity and reliability are terms commonly associated with experimental or quantitative research. I am addressing the issue of validity and reliability because some educational researchers (Borg & Gall, 1989) have criticized qualitative research methods for weak validity and reliability.

Bailey (1982) described criterion validity as a procedure that "involves multiple measurement of the same concept" (p. 70). Bailey wrote, "Since reliability by definition means consistency in the scores of a single measure, rather than identical scores on two alternate measures, it would seem better to test for reliability through repeated applications of the same measure" (p. 75).
As described earlier in this chapter, I used multiple methods for data collection throughout this study. The alternative research methods used were not meant to provide "identical" measures in an experimental sense of the word. Instead, I was able to look for emerging themes and issues and cross-reference or validate findings from one data collection method to another. Themes emerged across data collection instruments, thus a satisfactory level of reliability.

**Timeline.**

The following section outlines the series of events that occurred prior to and during the six-week series. These events coincided with Phase I, II, and III of the project and set the context for events that took place during the implementation phase (Phase III). Figure 4 provides a diagrammatic representation of this timeframe.

**Figure 4. Diagrammatic Representation of Research Timeframe and Scope.**

The initial contact was made with Joyce Atwood, Director of Curriculum and Instruction for Chillicothe City Schools, in September 1993. At that time, I was
contracted to provide a one-day inservice workshop for Chillicothe art teachers. This workshop, held in early October, provided me with opportunities to meet those individuals who would later become important key players in the development of this six-week staff development series.

In October, the six-week series was proposed during a meeting with Joyce Atwood, Patricia Griffith, coordinator for The Great Seal Network, and Paul Carpenter, General Supervisor for Ross County Schools. Their enthusiasm for the series was encouraging and plans were then made to present the proposal to The Great Seal Network's Council of Governments for approval. After the proposal was accepted by the Council of Governments in November 1993, the major phase of planning and implementing the series began.

A meeting with Mr. Steve Marion, accounts representative from the South Central Ohio Computing Association (SCOCA) was conducted. At that time, I familiarized Steve with the staff development series and proposed the computer networking component to him. Since Steve was personally responsible for issuing the SCOCA e-mail accounts, it was important that he be familiar with the project during the planning stages. Steve, in turn, committed his support and outlined the necessary steps that I must take in order to acquire e-mail accounts for workshop participants, including the required permissions letters from superintendents.

The South Central Ohio Computing Association (SCOCA) provides various computing services for districts throughout South Central Ohio. These services include electronic mail; budgetary and payroll programs; student records including attendance, grade cards, and scheduling; and reports to the Ohio State Department of Education. For security measures, SCOCA does not issue accounts to individual district personnel.
Therefore, signed permission letters from district superintendents were required for each account assigned to individual workshop participants.

In order to facilitate and expedite this process, individual letters were written to district superintendents informing them of the workshop series and requesting their permission for SCOCA accounts for their district participants. I provided each superintendent with a pre-composed letter to Steve Marion for their convenience. Then, superintendents simply signed the permission letter and returned it to Mr. Marion or me for processing (see Appendix F for a sample cover letter, permission letter, and response.)

For advocacy reasons, I made numerous phone calls to superintendents and principals in January to remind them of the series and invite them to attend the first session. This proved to be successful as evidenced by those administrators who attended the January 31st face-to-face networking session.

The implementation phase of the six-week series began January 24, 1994 and continued through February 28, 1994. I was available for follow-up technical assistance through March 1994. Technical assistance continues to be available through trained administrators at Chillicothe City Schools and the Ross County Office of Education.
CHAPTER V
PHASE III: IMPLEMENTING THE SERIES
DATA PRESENTATION

This chapter presents the results of Phase III activity - the outcomes of the implementation phase of the study. An analysis and synthesis of the data collected during the study is presented in the following sections. First, I illustrate challenges that were incurred during the initial stages of Phase III. Second, I reveal demographic information about the context and the thirty-six participants who attended the six-week series. These data assist the reader in understanding the profile of the participant audience. Third, I present findings as five themes that emerged within the data and the interrelationships of these themes to the interactive staff development model implemented during this study. Last, I conclude with a summary of the major outcomes derived from the data.

Setting the Stage: The Rocky Start

Based on early conversations with local support staff members, Paul Carpenter and Patty Griffith, I anticipated early on many of the obstacles that later proved to be important issues in this study (i.e., technophobia, contextual factors, etc.), all of which are discussed in this chapter. However, what I did not anticipate were the dilemmas that "Mother Nature" would bring and the technological difficulties that, ultimately, plagued the beginning of Phase III.
A Visit from Mother Nature

The first hurdle was the weather. When the workshop series was initially planned for January, I did not anticipate that January 1994 would end up, literally, in the record books as the coldest winter ever recorded in Ohio. For instance, on Tuesday, January 18th - five days before the beginning of the workshop series - the record-breaking low was -22 degrees Fahrenheit. School districts throughout the area were closed and severe winter weather warnings were posted. Inoperable long distance telephone service made communication between Chillicothe and Columbus impossible except via electronic mail. Under the circumstances, it became questionable, at one point, whether or not the series would continue as planned or whether it would be delayed. School resumed on January 24th (temporarily, for one day only) and Session 1 was conducted as scheduled.

Initially, I planned to begin the series with the computer networking training session and begin the art criticism content in subsequent sessions. However, due to the weather circumstances, SCOCA network accounts could not be acquired until Session 2. Therefore, the computer networking training session was moved to Session 2, and I began the series with art criticism and aesthetics content. Ultimately, this proved to be ideal because the introductory inquiry session provided for a lively discussion and participants were immediately introduced to the series' content.

Tangles with Technology

On Friday before Session 2, I met with local support staff members to set up the Chillicothe High School (CHS) computer lab for the computer networking session. Local support staff members, Paul Carpenter, Patty Griffith, Amey VanVoorhis, and
Steve Marion, assisted as volunteers in setting up the computers’ menus for easy
SCOCA network access and in making sure that everything worked properly.

Upon my early arrival for Session 2, the CHS computer teacher approached me
and asked, "Have you heard about the network?" I anxiously replied, "Heard what?"
She preceded to inform me that there had been a fire earlier that day in a small barn near
the school. The fiber optic line which services the lab was located directly over the
small barn. The fire severed the fiber optic line and the network was down.
Chillicothe Telephone Company repair men had been immediately called to the site and
were frantically racing to get the service restored in time for the evening session. The
service was restored about 45 minutes into the session, but when participants attempted
to log-on to SCOCA, only two to three terminals could simultaneously access the
network. At the time, it was assumed that this was due to the fire, but that presumption
was never confirmed. Nevertheless, the problem served as a big inconvenience for me
and the participants.

As a result, I was unable to lead participants through basic hands-on
networking activities, as planned, during Session 2. However, using the three
terminals, Paul, Amey, and I demonstrated basic commands, such as logging on and
how to send e-mail. Nevertheless, only a few participants were able to practice these
activities. It was evident, at that point, that if the networking component of the study
was going to be successful, I would have to visit each participant individually at their
school and help them get on-line. Throughout the next two weeks, that is exactly what
I did. I made numerous phone calls, set up appointments, and travelled to the
participants’ schools to meet with them individually. This was very time consuming,
but by doing this, I was able to help them get started on basic computer networking
activities.
Finding Out About the Participants: Pre-Workshop Data Collection

At the beginning of Session 1, participants completed a Participant Information Sheet and a pre-workshop questionnaire survey (see Appendix E for forms). These instruments were used (a) to gather standardized demographic information, (b) to assess participants' knowledge of and past experience with using art criticism in their classroom, and (c) to gain an understanding of the participants' knowledge of and experience with interactive video networks and/or computer networking. The data was used to evaluate participant readiness for proposed workshop activities. I also used the information as a gauge to help me consider revisions that needed to be made to the originally proposed agenda.

Participant Demographic Information

Thirty-six teachers and administrators employed in educational institutions throughout Ross and Pickaway counties in Ohio participated in the staff development series. Participants represented various grade-levels, content assignments, and/or administrative duties (see Figure 5).

![Figure 5. Participant Demographic Information]
The pre-workshop survey questionnaire revealed that 24 (66.67%) of the 36 participants had been involved in staff development workshops in the past. However, of these 24 responses, only 11.11% (n=4) reported that the workshops involved interactive video classrooms and that only 13.89% (n=5) involved computer networking. In addition, only nine (22.22%) of the participants reported that they had used art criticism activities with their students. The responses implied the participants' lack of experience with the interactive technologies and an overall lack of understanding of art criticism content. The data informed me that I had more inexperienced users than experienced users, both with the interactive technologies and with the content, and that a substantial amount of work was in store if the workshop agenda was to be successfully implemented as planned. With this in mind, I made plans for how I might accommodate for the different levels of learners. These plans included using teacher-mentors to provide technical assistance with the technology and art criticism content. It was evident that the five participants who reported having had experience with networking could play an important role in providing networking assistance to their colleagues. In addition, four of the participants were visual art teachers and could serve as on-site content specialists during small group break-out sessions.

**Thematic Areas**

As I viewed and reflected on the data, dominant issues centered around several thematic areas. These themes form the basis for which the remaining sections of this chapter are organized. The themes that emerged are as follows:
1. Contextual Factors
2. Technology and Design Issues
3. Content Issues
4. Instructional Strategies
5. Attitudes

Each of the five themes overlapped one with the other as the study progressed. The nature of the overlap had a cause and effect on the unfolding themes during the course of the six weeks. An analysis of the overlaps will be presented following the identification of the five themes.

Contextual Factors

Contextual factors greatly influence the failure or success of any type of educational program. These factors affect both the experienced and the inexperienced user of content and technology. Spitzer (1993) wrote, "...The context in which teachers work sets important constraints on their initial and continuing use of telecommunication" (p. 50).

Table 2 summarizes some of the contextual issues found throughout the data. The locus of these issues involve the physical school setting, the social and cultural climate of the school, and the financial and administrative support system that is in place.
Table 2. Contextual Factors

<table>
<thead>
<tr>
<th>CONTEXTUAL FACTORS</th>
<th>INTERACTIVE VIDEO</th>
<th>COMPUTER NETWORKING</th>
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<td>ISSUES</td>
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</table>
| Convenience of Technology | Interactive classrooms centrally located both in the geographical region and in the school buildings | Terminal Access  
Time Conflicts  
Time Limitations |
| Social/Cultural Factors | Teacher Isolation  
Apprehension toward Technology  
Cultural/Social setting of school | Teacher Isolation  
Apprehension/Enthusiasm toward Technology |
| Financial Resources | Required for Equipment Installation |
| Administrative Support | Enthusiasm  
Interest in Utilization of Video Classrooms throughout the District Curriculum |
|                     | Enthusiasm  
Interest in Utilization of the Network for Curriculum Implementation and Resources |

Convenience of the Technology

Conveniently locating the technology throughout the school plays an important role in its utilization. This includes the location of interactive classrooms both within the geographical region and within the individual school. It also includes the placement of networked computer terminals within the physical structure of the school.

The four interactive video classrooms used in this study were conveniently located in schools throughout Ross County. During Session 1, participants selected a site where they would convene for interactive sessions. Many were able to attend the series in interactive classrooms at their own school or one that was conveniently located nearby. Participants indicated that the convenience of the interactive classrooms was an advantage of the network. "A program can be offered to several locations and have it
originated from one site", said one participant. Another wrote, "Staff can meet at a local site. Travel time and expense are minimal."

**Convenient Terminal Access and Time Constraints**

The setting in which the teachers were able to use the computer network was one of the most widely discussed issues throughout the data. In the post-workshop questionnaire survey, over half of the participants (63.89%, n=23) reported that they accessed a networked terminal in an administrative office. Figure 6 illustrates settings where participants completed most of their computer networking activities.

![Figure 6. Locations where Computer Networking Activities Took Place](image)

The six participants who accessed the network at the Ohio University-Chillicothe computer lab were teachers from the local Catholic school, Bishop Flaget. Because Bishop Flaget is a private school, they were unable to acquire SCOCA
network accounts. Therefore, they were issued temporary OUC network accounts. Bishop Flaget does not have terminals with modems, so these six teachers were unable to access the Ohio University network from their school.

Most of the networked terminals in the schools are used for grade reporting, student records, and maintaining budgets. For the most part, these terminals are usually located in the school secretary or principal's office. This automatically presented access problems for participants who wanted to use the terminals. First, the school office hours were the same as the teachers' classroom hours, so time conflicts were immediately evident. Second, the terminals were often being used by the secretary or principal during the teachers' conference period - the only time during the day when the teachers had time to get on-line. Third, the school office is usually the busiest place in the school other than the playground - not an ideal place to work!

When asked to describe any problems they had had with the networking activities, participants responded with the following answers:

Participant 10:
"Finding time to use it [the networked computer] was the biggest frustration."

Participant 16:
"My experience was very limited due to time constraints. The computer is located in the school office. It was in use during my conference period, so I had to use it after school when my schedule was hectic or the office was locked."

Participant 17:
"My big problem [is] finding a free computer when I had time to use it."
Participant 19:
"Wish I had it [the networked computer] set up all of my own. Sorry to bother
the secretary, but she was nice!"

Participant 11:
"My main concern is access to the system. It was usually limited to before
school (7:10-7:30 a.m.) and after school (4:00 p.m.- on). It would be great to
have a system available within the teacher's classroom."

But, as Figure 5 indicated, none of the teachers had a networked terminal in
their classroom. The frustration surrounding the terminal access and time limitation
issue is summed up in the following participant journal entry:

February 14, 1994
The newness of the net interaction seems to have worn off and I believe that
students [participants] are finding that gaining the personal time in the school to
even spend time logged in is difficult. If there were a [networked] terminal in
each classroom, it would be more practical. And getting on[line] to make any
kind of constructive dialogue with another individual is even more
discouraging. Even though I have had plenty of experience with e-mail during
the past two years [on a private network at home], I'm finding it difficult to
compose my thoughts in an office environment and having to work around
another person's desk. The privacy that I have in my home is completely gone
when I'm using the [networked] computer in the school's office.

Financial and Administrative Support
As is always the story, school district budgets are extremely limited. But,
financial support is obviously needed if districts are to adequately equip classrooms
with the hardware needed to execute distance learning programs and furnish the personnel needed to assist in the implementation of these programs.

I was impressed with the financial commitments that the Ross County Board of Education has made to distance learning. To begin with, Ross County invested a one-time fee of $10,000.00 for Great Seal membership. In addition, six out of seven districts within Ross County each committed $25,000.00 for renovating classrooms. These districts will, in the future, pay a $400.00 monthly rental fee for use of the network. These figures do not include professional staff hours, sending investment figures to about $40,000.00-$50,000.00 (Paul Carpenter, Ross County Technology Coordinator, personal communication, July 18, 1994). This financial support is a remarkable indication of the district's commitment to the success of The Great Seal Network and the advent of distance learning in Ross County.

Administrative support for this series was obvious by the fact that 13.89% (n=5) of the workshop participants were administrators, including Dr. Michael Cline, superintendent of Chillicothe City Schools. In addition, other administrative personnel - principals, superintendents, and curriculum supervisors - showed their support by attending Session 2 to observe the computer network training activities. Teachers reported that their principals were open to them using the SCOCA terminals in their schools.

Social/Cultural Factors

Individuals who participated in the series were predominantly from rural school districts in central Ohio. These districts are located in a geographical region that has a large Appalachia population. While Chillicothe City Schools has a student population of approximately 3,958 (Chillicothe City Schools, personal communication, July 18,
1994), its cultural and social setting remains rural by nature. In rural districts, teachers often feel a sense of isolation with limited opportunities for collaboration or continued professional growth. In this study, teachers were able to see how distance learning technologies can assist with relieving feelings of isolation. Throughout the data, participants commented on how these technologies "aid in the whole process of communicating with other schools, individuals, etc." and "allow us [teachers] to tap into resources that would never before be available."

The schools throughout Ross and Pickaway counties are geographically located within a 1,205 square mile area. While the schools have many things in common, they each have very different social and cultural climates. These climates obviously affect the degree of acceptance and implementation of new curriculum ideas as evidenced by the following scenario.

During the series, I introduced images by Havivi Edgar Heap of Birds, a Native American artist whose art work addresses issues of the Native American community. Throughout the critical dialogue sessions, the participants' attitudes about the artwork were varied - some liked it and some didn't. "The pictures [in the Heap of Birds' Context Bag Activity] brought out opinions by some of the people [participants]. Some were very verbal and seemed to think they had the only opinion. Others were quite open to the new ideas generated by the discussion", wrote one participant observer.

Others, however, were not as open to Heap of Birds' work, as evidenced in the following participant observer journal:

I think that in an attempt to gain a wide range of artwork, all of the artwork lacked any local, southeastern Ohio culture. At Ohio State [University], the attitudes towards multi-culturalism tend to be taken as a trend that everyone in
the education field has embraced. But living in a small [southeastern] city in Ohio, the multicultural idea is very foreign and not viewed with such fondness. This is just one example of how a school's cultural setting can, in fact, affect attitudes toward content.

Technology and Design Issues

The technologies employed throughout the six-week series were designed for interactivity. The interactive video classrooms of the Great Seal Network have full two-way video/two-way audio "real time" capabilities. In other words, classrooms are connected visually and aurally in a way that allows teachers and students to interactively see and converse with one another. Additionally, specially-positioned cameras and equipment enable participants to view written materials, slides, videos, etc. The SCOCA computer network provided asynchronous text transfer during the series. It is evident that The Great Seal Network will be capable, in the future, of transmitting full video, audio, and text (Great Seal, 1993) through its network. Presently, however, this option is not available. Therefore, this study utilized the Great Seal Network and computer networks, such as SCOCA, independently, but in conjunction with each other.

The four interactive video classrooms used during this study were designed very similarly (see Appendix B for illustration of the interactive video classroom at Chillicothe High School.) Each room is equipped with two color cameras and a large-screen color monitor. As illustrated in Appendix B, the teacher camera is located in the back of the room directly facing the teacher work station. The student camera is mounted on top of the large-screen monitor in front of the room directly facing the students. The teacher stations are equipped with a receive monitor, a preview monitor,
a VCR, a fax machine, a telephone, an Elmo (a device that replicates a slide, opaque, and overhead project all in one), and a switching panel for which the teacher can make shot selections for his/her site. During the large-group interactive sessions, participants were seated at tables located in front of the large-screen monitor.

Throughout the data, technological design remained a pervasive theme that played a dominant role in shaping remaining content, instructional strategies, and attitude issues. While some of these design issues related to both of the technologies, particular ones pertaining to each individual network are evident (see Table 3 on the next page).
Table 3. Technology and Design Issues

<table>
<thead>
<tr>
<th>TECHNOLOGY AND DESIGN ISSUES</th>
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<td>Interface Designs</td>
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<td>Hardware Design</td>
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The Great Seal Network's Interactive Video Classrooms

The Great Seal's interactive video classrooms are equipped with the MASTER Interactive Distance Learning System™ produced by Grass Valley Group, Inc. Grass Valley designed the system "for ease of use, making instructor/student interaction as natural as possible. As a result, barriers raised by the distance separating students from instructors have been minimized" (Grass Valley, 1991). However minimized these barriers may have been during this study, technological design issues still prevailed. These issues are evident throughout the data and discussed below.
Quad Split vs. Single-Screen Monitor Option

The Great Seal's interactive video system is presently limited to continuous-view sessions. A continuous-view session lets participants in up to four interactive classrooms see all other interactive classrooms continuously on a large, quad-split viewing monitor (see Figure 7). Grass Valley (1991) promotes this quad-split monitor because "costs can be saved by using one large monitor rather than four for observational purposes" (p. 1-9).

![Quad-Split Monitor Illustration](image)

**Site 1:** CHS - Chillicothe High School  
**Site 2:** OUC - Ohio University - Chillicothe  
**Site 3:** JVC - Pickaway-Ross Joint Vocational Center  
**Site 4:** Uniota High School

**Figure 7. Quad-Split Monitor Illustration**
Sessions 3, 4, and 5 of the workshop series were conducted in interactive video classrooms. During the sessions, the quad-split monitor allowed remote sites to be viewed simultaneously. However, throughout the six weeks, the same quad-split monitor that, in the beginning, appeared to be a miracle technology, ended up being an instructional obstacle for me and the participants. The video quality attained through the quad-split monitor was less than optimum. For example, if cameras at the remote sites provided wide-angle shots, the individuals image size on screen appeared so small that it was hard to decipher who was speaking. One participant observer wrote, "All [participants] seemed to struggle to see who was talking." This was frustrating for participants, as further evidenced by the following participant journal entry:

I found that it was very difficult to distinguish who was talking at the other locations, even though we had them on the screen. This was because the image from the remote locations was a wide-angle shot of the group and the video was not clear enough to even allow a view of who's mouth was moving. This combined with having to scan through the other three pictures to guess at which location the student was sitting at. Sometimes the person talking would begin making gestures or body movements that would give us some clues [as to who was talking]. And after an hour or so, some of the more vocal students could be recognized by sound or name.

Prescribed workshop activities required participants to engage in dialogue and problem solving activities via the network. However, the inability to make eye contact with others at remote sites made this difficult. This concurs with Acker and Levitt's (1987) findings that "improved eye contact increases satisfaction with videoconferencing as a medium for negotiation. Improved eye contact apparently...[allows] participants to
evaluate more confidently their counterparts, and to participate more comfortably in exchanging information" (p. 189).

A similar problem existed with visual aids too. During the interactive video sessions, I instructed from the interactive classroom at Chillicothe High School (CHS). All of the video excerpts, slides, and visual aids that I used during instruction originated from CHS. Because of the system's set up, I was able to switch the viewing monitor from a quad-split continuous-view to a single screen only at my site. This meant that the video, slides, and other visual aids were received at the remote sites in only the upper left hand quarter of the monitor (see Appendix D for photo illustration). This caused problems especially when visuals were needed.

For instance, I used videotapes during my presentations. When the art criticism videotape was shown, I was able to switch the monitor at CHS to a full screen, but the remote sites had to view it on one quarter of the monitor. Meanwhile, the camera shot from the remote sites remained on the monitor while the videotape was being shown in the upper left hand quarter. This was visually distracting because if a participant at a remote site who was on screen moved while the art criticism video was being shown, your eye was distracted. One participant observer at CHS wrote:

I found the quad screen difficult to watch. Therefore, I didn't get much out of the video. The slides were difficult to see much detail on the smaller quad screen. However, when it was switched and used the whole screen, it was easy to see and clear. I felt as if I had such a difficult time attending to the quad screen; children would be even more distracted.

A critical dialogue session was conducted in which participants were asked to look at and discuss What Makes a Man: Boy, Woman, Family by Hachivi Edgar Heap of Birds (see Appendix C). The artwork consists solely of words sketched with pastels
on panels of paper. Although I enlarged the image as much as possible using the Elmo, the image was still so small that participants found it difficult to see or read the words. The dialogue was not as lively as it could have been had I been able to show the artwork on a full screen. The quad-split monitor, again, rendered lower video quality that, in turn, resulted in a lower level of interaction among the participants.

My frustration is evidenced in the following excerpt taken from my reflective journal:

Monday, February 7, 1994

Driving home tonight I felt so frustrated. I feel as if the technology has me strapped and I can't do what I really want to do. This quad split thing is a real problem, if only I could switch it to a large screen when I need to. Since I can't, I must figure out a Plan B. Maybe next week, I should leave sheets of blue construction paper at the sites. When it is time to show the video, I'll have someone at the sites switch to the Elmo to display the blue paper. Then, each of the sites will have the exact same thing on their monitor and it will be easier for the participants to see the videotape from CHS. I think it might work. Cab

In Session 4, I followed through with my plans. One participant observer wrote, "Putting the blue over the screens really helped to enhance the video". The plan did work to help participants view the videotape. But, in the process, I discovered an important factor. The three sheets of blue paper used to cover the Elmo's were taken from the same package and were the same color. However, when support staff members displayed an image of the blue paper through the network, the three sheets of paper were three different values of blue. This meant that the artworks that participants had been looking at and discussing were, essentially, different images because of the color variations. Each remote site was seeing something a little different from the other.
If this had been a math class, I wouldn't have been concerned. However, in a visual arts class, the image is the content. If participants are looking at and discussing an artwork that is altered, due to the technology, from one site to the other, then the validity of the criticism session is questionable. In such a situation, the following is conceivable: descriptions of the artwork could be inaccurate; interpretations, then, could be invalid; which, in the end, could affect judgments about the work. Therefore, to ensure that sites have analogous images, it is important that quality print materials be used in conjunction with the technology. This is especially true for interactive sessions in which an art work is key source for the instructional activities.

The quality of art work reproductions in print has always been an issue with art educators, museum educators, and publishers. Museums have been strict to set and uphold high standards for the quality of art reproductions. Now, the same concern continues with reproductions that are transmitted via technology. In the scenario described above, it was only by accident that I discovered that the video network had been transmitting multiple representations of the art work. This issue of representation should continue to be of great concern for art educators as well as art institutions who plan to utilize telecommunication technologies for the distribution of art images.

Audio

Audio difficulties were prevalent at some point during each of the three interactive sessions. It was very difficult to regulate the audio for consistency across the sites. When one site reported that their audio was okay, another site reported that it was too loud or not loud enough. One participant observer wrote:
It [the audio] initially was very loud! Then, we got the sound good and then while T. Barrett was reading [during the video excerpts], it got very loud again. I noticed people wiggling and looking uncomfortable. The video [audio] was much louder than the live classroom interactions.

In one instance, the problem was that someone had moved a knob on the audio control panel at one of the sites to another setting. In another case, the hidden speaker switch on the control panel of the viewing monitor at CHS had been turned off.

In addition to the incidentals mentioned above, the interactive classrooms are not designed identically. Some have better acoustics than others (viz., Ohio University - Chillicothe [OUC]). This accentuates the problem for the presenter and for the person responsible for monitoring the audio.

Local support staff members at remote sites assisted in adjusting audio levels at each of the sites. This helped to alleviate many of the problems. While some of the participants felt just as frustrated as I did, many were understanding and supportive in my efforts. One participant observer wrote, "Seems to have several bugs to work out, but we are heading in the right direction".

Camera Angles

Teachers were given hands-on opportunities to serve as an on-site technical person. One participant who particularly enjoyed working the camera said, "Jack and Dave really seemed to enjoy running the camera. I'm sorry I didn't think to share the use of it earlier. I just enjoyed it so much I didn't think about it!" Patty Griffith, experienced with the interactive video system, served as the on-site facilitator at the OUC classroom. During Session 4, Patty switched the camera angle at OUC to provide a rear view of the participants and the classroom. One participant observer
noted, "It was interesting to get the camera angle from the rear of the room". Another wrote, "I was impressed with the back view of the class; we all looked pretty good from behind!" This camera angle provided participants with an alternative viewpoint that they had not previously seen and were, obviously, enthusiastic about.

A review of documentation videos taken during the interactive sessions revealed that camera shots were predominantly wide-angle front shots of the class with an occasional close-up shot of an individual participant. Participants had differing opinions concerning these close-up shots. One participant observer wrote, "No one liked close-ups of themselves" while another remarked, "I think that it would improve interaction to zoom in on the students making comments. There were several times that I wasn't sure who was speaking at the other sites." During a personal conversation, one of the participants pointed out his preference for close-angle shots, "First of all, I'm not used to talking to someone on a television screen. But, I think that the closer the person is on the screen to actual size, the more realistic he [or she] becomes. That's why I like to see people zoomed-in. They look more realistic." It is clear that participants were concerned with the ability to imitate face-to-face ease of interaction in the interactive video environment.

These participant comments reflect the research in which Kendon suggested that mutually held eye contact constitutes openness to another's communication (cited in Acker & Levitt, 1987). Therefore, because the zoom-in camera angle presented a larger image size and increased the participants' possibility for direct eye contact, the image appeared to be "more realistic". In actuality, however, close-up shots present a surveillance feel to the image which may be a direct result of the interactive video system's design. For example, when a participant wished to speak to someone at another site, s/he looked directly at the large-screen monitor, even though
the camera sending his/her image was located on top, not in, the monitor. It is true that positioning the camera on top of the monitor minimizes the parallax angle between the imaging lens on the camera and the image presented on the monitor (Acker & Levitt, 1987). Nevertheless, the angle still exists. Therefore, during close-up shots, individuals are not looking directly at each other, but rather slightly below each other, thus creating illusionistic eye contact.

**Computer Networking Design Issues**

As indicated in Table 3, design issues related to the computer network involved interface designs, system design, and computer hardware capabilities.

Because of the circumstances discussed earlier in this chapter, different participants were offered access to different computer networks:

- **OUC network** = 7 (6 Bishop Flaget teachers and 1 OUC personnel),
- **MEC network** = 4 (Circleville and Logan Elm teachers), and
- **SCOCA network** = 25 (all remaining participants). Both SCOCA and MEC network interfaces were similar, but different enough that it made large group training difficult.

In the case of OUC's network, there was no interface at all. Because of this problem, I noticed the frustration levels higher among the Bishop Flaget teachers, for obvious reasons, than other workshop participants. One OUC network user wrote,

> In the future, this class needs to meet more than six weeks. We needed more time on e-mail....One evening [at OUC] we couldn't even log-on, and one evening we could send mail, but not read or print it. This is just all so new it is overwhelming at times.

For individuals who were inexperienced users with the technology, a network with user-friendly interfaces would have been preferred.
The second issue involved the text editor on the MEC and SCOCA computers. Both of these networks use a VAX computer system with a text editor that is not the least bit user-friendly. In fact, participants found it to be unmanageable. "It would really be helpful to include a text editor in with the mail system. I also don't like that this system doesn't acknowledge that you've sent a message or [does not provide] any way to back out of sending a message. Lots to improve here," complained one SCOCA network user. It must be acknowledged, however, that the SCOCA equipment was designed to be used for statistical and financial processing and record keeping. Teachers are not the principal users of the SCOCA network.

The third issue revolved around the design of the computer terminals that most of the participants used. In most every case, the schools' networked terminals were "dumb terminals". In other words, they were directly connected to the network and did not contain hard-drives. Therefore, it was impossible for participants to download documents to or upload documents from a disk. This created situations such as the one described below taken from a participant's journal:

I felt a little uncomfortable sending messages without writing a "rough draft" first. I felt that I was just writing off the top of my head, and some of the punctuation, etc. was not perfect. I will have planned better in advance when I send messages about the unit.

As districts begin to purchase computers with hard drives, this problem should be eliminated.

Each of the preceding issues points out the importance of computer training for teachers. Computer literacy among teachers, though improving, is not widespread (Hannafin & Savenye, 1993). Therefore, it is important that teachers receive adequate training in computer operations before staff development activities begin. This may
involve everything from helping a beginning teacher understand how to turn on the computer to assisting the experienced-user with more advanced procedures. Nevertheless, to ensure program success, workshop participants must be knowledgeable in basic computer and computer networking skills before content activities begin.

Interactive Content for Interactive Technologies

In art education, art criticism is interactive in nature. The technologies utilized during the series are also interactive and lend themselves for interactive content and inquiry-based instruction. Therefore, art criticism was appropriate content for this series because of its inquiry-based format.

Throughout the data, content issues emerged. These issues are illustrated on the next page in Table 4.
Table 4. Content Issues

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<td>Balancing Technology with Content</td>
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Structuring Content for a Beginning Audience

There were a number of points that I had to consider while structuring the content for this series. To begin with, I had to consider the fact that many of the workshop participants were unfamiliar with art criticism and methods for conducting critical inquiry in the classroom, as evidenced by pre-workshop questionnaire survey data. Items 5 and 6 of this survey aimed at identifying the participants' understanding level of art criticism.
During the 1993-94 school year, I have used art criticism activities, such as talking and/or writing about an artwork, with my students.

Figure 8. Participants' Experience with Using Art Criticism Activities in their Classroom

From the responses, it was evident that at least some (22.2%, n=8) of the participants had used art criticism in their classrooms, but that the majority (75%, n=27) of the participants had not. Item 6 asked the eight participants to describe one art criticism activity that they had used in their classroom since September 1993. This item aimed at further identifying the amount, if any, and level of critical inquiry that was taking place in their classrooms. The eight responses included:

(a) "choose and art print and write about it",
(b) "writing assignment with students",
(c) "describe, analyze, and judge [an artwork]",
(d) "critical inquiry during a field trip", and
(e) "critique of work using art history, aesthetics, and criticism questions; studio project inspired by this work".
Developing Interactive Art Criticism Activities

The art criticism content and the technologies employed during the series were interactive in nature. That is, art criticism content, as it applies to the field of art education, necessitates an inquiry-based format of instruction. I developed and included art criticism activities throughout the six weeks that would promote a participatory, inquiry-based format and capitalize upon the interactivity opportunities. (Details of these activities are covered in Chapter IV). These art criticism activities included large group critical inquiry sessions on the interactive video network as well as hands-on art criticism games to promote face-to-face collaboration during small group break-out activities.

Participants were enthusiastic about the on-site small group activities. One participant observer responded,

I came to the conclusion [after playing the Token Response Game] that I could like a piece of artwork but would not like it in my home. There was also discussion on whether or not the cost of artwork influences your like or dislike of a particular piece. It made me think of why I have certain artwork on my walls.

Another participant observer wrote,

I thought the students at CHS reacted well to the break-out activity....The students [participants] at CHS really did not take a break because we got involved in a discussion of art and morality that was quite interesting. Everyone seemed to take part and opinions varied.

It was obvious from journal entries and personal conversations with participants that the on-site small group activities were important to the participants. Not only did these activities provide face-to-face interpersonal exchanges for participants, but the
sessions complimented and extended upon the cross-site interactive critical dialogue sessions.

Content Relevance

To ensure the success of any staff development series, the content must be relevant for the participants. Participants must be able to see how the content being delivered directly relates to their individual situations.

Participants for this series were from a variety of content areas. Nevertheless, most of them saw how art criticism can be utilized within their curricula. For example, one middle school language arts teacher wrote, "The content of this week's class [Session 4] was more interesting to me. The ideas presented could be used in my classroom." By Session 6, she had used an aesthetic inquiry activity (one that she attained in Session 1) with her 6-8th grade students. She, then, included the students' writings in her February 28th journal entry:

I am enclosing several examples of what my 6th, 7th, and 8th grade students think about art. I am also going to try my lesson plan plus others as writing exercises and [use them] to enlighten my students to art and its "mysteries".

Balancing Technology with Art Criticism Content

Balancing the technology with content was a struggle throughout the series. This may have been due, in part, to technical difficulties, contextual factors, and participant interest levels. Participants knew, prior to registering for the series, that the content would focus on art criticism and the interdisciplinary connections between the visual arts and language arts curriculum. However, after being introduced to the technologies, some participants wanted to do more with the technology than with the
visual arts. Because the technology was such an integral part of the series, at times it seemed as if some participants misread it to be the "content". In actuality, Session 2 did present computer networking skills that could have been misconstrued as the series' content. However, the session was necessary due to the fact that participants were not skilled in computer networking and needed training in order for them to successfully participate in the series' networking activities.

By the second interactive session, it was obvious to me that many of the participants had signed up for the series because of their interest in the technology, not in visual arts. One participant observer wrote, "I heard someone say [that] they like art but they were disappointed they could not spend more time on the Internet". On the other hand, there were other participants who felt as if the technology seemed to overshadow the content, especially when there were technical difficulties. "Sometimes, (especially when the equipment wasn't working correctly) I felt like the technology overshadowed the content. I would like to spend more time learning about language arts and visual art", said one participant.

**Instructional Strategies for Interactive Environments**

The data revealed a number of important instructional issues. These issues related specifically to the instructor and the strategies by which s/he delivers the instruction, and take into account content as well as the use and design of the interactive technologies. Table 5 provides a condensed look at these issues.
### Table 5. Instructional Issues

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>INTERACTIVE VIDEO</th>
<th>COMPUTER NETWORKING</th>
<th>FACE-TO-FACE SESSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry-based Methods for Instruction</td>
<td>Promotes 2-way Interactivity between Sites</td>
<td>Posing questions to participants via e-mail</td>
<td>Provides physical presence that is absent during Ig. group interactive sessions</td>
</tr>
<tr>
<td>Monitor Placement is Key to Developing Presence w/ Participants at Remote Sites</td>
<td>Monitor Placement is Key to Developing Presence w/ Participants at Remote Sites</td>
<td>Face-to-Face Technical Assistance</td>
<td>Hands-On Inquiry-based Content Activities provides problem-solving group collaboration</td>
</tr>
<tr>
<td>Quad-Split Viewing Monitor</td>
<td>Quad-Split Viewing Monitor</td>
<td>Adapting to Quad-split Monitor Identification Protocols</td>
<td></td>
</tr>
<tr>
<td>Teaching Station Limitations: Move into Participant Camera-Shot to Personalize Instruction Cordless Microphone</td>
<td>Teaching Station Limitations: Move into Participant Camera-Shot to Personalize Instruction Cordless Microphone</td>
<td>Adapting Inst. Strategies for Technologies that are not User-Friendly</td>
<td></td>
</tr>
<tr>
<td>Instructor Traits</td>
<td>Instructor Traits</td>
<td>Knowledgeable of Content &amp; Technology Ability to Initiate Dialogue in a Virtual Environment Personable Flexible</td>
<td></td>
</tr>
</tbody>
</table>

**Instructor Traits**
- Knowledgeable of Content & Technology
- Ability to Initiate Dialogue in a Virtual Environment
- Personable
- Flexible
Inquiry-based Models for Instruction

Distance education technologies carry a unique set of problems and opportunities for instructors using these technologies. Traditional lecture format or models used in satellite videoteleconferencing - one in which the instructor often disperses information to the students for recall - is one option for the interactive technology instructor. However, this model does not provide for optimum interaction offered by these technologies. Acker and McCain (1993) emphasized the importance of developing instructional strategies that take advantage of the two-way interaction capabilities - strategies which promote interactivity among and between the participants and the instructor.

Inquiry-based strategies were utilized during both the face-to-face and interactive sessions. This encouraged participants to take more of an active role in the workshops. However, interactivity was not guaranteed simply because the technological capabilities existed. I found it difficult, at first, to get participants to interact. Throughout the 2 1/2 hour sessions, I found myself constantly "working the crowd" - calling on individuals at various sites and pulling the dialogue along. I believe that the low interactivity was the combined impact of the participants' inexperience with the interactive classrooms and/or the fact that television has traditionally been a passive, not an active medium.

Technological Design Issues

As I noted earlier, technological design issues were pervasive throughout the data. Many of the instructional strategies that I employed throughout the six-weeks were a direct result of these design issues.
Earlier in this chapter, I discussed design issues that relate to the quad-split monitor. Particular strategies were used as a direct result of the quad-split monitor problems, such as the previously described "blue paper trick". The quad-split monitor makes it difficult to see who is actually speaking. One instructional strategy which helped to alleviate this problem involved asking participants to use identification protocols when asking a question. One participant observer suggested, "Students talking, answering questions, etc. need protocols! For example, 'John Doe, CHS, My question is...'. Otherwise, we'll continually be asking others to be quiet... [in order to figure out who is talking]." The identification protocol tactic was employed during Sessions 4 and 5 and proved to be helpful in identifying individuals who were speaking and assisted in managing turn-taking among participants.

**Interactive Classroom Teaching Stations**

Each interactive classroom is equipped with a teaching station. As the instructor, I felt uncomfortably constrained by the teaching station. I felt that, not only did this physically separate me from the individuals at my site, but it psychologically set me apart as being more of a "lecturer" instead of a facilitator for learning. Even one participant told me, "I have the feeling that you feel a little restricted by the microphone and camera location. These limitations could be difficult for a teacher who favors a hands-on approach".

So, during Session 5, I positioned the CHS student camera to a wide-angle view. Then, I sat at the tables with participants during the dialogue activities. I noticed an immediate difference in the tone of the dialogue. It felt as if I no longer had to "pull" the dialogue along. It was if I became "part of the crowd". This same feeling was experienced by one participant observer. She wrote, "I think it's good also that
Cassandra moves around the classroom and we see her with other students sometimes. I think for the viewers that’s probably important.” Moving about the participants helped to personalize what sometimes seemed to be an "impersonal" environment.

**Monitor Placement**

The teacher camera at CHS classroom is located on the back wall directly facing the teaching station. However, the teacher monitor which allows the instructor to see students at the remote sites is not located beside the camera. Instead, it is located on the desk of the teaching station. Therefore, when a participant at a remote site was speaking to me, I had to look down at the monitor if I wanted to see him/her speaking. If I wanted to appear on camera as if I were really looking at the person and appear as if I were really listening to his/her comment or question, I had to look at the camera located on the back wall. This was extremely difficult to do. One participant observer at the CHS site wrote, "It seems rather odd to watch the instructor attempt to talk to someone at a remote location and be looking into the camera as if talking to the wall."

**Computer Networking Instructional Strategies**

While many of the participants felt confident logging in to the computer network after returning to their individual schools, many did not. Some teachers requested technical assistance. So, I visited almost every participant at their school for a network tutoring session. Although the travel was time consuming, I was able to accommodate for the various learning styles of the participants, and the visits helped me to see the physical set-up of each school. After working with a teacher from Logan Elm School District, I received the following message the next day:
Message 30/46 From KLE_HELSEL@MEC.OHIO.GOV
Feb. 3'94 at 4:15 pm
Subject: Robyn's In
To: CBROADUS@magnus.acs.ohio-state.edu

CASSANDRA,
I DECIDED TO TRY AGAIN ON MY OWN. I DID IT ALL BY MYSELF! HURRAH! THANKS FOR TAKING THE TIME TO COME HELP US. I THINK IT WILL BE LOTS OF FUN AND I'M NOT SO SCARED...WELL, I KNOW YOU HAVE LOTS OF MAIL TO READ. SEE YOU MONDAY NIGHT. ROBYN - LOGAN ELM

One instructional strategy that I used on the computer network was to post questions via e-mail to buddy teams for their consideration. These questions were reflective in nature and usually asked buddy teams to reflect upon some component of their collaborative lesson plan.

Additional Instructional Strategy Issues

Needless to say, the instructor must be competent in the content that s/he is delivering. As the instructor for this series, I felt very knowledgeable with the art criticism content. But, as I discovered, just having the content knowledge alone is not enough.

I firmly believe that there is something to be said for not being camera shy. As I stated earlier, there were numerous times throughout the series in which I had to "work the crowd" to encourage interaction. During the times when I found the dialogue somewhat impersonal, I attempted to find ways to make it more personal. One participant observer wrote about me, "The teacher is obviously very interested in the content and that makes it interesting for us. She's obviously very excited about it and comfortable with it. When we couldn't get a close-up of her, it was cute when she put her face in the slide area [Elmo]." (The participant is referring to a fun incident when I
gave the remote sites a "super close-up" by putting my face on the Elmo and turning it on.) This crazy incident helped to confirm to participants that I was, in fact, a real person and not just someone out there in technology land. If I had been shy by nature, I may not have used these tactics and accomplished the same results.

Second, I discovered that, when you are dealing with technology, anything can happen. As an instructor, I had to be extremely flexible, ready to alter my instructional plans at the snap of a finger. I don't believe, however, that this is the case in every situation. This particular series was not only the first inservice staff development program offered through The Great Seal Network, but also an experiment to help get the "bugs" out of the system. I believe that once the technical difficulties have subsided, instructors will find the interactive system more "user-friendly".

**Attitudes**

Participant attitudes toward both the art criticism content and the interactive technologies were an integral part of this study. As I have previously illustrated, contextual factors, such as a school's social and cultural setting, influenced attitudes toward the implementation of both new content and use of technologies. Attitudes influenced the acceptance of the technologies, as well (see Table 6).
Table 6. Participant Attitudes

<table>
<thead>
<tr>
<th>PARTICIPANT ATTITUDES</th>
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<tbody>
<tr>
<td><strong>Attitudes toward Content</strong></td>
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<tr>
<td></td>
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<tr>
<td><strong>Technophobia</strong></td>
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<td></td>
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<tr>
<td><strong>Enthusiasm</strong></td>
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<td></td>
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<tr>
<td><strong>Frustration</strong></td>
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</table>

Chamberlin (1983) coined the term "technophobia", referring to an individual's fear of technology. According to Meade (1991), these fear factors, or technophobia, can hurt instructional technology effectiveness. During the initial stages of the series, I detected apprehension as well as enthusiasm among the teachers toward the technologies and the art criticism content. I believe the initial uneasiness with the technology subsided as participants had the opportunity to adapt to the telemmediated environments. In reference to the interactive classroom, one participant wrote, "At first, I think everyone was hesitant about seeing themselves on the screen. However,
soon we were waving back and forth to people we knew at other sites. It just took a little time to feel comfortable with the set-up."

After the first few minutes of Session 3, it was obvious that the novelty of the interactive classroom was interfering with the activities that I had planned. Participant actions implied that they needed a chance to become familiar with what it's like communicating via an interactive video network. So, I took some time to let the participants get acquainted with and experience the equipment by letting them talk and wave to each other. Afterwards, they settled down and I was able to continue the agenda as planned. The initial novelty with the equipment subsided by Session 4.

The following entries from a first grade teacher's journal illustrate how initial skepticism can turn into enthusiasm.

Session 3 - February 7, 1994
The interactive technology is great but I have a hard time seeing my first graders using it and keeping them focussed on the screens. I'd love to see it work with young children but I think that's way in the future.

Session 4 - February 14, 1994
I think the further we go in this course the more uninhibited we become. I thought we were quite talkative and willing to share our views [tonight].

Session 5 - February 22, 1994
The interactive technology is exciting and I'm glad I got to be a part of it. I hope I can continue to be involved with it after the workshop is over.
Over and beyond the frustrations with terminal access and network design, participants' enthusiasm for computer networking was overwhelming. During the first week or so, participants spent time simply trying to login and successfully send e-mail. When participants experienced success, it was obvious by the contents of their messages:

Message 5/12 From KLE_CUNNING@MEC.OHIO.GOV 14 Feb 1994 11:13:51
Subject: ENTERED
To: CBROADUS@magnus.acs.ohio-state.edu
Organization: Metropolitan Educational Council

DEAR CASSANDRA,
I FINALLY GOT IN THE COMPUTER!!!! THIS IS EXCITING. I ONLY WISH THAT I KNEW ADDRESSES BY HEART SO I DIDN'T SPEND SO MUCH TIME LOOKING THEM UP. BELL RANG...GOT TO RUN TO CLASS AND MOTIVATE THOSE DARLING TEENAGERS!!!! SEE YOU IN CLASS VIA VIDEO.
SUSAN CUNNINGHAM

Positive comments from the post-workshop questionnaire surveys suggested that participants were "in love" with computer networking:

Participant 14: "I love using the e-mail. I loved doing this!!!"
Participant 22: "I enjoyed working with the e-mail....My collaborative writing with my buddy was great. We plan to keep in touch over the network".
Participant 27: "I love the e-mail. My partner and I had a hard time getting started, but after we did, we enjoyed it. I love being able to send msgs. [messages] to those that I know."
Participant 29: "I love getting and sending mail to my buddies and others. It was disappointing when I did not get mail."
The post-workshop questionnaires also revealed that participants plan to continue communication with colleagues via e-mail. Thirteen participants (36.11%) indicated they would continue correspondence with their workshop buddy, twenty-three participants (63.88%) said they would like to continue accessing information for their classroom, and nineteen participants (56%) said they plan to continue correspondence with workshop staff.

**Interrelationships of the Themes**

Each of the five themes related, in some way or another, to interactivity. It is obvious from the previous discussion that issues concerning each of the five themes overlapped in different ways. It is important that the overriding cause and effect relationships between these areas be understood.

Throughout this study, select themes affected others which, in turn, affected the level of participant interactivity between and among the participants. For example, the design of the technologies and the eminities (or lack of) that they offered have a direct effect on the instructional strategies that a presenter may choose. Based on the type of strategies employed - whether they be inquiry-based or not - interactivity levels can differ. In addition, participant attitudes toward the technology can effect interactivity levels.

The physical school setting, or context, is important. If teachers are asked to work with low budget technology (i.e., computer terminals with no hard-drives) or if teachers have to content with limited terminal access and/or time constraints, one can expect frustration levels to be high and attitudes toward that technology to be low. This, obviously, results in a low level of discourse on the computer network. No one wants to waste their time fighting with a terminal.
Participant attitudes toward content will affect interactivity levels during content-related activities. Remember the participant observer who was somewhat reluctant to the infusion of multicultural content, his attitudes toward the content influenced his desire to participate in the critical dialogue sessions. Therefore, the social and cultural climate of a district and/or a school can affect participant attitudes toward content.

The interrelationships that can be drawn between the five themes, collectively, had an impact on the implementation and outcomes of this model. The overarching outcome that emerged in the data was interactivity. Figure 9 visually represents how the five themes are interrelated with interactivity as the central core of the figure.

![Image of Figure 9: Interrelationships of the Themes with Interactivity (I) as the Core](image-url)
Outcomes of the Data

Previously, I have addressed five thematic areas which surround the instructional model used during the six weeks. The significant outcome of this model was interactivity, as evidenced by the data. In this section, I will extend upon the previous discussion by specifically addressing the relationship between interactivity and the four instructional strategies of the model. Other significant outcomes and food for thought are summarized based on the previous data analysis.

Interactivity and Presence

The staff development model utilized during this series focused on an interactive content - art criticism - being delivered in two interactive telemediated environments. As discussed earlier in Chapter IV, I designed the model to encourage interactivity in four instructional strategies: (a) face-to-face interactivity in large group sessions; (b) large group interactivity among and between the remote sites via the interactive video network, (c) small group face-to-face interactivity among and between participants at each individual site, and (d) one-to-one interactivity between computer network "buddies" (refer to Figure 2, page 56).

Face-to-Face Interactions

The face-to-face interactions included large group interactive classroom sessions and small group break-out sessions at individual sites. During Sessions 1 and 2, participants were able to meet others and make initial face-to-face connections. These face-to-face, interpersonal exchanges helped participants to establish beginning social relationships that were then transferred into both the interactive video and the computer network environments. The social relationships provided for a stronger sense of
presence among those individuals in the large group interactive setting (see page 126 for a discussion of face-to-face interaction during small group break-out session activities).

Large Group Interactive Video Classroom Interactions

Interactions between and among participants were evident in large group interactive classroom sessions. I had anticipated that participants would interact more freely than they did. But, as stated earlier, I "worked the crowd" to initiate and maintain many of these interactions. Data from each of the instruments reflected several factors that may have affected this interaction. The following participant observer's journal entry brings up several points:

Session 3 - February 7, 1994

There is very little cross-location discussion between participants. Among the groups at each site, there seems to be no shortage of discussion. There is an easy explanation, we don't know each other well enough to openly start a conversation and we are looking to the instructor to be a moderator of the global conversation. I know four of the other students at the remote locations....Two of the people I know at the remote locations, I know only by name and face and have only talked with them in person once or twice. It would be hard for me to initiate a discussion with them because I don't know how they would react or respond. I don't want to interfere with the class, but I would also like to be able to reach out and respond or talk with an individual or address a topic of conversation. You really don't have the non-verbals to guide you either.

I observed this same participant talking with others during Session 1. And, because of his prior experience with computer networking, he provided technical assistance to
others during Session 2. Therefore, I was surprised when I read his journal entry. It pointed out, stronger than ever, how the technology can interrupt a person's interactive patterns.

During the first video classroom session, interactions among and between the participants were less frequent than in subsequent sessions. This was due, in part, to initial comfortability levels with the technology. Once the newness subsided, interactivity levels increased.

The presence factor was first and foremost throughout the data. As I earlier reported in Chapter II, Short et al. (1976) referred to the theory of social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationship" (p. 65). Time and time again participants made comments related to this issue. Below is a week by week account of how the topic of presence dominated the journal entries of one participant observer.

February 7, 1994
I think all [participants] felt somewhat apprehensive as we were doing something new. It felt strange talking to classmates on a screen rather than face-to-face.

February 14, 1994
Interactive technology is great but there seems to be something missing when you don't see the speaker face-to-face. You miss the up-close personal feeling and the close-up expression and eye contact.

February 22, 1994
It's still necessary for face-to-face discussions to get the full feeling of the conversation. It was difficult to see people's faces close-up on the screen since they were so small."
Throughout the data, participant comments reflected presence-related issues concerning whether or not the technology could imitate face-to-face interactions. Getting acquainted with the two-way interactive video classroom environment takes some time both for the participants and for the instructor. Throughout this series, technology issues often overshadowed the content. Therefore, I believe that participants need the opportunity to become acquainted with the interactive classroom environment before beginning the delivery of content. Then, valuable instructional time is better used.

**Understanding Virtual "Togetherness"**

Interactive video networks allow geographically distributed participants to be "together" in one location via technology. But, this is a phenomenon for which most people are not accustomed.

During Session 3, some individuals at remote sites talked among themselves during instructional time, forgetting that each of the sites were interconnected by the video network. However, the video documentation showed that, after Session 3, participants discovered that all sites were virtually linked together and, when someone speaks, everyone at the other sites can hear the conversation. One participant observer wrote, "There is some problem with people talking among themselves at one site while Cassandra talks with people somewhere else. The sound carries over and this must be a little annoying to her and it is somewhat disturbing to us all." After I discussed this problem with everyone at the beginning of Session 2, the talking seemed to subside.
Small Group Face-to-Face Interaction

Small group break-out sessions were conducted at each remote site in conjunction with large group interactive video sessions. These were designed to facilitate learning and face-to-face interactivity at the sites among and between participants.

One participant observer noted that, during the small group break-out activities, others were eager to share their personal interpretations of the art work. He said, "I've yet to notice any 'hesitation' on anyone's part. Most of the art pieces evoked at least some response [referring to the Token Response Game]."

Small group dialogue played an integral part in the face-to-face break-out activities. During the small group sessions, teachers participated in hands-on art criticism activities, shared individual ideas in a give-and-take environment, associated personal experiences to the concepts being discussed, and worked collaboratively with others in a problem-solving environment. Combining small group sessions with interactive video sessions can provide an added dimension to distance learning staff development programs.

One-to-One Computer Network Interaction

The level of computer network interactivity was affected by influencing factors such as terminal access, participant comfortability levels, participant attitudes, and network design issues - all of which have been previously discussed in this chapter.

Participants were assigned an e-mail "buddy" with whom they communicated and worked collaboratively with on assigned projects during the workshop. The
A taxonomic summary of the participant e-mail discourse is illustrated in Table 7. The taxonomy illustrates how message content included both personal and professional dialogue.

**Table 7. Computer Network Participant Discourse Taxonomy**

<table>
<thead>
<tr>
<th>NETWORK DIALOGUE</th>
<th>Personal Dialogue</th>
<th>Professional Dialogue</th>
<th>Collaborative Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attitudes about Technology</td>
<td>Correspondence w/ Instructor</td>
<td>Writing Lesson Plan</td>
</tr>
<tr>
<td></td>
<td>Enthusiasm of being on-line</td>
<td>Content Questions and Comments</td>
<td>Responses and Suggestions</td>
</tr>
<tr>
<td></td>
<td>Frustrations w/ Networking</td>
<td>Questions about the Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log-in Confirmation Mgs. to Buddy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal Ancedotes</td>
<td>Possibilities of Networking for Students</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Participants were eager to share successful log-in experiences, problems, and frustrations with their buddy and me. There were also numerous personal anecdotes, including the following weather-related message:

Message 1/15 From OUCH023@OUACCVMB.BITNET
Date: 10 Feb 1994, 20:08:04 EST
Subject: lesson plan
To: cbroadus@magnus.acs.ohio-state.edu
Message-id: <01H8QEJ8SRVM95MMJN@phem3.acs.ohio-state.edu>
Content-transfer-encoding: 7BIT

DEAR CASSANDRA,

THE WEATHER IS BEING SO UNCOOPERATIVE ISN'T IT? WELL, CIRCLEVille CITY SCHOOLS HAVE BEEN OUT SINCE TUESDAY. THEREFORE, I AM UNABLE TO DO THE PART OF OUR ASSIGNMENT WHERE WE NEED TO ASK THE CHILDREN TO LOOK AT A PIECE OF WORK AND WRITE ABOUT IT. I BELIEVE THAT MOST OF THE OTHER PEOPLE IN THE CLASS [WORKSHOP SERIES] ARE IN THE SAME BOAT BECAUSE ALL OF THE SCHOOLS HAVE BEEN CANCELLED ALL WEEK. WELL, HOPEFULLY EVERYTHING WILL BE OKAY BY MONDAY AND WE CAN TRY THIS AGAIN.

SEE YOU MONDAY.

Professional discourse included discussion about the implications of computer networking for the classroom. Participants also addressed questions to me about both art criticism content and technology. However, most of the professional discourse involved collaborative work between buddies. Network buddies worked collaboratively to write units of instruction incorporating critical inquiry concepts that they had learned during the workshop series.

One team, consisting of elementary classroom teachers, collaboratively wrote a thematic lesson plan based on animals in art. The following messages are examples of how they were able to utilize computer networking during their collaborative work:
Message 17/125 From OUCHO20@OUACCVM.BITNET
Date: 23 Feb 1994, 16:47:19 EST
To: ouch19@ouaccvmb.bitnet
Subject: Lesson Plan

DEAR JENNI,
I THOUGHT WE COULD GET STARTED WITH OUR LESSON PLAN... FOR OUR WRITING OBJECTIVES I THOUGHT WE COULD USE: 1. USES DIALOGUE 2. WRITES ON A GIVEN TOPIC. FOR OUR ART OBJECTIVES SOME WE COULD USE MAY BE: 1. USES A VARIETY OF MEDIA 2. TALKS ABOUT HIS/HER OWN ARTWORK 3. IS ABLE TO DISTINGUISH SOME ARTISTS BY THEIR METHOD...
TALK TO YOU LATER. CONNIE

Jenny replied with the following message:

Message 17/125 From OUCHO19@OUACCVM.BITNET
Date: 23 Feb 1994, 16:47:19
To: OUCHO20@OUACCVM.BITNET
Subject: LESSON PLAN

DEAR CONNIE,
THOSE SOUND LIKE GREAT OBJECTIVES FOR OUR UNIT. THE OBJECTIVES FOR FIFTH GRADE ARE VERY MUCH THE SAME AS YOUR FOURTH GRADE OBJECTIVES. IT SOUNDS LIKE WE ARE ON THE RIGHT TRACK.
IT LOOKS LIKE ALL WE REALLY NEED TO DO NOW IS COME UP WITH SOME CONVERSATIONAL DIALOGUE, OUR PROCEDURES, AND OUR EVALUATION METHODS. GOT TO GO, CONNIE. TALK TO YOU TOMORROW. JENNY

The team's collaborative efforts resulted in an interdisciplinary lesson plan that they plan to implement during the 1994-95 school year (see Appendix G).

Technology Outcomes

Technology and design issues were a pervasive theme which played a role in shaping much of the data. First, the data clearly suggest that, to be effective, interactive video classrooms must be equipped with switching options to incorporate both single screen and quad-split monitor use. While the quad-split monitor does provide instructors and participants with the usable option of a multiple-site continuous-view session, there are times when a single screen monitor is advantageous and preferred.
Second, because of the existing interactive classroom designs, close-up shots only imitated direct eye contact. Data from this study supported the need for improved eye contact during interactive sessions.13 Ellis (1993) suggested that students should have the option to manipulate camera angles and shot selection. At different times during this study, participants worked the cameras and made shot selections during the interactive video sessions. The response to this was positive. When planning instructional programs for adults, this should be considered.

The audio difficulties incurred during this study point out the importance of quality audio as an integral part of a interactive video classroom setting. Frequent monitoring of audio controls at each of the remote sites is a must. A cordless microphone would allow the presenter to move away from the teaching station into the wide camera angle with participants, a tactic that seemed to personalize the tone of interactions between the instructor and participants at remote sites. When participants have difficulty hearing the instructor, other participants' responses, or videotapes over the system, a less than optimum learning environment results.

In reference to computer networking, terminal access and network design were key factors. For computer networking to become a viable component of staff development programs, teachers must have unrestricted access to the networked computers. Just because a school has one terminal that is "connected" to the Internet does not mean that teachers necessarily have access. Connectivity and access are two different things. Ideally, access means networked terminals in each classroom, or at least in the teacher workroom, that would allow teachers the option to work at their leisure during their conference hour. No matter how amiable this option may sound, reality presents us with schools that are over-budgeted as it is. Networked computer
terminals for every classroom is not foreseen in the very near future. As further evidenced in this study, networked computer terminals that are not user-friendly are an automatic turn-off to teachers. Hard-drives are essential if collaborative efforts on the computer network between and among teachers is to be expected.

There was enthusiasm and apprehension among the participants toward the interactive technologies. In post-workshop questionnaire surveys, participants commented on what they felt were some of the advantages and disadvantages of using interactive technologies for inservice staff development programming. Some of the advantages were: (a) opportunities for collaborative teaching and planning, (b) instructors and important events can be shared to enlarge the art curriculum, (c) groups that are geographically separated can interact, and (d) interactive technologies aid in the communication process between schools and individuals.

Disadvantages included: (a) program planning is difficult when individuals have different levels of experience with the technology, (b) helping everyone to feel comfortable with the technology takes time, (c) dealing with the technical difficulties (i.e., audio/video), and (d) interactive technologies can never replicate the face-to-face interaction of a regular art classroom.

Content

When planning staff development programs, however, consideration needs to be given not only as to the appropriateness of the content for the mode of delivery, but also the appropriateness of the content for the inservice audience. In the case of this study, consideration had to be given as to the viewers' (participants') past experiences. As Barrett (1992) emphasized, one should choose art works that are challenging for a
more engaging dialogue session. However, he also noted that one should be careful to choose works that are not too far removed from the viewers' experiences.

Although Heap of Birds' work proved to be challenging, participant responses suggested that the images may have been, in fact, too far removed from their past experiences with art. For instance, participant responses to Heap of Birds' text-only imagery implied that the works did not fit within their definition of "art", a definition largely based on realism criteria. More importantly, the text-only images presented an alternative viewpoint of history - a viewpoint for which some participants may have felt uncomfortable, as evidenced by one participant's comments (see page 92-93). A more appropriate instructional strategy may have been to select art works that were representational, begin critical dialogue session with these images, and move into more complex works, such as Heap of Birds', later in the workshop series.

Concerning the content's applicability with distance learning technologies, it became obvious that art criticism was, because of its interactive nature, congruous with the technologies employed in this study. In the realm of art education, art criticism is inquiry-based. Critical inquiry in the classroom pulls individuals into interactive dialogue about a work a art. Interactive video classrooms and computer networks have the capabilities to delivery this interactivity.
CHAPTER VI
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

This study involved the development and implementation of a six-week inservice staff development series in art education. Two telecommunication technologies - an interactive video network and a computer network - were used in conjunction with each other for the delivery of art criticism content during the six-week series. Content focused on art criticism, however, interdisciplinary connections were made between the visual arts and language arts curricula. The six week series titled *Visual Art and Language Arts: Making the Connection* linked teachers in four Ohio area sites, thus providing opportunities to communicate with the presenter and other participants using audio, video, and/or text. These state of the art technologies provided for an interactive delivery of content.

The staff development model designed and utilized throughout the six-week series offered opportunities for workshop participants to interact in both face-to-face and telemediated environments. Since art criticism is "informed talk and writing about art for increased understanding and appreciation of art" (Barrett, 1992, p. 115) and is interactive in nature, it was appropriate for the series. The study provided insights as to how instruction in art criticism can be conducted in interactive environments such as an interactive video classroom and a computer network.

A multi-method research approach was designed and used with data collection and analysis techniques drawn from ethnographic, case study, and survey
methodologies. Throughout the study, insights were drawn to strengthen the design and provided for a continuous analysis of events throughout the research period.

The study was chronologically divided into three stages: Phase I, II, and III. Phase I involved a literature review to discover what interactive telecommunication staff development models were in place and which one(s) may have been more appropriate for staff development in art education. As indicated in Chapter II, the majority of the models found in the reviewed literature were based on satellite technologies, and none of the models were found within the art education literature. The lack of information pertaining to two-way interactive inservice staff development models both in education and art education literature led to Phase II.

Phase II involved the development of the interactive inservice staff development model used during this study and preparation for the implementation phase. I designed the model to encourage participant interactivity in four instructional settings: (a) face-to-face large group sessions, (b) large group interactive video network sessions, (c) small group face-to-face sessions, and (d) one-to-one interpersonal computer network setting (refer to Figure 10). The model was specifically designed with the delivery of art criticism content in mind. During Phase II, I decided upon content for the six-week agenda, produced visual aids needed for the series (i.e., video tapes, slides), and created hands-on participatory activities for small group face-to-face sessions.

Phase III - the implementation phase of the study - lasted for six weeks. The majority of the data was collected during this period to determine outcomes of implementing the model.

This study provided an in-depth look at an inservice staff development program in art education that utilized two distance learning technologies simultaneously over a six-week period - an interactive video network and computer networking. In addition,
the study contributes to the literature findings in that the study recounts, specifically, an inservice staff development program offered by a consortium of school districts for their personnel. From the reviewed literature, previous studies have predominantly involved staff development or continuing education programs that originated through a university. Therefore, this study provides the example of an "in-house" effort with data drawn largely from an emic point of view.

The multi-method research design used in this study confirms the need for alternative data collection procedures to examine the use of distance learning technologies. This study re-defines the traditional role of a participant observer to include multiple people as opposed to the single researcher for data collection at multiple sites.

Conclusions

This study was organized around the following set of questions:

1. What interactive distance learning staff development models are in place and which one(s) may be more appropriate for staff development in art education? What aspects of art criticism literature are appropriate for inclusion in an interactive staff development program?

2. What technology and content factors should be considered when designing an effective interactive art education staff development model for the delivery of art criticism content?

3. How might I test the interactive staff development model developed for this study to determine if distance learning technologies, namely an interactive video network and computer networking, can effectively deliver art criticism content in an inservice art education workshop series?
4. Based on the outcomes of my study, how might the use of interactive video networks and computer networking for inservice staff development in art education unfold in the future?

Considering these research questions, there are a number of conclusions that can be drawn from the data. First, distance learning technologies reduce the once-intractable barriers of time and distance. Nevertheless, distance education programs, such as the one conducted during this study, do not happen with technology alone. Interwoven within the discussion of the five themes are process, product, and people (the 3 P's). Throughout this study, the process (distance learning medium), product (content), and the people were the overarching factors in the research equation. While the process of delivery offers the setting for the educational program, it is the relevance of the content and the people, or key players, who make the program significant. The integration of people, product, and process is essential for successful distance learning inservice programs.

Second, distance learning technologies for inservice staff development in art education can be a rewarding experience. However, one must not be naive in understanding the complexity of putting such a program together. It is a demanding and time-consuming process that must be carefully considered. The time and efforts that are involved for content development, organization, etc. are not to be underestimated.

Third, interactive instructional strategies, such as those employed in this study, should be used to provide for interactive educational settings. Inquiry formats, such as those often used in classroom art criticism sessions, appear to be most compatible with the delivery methods that the interactive video network provides. All subject areas need
to be particular in the selection and development of process-oriented content activities that will successfully bring technology and content together.

Fourth, schools, as we know them today, generally are not set up for interaction and communication between teachers. Schedules, isolated classrooms, and separate curriculum strands make it difficult for collaborative ventures to take place between and among teachers. Perhaps the greatest service that these technologies, such as computer networking, can play for education is to provide a process for collaboration and communication.

Fifth, school administrators responsible for monitoring the design of interactive video classrooms need to consider recommendations from individuals experienced in interactive instructional environments. Public school facility personnel may have an overall understanding of the technical "workings" of an interactive classroom. However, it is the individual experienced in interactive instructional environments who should be making classroom design decisions - decisions which take into account, first and foremost, an optimum multi-site instructional setting. It is imperative that school districts consider issues of pedagogy first and technology issues second.

The main goal of the series was to see how interactive technologies could be used to deliver art criticism content, interactive in nature, in an inservice staff development program. Prior to the study, I anticipated that interactivity would, in fact, play an important role in the structure of the series to which it did. I had envisioned a higher level of participant interaction than I actually observed during the six-week period. I assumed that participants would be as overly enthusiastic as I was about both the content and the technology. However, this was not the case for everyone, as evidenced by the data presented in Chapter V. Therefore, adaptations on my part had to be made, to encourage and promote participant interaction, both in reference to content
and to the technology. As mentioned earlier, some of these adaptations involved revising content to accommodate for the diverse participant audience and adjusting instructional strategies to accommodate for technical difficulties.

Suggestions for Staff Development Practitioners

The following recommendations are not a comprehensive listing of all of the considerations that school districts should take into account when planning and utilizing inservice staff development programs in art education. However, they do represent suggestions that can be used to ensure successful art education staff development programming through distance learning technologies:

1. In an interactive video network, you are completely dependent upon the technology for the delivery of content. Technological "bugs" must be worked out to ensure that technical difficulties do not overshadow content and to guarantee quality instructional time for all participants.

2. Because participants are not in one physical location, it is imperative that the presenter use instructional strategies that will promote interactivity and full utilization of the technology. Suggestions include an inquiry-based, process-oriented model of instruction.

3. Face-to-face small group sessions conducted in conjunction with large group interactive video classroom sessions can provide additional opportunities for learning and a hands-on approach for promoting interactivity and collaboration among teachers.

4. Select content that is relevant to an inservice teacher audience. No matter how flashy the technology may be, it is only the vehicle for the delivery of pertinent content. If the content is not relevant to the teacher audience, the inservice program can be considered a waste of valuable time. Inservice program planners and instructors should
be especially sensitive to the various agendas of the participants and the cultural make-up of the community prior to the selection of art images for inquiry sessions.

5. Networking can provide a means for collaboration between and among teachers who may be geographically isolated. Computer networking as a method of instruction can provide additional options for one-on-one interaction between and among participants. However, to ensure program success, teachers must be adequately trained in the use of a computer and computer networking procedures before instructional activities begin.

6. Staff development planning personnel must take into account participant attitudes and consider how those attitudes can effect instructional efforts. Assuming that participants will automatically accept content ideas and/or the technology is a misperception that could lead to disaster.

7. The effective use of distance learning technologies for art education inservice programs require a significant commitment of financial and human resources for their promotion, planning, and coordination at the district level.

**Prospects for the Future**

The topic of inservice staff development will continue to gain importance at the local, state, and federal levels. This is especially true because of recent educational reform legislation - The Goals 2000: Educate America Act (Public Law 103-227) - which clearly supports strengthening and improving teacher education programs across this country. Richardson (1994) wrote,

Providing educators with continuous learning opportunities is one of two new national education goals in the Goals 2000....In addition, proposals being considered by Congress during reauthorization of the Elementary and
Secondary Education Act seek to expand federally supported professional-development programs. (p. 8)

And, with the Goals 2000 legislative allocation of an estimated $5,000,000.00 for state technology planning grants, one can hope that technology will play an important role in the implementation of future inservice staff development programs.

It is time for art education to take stock and decide what is next for distance learning technologies for the field. As new applications and refinements continue to emerge, these technologies will become ever more prevalent throughout our schools. But the future for interactive video classrooms and computer networking in art education is still to be decided. For those art educators whose lingering skepticism of clever machines dominate the field, it might behoove them to look to colleagues in other fields for confirmation of how distance learning technologies can offer opportunities for art education. For instance, educators in math and science are particularly encouraged at the educational possibilities of these technologies for their fields. (This is especially true now due to the availability of large grants from organizations such as the National Science Foundation and the Annenburg Foundation. These organizations are funding to pursue reforms in the fields of math and science education.) Art educators can draw upon experiences from the math and sciences to assist in the strengthened use of these technologies for art education. Goals 2000 clearly states that art education is part of the reform. Therefore, art education must get on the ball to develop strategies for how technology will play a role in art education.

Recommendations for Further Research

This study provided one example of how interactive video and computer networks can be used in staff development programs. But, as the technology advances,
costs decline, and the use of distance learning technologies become more prevalent, a number of key questions will emerge.

First, this study has shown one example of how telecommunication technologies can alter formats for traditional staff development programs. But, how will these transformations have an effect on teacher education programs across the country? If so, will distance learning formats be more effective, or at least as effective, as traditional models that are presently employed?

Second, what instructional methods best work when teaching in telemediated environments? The staff development model utilized during this study incorporated a variety of strategies drawn from a medley of traditional models. These proved to be somewhat effective. But, instructional methodologies need to be further developed and their effectiveness assessed.

Third, how does one incorporate the benefits of interactive technologies while dealing with the problems (i.e., technical design problems, technophobia, applicability of content)? School districts and distance learning program planners need to consider how the development of hybrid models - incorporating both traditional print media with new interactive technologies - can be used to enhance distance learning instruction.

Further development of process-oriented content activities is essential, especially activities that can be successfully implemented in distance learning environments such as interactive classrooms and computer networks. The hands-on approach to art critical inquiry may be one model that others may consider during the development of these activities. If these technologies are to be effective, appropriate content activities for these environments need to be designed.
Final Comment

This study provided indications of the various possibilities that distance learning technologies have for inservice staff development in art education. Telecommunication technologies can provide interactive formats for school districts to consider in staff development programming in art education. With careful planning, these technologies can provide the facility for teachers to work collaboratively within a district and encourage collaborative ventures with teachers from other districts. I believe the growing capabilities of these rapidly-developing technologies will enhance staff development programming in the future. But, planners of staff development programs must remember that interactive video classrooms and computer networks are technological instruments by which instruction is provided. No matter what the distance learning technology medium may be, the instruction must remain content relevant, fundamentally personal, and genuinely interactive.
APPENDIX A

GLOSSARY OF TERMS
GLOSSARY OF TERMS

Computer Networking - refers to the act of communicating through a computer network.

Distance Education - often used interchangeably with the term distance learning. The linking of a teacher and students in several geographic locations via technology that allows interaction.

Downlink - Transmission of radio frequency signals from a satellite to an earth station.

Fiber Optics - a communications medium based on a laser transmission that uses a glass or plastic fiber which carries light to transmit video, audio, or data signals. Each fiber can carry from 90 to 150 megabits of digital information per second or 1,000 voice channels.

Interactive Video Network - network which provides full interaction capabilities including two way audio and two video between two or more sites.

Internet - a group of interconnected regional, national, and international computer networks that use the same communications protocols.

Modem - MOdulator/DEModulator. Device that connects computer terminals and hosts through analog links (viz., phone lines) by converting data signals to analog signals and back again.

Network - An interconnected and coordinated system of dispersed communications devices often referred to as nodes that are linked via some type of media enabling individuals to exchange conversation, data, graphics, and/or information. A network, whether video or computer, is similar to a highway system. It can support different types of service, offered by anyone with access to the network who chooses to provide them.
**Protocols** - A set of rules and procedures for establishing and controlling conversations on a line. The set of messages has specific formats for exchanging communications and assuring end-to-end data integrity of links, circuits, messages, sessions, and application processes. For this paper, a definition for how computers will act when talking to each other. Standard protocols allow computers from different manufacturers to communicate.

**Telecommunications** - refers to the use of wire, radio, optical, or other electromagnetic channel to transmit or receive signals for voice, video, and/or data communications.

**Uplink** - An earth station that transmits a radio frequency signal to a communications satellite. The transmitting medium, or uplink, includes a large dish-shaped antenna and high-power amplifiers. The uplink is like the transmitter of a radio or television station, except that it concentrates its signal in one direction by means of a parabolic dish antenna that delivers a strong pinpoint signal to a specific satellite in space.
APPENDIX B

WORKSHOP AGENDA AND RELATED MATERIALS

INTERACTIVE VIDEO CLASSROOM FLOOR PLAN
Visual Art and Language Arts: Making the Connection

A Staff Development Workshop Series
January 24 - February 28, 1994

Instructor: Cassandra A. Broadus
The Ohio Partnership for the Visual Arts

The following agenda and information is from Visual Art and Language Arts: Making the Connection, a six-week inservice staff development series that focused on interdisciplinary connections between visual art and language arts. The series provided:

- Practical teaching ideas for making interdisciplinary links between visual art and language arts elementary curriculum,
- Classroom inquiry methods using works of art that emphasized both oral and written dialogue,
- Strategies for implementing the "visual literacy" component of both visual art and language arts curricula,
- Hands-on experience with interactive fiber optic classrooms and computer networking, and
- Pragmatic ideas for using computer networking to teach visual art and language arts concepts.

During the six-week series, workshop participants in four area sites were linked via a fiber optic interactive video system. Participants were given opportunities to participate in activities and communicate with presenters as well as others at all four sites. Each person was assigned a computer address through the South Central Ohio Computing Association (SCOCA) or the Metropolitan Educational Computing Association (MEC). Using this account, they were involved in weekly computer networking exercises including:

- an orientation to computer networking,
- collaborative writing about art, and
- personal electronic mail communication.
ART CRITICISM AND LANGUAGE ARTS:  
MAKING THE CONNECTION  
SESSION 1  
Face to Face Session  
CHILlicoTHE HIGH SCHOOL  
January 24, 1994

4:15 - 4:30 Registration  
Welcome and Introductions  
Goals and Objectives for the Series  
Discussion of Professional Development Activities

4:30 - 4:45 Introduction to Discipline-Based Art Education (DBAE): Art Production, Art History, Art Criticism, and Aesthetics

4:45 - 5:00 Theorizing about Art  
What is Art?: Finding definitions

5:00 - 5:10 SMALL GROUP BREAKOUT ACTIVITY  
Ruby the Elephant: An Aesthetic Scenario

5:10 - 5:20 INTERACTIVE DISCUSSION

5:20 - 5:25 Break

5:25 - 5:45 Criteria for Making Judgments about Art  
Topical Areas of Aesthetics

5:45 - 6:00 Aesthetics in the Classroom: What does it look like?  
Helping kids make judgments about art  
Foundations Level Activities  
Vivid Case Scenarios  
"The Unknown Tin Man"  
Complex Issues

6:00 - 6:10 Aesthetic Inquiry and Language Arts: Interdisciplinary Ideas

6:10 - 6:20 SMALL GROUP BREAKOUT ACTIVITY

6:20 - 6:30 QUESTION AND ANSWER SESSION
VISUAL ART AND LANGUAGE ARTS:
MAKING THE CONNECTION
SESSION 2: Introduction to Networking
Face to Face Session
CHILLICOTHE HIGH SCHOOL
January 31, 1994

4:15 - 4:25  Welcome and Announcements
Assign Designated Receiving Sites

4:25 - 4:50  Introduction to Computer Networking
What is SCOCA: South Central Ohio Computing Association
Steve Marion, SCOCA Accounts Manager
Assignment of Computer Network Accounts and Buddies
America's Future Superhighway: The NII
(National Information Infrastructure)
What is the Internet?

4:50 - 5:00  Break
(OU account-holders go to OUC computer lab for the hands-on session)

5:00 - 5:45  HANDS-ON SESSION: Accessing the Network
An Introduction to Electronic Mail (E-Mail)
Accessing your SCOCA and MEC account

5:45 - 6:10  Linking to Worldwide Electronic Resources

6:10 - 6:30  QUESTION AND ANSWER TIME
Assignment of Weekly Professional Development Activity
SESSION 3
ART CRITICISM IN THE CLASSROOM:
GETTING KIDS TO TALK ABOUT ART

TWO-WAY INTERACTIVE SESSION
February 7, 1994

4:15 - 4:20 Welcome
Interactive Technology in the Classroom

4:20 - 4:40 What is Art Criticism?
   Defining Art Criticism
   Of what importance is art criticism?
   Video excerpts of art criticism tape
   Who is an art critic? What does s/he do?

4:40 - 5:00 SMALL GROUP BREAK OUT SESSION at Receiving Sites
   Token Response Game

5:00 - 6:00 Looking at and Discussing Art
   Putting art experiences into language
   (INTERACTIVE DIALOGUE SESSION BETWEEN THE SITES)

6:00 - 6:15 Developing Verbal Fluency through Critical Dialogue
   Leading students in a critical dialogue session

6:15 - 6:30 QUESTION AND ANSWER SESSION
   Assignment of weekly networking activity
SESSION 4
ART CRITICISM AND WRITING: A DUO FOR THE CLASSROOM

TWO-WAY INTERACTIVE SESSION
February 14, 1994

4:15 - 4:20  Welcome

4:20 - 4:25  Putting art experiences into language
 Looking, Discussing, and Writing about Art

4:40 - 5:10  Interactive Critical Dialogue Session

5:10 - 5:15  Do you See what I see?
 Video Segments

5:15 - 5:35  Forming Personal Interpretations
 Individual Interpretations: Different and Contradicting

Finding the Meaning of a Work
 Artist's Intent vs. Personal Interpretations

5:35 - 5:45  Break

5:45 - 6:20  Setting up an Interactive Classroom
 Providing a Psychologically Safe Environment for
 Talking and Writing about Art
 Connections between Visual Art and Language Arts
 Video Segments

6:20 - 6:30  QUESTION AND ANSWER SESSION
 Assignment of Weekly Networking Activity
SESSION 5
LOOKING AT DIVERSE CULTURES THROUGH THEIR ART
TWO-WAY INTERACTIVE SESSION
February 22, 1994

4:15 - 4:20 Welcome

4:20 - 4:30 INTERACTIVE DISCUSSION ON SUCCESSES AND/OR PROBLEMS IN USING THE Internet

4:30 - 5:15 Multicultural and Contemporary Artworks: A New Way of Looking
Art as a Reflection of Culture
Looking at Diverse Cultures through their Arts
Contemporary Art and Issues of the 90's

5:15 - 5:25 Break

5:25 - 5:45 SMALL GROUP BREAK-OUT ACTIVITY
CONTEXT BAG ACTIVITY

5:45 - 6:00 Using Context Bags in the Classroom

6:00 - 6:15 Network Collaborative Writing Update

6:15- 6:30 QUESTION AND ANSWER SESSION
Assignment of Weekly Networking Activity, Collaborative Writing Exercise
SESSION 6
MODEL LESSONS FOR TEACHING

FACE-TO-FACE SESSION
February 28, 1994

4:15 - 4:20 Welcome and Refreshments

4:20 - 4:40 Successes and/or Problems with Using Technology for Teaching Art Criticism

4:40 - 5:30 Presentations of group work (units of instruction)

5:30 - 5:45 Evaluations
THE CASE OF RUBY THE ELEPHANT

"The Case of Ruby the Elephant" was inspired by a pair of color photos that appeared a few years ago in a Phoenix, Arizona newspaper. One photograph showed Ruby, an elephant at the Phoenix Zoo, grasping an artist's paintbrush in her trunk, applying paint to a canvas mounted on an easel. The second photo showed a painting completed by the elephant. Students were allowed to look at the newspaper pictures and were then instructed to respond to these two questions:

1. Is what Ruby has made a work of art?
2. Is Ruby an artist?

Students were further instructed to defend their answers. In field testing, students were usually asked to individually write their responses to each question. Following some quiet writing time, the class discussed their responses. In other instances, the class was divided into several smaller discussion groups at the outset. After a time, a spokesperson from each group summarized group responses before the entire class and general discussion followed. Each arrangement worked well. The choice of arrangement might depend upon whether the teacher wanted to especially reinforce and assess individual inquiry skills or interactive inquiry skills.

Q. Is what Ruby has made a work of art?

Kathy's response: I think that there are two ways of looking at it. One is that artist's materials are used to create art. A person may not feel that it is good art, but it shows the signs of being art. Ruby used different colors, therefore, some artistic thought is used. Another way of looking at it is comparing it with other works. Many artists spend years creating one art work, thinking and sketching. Ruby just sticks paint on the paper. A small kid could create a work like this. Should it be classified as "art" like the works of people who spent years?
Q. Is Ruby an artist?

Jamie's response: No, I don't think so. It's more like an animal trick. She was most likely trained to do so and like I said before [in my response to the first question], she probably really doesn't know exactly what she is doing. I don't think she could be considered an artist because what she is doing is more a trick. This lesson, so simple on its surface, immersed students in aesthetic inquiry, specifically addressing the concept of art and artistic expression. Kathy's response demonstrates that she is capable of viewing a problem from multiple perspectives and she provides enough conceptual material to fire several more discussions. For example, she has come to the important realization that something can be art without being good art; she toys with the idea that media and methods can be used as evident to identify an object as art: she suggests that a good way of recognizing art is to look for similarities between objects or between activities; she implies that making art requires maturity, time, effort and skill. Jamie's response indicates that artistic activity must be purposeful. The students might be questioned about what an artist's purpose might be, and about what an artist must know or think in order to intend to make art. It makes sense to assume that an artist must have some concept of art and some familiarity with art history in order to have such intentions. If Ruby does not possess such knowledge, it may be inappropriate to call her an artist. But would that mean that Ruby's paintings could not be art? No necessarily; many ancient and ceremonial artifacts have found their way into art museums and art history books, even though their creators probably had no concept of art analogous to ours. And consider this: Ruby's paintings have been sold at an art gallery in Scottsdale, Arizona.

Teaching with "The Case of Ruby the Elephant" provides a good opportunity for putting the principle of planned uncertainty into practice. In this instance, the goals
of the lesson were to introduce students to the process of aesthetic inquiry and to familiarize them with issues related to important topics in aesthetics. The teaching strategy was to direct students to reflect upon the questions and try to clarify and articulate their ideas through writing and discussion. In the process and through teacher aided summary and synthesis, students were able to consider several perspectives and solutions to the problems. What was unknown by the teacher beforehand was how the students would respond to the questions. The teacher was not waiting to hear "The Right Answer" and thus close the case of Ruby the Elephant; the teacher was waiting to hear the results of critical thinking about art. "The Case of Ruby the Elephant" could add an enjoyable and surprising twist to a unit on animals in art, (e.g., paintings of wildlife, and, paintings by wildlife!) At a more advanced level, Ruby could provide the catalyst for further studies in art theory and artistic expression.

THE TIN MAN

This lesson focuses on the work of folk artists who can be identified by their concern with the perpetuation of traditions peculiar to an occupation or trade, particularly the sheet metal trade. The tin man sculptures presented in this lesson were created by unknown artists who had chosen the sheet metal trade as an occupation. These works give students a look at how the context and the world in which the artist lives is an important aspect to understanding folk art.

MATERIALS:
Slide Projector; Slide carousel;
2. "Tin Man", Artist unknown, 30" high, Collection of Herbert Hemphill, Jr., New York City

Index Cards with aesthetic questions;

VOCABULARY: Sculpture; folk art; construction

INSTRUCTION:
1. Present students with the following scenario:
During a visit to Pittsburgh, Pennsylvania, a New York gallery owner noticed a tin man sculpture outside Herb's Heating and Cooling Shop. The tin man sculpture, proudly displayed near the front door, welcomed customers and visitors to Herb's shop. The gallery owner stopped the car to take a closer look at the tin man. He was astounded by the degree of craftsmanship and overall design of the sculpture. He knew that if he could only purchase the tin man for his gallery, someone in New York would surely pay a high price for the sculpture. He though it was truly a "work of art"! The gallery owner entered the shop to talk with Herb about buying the tin man. He offered Herb a lot of money for the tin man. As they talked, Herb assured the gallery owner that the
tin man was not a work of art, but simply a figure that he had made to advertise his business. He guaranteed the gallery owner that everyone in his business knows how to make these tin men and that it was not art.

2. Divide the class into small groups. Each group will receive a card with questions relating to the scenario. Questions may include:
   a. Should Herb sell the tin man to the gallery owner? Why or why not?
   b. Since Herb created the tin man but he does not consider it a work of art, is it "truly a work of art"? Explain your reasons

3. Students will discuss possible answers to the questions. After small group discussion is complete, a class discussion will follow. Although a reporter from each group will present possible answers and opinions, all students are encouraged to participate in the class discussion.

FURTHER SUGGESTION: This vivid case scenario could also be presented in a story drama. Actors for the story drama could include Herb, the gallery owner, the gallery owners friend, workers in Herb's shop who could express their opinions to Herb and customers in Herb's shop. For extra fun, the tin man could even come alive to participate in the story drama!

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Figure 10. Interactive Video Classroom Floor Plan, Chillicothe High School.
APPENDIX C

ART CRITICISM CONTEXT BAG ACTIVITY INFORMATION
INSTRUCTIONS

Items in this context bag can be used to help you form a better understanding of the art work of Edgar Heap of Birds.

Carefully look at and discuss the artwork "What Makes a Man: Boy, Woman, Family". Then, look at each of the enclosed context cards and the additional information on the back of each card. Lay the cards out on a table so that you can see all of them at once. Decide which of the cards is the most important for helping you to form an understanding of the work "What Makes a Man: Boy, Woman, Family".

Arrange them according to their rank of importance. Move them around if you need to before making your final decision. You may choose to include or omit the reproduction of "What Makes a Man..." in your ranking.

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CONTEXT BAG ACTIVITY
HACHIVI EDGAR HEAP OF BIRDS
LIST OF CARDS

1. Contemporary Native American Issue
   "Landfill Plan Sparks Indian Protest"

2. Portrait of Heap of Birds with "Telling Many Magpies..."

3. Indian Prisoners in the courtyard at Ft. Marion about 1875,
   St. Augustine, Florida

4. Overhead view of Fort Marion prison, St. Augustine, Florida

5. Coacoochee's diary account of an escape from Fort Marion,
   November 1837

6. "What Makes a Man: Boy, Woman, Family" by Hachivi Edgar
   Heap of Birds, 1987, pastel on rag paper, 66 x 150", 15 panels each 22 x 30"
Landfill Plan Sparks Indian Protest

In Tennessee, native Americans oppose development they view as a threat to ancestral graves.

By Brenda K. Marshall

The plans along the Indian Landfill area in the Bell Bend area near Beechbluff, Tennessee, include turning much of the land into a national park. This is a site of great historical and cultural significance to the Cherokee Nation.

Contemporary Native American Issue

Figure 11. Context Bag Activity Card
This material is available for consultation at your University library.


Portait of Hachivi Edgar Heap of Birds with "Telling Many Magpies, Telling Black Wolf, Telling Hachivi". 1989, screen print, 42" x 60".

Figure 12. Context Bag Activity Card
Indian prisoners in the courtyard at Fort Marion about 1875.
St. Augustine, Florida.

Figure 13. Context Bag Activity Card

Overhead View of Fort Marion prison, St. Augustine, Florida

Figure 14. Context Bag Activity Card

"...We were in a small room, eighteen or twenty feet square. All the light admitted, was through a hole (embrasure) about eighteen feet from the floor.... We from time to time cut up the forage-bags allowed us to sleep on, and made them into ropes....

In order to reduce ourselves, we took medicine five days. For some weeks we watched the moon, in order that the night of our attempt it should be as dark as possible.... With much difficulty succeeded in getting my head through; for the sharp stones took the skin off my breast and back. At last, safely on the ground, I awaited the arrival of my comrade...."

COACOOCHEE'S ACCOUNT OF AN ESCAPE FROM FORT MARION, NOVEMBER 1837.

Figure 15. Context Bag Activity Card

This material is available for consultation at your University library:

"What Makes a Man: Boy, Woman, Family" by Hachivi Edgar Heap of Birds, 1987, pastel on rag paper, 66" x 150", 15 panels each 22" x 30".


*Figure 16. Context Bag Activity Card*
APPENDIX D
PHOTOGRAPHS
Plate I. Participants with a Quad-Split Monitor.
Plate II. Participants during a Large-Group Interactive Session
APPENDIX E
DATA COLLECTION INSTRUMENTS
**PARTICIPANT INFORMATION SHEET**

**PLEASE COMPLETE AND RETURN TO CASSANDRA BROADUS ON MONDAY, JANUARY 24TH.**

<table>
<thead>
<tr>
<th>NAME</th>
<th>last</th>
<th>first</th>
<th>middle initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOME ADDRESS</td>
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<td></td>
<td></td>
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</tbody>
</table>

<table>
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<tr>
<th>HOME PHONE</th>
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<th></th>
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<table>
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<tr>
<th>SCHOOL DISTRICT</th>
<th></th>
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<table>
<thead>
<tr>
<th>SCHOOL</th>
<th></th>
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<table>
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<tr>
<th>TEACHING ASSIGNMENT</th>
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<table>
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<tr>
<th>SCHOOL PHONE</th>
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**CONFERENCE PERIOD: FROM_______ to__________**

<table>
<thead>
<tr>
<th>male</th>
<th>female</th>
<th>Age Range:</th>
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</thead>
<tbody>
<tr>
<td>20-29</td>
<td>40-49</td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>50-59</td>
<td></td>
</tr>
</tbody>
</table>

**SUPERINTENDENT'S NAME**

**ADDRESS (if known)**

I am taking this workshop for: (Check one)

<table>
<thead>
<tr>
<th>GRADUATE CREDIT</th>
<th>CEU CREDIT</th>
<th>NO CREDIT OPTION</th>
</tr>
</thead>
</table>

I currently have an electronic-mail account.  Yes  No

If yes, please indicate where you received your account.

<table>
<thead>
<tr>
<th>South Central Ohio Computing Association (SCOCA)</th>
<th>Ohio University account</th>
<th>Ohio State University Magnus account</th>
<th>America On-Line</th>
<th>Other network (Prodigy, Compu-Serve, etc.)</th>
</tr>
</thead>
</table>

Current E-Mail Address:

---

**FOR OFFICE USE ONLY**

E-Mail Address:

Network Buddy:

Technical Assistance Record:
PRE-WORKSHOP QUESTIONNAIRE

Results from the following questionnaire will be used during the evaluation of this staff development series. Your input is greatly appreciated.

Please complete and return to Cassandra Broadus on Monday, January 24th. Thank you.

1. I have participated in staff development workshops in the past.
   Yes No

2. I have participated in past staff development activities that utilized interactive fiber optic technology? Yes No
computer networking? Yes No

3. Briefly describe the activities that you participated in which utilized either of these technologies.

4. Have you taken a distance education course which utilized another technology medium other than fiber optics or computer networking?
   Yes No If so, what medium? _________________

5. During the 1993-94 school year, I have used art criticism activities, such as talking and/or writing about an artwork, with my students.
   Yes No

6. Briefly describe one art criticism activity that you have used in your classroom since September 1993.

7. I provide interdisciplinary activities in my classroom that integrate visual art and language arts.
   Never Once a month Weekly Daily

8. On the back of this page, briefly describe one of these activities.
PROFESSIONAL DEVELOPMENT ACTIVITIES

GRADUATE CREDIT INFORMATION

This staff development series has been planned to provide participants with numerous opportunities for interaction and hands-on experience. To get the most out of this series, your participation in the following workshop activities is needed.

1. **Attend and participate in each workshop session.**
   - Monday, JANUARY 24, 1994 4:15-6:30pm
   - Monday, JANUARY 31, 1994 4:15-6:30pm
   - Monday, FEBRUARY 7, 1994 4:15-6:30pm
   - Monday, FEBRUARY 14, 1994 4:15-6:30pm
   - **Tuesday, FEBRUARY 22, 1994** 4:15-6:30pm
   - Monday, FEBRUARY 28, 1994 4:15-6:30pm

2. **Complete all weekly Professional Development Activities (i.e., computer networking assignments, readings) described in the workshop schedule.** You will be working collaboratively with other teachers from your grade-level/subject area on weekly Professional Development Activities.

3. **Using inquiry methods and strategies presented in these workshops, develop an Interdisciplinary unit of instruction for your classroom that clearly integrates the visual art and language arts curriculum.** You will be working collaboratively with other teachers from your grade-level/subject area to develop lessons for this unit. *Further details about this project and suggestions for completing it will be given throughout the workshops series.*

Two graduate credit hours are available through Ohio University-Chillicothe, Department of Continuing Education. If you have questions about your registration status or graduate credit, please contact:

Jody Van Winkle
Continuing Education, Training & Development
Ohio University - Chillicothe
P.O. Box 629
Chillicothe, OH  45601
Phone:  614-774-7226
FAX:  614-774-7214
JOURNALING

Participants choosing to receive two graduate credit hours must complete all Professional Development Activities described above and the additional requirement described below:

JOURNALING - An account of your experiences at workshop sessions will be recorded in a journal.

Although interactive video-teleconferencing allows workshop participants to see each other, much of the communication between the sites is dependent upon camera placement and room arrangement. Not all of the interaction that takes place at each receiving site, both verbal and non-verbal, will necessarily be picked up through the cameras. That is one reason why on-site observations are important.

As an on-site observer, you can play an important role in documenting information during the weekly sessions. This information can not only aid in the successful evaluation of this workshop series but assist in the planning of future staff development programs.

This journal has been furnished to you and contains questions and items for your consideration throughout the weekly sessions. Please review each of the questions prior to the beginning of workshop. The journal will help you record the following:

(a) notes on the receiving site setting;
(b) transmission qualities at each site; and
(c) notes on the teachers' interaction;
(d) teachers' attitudes (both verbal & nonverbal) toward content activities;
(e) teachers' attitudes (both verbal & nonverbal) toward technology;
(f) other information that you feel pertinent to the workshop series' evaluation.

Your journal entries do not have to be long and extensive, but should clearly portray the receiving site setting and workshop activities. Please submit your completed journal to Cassandra after Feb. 28th.

Thank you.
Session 3  
Monday, February 7, 1994  
Art Criticism in the Classroom:  
Getting Kids to Talk About Art

I. Set up of the Fiber Optic Room  
Describe the physical arrangement of the room. Were the tables and chairs accommodating for today's activities? Could all participants easily see the screen? If not, how was this problem alleviated?

II. Transmission Signal  
Was the video clear during today's workshop? Was the audio signal clear during today's workshop? If not, describe the problems that site encountered.

III. Small Group Break-Out Activity  
Token Response Game  
Were participants eager or hesitant to play Token Response? Record examples of participants' discussion during the Token Response Game.
IV. Interactive Sessions

Were the participants apprehensive about interacting with the other receiving sites? If so, why do you think this was the case?

V. Record any happenings and/or comments that you think are significant to evaluating today's session.

Comments concerning teachers' attitudes (both verbal and nonverbal) toward content activities

Comments concerning teachers' attitudes (both verbal and nonverbal) toward the interactive technology

VI. Other relevant observations and/or comments
JOURNAL ENTRY

Session 4
Monday, February 14, 1994

ART CRITICISM AND WRITING:
A DUO FOR THE CLASSROOM

I. Set up of the Fiber Optic Room
   Describe the physical arrangement of the room. Were the tables and chair accommodating for today's activities? Could all participants easily see the screen? If not, how was this problem alleviated?

II. Discuss any technical difficulties that your site encountered during today's session (i.e., audio/video transmissions).

III. Small Group Break-Out Activity
   Did group members prefer to work alone, in pairs, or as a group to complete the small group activity? Please explain.
IV. Interactive Session
Were participants eager or hesitant to share their personal interpretations of the art work with the other receiving sites? Please explain.

V. Record any happenings and/or comments that you think are significant to evaluating today's session.
Comments concerning teachers' attitudes (both verbal and nonverbal) toward the content.

Comments concerning teachers' attitudes (both verbal and nonverbal) toward the interactive technology.

VI. Other relevant observations and/or comments
JOURNAL ENTRY

Session 5
Tuesday, February 22, 1994
Multicultural and Contemporary Artworks:
A New Way of Looking

I. Set up of the Fiber Optic Room
Describe the physical arrangement of the room. Were the
tables and chair accommodating for today's activities? Could all
participants easily see the screen? If not, how was this problem
alleviated?

II. Discuss any technical difficulties that your site
encountered during today's session. (i.e. audio/video
transmission)

III. Small Group Break-Out Context Bag Activity
Did participants clearly understand the objectives of the
Context Bag activity? Record examples of participants'
discussion during the Context Bag Activity.
IV. Interactive Sessions
Were the participants apprehensive or eager to interact with the other receiving sites? Please explain.

V. Record any happenings and/or comments that you think are significant to evaluating today's session.
Comments concerning teachers' attitudes (both verbal and nonverbal) toward content activities.

Comments concerning teachers' attitudes (both verbal and nonverbal) toward the interactive technology.

VI. Other relevant observations and/or comments
JOURNAL ENTRY

Session 6
Monday, February 28, 1994
Model Lessons for Teaching

I. Set up of the Fiber Optic Room
   Describe the physical arrangement of the room. Were the
tables and chairs accommodating for today's activities? Could
the participants easily see the screen? If not, how was this
problem alleviated?

II. Transmission Signal
   Was the video clear during today's workshop? Was the
audio signal clear during today's workshop? If not, describe the
problems that your site encountered.

III. Did participants appear to feel comfortable
     expressing their likes/dislikes with the technology?
     Please explain.
IV. How did participants at your receiving site show interest in the other groups' presentations? (i.e., Did they take notes, make personal comments, etc.?)

V. Record any happenings and/or comments that you think are significant to evaluating today's session.
   Comments concerning teachers' attitudes (both verbal and nonverbal) toward content activities.

   Comments concerning teachers' attitudes (both verbal and nonverbal) toward the interactive technology.

VI. Other relevant observations and/or comments (i.e., teacher attitudes toward completing evaluation forms)
Visual Art and Language Arts: Making the Connection
POST-WORKSHOP QUESTIONNAIRE

Fiber Optic Classrooms

1. Discuss what you feel are the advantages and/or disadvantages of using fiber optic classrooms and computer networking for a staff development program?

2. Many of you have expressed an interest in using the fiber classrooms in your teaching. Discuss some possible ways that you could utilize the fiber optic classrooms in your curriculum in the future.

3. Would you be interested in additional staff development workshops to expand your working knowledge and experience with using fiber optic classrooms?

   Yes   No

Basic knowledge of computers

4. I have a computer at home. (Circle one)

   Yes   No

5. This workshop series was my first experience with computers. (Circle one)

   Yes   No
6. If this was not your first experience with a computer, how did you attain your computer knowledge? (Circle one)

Self-taught
Conference or workshops
Continuing ed. college courses
District courses
Undergraduate/graduate training
Spouse and/or friend
Other ________________________

7. Please check each computer application below with which you have had experience.

Word processing
Games
Databases
Desktop publishing
Painting or drawing
Keyboarding
Spreadsheets
Chart/graphing
Tutorial programs
Others_________________

Computer Networking

8. During this workshop series, I used a networked computer located in: (Circle all that apply)

the computer lab at my school.
another school in my district.
my classroom.
an administrative office.
a library or resource room.
the local university.
my home (via modem).

9. Describe your experiences with the required e-mail and listserv activities? Include both your successes and/or frustrations. Include the collaborative writing experiences with your network buddy.
10. Describe any additional computer network activities that you explored on your own (i.e., database access, telnet, phone, etc.).

11. I plan to continue using my networking skills:

- to correspond with my workshop buddy. Yes No
- to access information for my classroom. Yes No
- to correspond with workshop staff. Yes No

Workshop Series

12. What was your initial motivation for enrolling in this workshop series? (Circle all that apply.)

- An interest in the visual art/language arts content
- An interest in learning some basic computer networking skills
- An interest in learning about two-way interactive classrooms
- CEU credit offering for professional advancement
- Graduate Credit offering for professional advancement
- Other

13. Over the past six weeks, I have begun to think about ways in which I can provide interdisciplinary connections between visual art and language arts for my students.

   No

14. Discuss how you plan to use some of the interdisciplinary ideas presented in this workshop series.
15. Please make further comments and suggestions for improving similar staff development workshops in the future.

16. Overall, how do you rate this staff development series? (Circle one)

1  2  3  4  5  6  7  8  9  10
            Poor      Fair      Good     Excellent

17. I WOULD LIKE TO RECEIVE ASSISTANCE IN THE UPCOMING WEEKS TO FURTHER MY KNOWLEDGE IN COMPUTER NETWORKING (i.e., accessing resources, etc.)

YES      NO

18. I WOULD BE WILLING TO BE INTERVIEWED BY CASSANDRA BROADUS ABOUT MY WORKSHOP EXPERIENCES.

YES      NO
January 25, 1994

TO: Jeff Culwell

FROM: Cassandra A. Broadus
Ohio Partnership for the Visual Arts

RE: MEC Accounts

I enjoyed speaking with you this afternoon concerning the staff development workshop series "Visual Art and Language Arts: Making the Connection". This series is currently being offered via the Great Seal Fiber Optic Network in the Chillicothe Area. As coordinator, I am involved in the planning and implementation of this series. The series involves interdisciplinary ideas for integrating the visual art and language arts curriculum. In addition, it will offer participants opportunities to learn about computer networking and the implications of this technology for education.

I have been working closely with Mr. Steve Marion, South Central Ohio Computing Association (SCOCA) Accounts Manager, to acquire e-mail accounts for the workshop participants. He will be issuing SCOCA accounts to those participating teachers in districts such as Union-Sciota, Chillicothe, Huntington, Paint Valley, Pickaway-Ross, Ross County, and Scioto Valley. However, there are two districts, Circleville and Logan Elm, which are serviced by MEC and not by SCOCA. In order for these teachers to participate in the networking activities, I need to acquire MEC accounts for them. Their names are listed below:

<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhonda R. Miner</td>
<td>Mound Street</td>
<td>Circleville Schools</td>
</tr>
<tr>
<td>Bruce C. Chilcote</td>
<td>Logan Elm HS</td>
<td>Logan Elm Schools</td>
</tr>
<tr>
<td>Susan Cunningham</td>
<td>Logan Elm HS</td>
<td>Logan Elm Schools</td>
</tr>
<tr>
<td>Robyn M. Helsel</td>
<td>Logan Elementary</td>
<td>Logan Elm Schools</td>
</tr>
</tbody>
</table>

Thank you for agreeing to issue these accounts for these four teachers. Now the more difficult task is to get terminal access for them. I will continue to work toward that goal this week.

The attached page details the goals and objectives for the series. I will come by your office around 10:00 Thursday to pick up the e-mail account information. If you need further information for your documentation, please feel free to contact me at 614-864-0923 or via e-mail at cbroadus@magnus.acs.ohio-state.edu. I can't thank you enough for your support and cooperation!
January 25, 1994

TO: Mr. Richard Cline

FROM: Cassandra A. Broadus
Ohio Partnership for the Visual Arts

RE: SCOCA Permission Letter

I enjoyed speaking with you this afternoon concerning the staff development workshop series "Visual Art and Language Arts: Making the Connection". As discussed in the Council of Governments meeting in September, this workshop series will be offered via the Great Seal Fiber Optic Network. The series' agenda includes offering opportunities for workshop participants to be involved in basic computer networking activities.

The following teachers and administrators from Chillicothe City Schools have signed up for the series:

Jack D. Burgess, Mt. Logan MS
Alan Cook, Mt. Logan MS
Judith Lanning, Smith MS
Sherri Rutherford, Smith MS
Donna J. Towne, Mt. Logan MS
Michael Cline, Chillicothe Administration
Amey Van Voorhis, Chillicothe Administration

In planning for this project, I have been working closely with Steve Marion, SCOCA Accounts Manager. In order for Steve to issue each teacher an account, he will need a permission letter from his/her superintendent.

As we discussed on the phone, your signature on the following letter will provide permission for Jack, Alan, Judith, Sherri, and Donna to acquire their accounts. Please sign the attached letter and return it to me via FAX at 614-864-0923 or e-mail at cbroadus@magnus.acs.ohio-state.edu.

If you have any further questions or if I can be of assistance, please feel free to contact me. Thank you for your support and cooperation.
January 25, 1994

Mr. Steve Marion, Accounts Manager  
South Central Ohio Computing Association  
P.O. Box 577  
Piketon, OH 45661

Dear Steve,

The following teachers in my district have enrolled in "Visual Art and Language Arts: Making the Connection" staff development series:

Jack D. Burgess, Mt. Logan MS  
Michael Cline, Chillicothe Administration  
Alan Cook, Mt. Logan MS  
Judith Lanning, Smith MS  
Sherri Rutherford, Smith MS  
Donna J. Towne, Mt. Logan MS

In order to successfully participate in the series, I understand that they will each need to acquire a SCOCA account. This letter is to confirm that they have my permission to obtain an account.

If you need any further information, please feel free to contact me. Thank you for your cooperation.

Sincerely,

Mr. Richard Cline,  
Superintendent, Chillicothe City Schools
APPENDIX G

PARTICIPANTS INSTRUCTIONAL LESSON PLAN
Dear Cassandra,

The following is the lesson plan that Jenni Caldwell, Roberta Magill, and I worked out together.

Art Objectives: verbalizes own likes and dislikes about art work  
experiments with various media(e.g. paints, chalk, collage,  
construction paper, etc.)

Writing Objectives: writes for a specific audience and purpose  
responds to work of peers through various ways  
uses writing skills in other curriculum areas  
uses dialogue in writing

Materials: two Picasso prints, "Little Boy on Donkey", and "Rooster"  
paper, pencils, tempera paints, watercolors, construction paper,  
clay, chalk

Procedure: Day One

Children will be shown the two Picasso prints and asked the  
following questions to encourage discussion. Do you like  
these? Which do you like better? Why? How are they  
different from each other? How are these the same? If  
they could talk , what might they say? What do you think  
the artist was saying with these? Do you think one took  
more time to create than the other? Is there anything you  
don't like about these? Can you see anthropomorphism when you  
look at these?  

The teacher will illustrate the student's responses with a  
Venn Diagram on the chalkboard.  

Choose one of the prints and write what the animals might  
say if they could talk. The students should be sure to  
use dialogue in their paper.

Day 2-------Finish writing and self-edit. Teacher editing. Write final  
draft.

Day 3-------Exchange papers. Read what another student has written.
Draw a rough sketch of what you think that animal may look like.

Day 4-------Decide what media to use. Create the character that your friend has written about.

Day 5-------Display all of the art works. The person who created each piece will tell why it looks like it does. The person who wrote the paragraph will tell whether or not this is how they envisioned the character. They will also tell what they like about the art work.

Then the whole class will tell what they like about the art.

Connie Schaefer
REFERENCES


Ameritech. (1993). *Superschools: Education in the information age and beyond*. (Available from Ameritech, P.O. Box 618000, Chicago, IL 60661-8000.)


Columbus Educational Satellite Network. (1993). Receive site facilitator's guide for interactive distance education television systems. (Available from Department of Library Media Services, Columbus Public Schools, 737 E. Hudson St., Columbus, OH 43211).


Old Dominion University. (1992, October). Assessing the visual arts. Publicity brochure available through Old Dominion University, 101 Hughes Hall, Norfolk, VA 23529-0228.


NOTES

1 A VHS recording of this distance education teleconference is available through Old Dominion University.

2 The Ohio Partnership for the Visual Arts (OPVA) has been a leader in quality in-service staff development and curriculum implementation in Discipline-based art education (DBAE) across the state of Ohio for the past seven years. One of six institutes receiving assistant from The Getty Center for Education in the Arts, The Ohio Partnership continues to strengthen the quality and status of art education in the elementary and secondary public schools in Ohio. (Ohio Partnership, 1993). The OPVA's two-week Summer Staff Development Program introduces district team personnel to DBAE by providing participants with a rigorous engagement with the visual arts and the four disciplines (i.e., aesthetics, art criticism, art history, and art production). Throughout the year, the OPVA assists participating districts in conducting renewal workshops and year-long staff development programming for district personnel.

3 To subscribe to the Consortium of School Networking (COSN) listserv, send a message to listproc@yukon.cren.org with the sole line: subscribe cosnpsc Your Name.

4 To subscribe to the American Educational Research Association's (AERA) Electronic Networking Special Interest Group (ENETSIG) listserv, send a message to enetsig@uhunix.uhcc.hawaii.edu indicating that you would like to be added to the distribution list.


6 To access JASON ONLINE, telnet to TOPCAT.BSC.MASS.EDU or 134.241.41.3 and type "JASON" as username and "guest" as password (electronic personal communication, Peter Scott, aa375@freenet.carleton.ca., March 6, 1994.)

7 As a critic-in-education with the Ohio Arts Council, Dr. Terry Barrett has had numerous opportunities to use the suggested art criticism strategies with diverse audiences.

8 Token Response was designed by Mary Erickson and Eldon Katter and is available through Crizmac Art and Cultural Education Materials, P.O. Box 65928, Tucson, Arizona 85728-5928.
9 The Ohio Partnership for the Visual Arts' staff development video series is available from: The Ohio Partnership for the Visual Arts, Department of Art Education, The Ohio State University, 128 N. Oval Mall, 340 Hopkins Hall, Columbus, Ohio 43210. The series includes video tapes on aesthetics, art criticism, art history, and studio production and is designed for inservice staff development programs in Discipline-based art education (DBAE). Accompanying facilitator guides offer (a) suggestions for using the tapes, (b) suggestions for small group break-out activities to compliment the tapes, (c) supplemental reading materials, (d) corresponding teacher developed lessons and, (e) other pertinent information. The Ohio Partnership for the Visual Arts is funded, in part, by the Getty Center for Education in the Arts.

10 A special thank you is extended to Dr. Sydney Walker, assistant professor of art education at The Ohio State University, for planting the Context Bag Activity idea in my head and for her advice during its creation.

11 Wolcott (1990) questioned the traditional means of triangulation. He provides simple suggestions for the validation of qualitative studies: be as credible, sensitive, complete, fair, and rigorously subjective as possible; talk a little and listen a lot.

12 The Council of Governments consist of one representative from each of the 15 boards of education throughout Ross and Pickaway Counties, Ohio. This regional Council was formed for the purpose of promoting the use of advanced telecommunications and technology to provide enhanced educational opportunities to the communities of Ross and Pickaway Counties. The Board of Directors for the Council refers to the governing body and legislative body of the council established pursuant to, and having those powers and duties enumerated in, the Council's Bylaws (Council of Governments, 1993).

13 For future interactive video classroom design ideas, see Acker and Levitt's (1987) research involving Gazecam, "an image display/send system that removes parallax (i.e., aligns the send and receive components of the system) such that participants in different room seem to be looking directly at each other" (p. 182).