ABSTRACT
                Annotations of 16 documents, derived from a search of
doctoral dissertations and the ERIC system, discuss the skills and
competencies needed by principals or other administrators of
bilingual schools or programs. A brief introduction lists the seven
categories of competencies identified by the documents, comprising
change promotion, conflict resolution, human relations, community
involvement, instructional staff selection and development,
comprehensive planning, and acquisition of other cultures. An
attached list of references includes the ten articles and six
dissertations annotated as well as several other relevant documents.
(RW)

# A LITERATURE REVIEW: COMPETENCIES FOR
# PRINCIPALS OF BILINGUAL/COMMUNITY SCHOOLS

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# I. Overview

The sources discussed in this literature review are included as a result of two types of searches, an ERIC run and a hand review of abstracts. The ERIC and for the most part the hand search were limited to publications no older than two years. However, a few entries with older publication dates are included in the reference section. Appendix A shows the descriptors used to identify entries pertaining to the focus of the ERIC search. Four different programs (locate and print) were formulated and entered into the computer. The hand search, besides reviewing the journal abstracts, included examination of the dissertation abstracts. What resulted from these efforts was the identification of about thirty-five (35) sources and upon review of each entry, twenty-three (23) were found to be appropriate for inclusion. The primary focus of the search was to identify writings which directly addressed competencies for principals administering bilingual programs or serving in schools with a majority of bilingual students. A preliminary search revealed a paucity of listings directly targeted to the above focus. Therefore, the parameter of the focus was expanded to include relevant writings which had implications to the primary focus. The expanded focus included such topics as the preparation of urban administrators, principals in metropolitan schools, minority administrators and their perceptions about successful practice, etcetera. Because of the numerous writings in these related areas, the bibliographer had to make a decision about inclusion or exclusion based on the title and/or the abstract when available. However, it is believed that few writings relevant to the focus escaped detection.

## II. General Statements About The Findings

The writings found in the journals or papers in the ERIC bank are not

based on field research. Rather they are prescriptive in nature based on practitioner experience or conceptualization by graduate students or professors. The sole exception is the study conducted and written by Columbus Salley.

Both practitioner and scholar are in agreement about what administrators must perform or skills they must possess if bilingual education programs are to be successful. Consistently the following elements are found in the writings: (1) Chicano administrators are confronted with conflict. (2) Chicano administrators must be change agents. (3) Mexican American administrators must incorporate the community into the school program. (4) Urban administrators must have skill in human relations. (5) Principals in schools who serve communities having a culture different than white middle class must know and respect other cultures. (6) Principals must be supportive of bilingual programs. (7) Principals must employ capable and sympathetic staff members. All the writings addressing the principal agree that the principal is the most influential in making or destroying an instructional program. One finding, identified by only one of the articles included herein, appears to be significant and worth highlighting. The study conducted by Salley and others states that the school structure must change if the principal is to be a change agent. If such a conclusion is valid, it has major implications for this study, i.e., to identify competencies for principals of bilingual community schools. One competency area for development may well have to include skill in altering school structure or organization.

Generally, the articles, while they identify competency areas, lack specificity. The only exception are the writings by Valverde. However, his competencies have not been validated by field testing, although they are supported by other authors.

As to the dissertation studies, for the most part they support the prescriptive writings found in the journals and ERIC. The doctoral dissertation research, most of the designs include the survey methodology, have come to identify competency areas that principals of bilingual programs must acquire similar to those found in the journals. Collectively the dissertation studies reveal that principals or instructional administrators must have facility in conflict resolution, human relations, comprehensive planning, staff selection, community cooperation. Also, most practitioners perceive the acquisition of these skills as best acquired from on-the-job experience or in-service type programs.

Therefore, the literature search indicates that categories for competencies useful to principals responsible for leading a bilingual instructional program be generated in the following areas:

(1) Change

(2) Conflict Resolution

(3) Human Relations

(4) Community Involvement

(5) Instructional Staff Selection and Development

(6) Comprehensive Planning

(7) Cultural Acquisition

Each of these seven categories require further thought, definition and discussion. Additional attention will be given to these seven competency categories when the survey/questionnaire development phase is undertaken.

## Procedural Note

The reader should note that a few of the entries found in the reference section are not found in the annotated section. The papers edited by Mend were found to be of interest but not directly informative to the focus. The dissertation by Thompson may be useful at a later time, therefore it was listed but not written up. The dissertations by Ramos, Samora and Wood were not located in the abstracts.

III.  ANNOTATED BIBLIOGRAPHY

A.  Articles

Aguilar, J. V.  The Building Principal's Role In A Bilingual Education
   Program.  Journal of Teacher Education, Vol. XXX, No. 3, (May-June 1979)
   pp. 26-28.

     This article argues that the principal plays as important a role as a
teacher in a bilingual program.  The author identifies tasks and activities
that the principal should perform if children of limited English-speaking
ability are to learn, grow, and develop into productive and well informed
adult citizens.  Aguilar states that principals need to know the minority
community: Its language, culture, value system, and the people's educational
desires for their children.  He implies these learnings can be gained from
university or college courses.  He, further, listed the following:

     1. The elementary school principal must support the educational
program desired by the community.

     2. The principal should help the community to see existing needs which
the current program does not meet.

     3. The principal's major responsibilities have to do with the instruc-
tional portion of the program.

     4. The principal must select staff members who possess a positive and
constructive attitude toward bilingual education and the development of
skills necessary to relate to students, parents, and community members of
different cultural and ethnic backgrounds.

     5. The principal must justify budget request for staff activities and
material purchase which will enhance the bilingual program.

     6. Establishment of a parent-advisory group is a major responsibility.
With input from a variety of sources, the makeup of the advisory group must
be representative of the community.

     7. The principal must support staff efforts and speak to a variety
of community groups, explaining the problems and benefits of the school's
bilingual program.

     8. The principal must consider the bilingual program as an integral
part of the curriculum.

     9. The principal must provide the reinforcement and the atmosphere
that allows the teacher to be creative, which allows the pupil to be productive.

Bolman, Lee (ed.)  Innovative Training For Educational Administrators,
   Education and Urban Society, 1976, 9, 1, pp. 1-123.

     The entire issue is devoted to training administrators.  Three of the
articles address how preparation programs were redesigned, i.e., Stanford,
SUNY at Buffalo and New York University.  This special issue may be of
use later in considering the organization of the bilingual administrator
preparation program at Texas Women's University.

Contreras, A. Reynaldo  Spanish-Surnamed Educational Administrator.
   Emergent Leadership, UCEA Journal, Vol. III, No. 2, 1979, pp. 33-47.

   This article is an abbreviated report of the author's unpublished
dissertation and is focused to discussing the question, "How are these insti-
tutionalized Hispanic professionals, especially educational administrators,
relating to Hispanic community groups and to institutions they work for?"
Before answering the question, the author suggests that Spanish-surnamed
administrators are expected to be role models, experts, linkages, and
advocates for Hispanic community groups.  In answering the question; the
author identified that these two sociocultural systems (Hispanic community
and institutions) create a marginal situation--an environment characterized
by inconsistencies in values, norms, attitudes, expectations, behaviors,
languages--and a marginal-self administrator.  Moreover, Spanish-surnamed
administrators experience role conflict as a normal work experience without
serious signs of distress.  Also, Spanish-surnamed administrators use a
variety of administrative behaviors for dealing with situations of potential
conflict, with advocacy behavior more frequently used than others.  Lastly,
the organizational conditions that ethnic minority administrators have
encountered have demanded their constant attention to the organization.
This has limited their contact with the heterogeneous ethnic community, thus.
suggesting limited awareness of community expectations.  The coping behavior
has been oriented toward the organization as a consequence of the conditions
encountered for entrance, participation and promotion within the organization.

Gue, Leslie R.  Preparation of Educational Administrators In A Multicultural
   Nation--Political, Social, And Historical Perspectives, 1979, ED 170-907,
   33p.  Paper presented at AERA, San Francisco, California.

   A multicultural training program should contain a theory component
concerning such concepts as culture, ethnocentrism, stereotyping and an
experiential component including such activities as intercultural communica-
tion workshops, internships in culturally based ethnic organizations and
simulation games (BaFa'bafa).

   Furthermore, the author recommends that in the theory component the
following elements be included for discussion:

   Prejudice and discrimination

   Cultural change, drift and diffusion

   Decision models in differing cultures

   Use of informal organizations in differing cultures

   Influence as a force on administrators in differing cultures

   Rationale for administrative structures in other cultures

   Intercultural communication:  verbal and non-verbal

   Status hierarchies in communication of other cultures

Merino, Alfred. A Program Report:  Training Minority And Women School
   Administrators.  Emergent Leadership, UCEA Journal, Vol. III, No. 2,
   1978, pp. 37-46.

The article lists six competency areas that minority administrators should have training in. They are:

1. Improvement of educational programs -- comprehension of movements and trends in curriculum and understanding organizational patterns in the school.

2. Personnel Management -- selection, supervision and evaluation of personnel.

3. Administrative Leadership -- understanding human motivation, group dynamics, communication, conflict resolution and the handling of controversial issues.

4. School-Community Relations -- interaction of organized groups, the utilization of contributions from various sectors, and the maintenance of effective relations with diverse ethnic groups, the press and political agencies.

5. Law

6. School Management -- planning, implementation, research and development, and program budgeting.

Nieto, Consuelo and Valverde, Leonard A. A Momentous Leap: From Survival To Leadership. Consortium Currents, Vol. 3, No. 1, 1976, pp. 2-10.

.The purpose of this article is three-fold: (1) to define the type of leadership that needs to be practiced by Chicano educators who want to act to improve the educational environment, organizational structure, and institutional operation for Chicano students; (2) to present the educational missions that need to be undertaken; and (3) to identify the leadership means that may be most appropriate to accomplish these tasks successfully.

. The authors describe two types of leadership styles presently in effect. Type I leader is referred to as administrator. Type I is representative of Lipham's definition: "An individual who utilizes existing structure and procedure to achieve an organizational goal or objective". Type II leader is referred to as Chicano advocate, and is representative of Hemphill's definition: "/One who/ initiates a new structure or procedure for accomplishing a group's goal or objective".

It is posited that the Chicano leader's instructional role goes beyond designing and developing institutional alternatives, but working toward the correction of injustice in school systems. The instructional role may be accomplished by identifying instructional needs and translating them into measurable goals and objectives, and drafting step by step strategies.

Finally, the authors hypothesize that Type I and II will not suffice for the future; rather a new type will be needed, Pro-active Negotiator or -Type III. It is anticipated that Chicano leaders will be placed in middlemen positions having to facilitate a balance between organization and community desires. This calls for the Type III Chicano leader to have skill

at defining a balance between opposing issues, between long and short range
objectives and between in-siders and out-siders. Success at reaching
satisfactory arrangements will depend upon being responsive, and initiatory
at times and in appropriate degrees, in short, a compromiser. Moreover,
Type III leader will have to forge linkages with different organized groups
in order to collectively work toward change. Chicano educational leaders
will have to concern themselves with intra and inter-communication.

Salley, Columbus; McPherson, Bruce and Baehr, Melany. What Principals Do:
   A Preliminary Analysis, The Principal in Metropolitan Schools, Erickson
   and Reller (eds.). McCutchan Press, 1979, pp. 22-39.

The authors discuss the background of the study including instrument
construction, data collection, factor analysis, and multivariate analysis
of variance before stating their findings. The three major findings of the
study were:

(1) Type and size of school account greatest for how principals describe,
    their job., although socioeconomic status and ethnic composition of
    students and teachers are influential.

(2) Personal characteristics of the principal are not significant.

(3) Age and years in present position yield no difference.

Of greater importance are the implication the authors posit. Principals
are captives of their environment. Unless some environmental characteristics,
particularly the organization of the school and its system, are changed, the
principal rarely will be a change agent. The organizational constraints on
the principal must be changed before the general role of the principal can
change. However, there is hope. The authors agree with Sarason's view that
for the principal, "The ultimate fate of ideas and values depends on the
principal's conception of himself in relation to the system." Bilingual
schools should be designated alternative schools since such schools have
developed different structures of procedures...

Personality is indeed important in how a principal defines his relation-
ship with a school. The success of a principal, in developing ideas for the
school and maintaining values as an educator is closely related to how the
individual human being organizes his inordinately demanding job.

Valverde, Leonard A. Instructional Leadership For Bicultural Programs:
   Role Responsibilities and Relationships, Education and Urban Society,
   Vol. X, No. 3, 1978, pp. 337-346.

This article identifies the major responsibilities and relationships
of two positions, the director of bilingual education and the principal of a
school with a bilingual program. The author points out that leadership in
emerging programs such as bilingual education must be dynamic (change
oriented) rather than tractive (maintenance). Also, the leadership of
bilingual programs must be knowledgeable of philosophy and theory of bilin-
gual programs, well trained as an administrator, and genuinely sensitive
of the culture. Moreover, bilingual programs should be organized on the

instructional team concept. The article elaborates on the feature of the instructional team concept and then proceeds to identify the responsibilities of the program director and school principal. For both roles, the major responsibilities are divided into three basic categories: administration, supervision and instruction. For the program director there are nine major responsibilities in administration, six in supervision and three in instruction. For the school principal, the major responsibilities are listed below:

## Principal's Major Responsibilities in a Bicultural Program

I Administration

   A Suggest to director alteration of district policy based on sound rationale or data from program evaluation

   B Implement policy as interpreted by director and staff

   C Tailor program design to school situation

   D Cooperate in evaluation of program at school

   E Schedule teachers, pupils and resources according to program objectives and goals

   F Submit financial needs to director annually and upon request

   G Formulate and submit program progress reports to director

II Supervision

   A With teachers establish school objectives compatible with district goals and plan school program for coming year

   B Formulate an ongoing staff evaluation plan directed at staff improvement

   C With school teachers and district office supervisory staff establish selection criteria and process for employment of program staff

   D Participate in the screening and selection of instructional staff for school program

   E Organize and participate in classroom observations

   F Take part in evaluating instructional material developed for the bicultural program at the school

III Instructional

   A Organize and sponsor a school community council which will assist in monitoring the bicultural program, volunteer in program activities, and disseminate information about the program to the general community

   B Take an active part in all phases of the in-service programs sponsored by the district

   C Attend national, state and local conferences, institutes and seminars offered by professional associations or universities

   D If necessary, enroll in postsecondary course work in order to upgrade skills or eliminate deficiencies in the area of administering bicultural education programs or gaining new knowledge of biculturalism

Valverde, Leonard A. Leadership Compatible With Multicultural Community Schools. _Educational Leadership_, Vol. 33, No. 5, (Feb. 1976) pp. 344-347.

The author posits an assumption and a proposition before stating a certain leadership style that may be suitable for Chicano community schools. First, it is assumed that administrative and supervisory personnel need fundamental skills for operating any educational organization. The proposition is that individuals in multicultural community schools must not only be skilled in instruction, but they must also perform in ways that are compatible with attitudes of the various ethnic groups.

The leadership style that is offered is one of inclusion and sharing, that is, principals and others must include the community members who wish to participate in the school activities by means of providing information and other training that may be required.

Valverde, Leonard A.  Supervision Of Instruction In Bilingual Programs.
   Bilingual Education for Latinos. Washington, D.C.:  ASCD, 1979, pp. 65-80.

In this article the author submits that instructional leaders must begin bilingual programs so as to accomplish two goals:  (1) make educational institutions sensitive to the cultural differences among students, and (2) assure that educational institutions promote cultural diversity by developing programs that implement a new educational philosophy, cultural democracy.  Instructional leaders are defined as persons particularly responsible for instructional improvement, for example, assistant superintendent for instruction, director of curriculum, school principals and instructional coordinators.

The author then presents an array of supervisory tasks and behaviors instructional leaders need to address if bilingual programs are to be successful.  The tasks are listed without discussion.

Domain A.  Curriculum Improvement

   A-1. Setting Instructional Goals
   A-2  Utilizing Specialized Personnel
   A-3  Guiding Educational Plans of Teachers

Domain B.  Developing Learning Resources

   B-1  Producing Learning Materials
   B-2  Evaluating the Utilization of Learning Resources
   B-3  Evaluating and Selecting Learning Materials

Domain C.  Staffing for Instruction

   C-1  Assisting in the Selection of Instructional Personnel
   C-2  Assisting in the Placement of Instructional Personnel

Domain D.  Organizing for Instruction

   D-1  Monitoring New Arrangements
   D-2  Revising Existing Structures

Domain E.  Utilizing Support Services

   E-1  Evaluating the Utilization of Services

Domain F.   Providing Staff Development

        F-1   Planning for Professional Growth
        F-2   Conducting In-Service Sessions
        F-3   Supervising with the Clinical Model

Domain G.   Community Participation

        G-1   Interacting with the Public
        G-2   Instructing the Community·

III. XXXXXI    I    XXXXI

B. Doctoral Dissertations

17.

Aguilar, Robert. A Comparative Study On The Nature Of Job Satisfaction Between Mexican American And Non-Mexican American Public School Administrators In California. Unpublished Dissertation, 1979, University of the Pacific, 136p. DAI- 1161A, (Order # 7919890).

This study tested the null hypothesis that no significant relationship existed between Mexican American and other public school administrators in relationship to overall job satisfaction, satisfaction of work tasks and situations and careers.

The California Public School Administrator Opinionnaire was used and 120 Mexican American responded v. 123 public school administrators responding.

Findings: No difference on overall job satisfaction between Mexican American and others. However, non-Mexican Americans felt more satisfied with work situation while Mexican Americans felt more satisfied with career opportunities. Also, the findings revealed no difference regarding work tasks performed.

Asbury, William C. Perceived Preparation For Competencies Considered Important To Urban Education Administrators. Unpublished Dissertation 1978, University of Virginia, 363p. DAI- 558A, (Order # 7916262).

The purposes of this study were to determine the competency areas in Ed.A. believed to be important to urban education administrators, the perceived mastery of those competency areas by urban administrators and the preparation programs which they believed were most helpful to them in preparing for each competency area.

Sample:  40 elementary principals; 19 secondary principals,
         8 superintendents in commonwealth of Virginia:

Major findings were-administrators believed the competency areas of Human Relations, Analysis of Time and Conflict Resolution to be the most important of 19 competency areas, and that mastery was on-the-job experience and in-service programs.

Lopez, Alberta F. Role Conflict Specific To Chicano Administrators In Community Colleges Of The Southwest. Unpublished Dissertation, 1978, University of Arizona, 139pp.

This descriptive survey found the following:

1. 95.4% believed that the administrator is primarily a public servant who works for the needs and interest of the community served.

2. 92.6% believed that the administrator is primarily a student advocate.

3. 60% experienced personal conflict because they believed their institution is not doing enough for Chicano students.

4. 76% felt that they were more change oriented than their superiors would like them to be.

5.  80% experienced dual allegiance to their institution and to the Chicano community.

6.  96% felt that conflict was a necessary and progressive condition for institutional change.

7.  73% agreed that they are expected by everyone including themselves to perform at a higher level of competence than their anglo counterparts.

The highest ranked source of Chicano administrator role conflict was the belief that tokenism toward Chicano concerns was practiced in their institutions. Ethnic composition of the institution is a significant role conflict variable. Respondents from institutions with less than 20% Chicano staff experienced more role conflict than those from institutions with 20% or more Chicano staff. Mexican American respondents perceived less role conflict than did the Chicano respondent. Chicano administrators place more emphasis on personal and human aspects of the administration than the technical managerial aspects.

Scruggs, James A. A Study Of The Perceptions Of Minority Administrators Concerning Their Leadership Status Using The National Urban Fellows As A Sample Population. Unpublished Dissertation, 1979, University of Massachusetts, 98p. DAI- 1198A, (Order # 7920895).

This study was made to determine the perceived status of minority administrators, using the National Urban Fellows as a sample population. The sample population consisted of Black, Spanish surnamed, Native American, Hawaiian, and white; 81% were male, 19% were female.

The minority administrators:

(1) perceived the existence of a minority quota system in hiring
(2) are employed in organizations serving high percentages of minorities
(3) are sponsored by whites in getting a job
(4) report to a high percent of white supervisors
(5) perceive less respect from peers and other employees than whites
(6) perceive less participation in decision-making than whites
(7) perceive less power and authority in the development and implementation of policy than whites
(8) perceive less influence in staff hiring and termination of staff than whites
(9) perceive less influence in budget making than whites
(10) perceive less influence in preparing job descriptions than whites

Stevenson, John R. The Contribution Of Selected Administrative Factors To The Success Of The Innovative Education Programs In Bilingual Navajo Indian School. Northern Arizona University, 1979, 136pp. DAI- 1201A (Order # 7919013).

Twenty administrative factors were selected as being most important by consensus with practicing Bureau of Indian Affairs administrators. Data were gathered by direct interview using a questionnaire as an interview guide. Twelve BIA schools were used and data were gathered in 81 innovative projects.

Findings:

The literature review identified three factors: (1) comprehensive planning, (2) administrative support, and (3) parental-community imput.

The analysis confirmed that comprehensive need assessment rated highest in correlation with success. This was closely followed by principal and staff imput during planning. Determining expected academic goals for children was found to be very important. Also, necessary to carefully describe the needed qualifications for participating staff.

Managerial functions-proper space facilities and pre/post testing correlated strongly with success. (Also quality of staff). The net result of the investigation confirms that the school principal was important as a change agent, an education leader and a day-to-day administrator in the success of innovative educational programs.

Tom, Raymond  The Effectiveness Of Principals As It Is Related To Interpersonal Behavior And Bilingual/Crosscultural Education.  The University of the Pacific, 1979.  162pp.  DAI- 1203A (Order # 7919896).

The purpose of this study was to examine the following questions:  Are the ratings of principal effectiveness related to (1) the interpersonal behavior orientations of principals, (2) principalship experience and (3) the principals reactions to bilingual/crosscultural (B/CC) education?  Are the reactions of the principals to B/CC education related to (1) interpersonal behavior orientation of principals, (2) years experienced?

Instruments used were:

Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) and Bilingual/Crosscultural-Principal Questionnaire.  Sample was 30 elementary principals in one unified district.

Results:

80% of the principals reacted positively to B/CC education.  There were no significant differences or relationships among the variables:  rated effectiveness of principals, reaction to B/CC, principalship experience, FIRO-B scores, and years of B/CC experience.

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Appendix A

Program I

    Collect
          Principal/Administrator Role
    Cross
          Mexican American/Bilingual Education
    Print

Program II

    Collect
          Principals/Job Skills
    Cross
          Mexican American/Bilingual Education
    Print

Program III

    Collect
          Cross Cultural Training/Administrator Qualification/Principal
    Cross
          Mexican American
    Print

Program IV

    Collect
          Job Analysis/Ability/Qualification
    Cross
          Mexican American/Principals
    Print

DOCUMENT RESUME

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              Elementary Education; Elementary School Teachers;
              *Information Dissemination; Inservice Teacher
              Education; Organizational Change; Television
              Viewing
IDENTIFIERS   *Interactive Cable System

ABSTRACT
              Both interactive (two-way) and traditional (one-way)
television programs on new ideas about teaching were made available
to teachers in a study of using cable television as a delivery system
for diffusing new ideas in schools. Teachers of grades one through
six in 41 schools were interviewed before and after a full year of
using the interactive and traditional television programs. The
participating teachers taught in (1) 14 schools with interactive
cable facilities, (2) 12 schools with conventional one-way cable
television, and (3) 15 schools that received neither of the televised
inservice programing notes but which continued traditional inservice
training sessions. In addition to their experience with and
evaluations of the cable programing, the teachers responded to
questions about their teaching experience, job satisfaction, level of
commitment to a teaching career, and new ideas they had encountered
about teaching. The findings suggested that characteristics of the
individual organization (such as the level of agreement among staff
about good teaching and the amount of communication within the
organization about new ideas) played important roles in the diffusion
and implementation process. Presence of both interpersonal and
technological interaction had positive effects on learning and
implementing new ideas. The study produced a strong argument for
considering variables related to the viewing situation--such as
coviewer interaction--and structural characteristics of communication
patterns within existing groups. (RL)

Communicating Innovations Via Television:

A Study of Learning Within a Social Context

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2

Traditionally researchers have viewed the mass media as one-way channels. In particular, studies of various media have tended to focus on resulting behavioral or cognitive responses following exposure to certain types of content-- educational, persuasive, prosocial, aggressive, political, or entertaining. Some researchers have attempted to incorporate potential mediating factors into their work, including, for example, presence of co-viewer interaction or characterizations of the surrounding environment, thus attempting to estimate a more complex and differentiated model of the flow of mass mediated information.

Individuals live in complex environmental contexts; they are constantly exposed to information from a variety of sources--family, peers, schools, churches, political interest groups, media, and so on. All of these factors, to varying degrees, contribute to individuals' understanding of the world around them. As Comstock, Chaffee, Katzman, McCombs, and Roberts (1978) suggest, "All social influence whether emanating from a television program, a parental proscription, or a teacher's lesson, is mediated by conditions and contingencies that derive from other sources of influence. Although it makes research difficult, this is the way the world operates" (Comstock et al.,1978, p. 286).

The purpose of this paper is to examine the role of various information systems and aspects of the communication environment in the diffusion of innovation within an organizational context. In particular, the study compares

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different sources of information in conjunction with environmental factors and assesses their ability to a) communicate the innovation, and b) provide the individual with enough information and stimulation so that s/he can actually implement it.

Various studies have consistently reported that viewing television within an educational context will result in positive and significant differences in comparison with other media in learning and perhaps even behavioral effects. However, these results have not been replicated in a field study, and furthermore no other estimates of social structure or context have been examined in conjunction with learning effects in these experiments. This study provides data on 1) the role of various information systems in terms of the degree to which teachers turn to them for new ideas within organizational settings having unique communication characteristics; 2) the effects of new technology, that is, the introduction of in-service on cable in the experimental groups, compared to traditional instructional media in the control schools; and 3) the efficacy of these different information systems, including cable television, as well as traditional sources in predicting actual innovative behavior (implementing the ideas).

Television as Instructor

There is a long tradition of investigation into the general issue of adult learning from various instructional media. In particular, studies have compared the

effectiveness of television with other instructional media since the early 1950's. One classic investigation (Tannenbaum, 1956) tested adult learning in four different conditions which presented educational content using a film strip, a manual, three television lectures viewed over a period of three weeks, and three television lectures viewed all in one sitting. His results demonstrated the greatest learning effects for the three televised lectures viewed together, then for the three lectures viewed over a three-week period, followed by the manual, with the film strip being the least effective. Other studies in this tradition have yielded similar results testifying to the relative effectiveness of television in comparison with other media as an educator for adults learning in a school context (cf. Bryan, 1961; Corle, 1967; McIntyre, 1966, Rock, Duvan, and Murray; 1953; and Williams, Paul, and Ogilvie, 1957).

We seem to know a fair amount, therefore, about adult learning from television, compared to other sources of information. But these insights stem from research conducted in a relatively limited context; that is, in cases where an already motivated subject views overtly educational content in isolation and within a learning context.

Most studies on the educational use of various media, and television in particular, have demonstrated a decided preference for the control of the laboratory setting. Recently, however, several investigators have called for greater emphasis on a realistic or naturalistic study of the

television experience and concerted efforts to sort out its relationship to other factors in the naturalistic environment which define social context (cf. Dorr, 1978; Winick and Winick, 1979). However, no major study has yet attempted to analyze the interpersonal aspects of the television experience for the adult viewer in either a naturalistic or experimental context.

Dorr's review of the literature (1978) summarizes the current state of the art as follows:

> All the studies I have reviewed suggest that learning from television may be enhanced by attention-directing and educationally supplementing content. They also suggest this may be done by a parent, a teacher, or an unfamiliar adult, who may or may not be physically present, with either instructional or entertainment programming. There is enough work to believe this is possible with preschoolers and with elementary school age children, but we cannot be so certain about the effects with older viewers.
>
> (Dorr, 1978, p. 26)

## Interaction Effects

In their efforts to study the complexities of the real world, researchers have found that one factor, co-viewer interaction, has consistently predicted such dependent measures as aggressive behavior and prosocial learning from television. Studies on interpersonal factors mediating between viewers and aggressive television content have adopted a behavioral criterion variable, and the results in this area suggest that the presence or absence of a familiar co-viewer is a reliable predictor of subsequent aggressive behavior (cf. Steuer, Applefield, and Smith, 1971; Thomas, 1972).. Many studies of children have found them to be less

aggressive when an adult is merely present during viewing.

Some researchers have used similar experimental designs but have required verbal evaluative interaction between the adult and the child (cf. Grusec, 1973; Hicks, 1968). Again the adult's role proved crucial in predicting behavior. This finding has maintained reliability with college students, when males exposed to an authority figure's negative evaluative comments on aggressive content administered weaker electric shocks following viewing than those who simply viewed the content with no adult interactions (Lefcourt et al., 1966).

Other researchers have used educational programming to examine the effects of interpersonal interaction. Rather than a behavioral measurement, most of these studies have relied on amount of learning as the dependent variable; most also rely on interactions between a teacher figure and preschool or elementary students as subjects (Borton, 1971; Corder-Bolz and O'Bryant, 1978; Friedrich and Stein, 1975; Singer and Singer, 1974). All of the studies report greater learning as a result of adult interaction and reinforcement of concepts, actions and themes. The effects of mothers' interactions with preschool children have yielded similar results with educational programming (Ball and Bogatz, 1970; Bertram, Pena, and Hines, 1971; Salomon, 1977); that is, the children learn significantly more if their mothers watch the programs with them and interact with them in some way relevant to the content.

One of the most recent and elaborate studies dealing with the effects of adult interaction on learning from television is the Freestyle project (Johnston, in press). Dealing with fourth through sixth graders as subjects, Johnston found significant increases in learning as a result of teacher-student activities--discussion, role-playing, games and other classroom interaction--based on program content from the Freestyle series.

The study reported here offers a rather unique opportunity to explore the role of various media as instructional systems for the adult, where exposure to content is voluntary and estimates of the communication context, potential mediators or reinforcers of content, are included in the analysis. Although the data presented in this paper cannot possibly resolve the many unanswered questions and broad issues relating to adult learning from the media in a social context, this field study is unusual in its focus on adult behavior within organizations and in its examination of their use of various mass media and interpersonal sources available to them. In his classic book on the diffusion of innovation, Rogers stated, "A combination of mass media and interpersonal channels is the most effective way of reaching people with new ideas and persuading them to utilize these innovations" (Rogers, 1971, p. 260). Data from this study, combining mass media and interpersonal channels, yield further insight into the diffusion process in terms of both learning about and

implementing innovations.

Design

In 1974 the National Science Foundation appropriated funding for a number of interactive cable projects (Brownstein, 1978). In general, findings from those studies which focused on learning variables tended to support the cost-effectiveness of implementing interactive cable programs. Studies in fire prevention and teacher training (Baldwin et al., 1978; Clarke et al., 1978; Lucas, 1978) resulted in positive learning effects following exposure to interactive programming. Preliminary findings in these studies suggested that training via interactive cable can be more enjoyable and effective than more traditional modes of instruction.

The data examined here provide greater insight into both traditional (one-way) and interactive (two-way) cable television, as well as alternative information systems, in their respective roles as educators within unique organizational settings. Respondents, elementary school teachers and principals in Rockford, Ill., discussed their uses of numerous sources of information, such as print media (books, magazines, newspapers and professional journals), films and television, and interpersonal sources (teachers, principals, friends), for learning about new ideas.

Teachers at the 41 elementary schools who participated in the experiment were divided into three treatment groups: those working in 14 schools with interactive cable

facilities; teachers in 12 schools with conventional one-way cable television; and those in 15 schools which received none of the televised in-service programming but which continued traditional in-service training sessions. Data were gathered before and after the period of experimental program delivery, which extended across an entire school year. Teachers in grades one through six and their principals were included in the study.

Following a full year of program delivery, teachers were questioned about such topics as their teaching experience, job satisfaction, level of commitment to a career of teaching, and new ideas they had encountered about teaching. In addition, respondents discussed their experience with and evaluations of the cable programming. Detailed interview records were compiled during all waves of data collection, and contacts in a random ten per cent of cases were confirmed independently.

Programming

Eight shows centered on topics nominated by teachers were eventually produced using local elementary staff members as on-screen talent. The first three programs dealt with teaching metrics; the next four focused on various aspects of language arts teaching; and the final program concentrated on helping students put together science fair projects for local and state competitions.

Interactive segments were edited into the programs reinforcing certain points and asking opinion and factual

questions about the content. All viewers in both one-way and interactive schools could hear the interactive segments, but only viewers in schools with interactive facilities were able to punch in responses on a terminal and receive feedback about other teachers' answers, providing a broader perspective on their own thoughts.

## The Variables

The first independent variable of concern here is the treatment group to which the individual school was assigned. The three groups consisted of control schools, where traditional in-service training continued uninterrupted; one-way experimental schools, which provided in-service training programs for teachers via cable television; and interactive experimental schools, where teachers could view the in-service programs, respond to questions edited into the programs, and receive spontaneous feedback on their answers.

Because viewing was primarily voluntary (outside of a few demonstration meetings), a self-report measurement of exposure was also included in the analysis. Teachers in the two experimental treatments (one-way and interactive cable television) were asked:

Did you watch <u>any</u> of the in-service programs on television?

Inclusion of these first two independent variables (treatment and exposure) in the analysis permits the estimation of experimental and viewing effects. However, we hypothesized that certain environmental characteristics,

apart from treatment group, would possibly play critical roles in enhancing or inhibiting the diffusion of innovations. As a result, we created two additional independent variables and included them in this analysis. They are based upon social factors that shape responses to innovative ideas and mediate the effects of in-service training within the individual school.

Two dimensions of structure were selected as the focus of attention here. One is concordance, that is, the degree to which teachers agree on the definition of good professional performance. Teaching norms prescribe the range of acceptable, rewarded behavior in the workplace. The diffusion of innovation process should operate quite differently in schools where low levels of agreement, and thus diverse opinions, exist, as opposed to homogeneous schools, where most teachers share a monolithic and perhaps closed view of good teaching. The second structural variable is the degree of communication among the staff about work. Communication expresses the openness of teachers to sharing classroom experience with others. Again, variance in the amount or structure of communication that characterizes the organization should be related to greater or lesser facilitation of innovation within the school.

Our measures of concordance and communication draw upon an extensive gathering of sociometric data within each school. Findings concerning these two independent variables

are interesting in themselves. Teachers were presented
separate lists of staff members who worked in their building
and were asked for two kinds of responses.

> (Please indicate) people at your school who have
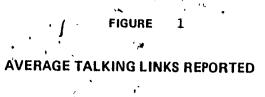> especially good ideas about teaching;

> (Please indicate) persons you discuss teaching ideas
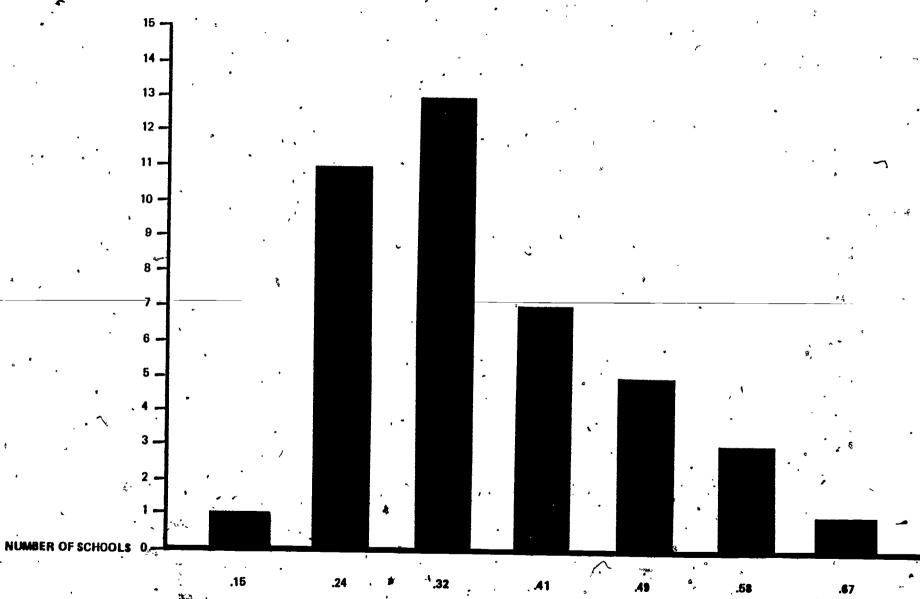> with at least once a week.

Agreement about good teaching performance was indexed
in each building by calculating the concordance coefficient,
or average rank correlation, among nominations made by all
staff members interviewed. Figure 1 contains a histogram of
these concordances for the 41 schools in the experimental
design, divided into seven categories (with interval widths
of approximately .13). Both the magnitude of norm diversity
across buildings and the shape of the distribution convey
useful information about schools as workplaces.

Most buildings (the lower three categories, or 26
schools) contain staffs whose intercorrelation is less than
.35. The level of statistical significance varies for
buildings, of course, depending upon the number of teachers
interviewed. But this threshold of agreement about
colleagues with good teaching ideas explains only a small
amount of the variance in these judgments and suggests
considerable difference of opinion allowing a variety of
role models.

Communication in the 41 buildings is equally skewed,
and in the direction of high values. Nominations of talking

FIGURE 1

AVERAGE TALKING LINKS REPORTED

TOTAL N = 41

TALKING LINKS

partners for discussing new ideas were percentaged over a total number for each building, reflecting the largest number of mentions possible, given faculty size. The histogram in Figure 2 shows a third or fewer talking links being used in most buildings. Only nine schools had staffs whose reports of talking about work absorbed nearly one-half or more of the interaction dyads possible.

A primitive picture of schools as workplaces emerges from these data. Despite facilities for socializing (offices and lounges), a lack of hierarchical structure, and small staffs, teachers differ widely in their definition of good performance; and they talk about work selectively with only a few colleagues.

The independent variable identifying the source of the new idea mentioned by the subject is based on responses to the following:

> Where have you read, seen, or heard anything having to do with (idea)?

Subjects volunteered various sources, including specific people, as well as visual and print media. Our interest in the source of the idea as a predictor of innovation is based on the concept of stereotyped information systems; that is, one learns about abstractions, such as thoughts and ideas, from print media, but visual media, such as film and television, show one how to do something. Thus, the source of the idea may possibly explain differences between learning about and implementing innovation.

The final independent variable included in this

FIGURE 2

DISTRIBUTION OF SCHOOL NORM DIVERSITY



TOTAL N = 41

NUMBER OF SCHOOLS

CONCORDANCE COEFFICIENT:

CATEGORY MIDPOINT

17.

18

analysis concerns teachers' social context of viewing. Most viewers in both experimental treatments were expected to watch alone. After considering the characteristics of traditional in-service, one benefit of interactive delivery for improving professional work productivity was privacy. Continuous program delivery throughout the day linked with an individualized response device, all available in a designated room, was intended to disarm fears among some teachers that participating in in-service can be threatening.

Despite the strain of incompatible work schedules, a surprisingly large number of viewers in both experimental treatments reported they usually watched in-service with at least one person. Sixty-three per cent claimed group viewing as typical. Studies on children and television cited earlier propose that co-viewer interaction reinforcing content may have dramatic effects on both learning and behavior. If this hypothesis applies to adult co-viewing behavior, differences between solo and group viewers should emerge.

As in the adult studies of learning from educational television, we were primarily interested in the dependent variable of what teachers gained from this new form of in-service training, one-way or interactive cable television, as opposed to more traditional and already existing sources of information. The measurement used, however, permitted the collection of richer data than simple recall of program

content. Teachers were asked:

> Are there any ideas or methods you've seen or heard about during the past year for different ways elementary teachers do their work?

After providing descriptions of ideas and methods, teachers were questioned about the content, source, and significance of the idea(s) mentioned. Because we were unable to observe actual classroom behavior or students' learning effects resulting from teacher innovations, we included in the interview a question designed to provide self-reports of innovative behavior:

> Have you tried (idea)?

Thus, we were interested in the process of learning about and implementing innovations as a function of treatment group, exposure to content, structure of communication environment, source of idea, and social context of viewing.

## Results

Multivariate analytic techniques must be applied to explicate the relationships of the independent variables (treatment group, exposure, concordance, talking, source of idea, and viewing context) to the criterion variables (number of new ideas mentioned and implementation of one or more of those ideas). Multiple Classification Analysis (MCA), a technique designed to accommodate data unable to meet the stringent linear assumptions of multiple regression, was used for the following analyses. MCA is essentially multiple regression with dummy variables. It

allows the analyst to utilize predictor variables with nominal, ordinal, or interval measurement by transforming each class or category of each predictor into a dummy variable. MCA enables the analyst to assess the bivariate relationships between the individual independent variables and the dependent variable both prior to and following the adjustments in this relationship, accounting for the effects of the other predictors, as well as the overall assessment of multiple prediction.

The first MCA (Table 1) considers the sources of the ideas mentioned, exposure to content, the treatment group to which the school belonged, and the two social structure variables, communication and concordance, in explaining the variance in the total number of new ideas mentioned by individual teachers. Table 2 presents the same independent variables but addresses the implementation issue, that is, did the teachers proceed to try one or more of their new ideas?

In both analyses it appears that agreement about what constitutes good teaching is particularly important in creating an atmosphere where innovation is likely to occur; that is, it appears that diversity of opinion within the school enhances the likelihood of innovation, whereas homogeneity inhibits it. The direction of the group means in both tables indicates that the higher the level of agreement within the individual school, the less likely the innovation. Apparently conflict over what good teaching is

## Table 1
### MCA of Number of Ideas with Source of Ideas with Source of Idea, Concordance, and Talking

| Source | Unadj. Means | Adj. Means | Concordance | Unadj. Means | Adj. Means | Talking | Unadj. Means | Adj. Means | Treatment | Unadj. Means | Adj. Means | Exposure | Unadj. Means | Adj. Means |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TV/Film | 2.14 | 2.08 | Low | 2.07 | 2.17 | Low | 2.03 | 2.16 | One-way | 2.08 | 1.88 | View | 2.15 | 2.15 |
| Print | 2.04 | 1.97 | Med | 2.06 | 2.08 | Med | 1.71 | 1.71 | Interactive | 2.08 | 2.09 | Noview | 1.67 | 1.69 |
| Meetings | 1.91 | 1.96 | High | 1.70 | 1.58 | High | 2.15 | 2.04 | Control | 1.71 | 1.86 | | | |
| People | 1.83 | 1.88 | | | | | | | | | | | | |

$\overline{X} = 1.95$
$N = 233$

where 1 = 1 idea mentioned
2 = 2 ideas mentioned
3 = 3 ideas mentioned

Rank order of betas:
Concordance .25
Exposure .22
Talking .18
Treatment .10
Source .06

## Table 2
### MCA of Trying One or More Ideas with Source of Ideas with Source of Idea, Concordance, and Talking

| Source | Unadj. Means | Adj. Means | Concordance | Unadj. Means | Adj. Means | Talking | Unadj. Means | Adj. Means | Treatment | Unadj. Means | Adj. Means | Exposure | Unadj. Means | Adj. Means |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TV/Film | 1.64 | 1.66 | Low | 1.66 | 1.55 | Low | 1.63 | 1.58 | One-way | 1.75 | 1.83 | View | 1.64 | 1.70 |
| Print | 1.68 | 1.72 | Med | 1.73 | 1.70 | Med | 1.93 | 1.92 | Interactive | 1.54 | 1.48 | Noview | 1.85 | 1.76 |
| Meetings | 1.83 | 1.80 | High | 1.81 | 1.95 | High | 1.60 | 1.65 | Control | 1.92 | 1.91 | | | |
| People | 1.75 | 1.73 | | | | | | | | | | | | |

$\overline{X} = 1.73$
$N = 233$

where 1 = tried 2 ideas
2 = tried 1 idea
3 = tried no ideas

Rank order of betas:
Treatment .29
Concordance .25
Talking .23
Exposure .14
Source .06

,all about fosters innovation.

It is also interesting to note that exposure plays a more dominant role in learning about innovations than in implementing them. One seems to <u>learn</u> from viewing the content, but <u>acting</u> on that learning by trying one or more of the ideas is more closely related to the type of school in which one is working--interactive, one-way, or control-- than to exposure. Schools assigned to the two experimental treatments seem to adopt atmospheres more conducive to innovative behavior. The technological intervention of simply providing in-service on cable in schools seems to have resulted in more innovative behavior with teachers in interactive schools being the most likely to try new ideas and those in control schools the least likely to do so (adj. means=1.48 and 1.91), whether or not subjects actually viewed the programs.

The mere presence of the novel technology seems to <u>affect</u> the entire organizational environment, so that suddenly innovative behavior earns a higher premium, especially in schools where a diversity of opinion about good teaching predominates.

In addition, low levels of talking among colleagues within the school seem more conducive to learning about and implementing innovations than moderate and high levels (adj. means=2.16 on number of ideas and 1.58 for trying ideas in low talking environments). This finding is somewhat counter-intuitive but perhaps complementary to the

results for concordance. One might well expect low levels of agreement (which enhance innovation) on what constitutes good teaching to accompany low levels of talking (which also enhance innovation). Diversity of opinion does not necessarily result in free and open discussion. Talking about new ideas may involve taking risks and meeting with resistance from one's colleagues. Therefore, the decision to be innovative and try new ideas is largely an independent and individual one.

In terms of instruction, the Multiple Classification Analysis of the number of new teaching ideas mentioned, presents positive learning effects resulting from exposure (adj. mean=2.15 ideas for viewers and 1.69 for non-viewers). There is also evidence in Table 1 of a positive effect for interactive cable as an instructional system with teachers in interactive schools mentioning more ideas (adj. mean=2.09) than those in one-way (adj. mean=1.88) or teachers in control schools (adj. mean=1.86).

Given the apparent effectiveness of cable television in contributing to the diffusion and implementation of innovation from the previous analyses, consideration of various social and experimental viewing contexts may provide greater insight into how the technology achieves its positive results. Thus the final analyses to be presented here (Tables 3 and 4) attempt to disentangle the effects of exposure to the programs by accounting for differences in the social and experimental context of the respondent's

## Table 3

MCA of Viewers' Number of Ideas with Source of Idea, Concordance, Talking and Social Context of Viewing

| Source | Unadj. Means | Adj. Means | Concordance | Unadj. Means | Adj. Means | Talking | Unadj. Means | Adj. Means | Social Context of Viewing | Unadj. Means | Adj. Means |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TV/Film | 2.2 | 2.29 | Low | 2.46 | 2.60 | Low | 2.2 | 2.46 | 1-way solo | 1.94 | 1.89 |
| Print | 2.30 | 2.17 | Med | 2.39 | 2.47 | Med | 2.05 | 2.01 | 1-way group | 2.22 | 1.98 |
| Meetings | 2.10 | 2.11 | High | 1.86 | 1.66 | High | 2.38 | 2.30 | 2-way solo | 2.00 | 2.34 |
| People | 2.23 | 2.31 | | | | | | | 2-way group | 2.43 | 2.48 |

$\overline{X}$ = 2.22  
N = 107

where 1 = 1 idea mentioned  
2 = 2 ideas mentioned  
3 = 3 or more ideas mentioned

Rank order of betas: 
| | |
|---|---|
| Concordance | .38 |
| Context | .23 |
| Talking | .16 |
| Source | .07 |

## Table 4

MCA of Viewers' Trying One or More Ideas with Source of Idea, Concordance, Talking and Social Context of Viewing

| Source | Unadj. Means | Adj. Means | Concordance | Unadj. Means | Adj. Means | Talking | Unadj. Means | Adj. Means | Social Context of Viewing | Unadj. Means | Adj. Means |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TV/Film | 1.67 | 1.65 | Low | 1.42 | 1.28 | Low | 1.40 | 1.31 | 1-way solo | 1.88 | 1.86 |
| Print | 1.49 | 1.56 | Med | 1.64 | 1.53 | Med | 1.77 | 1.75 | 1-way group | 1.71 | 1.85 |
| Meetings | 1.80 | 1.79 | High | 1.68 | 1.90 | High | 1.54 | 1.60 | 2-way solo | 1.56 | 1.39 |
| People | 1.57 | 1.50 | | | | | | | 2-way group | 1.43 | 1.40 |

$\overline{X}$ = 1.60  
N = 107

where 1 = tried 2 ideas  
2 = tried 1 idea  
3 = tried no ideas

Rank order of betas: 
| | |
|---|---|
| Concordance | .37 |
| Context | .35 |
| Talking | .24 |
| Source | .16 |

viewing.

Analysis of viewing contexts in terms of one-way versus interactive and solo versus group viewing is of interest here because of the consistent positive effects demonstrated in both laboratory and field studies with adults co-viewing with children. The interaction--labeling, reinforcing, and instructing--that occurs during viewing is a powerful predictor of children's learning. Does such a pattern hold true for adults co-viewing with adults? And if so, is it enhanced by the ability to interact with the medium which can provide technological feedback in addition to interpersonal interaction? No doubt discussions and interactions that occurred during in-service viewing took on a different tone and purpose than a typical teacher-child interaction pattern. However, the result may be similar-- discussing and focusing on certain aspects or segments of the content along with at least one colleague and obtaining additional feedback from the medium itself may yield profoundly different results from a solo viewing context in a one-way school.

Again the independent variables in the following MCA's refer to source of idea, concordance, talking, and finally social context of viewing (solo one-way, group one-way, solo interactive, group interactive) added. The dependent variables remain the same: number of ideas and trying one or more of those ideas.

The rank orders of betas for the two analyses are

identical. Concordance, or level of agreement about good teaching, is the most powerful predictor for both number of ideas and likelihood of implementing them. As in the earlier analyses, the relationship between concordance and the dependent variables is negative in both cases; that is, the greater the level of agreement within a school, the fewer the ideas and the less likely the implementation of one or more of them. Not surprisingly, innovative behavior tends to flourish in an environment of diversity, where teaching norms are loosely and individually defined.

Context of viewing ranks second to concordance in both analyses. Interactive group viewing consistently yields greater innovation--more ideas and greater likelihood of implementing more ideas (adj. mean=2.48 for number of ideas; 1.40 for trying ideas), whereas one-way solo viewing is equally consistent, yielding the least innovative group means (adj. mean=1.9 for number of ideas; 1.9 for trying ideas). Means for the other two modes of viewing, which offer some interaction, either interpersonal or technological, fall between the extremes of conjoint interpersonal and technological interaction in group interactive viewing and no interaction whatsoever in solo one-way viewing. It appears that the richer the feedback relating to the content, the more dramatic the effects on both diffusion and implementation of innovation.

In all of the analyses the least powerful predictor proved to be the source of one's ideas. We included this

variable to explore the possibility that the stereotyped nature of the source could produce differential results on learning and implementing innovations. In general, the differences' among the group means for various sources are too small to shed much light on this issue.

## Implications

The findings outlined above lend further support to literature cited earlier calling for close inspection of the role of co-viewing interaction relating to media content in explaining viewing effects. Few studies have attempted to address the issue because of its complexity. However, the positive impact on learning about and implementing innovations, resulting from viewing contexts offering interpersonal and technological interaction in response to in-service training programs, is quite consistent with literature on children and co-viewing effects. Intuitively it makes a fair amount of sense to argue that the more one thinks about and discusses a topic, that is, the more it is integrated into one's experiences, the more s/he comes to know about it and act accordingly. So it is with television content as the above analyses indicate.

Furthermore, most television studies fail to consider the structural characteristics of existing organizations, such as the family, in conducting research on media consumption. The results for both concordance and talking suggest that the importance of such features inherent in the communication environment should not be overlooked in

studying media behavior. The results of the present study testify to the statement by Comstock et al. (1978) cited earlier, regarding the large gap between what goes on in the real world and what research attempts to investigate. This field study of elementary school teachers suggests that television research has overlooked potentially critical factors, such as feedback and interaction, as well as structural characteristics of the environment, in the quest for direct and predictable effects.

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