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A COLLABORATIVE ORIENTATION OF EMPLOYEES IN TWO UNIVERSITY OUTREACH ORGANIZATIONS

By

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ABSTRACT

A COLLABORATIVE ORIENTATION OF EMPLOYEES IN TWO UNIVERSITY OUTREACH ORGANIZATIONS

By

Sonia Catalina Parra Zuña

The purpose of this thesis was to learn how employees in two university outreach organizations think and behave regarding outreach services in relation to an organizational vision of collaboration. Are these employees thinking and behaving in accordance to the collaboration emphasis of their leaders? The vision of a collaborative style of outreach as brought forth by organizational leaders is conceived here to be an organizational innovation.

Data were obtained from a mailed questionnaire returned by 466 employees from Michigan State University Extension and the University's Institute for Children, Youth, and Families. The survey asked employees to record their ideas, perceptions, and attitudes about collaborating with employees and constituents when working on a problem.

Results suggest that faculty and graduate students are "out of the information loop" that centrally involves outreach workers and their community constituents.

DEDICATION
(DEDICACIÓN)

Quiero dedicar mi tesis a mis dos madres. Primero a mi madre biológica, Rosa Cristina Zuña Pacheco quién me ha dado la vida, esperanza, y su sudor para que yo progresara en mis estudios. A mi segunda madre y hermana mayor, Carmita, quien siempre ha estado a mi lado dandóme valor para seguir adelante y sin su cariño, apoyo, y asistencia económica no sería posible lo que he logrado en mi vida. Estas palabras no son suficientes para expresar mi agradecimiento y amor hacia ustedes. Esto es un ejemplo de mi sincera gratitud por su dedicación.

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TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure | Page

CHAPTER I
INTRODUCTION

The purpose of this thesis is a preliminary investigation of the organizational culture of two university outreach organizations. Specifically, the investigation concerns the degree to which a culture of partnership with, and respect for, community constituents has diffused from organizational leaders to subordinates. Another objective was to identify employee and administrator perceptions of problems or challenges that they might face in collaborative work as proposed by the organizational leaders. The organizations of study are Michigan State University Extension and the Institute for Children, Youth, and Families. Both have central offices on Michigan State University's campus. The Institute for Children, Youth, and Families brings a strong research base to program development, delivery and evaluation, while Extension brings a long history of effective programming efforts in every community across the state of Michigan (Institute for Children, Youth, and Families, 1992).

Land-Grant Universities

The tripartite mission of teaching, research, and service ("service" often used interchangeably with the terms "extension" or "outreach") makes land-grant institutions unique in the United States (Enarson, 1989). Prior to 1914, agricultural educators had already learned that one good way to influence farm families' practices in crop production and home canning was through educational programs for youths. Thus, youth work was one of the original programs of the Cooperative Extension Service (Wessel & Wessel, 1982, as cited in Rutledge's dissertation, 1989, p. 2). As the 4-H and Youth Development Program evolved as part of the Cooperative Extension Service within the land-grant system, it remained close to its agricultural roots. Many new programs were developed to meet the needs of non-rural boys and girls, but the resource base of the program remained almost entirely within the colleges of agriculture and home economics. As society became more urban, the needs of local communities changed. The ability of the land-grant system and its Cooperative Extension 4-H program to meet the contemporary needs of youths and families was challenged. In addition, the leaders of land-grant institutions and Cooperative Extension expressed similar concerns related to whether or not their institutions had the capability or the desire to respond to the contemporary needs of youth and families. To a large degree, extension organizations in the United States still exist primarily to benefit a very small but important agricultural community.

Although the agenda of land-grant extension services had broadened by 1990 to include industrial technical assistance (Feller, Madden, Kaltreider, Moore, & Sims, 1987), youth programming, and health service, as well as additional areas, the land-grant extension model had not changed. Universities still embarked on a mission of disseminating centralized university-based knowledge to solve what extension personnel perceived to be important concerns.

A vital and energetic outreach mission is dependent upon the institution's capacity to adapt continually to the changing knowledge needs of society. This adaptation is particularly challenging today because society is undergoing rapid and fundamental transformation. Society confronts a host of major challenges that require higher education's active and creative involvement. We are experiencing the growth of an underclass characterized by high unemployment, crime, and a breakdown of the social fabric. The issues that dominate U.S. society today involve people who are not traditional land-grant extension clients.

A multidisciplinary approach to community problems is required because of the changing needs and complexity of emerging problems in today's society. The land-grant universities are responding to the demand of their clientele by broadening the knowledge base of extension and continuing education programs. This has been accomplished with the establishment of an extension structure that provides faculty resources from all disciplines within the university. Solutions to many new societal problems and pressures require multidisciplinary process and new relationships institutions and people that most extension organizations are ill-prepared to deliver or develop (Bennett, 1990).

Title V of the Rural Development Act of 1972 provides incentives for extension and research to collaborate with other colleges and universities throughout the state. Extension organizations typically have extensive relationships with various departments of state government. Cooperative efforts with departments of agriculture are the most prevalent, but joint efforts have been increasing with other departments such as health, education, welfare, community affairs, and environmental resources.

The interdependent team of the land-grant system collaborates with many people to apply technology, substitute machine for human energy, and develop management acumen. Formal relationships exist between extension and the land-grant university of each state. The extension service, the major off-campus educational arm of land-grant universities, disseminates information from the university to the residents of the state.

Budget reductions in higher education has had serious implications for the land-grant institutions. The requirement that multidisciplinary solutions be found for more complex societal problems means that outreach employees of the Institute and Extension must develop collaborative partnerships with community leaders and with faculty of diverse disciplines.

Why Outreach and Why Now?

Today, U.S. populations look to universities to provide solutions to a myriad of practical problems, ranging from the means for increasing agricultural production to better child-raising techniques. Without a doubt, this new role in which our society perceives institutions of higher learning, particularly the large urban or state university, has brought about drastic changes in some of the university's activities (Evans & Leppman, 1968, p. 5). The university and the community have been forced to interact.

Faculty and staff who affiliate with problem-focused, multidisciplinary units are frequently drawn from a variety of disciplines, and some may consider themselves to be pandisciplinary in temperament, philosophy, and practice. In problem-focused, multidisciplinary units, the utility function of knowledge is paramount. Consequently, outreach programs are likely to be responsive to real world issues and problems (Provost's Committee on Outreach, 1992, p. 27).

United States society confronts a host of major challenges that require higher education's active and creative involvement. This nation is experiencing the growth of an underclass characterized by high unemployment, crime, and breakdown of the social fabric. Today's youth struggle with substance abuse, teen pregnancy, academic failure, and crime delinquency.

Innovations introduced in a college or university can assist in translating its strategic vision into reality. Meaningful change is much more than merely cosmetic; it is tantamount to renewal. It involves redefining values and transforming the culture of an organization (Farmer, 1990). The notion of avoiding being "all things to all people" also included the dimension of recognizing just what it is that a university should, and should not, provide through outreach. At Michigan State University strong emphasis is placed on the need to avoid being viewed as a "problem solver" or as a "social service" institution.[1] The university's role, on the other hand, should be that of a knowledge resource--to provide knowledge and to assist clients of their outreach programs in "putting that knowledge to work" in ways that improve their situations.

According to the Provost's Committee on Outreach, integrative models and approaches used at other universities (e.g., at the University of Wisconsin, some research/

[1]Michigan State University has a well-established history of extending knowledge in service to society.

outreach activities are integrated and targeted at the industrial sector) should be studied for possible adaptation at Michigan State University. At the decentralized level, colleges and units should be given the freedom to do the type of outreach that "makes sense" for their specific cultures, as long as those efforts fall within the parameters established at the university level. An important outcome of outreach is client empowerment. This occurs when clients work with MSU faculty to take greater control over their circumstances and environment.

The Council on the Review of Research and Graduate Education (CORRAGE) (1990), defines *outreach* "as an intrinsic product of both the creation of and the transmission of knowledge, with the underlying understanding that the most successful outreach will be the product of excellent research, often multidisciplinary in nature." CORRAGE (1990, p. 11) has explicitly explained that the advantages of outreach at Michigan State University are: (1) fulfilling the land-grant mandate and the University's mission; (2) ability to apply faculty expertise to solve problems, thereby having a positive influence on human enablement and economic development in Michigan and the world beyond; (3) exploring new and expanded sources of support for research efforts; and (4) for graduate students: the expanded breadth of their educational experience to include the application of their research, enhanced opportunities for financial support and internship, and increased understanding of the philosophy of land-grant and other public institutions. To facilitate effective outreach, basic research needs to be articulated with applied research, so that the frontiers of knowledge are expanding and the knowledge generated is used to solve the problems confronting society (Schuh, 1984).

Traditionally outreach has meant the dissemination of university-based knowledge to solve problems which university-based persons perceive to be community-based. Instead, both leaders of the university outreach organizations of study envision a two-way flow of information and collaboration between the Institute for Children, Youth, and Families' and Michigan State University Extension's employees and the community-based clientele.

Dr. Richard Lerner, Director of the Institute for Children, Youth and Families (Annual Report 1991-1992) declares that "throughout this period my colleagues and I have worked to build and integrate the transcollege, mulitdisciplinary, multiprofessional, and community-collaborative dimensions of the Institute." Dr. Gail Imig, Director of Michigan State University Extension, explains that MSUE is undergoing a change in which local citizens and those to be served will be involved, as well as Extension staff and other MSU faculty, in the identification as well as the solution of community-based problems.

For Michigan State University and both on-campus outreach programs, for the Institute and Extension to move ahead with collaborative-based outreach, it will be necessary to learn how administrators, agents, aides, faculty, support staff, graduate students, and other employees feel about outreach. The present research's focus is on understanding how these individuals perceive working with other groups, internal and external to the university, and their reactions to an innovative outreach approach. Employees' perceptions about working with certain groups of people will have an effect on their present and future outreach efforts. Until MSU, MSUE, and ICYF employees understand their own perceptions, it will be difficult to provide collaborative university outreach to the community or to cater viable services via the university. Research results can prove valuable to the individuals from ICYF and MSUE who are expected to follow an outreach service oriented plan to meet the needs of their constituencies. Furthermore, implications from the study may prove beneficial to leaders who are attempting to bring about this change.

What is Diffusion?

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication in that the messages are concerned with new ideas (Rogers, 1983, p. 5). Diffusion is a kind of social change, defined as the process by which alteration occurs in the structure and function of a social system. Social change occurs when new ideas are invented, diffused, and either adopted or rejected, leading to certain consequences.

> When an innovation is diffused and adopted (either symbolically or behaviorally) by a sufficient number of the "relevant units of adoption" in a social system to register an impact (becoming an integrated part of the normative patterns in the system) social change has occurred in the system (Zaltman, Duncan, & Holbek, 1973, p. 14).

Organizational Innovation

Organizational innovativeness has been weakly linked to four variables measuring definite dimensions of organizational structure: Centralization, complexity, formalization, and interconnectedness. Rogers (1983) explains that centralization is the degree to which power and control in a system are concentrated in the hands of relatively few individuals. Centralization usually has been found to be negatively associated with innovativeness, meaning the more power is concentrated in an organization the less innovative that organization tends to be. Complexity is the degree to which an organization's members possess a relatively high level of knowledge and expertise, usually measured by the members' range of occupational specialties and their degree of professionalism expressed by formal training. Complexity, Rogers (1983) describes, encourages organizational members to conceive and propose innovations, but it may make it difficult to achieve consensus about implementing them. A third variable, formalization, is the degree to which an organization emphasizes following rules and procedures in the role performance of its members. Formalization acts to inhibit consideration of innovations by members. Finally, interconnectedness is the degree to which the units in a social system are linked by interpersonal networks. The results of hundreds of studies indicate a rather low correlation between the aforementioned variables and the innovativeness of organizations (Rogers, 1983).

Rogers and Agarwala-Rogers (1976) distinguish between two general types of innovations which are characterized by very distinct dynamics in respect of the innovation process. Innovations of the organization "are those innovations adopted as a result of an organizational decision which do not require most members to behave differently as individuals" (Rogers & Agarwala-Rogers, 1976, p. 150). Rogers and Agarwala-Rogers stress that the organization as a whole changes, but not most of its employees. On the other hand, innovations in the organization are "those innovations which require changes in individual behavior" (Rogers & Agarwala-Rogers, 1976, p. 150).

Without an adequate vision[2] of the form the innovation will take, whatever energy is generated will be dissipated. Without a critical amount of motivation, neither the energy to initiate change nor the readiness to implement it will be present. Walton (1987) explains that innovation cannot be effective unless it is guided by a vision made manifest in a model. A model is a general concept of the future organization and evolves from an understanding of the limitations of traditional organization and experimentation with alternatives (Walton, 1987). When an innovation is based on a model that affects both the employer and the employees but does not protect the interests of both groups, the innovation will likely fail.

Definitions of Terms

The following terms and their definitions are pertinent to this study and are being used for the purposes of clarity and consistency:

Constituents are people external to the university who are served by Michigan State University or by the Institute for Children, Youth, and Families. The terms affiliate and clientele are synonymous of constituent.

A ***problem*** is a recognized condition or need that affects constituents.

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[2]Vision is a blueprint of a desired future state (Shieve & Shoenheit, 1987, as cited in Chance, 1992, p. 48).

Support staff personnel are clerical technicians, secretaries, and administrative assistants.

An ***Aide*** is a program assistant in Michigan State University Extension. For example in the Expanded Food and Nutrition Education Program (EFNEP), aides inform low-income families about nutritional value and adequate food spending for their incomes.

Following Michigan State University's Provost's Committee on University Outreach (1993), universities exist to generate transmit, apply, and preserve knowledge. ***Outreach*** [3] is a form of scholarship that cuts across teaching, research and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions.

Outline of the Thesis

This chapter has provided a brief overview of the focus of the present thesis. It provided a history of the land-grant universities, the purpose of the thesis, diffusion theory, organizational innovation, and definition of important terms.

Chapter II provides a summary of the theoretical foundations taken from the literature pertaining to leadership vision, organizational culture and climate, and diffusion of innovation in organizations. This chapter also provides review of literature concerning change in organization, kinds of change, and adopting new innovations and how it is influenced by four factors: age, organizational position, proximity, and years with an organization, and complete descriptions of the two outreach organizations.

Chapter III details and provides rationale for the use of a questionnaire, operationalizing aspects of collaboration, independent variables and collaboration, pre-testing and preparations of the questionnaire, and the data analysis.

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[3] A term adopted in 1990 as an encompassing way for Michigan State University to describe how it extends its knowledge resources to society (The Provost's Committee on University Outreach, 1993, p. 1).

In Chapter IV, results of the data analysis are presented. Results are organized according to questions: To what degree do employees hear about constituent problems from internal, boundary spanning, and external sources?, do age, years with the organization, region of office, and organizational position influence whether employees hear about constituent problems from internal, boundary spanning, and external sources?, to what degree do employees seek advice from internal, boundary spanning, and external sources when working on a problem?, do age, years with the organization, region of office, and organizational position influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem?, and does a collaborative orientation vary by employee's age, region of office, organizational position, or years with organization?

Chapter V discusses the thesis' conclusions, limitations to scope of the study, the applicability of the results to MSUE and ICYF in their outreach approach, summary of research findings, and implications.

CHAPTER II

LITERATURE REVIEW

This chapter presents a review of publications about visionary leadership, organizational culture and climate, diffusion of innovations in organizations, and in addition, descriptive sections on the two organizations of study and research questions, are included.

Leadership Vision

What is leadership vision? A *vision* is a target that beckons (Bennis & Nanus, 1985). Bennis and Nanus emphasize that a vision always refers to a future state, a condition that does not presently exist and never existed before. Kanungo and Conger (1989) define vision as some idealized goal which an executive wants the organization to achieve in the future. West and Farr's (1990, p. 310) definition of vision is; "an idea of a valued outcome which represents a high order goal and motivating force at work".

With a vision, the leaders provide the all-important bridge from the present to the future of the organization. On the one hand, an organization seeks to maximize its rewards from its position in the external environment and, on the other hand, individuals in the organization seek to maximize their reward from their participation in the organization. When the organization has a clear sense of its purpose, direction, and desired future state and when this image is widely shared, individuals are able to find their own roles both in the organization and in the larger society of which they are a part. This empowers individuals and confers status upon them because they see themselves as part of a worthwhile enterprise (Bennis & Nanus, 1985). In the present study, organizational leaders have enunciated strong visions for change, both inside and outside the organizations of study.

Dr. Gail Imig's strategic vision for MSUE involves vesting local committees with enlarged roles for identifying issues to be addressed cooperatively by local citizens and organizations, MSUE, and other knowledge sources. ICYF's administration aspire to bring the campus and the community together in a productive, co-learning collaboration embodying the land-grant tradition. Scholarship that is not integrated with the needs of children, families, and communities involved in that scholarship, needs that are articulated by the members of the communities (not scholars acting independently of the perspectives of the community) will be difficult to translate into policies and program of meaning and value to the community. Dr. Richard Lerner believes such scholarship will not be acceptable by the community. In addition, since the community did collaborate in the planning of the scholarship, any community capacity building, that may accrue from such partnership, is not likely to be produced. Research that is integrated with community needs and scholarship that is a product of collaboration between the university and the people involved is therefore linked to community-based actions. Such research can be conceived of as the type of scholarship that was intended to be associated with the American land-grant university. Recently this has been seen as too time-consuming by faculty and outreach employees. Michigan State University Extension's and the Institute for Children, Youth, and Families' leaders are reintroducing a vision of community-collaborative integration of research and service.

By focusing on a vision, the leader acts on the emotional and spiritual resources of the organization, on its values, commitments, and aspirations. Managers, by contrast, operate on the physical resources of the organization, on its capital, human skills, raw materials, and technology. Great leaders often inspire their followers to high levels of achievement by showing them how their work culture contributes to worthwhile ends. It is an emotional appeal to some of the most fundamental of human needs-the need to be important, to a make a difference, to feel useful, to be a part of successful and worthwhile enterprise (Bennis & Nanus, 1985). Effective visionary leaders put their vision into practice by means of their own specific interpersonal behaviors on a one-to-one basis. Visionary leaders enact their visions through effective communication practice (Sashkin, 1988). The leader may generate new views of the future and may be a genius at synthesizing and articulating them, but this makes a difference only when the vision has been successfully communicated throughout the organization and effectively institutionalized as a guiding principle. A vision cannot be in an organization by decree, or by the exercise of power or coercion. It is more an act of persuasion, of creating an enthusiastic and dedicated commitment to a vision because it is right for the times, right for the organization. A vision of the future is not offered once and for all by the leader and then allowed to fade away. It must be repeated time and time again. Consistent with Bennis and Nanus (1985), a vision must be incorporated in the organization's culture and reinforced through the strategy and decision-making process. In the end, the leader may be the one who articulates the vision and gives it legitimacy, who expresses the vision in captivating rhetoric that fires the imagination and emotions of followers, who empowers others through the vision to make decisions that get things done. But if the organization is to be successful, Bennis and Nanus (1985) affirm that the image must grow out of the needs of the entire organization and must be "claimed" or "owned" by all the important actors.

Boal and Bryson (1988, p. 19) argue that, "...visionary charismatic leaders are those who produce charismatic effects primarily through helping to heighten internal correspondence for individual followers or co-orientation within a group of followers." Visionary charismatic leaders link individuals' needs to important values, purposes, or meanings through articulation of a vision and goals -which inspire interpretative schemes- and also through pointing out how individuals' behavior can contribute to fulfillment of those values, purposes, or meanings. The organizational literature suggests that in addition: (1) potential followers need to be dissatisfied with the current situation (March & Simon, 1958, as cited in Hunt, Baliga, Dachler, & Schriesheim, 1988) (2) the new vision must provide for a stronger linkage between values, attitudes, and behaviors; and (3) followers must have a chance to successfully practice part(s) of the vision before they will attribute charisma to the leader (Hunt, Baliga, Dachler, & Schriesheim, 1988).

According to West and Farr (1990), if vision is to be a facilitator of innovation within a group it is important for the vision to be negotiated and shared. West and Farr (1990) indicate that visions of a group imposed by those hierarchically superior are unlikely to be facilitative of innovation. Furthermore, they suggest that vision will be more facilitative of innovation to the extent that it is *valued within the group.*

In organizational level studies similar to individual, leadership style appear important in influencing innovation. Kanter (1983) and Peters and Waterman (1982) suggest that innovation is most likely to occur where leadership styles are participative and collaborative.

How can a transforming leader impact the culture of an organization? The simple wielding of power linked with a position of authority is not congruent with this concept of leadership. Research has also shown that attempts to force cultural changes do little but create "wild cultures" that are less visible and more difficult to understand (Fink, 1988, p. 65). Deal and Kennedy (1982) describe the value system that influences the behaviors of members as the very core of organizations and thus the focus of attempts for change. Schein (1986) sees leaders as needing both a vision of the future and the ability to express and reinforce this vision since he believes "the unique and essential function of leadership is the manipulation of culture."

Whereas visionaries are perceived as creating innovation, in many situations, such innovation is created by recombining old elements into new forms. This, at times, is done on purely symbolic levels, but at times, it involves the application of technologies, processes, or structures in new and unexpected situations (Westley, 1991).

Organizational Culture and Climate

Organizational Culture

Schein's (1985, p. 244) definition of *organizational culture*, "consists of a large set of taken-for-granted implicit assumptions that cover how group members view both their external relationships with their various environments and their internal relationships with each other." Organizational cultures form within societal, ethnic, and occupational cultures. But, because culture is unconscious and taken for granted by insiders, it cannot be studied through unobtrusive methods such as questionnaires (Schein, 1985). Following Wilkens and Dyer (1988), organizational culture is socially acquired and shared knowledge that is embodied in specific and general organizational frames of reference. Goodenough (1970) defined culture in terms of sets of standards for perceiving, believing, evaluating, communicating, and acting: those who share a set of cultural rules of social conduct, share a culture. He noted that some rules are explicit, others unspoken, but in either case, failure to abide by them is seen as a breach of appropriate behavior. An organization might then be studied as a culture by discovering and synthesizing its rules of social interaction and interpretation, as revealed in the behavior they shape. A definition of organizational culture that usefully incorporates most previous definitions is:

> A relatively enduring, interdependent symbolic system of values, beliefs, and assumptions evolving from and imperfectly shared by interacting organizational members that allows them to explain, coordinate, and evaluate behavior and to ascribe common meanings to stimuli encountered in the organizational context; these functions are accomplished through the mediation of implicit and explicit rules that act as cultural warrants (Schall, 1983, p. 557).

As Geertz (as cited in Pacanowsky & O'Donnell-Trujillo, 1982) suggests, culture is not so much to be studied as a system of kins, collection of artifacts, or corpus of myths, but as sense-making, as a reality constructed and displayed by those whose existence is embedded in a particular set of webs. Consistent with Geertz, "culture is not a power, something to which social events, behaviors, institutions, or processes can be causally attributed" (Pacanowsky & O'Donnell-Trujillo, 1982, p. 123). Each culture has its set of relevant constructs (objects, individuals, processes) used by organizational members. Each organizational culture has its system of facts which members use to explain how and why the organization operates the way it does.

According to Falcione and Kaplan (1984, p. 300), culture, from this perspective, is "usually long-term and strategic...difficult to change...(and) rooted in deeply-held beliefs and values in which individuals hold a substantial investment as the result of some processing or analysis of data about organizational life." The culture construct, as viewed from this perspective, bears remarkable resemblance to the climate construct defined from the "multiple measurement-organizational attribute" approach defined by James and Jones (as cited in Falcione & Kaplan, 1984, p. 288).

The circular causal relationship between communication and culture has led scholars to define culture as a communication phenomenon. Gudykunst and Kim (1984, p. 11), for example, define culture as, "that relatively unified set of shared symbolic ideas associated with societal patterns of cultural ordering". Pettigrew (as cited in Barnett, 1988, p. 103) defines organizational culture as "the system of such publicly and collectively accepted meanings operating for a given group at a given time."

Organizational Climate

West and Farr's (1990, p. 148) definition of *organizational climate* is "the feelings, attitudes and behavioral tendencies, which characterize organizational life and may be operationally measured through the perceptions of its members." While culture is normative and stable, climate thus is more descriptive and changeable. In keeping with West and Farr's definition, climate may thus be seen as the way culture is expressed at each point of time, and by trying to change culture, company leaders may hope to influence climate, which is more directly related to company behavior (West & Farr, 1990).

What is this relationship between climate and culture? Falcione and Kaplan (1984) suggest that culture may be usefully viewed as the organization's systems of values, norms, beliefs, and structures that persist over time, while climate is the assessment of these elements at a given moment. Conceptually, at the inception of an organization, climate and culture is isomorphic. However, over time, as the organization becomes an entity aside from the persons who belong to it, climate becomes an indicator of the goodness of fit between an organization's culture and its people (Falcione & Kaplan, p. 301, 1984).

How do culture and climate differ? Schwartz and Davis (as cited in Barnett, 1988) distinguish the term as follows: Climate concerns whether people's expectations about what it should be like to work in an organization are being met. In other words, climate refers to how satisfied they are about certain organizational activities. Climate is only one aspect of organizational culture, which is the patterns of beliefs and expectations shared by the organization's members. While climate refers to whether or not expectations are being met, culture is concerned with the nature of the expectations themselves. Thus, while culture is an emergent property of group interaction, climate may be taken to be individuals' psychological perceptions of the characteristics of an organization's practices and procedures. Climates are, by definition, very stable and they change very slowly. Organizations' cultures do change, and its members' attitudes, values, beliefs and expectations are dynamic. It should be noted that Falcione and Kaplan (as cited in Barnett, 1988) take a contrary view when discussing the relationship between culture and climate.

The strong interrelationship between culture and communication has been frequently noted by other researchers interested in cultural perspectives. Hall (as cited in Pacanowsky & O'Donnell-Trujillo, 1982) states that "culture is communication and communication is culture." Pacanowsky and O'Donnell-Trujillo (1982, p. 123) refer to culture as a web that "is the residue of the communication process." Spradley maintains that culture is "learned, revised, maintained, and defined in the context of people interacting" (as cited in Schall, 1983, p. 559).

According to Louis (1983), organizations should be viewed as settings that may foster the development of cultures. Louis refers to organizations as "culture-bearing milieus" because among other properties, they convene regularly and provide opportunities for affiliation out of which may come sets of shared understandings that are relevant and distinctive to some group.

Diffusion of Innovation in Organizations

Innovation

According to Rogers (1983), *innovation* is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively" new as measured by the lapse of time since its first use or discovery. If the idea seems new to the individual, it is an innovation. The present thesis conceptualizes a new vision of outreach as an innovation.

Diffusion is a multidisciplinary theory of planned social change, change that is brought about by the spread of new ideas or new technologies throughout a social system. Communication between a change agency and the client system and further communication within that system result in individuals or groups deciding to adopt or reject the innovation (Freimuth, 1987, p. 223).

Hage and Aiken (1970) follow a similar approach. For them a new program, that is an innovation, is defined as "the addition of new services or products...This does not imply that each new program adopted by an organization is necessarily new to the society" (Hage & Aiken, 1970, p. 14). A specific new program may be new only to the organization being studied.

Not all scholars agree with this approach to the definition of innovation. For example, Becker and Whisler (as cited in Zaltman, Duncan, & Holbek, 1973, p. 11), although talking about innovation as a process, suggest "defining innovation as the first or early use of an idea by one of a set of organizations with similar goals". According to Becker and Whisler, organizational innovation occurs when the organization is among the first to adopt the new idea and incurs significant costs of search and risk. A firm adopting later (after some time has elapsed) undergoes organizational change but not innovation, whereas the early adopting organizations undergo both innovation and change (Zaltman, Duncan, & Holbek, 1973, p. 11). In Beckler and Whisler's definition is the assumption that a given change involves an innovation process only when it occurs early in the diffusion process of the item.

Albrecht and Ropp's (1984) study, found that workers were more likely to report talking about new ideas with those colleagues with whom they also discussed work and personal matters, rather than necessarily following prescribed channels based on hierarchical role relationships. Innovativeness is a product of the complex interpersonal interactions among members of a system (Albrecht & Ropp, 1984). Based on Albrecht and Ropp (1984, p. 78), "Innovation flourishes in organizations when information flow is widespread, feedback is rapid, and both mechanisms cut across traditional lines of authority." Involving individuals from a cross-section of hierarchical levels in policy and planning decisions consistently has been found to improve morale as well as compliance with actual changes within organizations. The highest rates of innovation were found in those organizational cultures that encouraged collaboration, allowed different kinds of information to flow freely, and featured coalitions built of supporters and collaborators who worked together on new ideas. These organizations had complex structures that made it possible for managers to be linked to other organization members in several ways (for example MSUE with the State of Michigan and Michigan State University). They had opportunities to form ties with a variety of organization members at different hierarchical levels, resulting in greater knowledge and resourcefulness (Albrecht & Ropp, 1984, p. 80).

Johnson (1990) asserts that innovation processes are crucial to organizational success both in terms of establishing new directions for a company and insuring that all of an organization's diverse parts are working toward a common goal, and for organizational effectiveness generally. Organizations are increasingly realizing that the crucial issue related to innovation is the generation of ideas by their employees and lower-level managers, rather than the adoption and implementation of ideas imposed from other sources (Kanter, 1983).

In what kinds of relationships, then, are organization members likely to discuss new ideas? Uncertainty reduction theory can help to identify and understand the types of interpersonal relationships that are conducive to communication about innovation (Albrecht & Ropp, 1984, p. 80). People who are linked in multiple ways are better able to develop collegial relationships because they have more information about each other and are less uncertain about how the other will respond or behave. Uncertainty reduction theory holds that an individual is motivated to communicate in order to reduce this uncertainty about the other. The process of exchanging information lessens the perception of uncertainty, thereby tying people closer together and promoting continued interaction. Hence, when people are able to meet regularly, they are more inclined to interact both to reduce uncertainty and to continue the relationships that develop in the process.

Hence, innovative ideas are not usually discussed among people who have weak ties within the organization because their uncertainty toward one another is greater. The exchange of a broad array of types of information is important to the development of a relationship because persons involved in such interpersonal relationships are more likely to understand and trust one another's reactions and hence able to talk about new ideas. Reduced levels of uncertainty encourage more frequent interaction and therefore are likely to facilitate more discussion about innovation, encouraging a broader emphasis on problem solving and idea development.

Albrecht and Ropp (1984, p. 84) explain, "We expected that individuals would report most of their discussion of innovation occurring within those individuals with whom they also had a work and social/personal relationship". Further analysis supported their hypothesis that messages about innovation were perceived to have been exchanged when work and social topics were also perceived to have been discussed. In general, Albrecht and Ropp found that the organizational level did not seem to relate to the distribution of types of ties across respondents. Respondents at nearly all organizational levels reported that most of their innovation ties overlapped with work and social/personal ties. As expected, respondents perceived that more of their ties were with peers than with those on a different level. The findings show that the greatest number of interactions occurred between individuals of similar status (Albrecht & Ropp, 1984).

Who Brings About the Change?

Resistance will be less if persons involved feel that the innovation is their own, and not one devised and operated by outsiders. Resistance will be less if the innovation clearly has wholehearted support from top officials of the system, but adoptor-level involvement and ownership is a key to successful organizational diffusion.

"Leadership is what gives an organization its vision and its ability to translate that vision into reality" (Bennis & Nanus, 1985, p. 20). Without this translation, a transaction between leaders and followers, there is no organizational "heartbeat". *Positioning* is the set of actions necessary to implement the vision of the leader. If vision is the idea, then positioning is the niche the leader establishes. For this niche to be achieved, the leader must be the epitome not only of clarity but of constancy, and reliability. Bennis and Nanus (1985, p. 52) reiterate, "...Effective leadership takes risks--it innovates, challenges, and changes the basic metabolism of the organizational culture."

In keeping with Bennis and Nanus (1985, p. 52), effective leaders will ultimately "reap the human harvest of their efforts by the simple action of power's reciprocal: empowerment." The fundamental ingredient in organizational leadership is that the leader's style pulls rather than pushes people. A pull style of influence works by attracting and energizing people to an exciting vision of the future. It motivates by identification rather than by rewards and punishments (Bennis & Nanus, 1985).

Diffusion of Innovation Theory

According to Zaltman, Duncan, and Holbek (1973, p. 14), "the process by which an innovation is spread through communication channels to members of a social system over time is called diffusion." The diffusion model is a conceptual paradigm with relevance for many disciplines. One can understand social change processes more accurately if the spread of new ideas is followed over time as it courses through the structure of a social system (Rogers, 1983, p. 89). The four elements of the diffusion of innovations are the innovation, communication channels, time, and the social system.

Rogers (1983) makes a distinction between knowing about an innovation and using the idea. Most individuals know about many innovations that they have not adopted. Rogers (1983, p. 169) explains "One reason is because an individual may know about a new innovation, but not regard it as relevant to his/her situation, as potentially useful." Attitudes toward an innovation, therefore, frequently intervene between the knowledge and decision functions. In other words, the individual's attitudes or beliefs about innovation have much to say about his passage through the innovation decision process. Consideration of a new idea does not pass beyond the knowledge function if an individual does not define the information as relevant to his/her situation or if sufficient knowledge is not obtained to become adequately informed so that persuasion can take place (Rogers, 1983, p. 169).

In the present case, the new vision of outreach is known by all employees to some degree. They can be expected to have formed attitudes and perhaps behaviors based on their knowledge of the innovation. *Opinion leadership* is the degree to which an individual is able to influence other individual's attitudes or overt behavior informally in a desired way with relative frequency. By their close conformity to the system's norms, opinions leaders serve as an apt model for the innovation behavior of their followers (Rogers, 1983, pp. 27-28).

Researchers have had ready explanations for innovation failure in terms of resistance to change; few researchers have examined how attitudes and behaviors or organizational members can facilitate innovation. Also, it is often accepted unquestioningly that innovation is a "good thing" and resistance therefore a "bad thing."

Farmer (1990) states that three important factors must be present if efforts to innovate are to succeed. First, a condition of trust which involves free and open communication between faculty members, administrators, employees is the first pre-condition for achieving trust. If employees view collaboration as a way of providing service to the community then they will continue or reinforce this vision of collaborative outreach with community clients. Second, a committed leadership, for example a strong commitment from top campus/organizational leadership, is indispensable; without it change will simply not occur. It is the responsibility of top leadership to encourage innovation and to make it known that it fully supports institutional change. Third, effective planning can also contribute to the creation of an environment supportive of change if the learning that takes place during the planning process is seen as more valuable than the plan itself.

Authority decisions typically involve downward communication, whereas the collective process employs both horizontal and upward communication after initiation. Collective decision-making structures can also facilitate the innovation process in several ways. First, unless the internal feedback mechanisms in the organization are extremely reliable, it may be difficult for individuals in the decision hierarchy to be aware of the need for innovation at the lower levels of the organization. The authority decision structure thus does not take advantage of adopting unit members' knowledge as it applies to the innovation decision process (Zaltman, Duncan, & Holbek, 1973). The collective decision process can facilitate the implementation stage of the innovation decision process even if it slows the decision process down, given the involvement of more individuals. The increase of participation in the decision process is likely to lead to more commitment by participants to working through some of the difficulties they might experience during implementation. The collective decision process is most applicable and productive when participants feel that (1) the innovation-situation they are working on is relevant to their lives; (2) they have the competence to initiate and implement the innovation; and (3) they have the authority to follow through with the innovation. When all these conditions are not met, some combination of authority and collective decision structure is more appropriate.

Stages of Change

Attempts to introduce organizational changes must occur both after members have developed belief in the new values and in concert with natural forces in the environment that will support this change. A metaphor that captures this view of cultural change is presented by Martin, Sitkin, and Boehm (Fink, 1988, p. 69) when they state that "creating a culture is like surfing. You cannot make a wave. All you can do is wait and watch for the right wave, then ride it for all it's worth."

When an organization's decision makers select a new innovation they face a series of choices that occur over time. These choices can be viewed as stages. They are evaluation, initiation, implementation and routinization (Hage & Aiken, 1970, p. xiv). In the first stage, evaluation, there is the consideration of the need for change. Initiation involves the choice of a solution and the search for resources to pay for the remedy. Implementation involves the actual attempt to start a new activity, and routinization involves the stabilization of the program. Particularly during the initiation and implementation stage there is likely to be a considerable amount of conflict.

Rogers' stages of social change reflect the adoption of innovative practices or activities by individuals. As such, Rogers' is a social-psychological approach to the problem of social change. In his awareness stage, the individual first becomes exposed to the innovation; in the interest stage, "the individual seeks additional information; and in the evaluation stage, the individual mentally applies the innovation to his present and anticipated future situation" (Hage & Aiken, 1970). Hage and Aiken (1970) group all these activities into the single stage of evaluation. Because Rogers' approach involves a decision to innovate by a single individual, while Hage and Aiken's concern is with an organization, which entails a collective decision to innovate. There are obviously differences between these two distinct approaches. However, a parallel remains: namely, this stage necessarily involves the seeking of information and exploration of the possible consequences of innovation.

During Rogers' trial stage, the individual tries the innovation in a limited fashion to determine its feasibility for complete adoption. This stage is analogous to Hage and Aiken's implementation stage. In Rogers' adoption stage, the individual decides to utilize the innovation fully, which is similar to Hage and Aiken's routinization stage. There are some differences in the type of unit that is adopting an innovation: individuals versus organizations, but there does seem to be some overlap in the two processes of innovation.

Only Mann and Neff's (as cited in Hage & Aiken, 1970) description of the stages of social change refer to organizations per se. Their first two stages, the state of the organization before change and the recognition of a need for change, clearly overlap with Hage and Aiken's evaluation stage. Their stage of planning the change combines some elements from both Hage and Aiken's evaluation and initiation stage. By planning the change, they are referring to the clarification and definition of objectives, the development and review of alternative courses of action, and determination of proper strategy and tactics. These are activities that Hage and Aiken (1970) have included in the evaluation stage. In addition, in this stage identifying and developing needed skills, which Hage and Aiken have classified in the implementation stage. Mann and Neff (as cited in Hage & Aiken, 1970) also included descriptions of effective power equalization techniques at this stage, the latter authors discussed as one of the dilemmas of implementation. Mann and Neff's final stage, stabilizing change, is similar to Hage and Aiken's, routinization stage. However, one of the difficulties in making exact comparisons between Mann and Neff's description of stages in social change and Hage and Aiken's is that the former's discussion is oriented to the practitioner's point of view. Mann and Neff's work is designed to alert change agents to problems of human relations; thus there is not exact comparability between their approach and Hage and Aiken's (1970).

The innovator or innovating group has the task of introducing an innovation into a social system and guiding it along a frequently circuitous route to adoption. According to Evans and Leppmann (1968), an idea can come from a source external to, or part of, the innovation-receiving system. An innovation can be introduced by a "*change agent*," a term that Rogers and others use to identify a professional person who tries to influence the direction that decisions on adoption will take place. This permits the distinction between one who simply introduces change and the innovator who is really the first person within the system to adopt an innovation. The change agent has emerged as an important figure in many areas of innovation research.

Adopting New Innovations

An innovation is important because a new change is designed to meet a need. It represents an attempt, whether successful or unsuccessful, to achieve a goal. The new innovation may create more difficulties than it solves or it may fail to meet adequately the need for which it is designed. This does not imply that each innovation adopted by an organization is necessarily new to the society in question. A particular innovation may be new only to the organization being studied.

(a) By Age

Previous research findings which show that workers who are interested in participating in problem-solving groups are likely to be younger, better educated, and more attracted by job advancement, suggest that motivation to participate could be prompted by unfilled needs for self-expression, including the use of knowledge, skills, experience, and innate abilities that most routine industrial occupations discourage (Miller & Prichard, 1992, p. 418). The results in a study done by Miller and Prichard (1992) indicate that employees who expressed interest in becoming a member of a problem-solving group tend to be younger and more ambitious in the sense of being interested in job advancement, than employees who were not inclined to participate. The interested employees were also more positive in their expectations that the planned employee involvement program would lead to benefits for both employees and the organization.

(b) By Position

A number of studies of work organizations have found support for the principle of worker participation in authority to be greatest among workers at the bottom (of the organization), especially blue-collar industrial workers, and in general, among workers in highly routinized and dissatisfying jobs (Fenwick & Olson, 1986, p. 506).

The expectation that people “at the top” will somehow solve all organizational problems seems increasingly inappropriate. Instead, because of the complexity of these situations, it is important that organizations find out how to release the creative energies, intelligence and initiative of people at every level. Employees in the two organizations of study need to learn to integrate individuals' contributions so that people are able to work more successfully together to achieve common purposes and to solve problems. Nixon (1992) indicates, organizations today require people at every level to act powerfully and offer their initiative, energy and intelligence.

According to Daft (1978), if a goal of innovation is established, innovation initiation may originate with lower organization members. Freedom of exposure of employees at lower organizations level enable innovative ideas to enter the organization and be proposed.

Consistent with West and Farr (1990), few studies have focused on the effects of innovations as perceived by individual employees within work groups, and this has led to a "predominantly top-down" view of innovation. One hypothesis is that there will be less evidence of a collaborative approach to outreach as one goes higher up the organizational ladder. Agents, who are near the bottom of the ladder, have been working in a collaborative manner with their customers, constituents, and clients from the inception of their careers. This "visionary" outreach style is the very essence of agents' jobs. This MSUE group has been carrying out this outreach approach, but perhaps organizations' top hierarchical personnel have not followed this collaborative manner. More than likely they follow a more traditional one-way communication style.

(c) By Proximity

Rogers' (1981, p. 147) definition of *proximity* is "the relative nearness of a pair of individuals to each other in a communication sense." Monge et al. (1985, p. 1129) define *organizational proximity* "as two or more people being in the same location where there is both the opportunity and psychological obligation for face-to-face communication." Allen (1977) (as cited in Monge et al., 1985, p. 1131) found that the probability of communication decreases as distance increases. Recent research has indicated a relationship between propinquity and the formation of strong ties to information sources (Keller & Holland, 1983).

Much more proximity research has been conducted in interpersonal than in organizational contexts. Monge and Kirste (1980) defined proximity in the organizational context as the probability of people being in the same location at the same time where face-to-face communication was possible. This definition is based upon three important considerations of organizational contexts: (1) People in organizations are proximate to multiple rather than single others (2) People's proximity to each other fluctuates extensively throughout a day as people move about the physical organization performing their work tasks (3) Proximity can be usefully defined in terms of the opportunities for communication that are provided by sharing the same physical work locations as other people.

Collaboration

Collaboration is defined as a process of two or more people working together in mutual respect. The Institute for Educational Leadership, Inc., describe collaboration among agencies and organizations with a stake in improving the lot of children and families is a process for re-ordering that system to deliver more integrated, comprehensive and effective services to that population. Collaboration is broadly defined as an effort that unites and empowers individuals and organizations to accomplish collectively what they could not accomplish independently (Kagan & Rivera, 1991). It influences the viewpoints of individuals about the roles, functions and capacities of other groups and individuals. In a study pursued by Kouzes and Posner (1987), the more frequently people felt that their managers fostered collaboration and strengthened others, the higher their assessments of their managers' upward influence, credibility, and work-group espirit de corps and the higher their level of job satisfaction and commitment. Fostering collaboration is all about getting people to work together. The process of collaboration must be nurtured, strengthened, and managed. "Collaboration is needed to develop the commitment and skills of employees, solve problems, and respond to community issues/problems" (Kouzes & Posner, 1987, p. 134).

Shared visions and values bind employees together in collaborative pursuits. Tasks that require people to exchange ideas and resources reinforce the notion that participants have cooperative goals. As individuals jointly work together, seeing that they need information from each other in order to be successful, they become convinced that everyone should contribute and that by cooperating they can all accomplish the task successfully (Kouzes & Posner, 1987, p. 134).

Leaders who foster collaboration search for integrative solutions. With integrative thinking, leaders frame differences and problems so that participants focus on "what is to be gained" rather than "what is to be lost." Collaboration breeds teamwork as solutions are sought that integrate people's needs. Consistent with Kouzes and Posner (1987), collaboration is fostered when one can integrate potentially disparate perspectives by reframing differences into commonalities.

In the case of these two outreach organizations, the ideal process in a collaborative service is to involve both the internal employees to the university and those external to the university to work with each other and the constituents to define and address constituents' issues. A collaborative approach needs to begin immediately to benefit those directly involved in the problem under investigation. The need for more multidisciplinary solutions has brought forth the need for a collaborative working environment to plug into all sources of individuals and to gain insight. Enarson (1989) strongly recommends to cooperate and build several linkages to meet the changing needs of today's society. Specifically, he discusses extension's expanding clientele (non-agricultural) who require assistance from non-traditional extension people (e.g. public administration, sociologist, and management science).

Boundary Spanning, Internal, and External Information Sources

A *boundary spanner*, or "boundary role person" as Adams (1976) refers to such individual, is responsible for contacting people outside her/his own group. These are individuals whose activities place them at organization boundaries for the purpose of effecting transactions with the environment. Adams (1976) emphasizes that typically, the boundary spanner is depicted as not just an intermediary between two persons but between many individuals from both sides. Rogers and Agarwala-Rogers (1976) describe boundary spanners or "cosmopolites" as individuals who provide an organization with an openness. In keeping with Rogers and Agarwala-Rogers (1976, p. 68), spanners "act as the open doors and windows of an organization allowing for a cross-ventilation of new ideas." Thompson (1967) describes the spanning unit's activity consisting of encoding and decoding information so that the interacting system may better communicate with each other.

Boundary spanners play a central role in intergroup relations. Consistent with Aldrich and Herker (1977), boundary role incumbents, by virtue of their position, are exposed to large amounts of potentially relevant information. Friedman and Podolny (1992) explain that boundary spanners are essential to the efficient and effective operation of organizations. According to Organ (1971), it is through the behavior of boundary "agents" that the organization adapts (or fails to adapt) to changes in the environment. It is through the vigilance of boundary "agents" that the organization is able to monitor and screen important happenings in the environment.

Organ (1971, p.75) points out that a boundary agent has to maintain interaction with, and owes allegiance to, two distinct groups of people: "those constituents in his/her organization plus those agents representing other constituencies on whom his/her organization depends." Dubinsky, Hartley, and Yammarino (1985), indicate that individuals in boundary-spanning positions occupy a unique and difficult organizational role. Being at the interface of an organization and its environment (or multiple organizations), boundary spanners receive, process and transmit information and messages across organizational boundaries.

According to Rogers and Agarwala-Rogers (1976), boundary spanners are concentrated at the very top and at the bottom of an organization. In this study, faculty members are at the top of the organization and graduate students are situated near the bottom of both organizations. At the top, employees have most of their contact with the environment at a relatively high level; they gather information about the whole picture of changes in the environment without usually being aware of the fine details. Rogers and Agarwala-Rogers (1976) further explain that those near the bottom of the organizational hierarchy deal most directly with customers and clients which are able to provide knowledge of external conditions to top leaders through upward vertical flows. This bottom-up communication flow of knowledge can lead to appropriate organizational change.

Organizations of Study

Two outreach organizations at Michigan State University, a large U.S. Midwestern land-grant university, were the focus of this study. Community outreach is a core mission of each organization. Each organization was under new and very similar leadership at the time of this study. The two leaders share a common orientation to the nature of outreach, partly by serving together for 18 months on a university-wide committee. In addition, the two organizations collaborate closely in child and youth programming and share some jointly appointed faculty and staff. While one organization is rather new and has few employees, the other organization is old and has hundreds of employees.

The Institute for Children, Youth, and Families

The Institute for Children, Youth, and Families' (ICYF) programs are created in several ways: (1) Faculty identify ways their research may be integrated with community-identified needs to create a new initiative in outreach scholarship; (2) a community articulates needs that may be addressed by faculty knowledge in order to create a new initiative in outreach scholarship; (3) or faculty-community coalitions, involving new initiatives in outreach scholarship, may be formed through the catalytic, integrative activities of ICYF staff. This infrastructure of catalytic activities includes establishing channels of communication, identifying potential needs, resources, and expertise, and building networks (Annual Report 1991-1992, p. 1). The Institute plays a critical role in these processes by serving as the locus of faculty-community collaboration in integrating research and outreach for children, youth and families.

ICYF promotes the idea that American universities should pursue a new paradigm of research and service if universities are to contribute to addressing the variety of problems facing today's youth. A vision of a community-collaborative integration of research and service (or "outreach") has been forwarded by the paradigm of scholarship promoted within land-grant institutions' colleges of home economics (or their equivalents, for example the College of Human Ecology and Human Development). It is this vision of "outreach scholarship" that provides the intellectual foundation of the Institute for Children, Youth, and Families (Institute for Children, Youth and Families, 1993). The mission of ICYF, formulated through the Institute's 1993 strategic planning process is:

> The Institute is a university-wide, multidisciplinary unit integrating research, policy and outreach. Through human developmental and ecological models and methods, the Institute promotes faculty-community collaborations involving the generation, transmission, application, and preservation of knowledge in order to (1) promote the positive development of children, youth, and families; (2) respond effectively to contemporary problems; (3) acknowledge and celebrate the diversity and strengths of communities; and (4) create a new paradigm for professionals, one merging research, outreach, and policy engagement. (Institute for Children, Youth and Families, 1993, p. 2)

ICYF promises to facilitate a process of faculty-community collaboration in order to create a dynamic resource base. The Institute's commitment is to gather and make information available on the programs and policies that best improve the lives of children, youth, and families.

Dr. Richard Lerner, ICYF's Director, and his colleagues organized an ideal organizational chart which exemplifies their theoretical perspectives on the organizational level, was a major focus of their activities in 1991-1992 (See Figure 1). The members of the program staff enable ICYF to pursue faculty and community-based research and outreach in a set of programmatic areas. The Institute brings staff and volunteer expertise together to address the needs and priority issues facing Michigan children, youth and families across the "life cycle". The Children, Youth and Family programs include resources in Home Economics, 4-H Youth Development and the Expanded Food and Nutrition Program that are used to foster the positive development of young people and families.

Michigan State University Extension

Compared to the Institute for Children, Youth, and Families, the second organization of investigation, Michigan State University Extension, is a well-established, large, programmatically-diversified, and geographically-dispersed organization. As at most land-grant institutions, MSU's Extension organization is central to the university's historical and future land-grant role.

On December 1909, the first legislative bill to finance extension organizations by United States land-grant colleges was submitted. South Carolina Congressman A. Frank Lever submitted such a bill on 1911. An amended version of Lever's bill was introduced in the U. S. Senate more than a year later by Georgia Senator Hoke Smith. Nearly two more years elapsed before the Smith-Lever Act passed (Vines & Anderson, 1976).

Extension was created by the Smith-Lever Act of 1914. Extension is supported by a partnership between the United States Department of Agriculture, the land-grant institutions of each state, and local county governments (Rutledge, 1989).

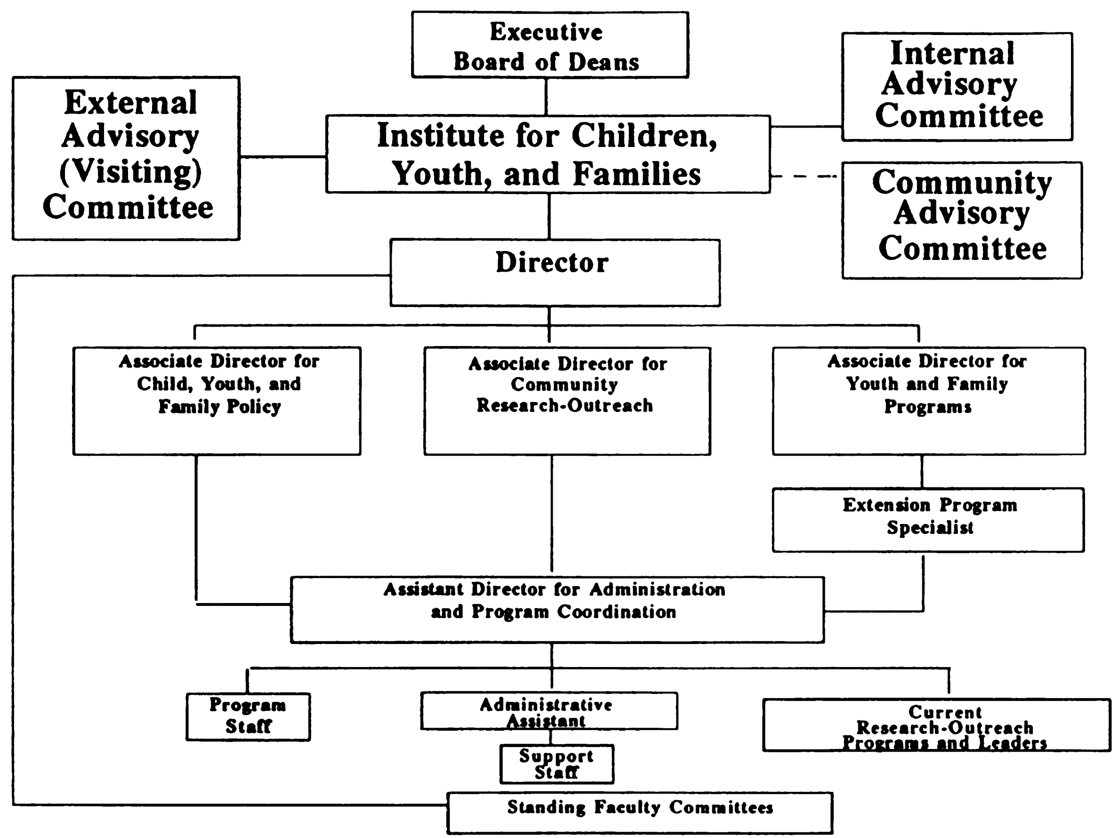

Figure 1. Institute for Children, Youth, and Families Organizational Chart

> It specified that the work...shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications and otherwise. (Vines & Anderson, 1976, p. 7)

In the early 1990s, under Director Gail L. Imig's new leadership, the Cooperative Extension Service's logo became known as Michigan State University Extension, signaling its strengthened linkage to the whole university (The Provost's Committee on University Outreach, 1993). About a year later, the University Outreach regional offices were consolidated with the MSUE regional system, thereby further accentuating a more integrated approach to outreach.

There are six hundred and fifty employees[4] in the extension organization at this university (See Figure 2). MSUE is organized into four major programs: agriculture and natural resources; family life; youth; and community resource development. The development of these programs came out of a number of needs. For example, there was a need to combine into a "systems" approach the problems related to agriculture. There was the necessity of bringing together contributions of various disciplines to a particular set of problems on which a particular audience desired education (Vines & Anderson, 1976).

For over seventy-five years the cooperative extension service of this university has drawn upon the university's knowledge resources to support the educational needs of the state's eighty-three counties. The former Cooperative Extension Service, as a publicly supported educational agency, is continually struggling to define its proper function and purpose in a changing society. Issues of defining appropriate target audiences, delivering quality programs in the most efficient manner, projecting a positive organizational image, and

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[4]There were 650 MSUE employees at the beginning of research. During the course of the present study, Michigan State University Extension underwent staff and budget cutbacks, and the number of current employees have not been disclosed.

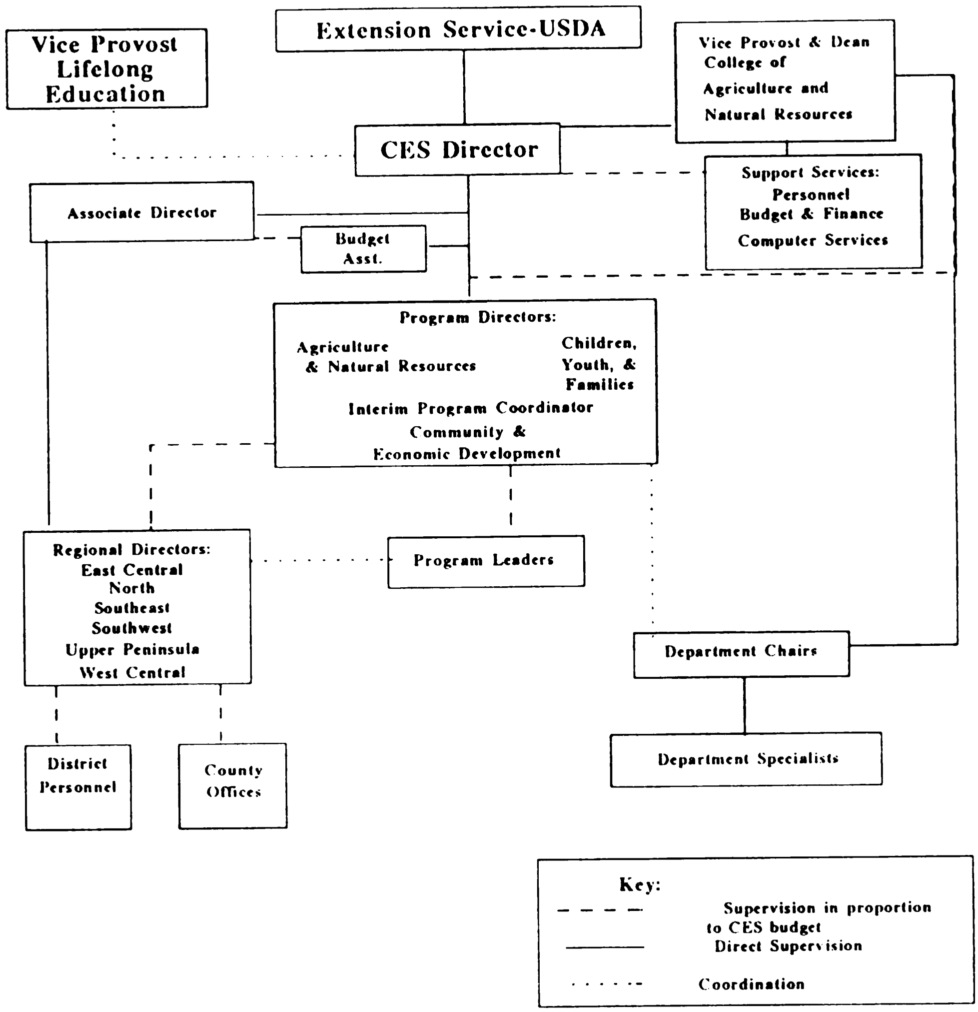

Figure 2. Michigan State University Extension Organizational Chart

maintaining an adequate support base are constantly being discussed (Warner & Christenson, 1984).

Extension was established to disseminate the findings of researchers at land-grant universities to persons not resident in institutions of higher education (Warner & Christenson, 1984). This suggests that extension is in the business of communicating ideas, practices, and technologies to whomever is interested in using them.

With changes in the nature and size of the farm and rural population, and in compliance with Congressional directives and in response to changes in clientele needs, the extension program has broadened to serve a wide range of people. For example, programs have been developed to address clientele such as urban residents with activity areas like 4-H, gardening, nutrition, recreation, energy, health, community services and many aspects of family living. The Expanded Food and Nutrition Education Program (EFNEP) was created to focus on the nutritional needs of low-income families (Warner & Christenson, 1984). According to Warner and Christenson (1984, p. 126), "the genius of Extension is its responsiveness to changing needs." The underlying philosophy of the system was to "help people help themselves" by taking the university to the people. Cooperative Extension is an agency for change and for problem solving, a catalyst for individual and group action with a history of seventy-five years of public service (Rasmussen, 1989).

Today extension is serving many suburban and urban residents through horticultural, urban gardening, family economics, nutrition, and 4-H programs. Urban 4-H programs usually result from citizen demand and are, for the most part, financed by state and local funds, with much of the work carried out by volunteers. However, some 4-H, urban gardening, and urban nutrition programs, including EFNEP, are carried out at the direction of Congress and are financed by appropriations earmarked for those programs (Rasmussen, 1989). A number of farm organizations oppose the urban programs or at least suggest that agricultural production and rural problems be given almost exclusive priority. Consistent with Rasmussen (1989), one way of looking at this problem is to identify clientele through a process that selects the most critical issues the expert knowledge available to the system has the capacity to address. Many critical issues that extension may address are of importance to people regardless of where they live. This means that rural and urban audiences do not necessarily have mutually exclusive needs.

Michigan State University Extension's Children, Youth and Family programs include resources in Home Economics, 4-H Youth Development and the Expanded Food and Nutrition Program that are used to foster the positive development of young people and families. Children, Youth and Family Programs (CYF) has trained staff in Michigan's 83 counties in areas of programming and research expertise on Michigan State University's campus. It is supported by more than 42,000 volunteers statewide working together to reach more than 450,000 Michigan residents each year (Children, Youth, and Family Programs pamphlet).

Leah Cox Hoopfer, MSUE's Associate Director for Youth and Family Programs and ICYF's Associate Director, explains the endeavor joining the Institute's scholarship and MSUE's effective outreach expertise. She points out that the partnership with MSUE prompts and promotes many new collaborations in communities across the state and strengthens collaborations in which Extension currently is engaged (Institute for Children, Youth and Families, 1992).

The basic function of the extension service is to facilitate the dissemination and utilization of useful research results and other innovations to the people of the state of Michigan. Extension's philosophy is to help people identify their own problems and opportunities, and then to provide practical, research-based information that will help them overcome their agriculture and home economics problems, primarily aimed at rural audiences. The involvement of additional disciplines of the land-grant universities in Extension programs has resulted in a much wider subject-matter base for extension programs in continuingly diverse areas.

Research Questions

The purpose of the present thesis is to better understand how employees of two organizations think and behave regarding collaboration in their everyday work. The review of the literature in this chapter has concerned leadership vision as an innovation that may or may not diffuse throughout an organization. A new organizational vision represents an administratively-led, top-down, fundamental change. The adoption of such a vision and its implementation into everyday workplace attitudes and behaviors faces many obstacles, chief among them the existing climates and cultures of the organization. The diffusion of a new leader's vision for an organization will be successful to the degree to which employee attitudes and behaviors (that is, the disaggregate of climate and culture), change.

Since over-time data collection is not possible for the present thesis, change cannot be measured. Yet it is possible to inquire about the state of employee attitudes and behaviors regarding collaboration, the results of which may then be used for a later over-time study of organizational change.

In light of the inconclusive literature regarding factors associated with the diffusion and adoption of fundamental change in organizations, the following research questions are posed:

1. To what degree do employees hear about constituent problems from internal, boundary spanning, and external sources?

1a. Do age, years with the organization, region of office, and organizational position influence whether employees hear about constituent problems from internal, boundary spanning, and external sources?

2. To what degree do employees seek advice from internal, boundary spanning, and external sources when working on a problem?

2a. Do age, years with the organization, region of office, and organizational position influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem?

3. Does a collaborative orientation vary by employee's age, region of office, organizational position, or years with organization?

Summary

This chapter dealt with leadership vision, organizational culture and climate, and diffusion of innovations in organizations. Literature specifically differentiating culture and climate was discussed. In addition, adopting new innovations are introduced and how it is influenced by age, organizational position, and proximity. Descriptions of the two outreach organizations, The Institute for Children, Youth, and Families and Michigan State University Extension, were provided.

CHAPTER III

RESEARCH METHODOLOGY

The Questionnaire

A mailed survey of all organizational members (n=923), of Michigan State University Extension and the Institute for Children, Youth, and Families was conducted.[5] According to Kerlinger (1986, p. 386), "Survey research is probably best adapted to obtaining personal and social facts, beliefs, and attitudes." Survey research normally has the advantage of wide scope, and gathering a great deal of information from a large population, at an economical cost. In addition to the efficiency inherent in survey research, the primary strength of the questionnaire is its broad distribution which makes results generalizable to the entire population of both organizations.

Dillman (1978) points out mail questionnaires have limitations, for example, lack of opportunity to probe or clarify questions and lower return rates. These foreseeable limitations were taken into consideration and handled during the pre-testing stage and follow-up procedures.

The main purpose[6] of the survey instrument was to collect data that would indicate the extent to which employees of ICYF and MSUE were thinking and behaving in a collaborative approach to outreach.

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[5]Surveys are widely used in organizational communication research. Survey methods have some disadvantages. First, survey methods cannot match the richness of detail that can be achieved via case study methods. Second, and even more of a problem, survey methods presume that we know what questions we want to ask before we go into an organization. The research task may become one of measurement, not of discovery (Pacanowsky & O'Donnell-Trujillo, 1982, p. 121).

[6]The questionnaire contained some items that were not used for this thesis.

Operationalizing Aspects of Collaboration

Employees from both organizations were asked how often they hear about constituent problems from a list of 10 types of individuals: Administrators, aides, agents, constituents, faculty, graduate students, support staff, volunteers, other professionals in the field (non-MSU), and other. The 5 Likert-type responses were: 1= very often, 2= often, 3= sometimes, 4= not very often, and 5= rarely.

In addition, respondents were asked, when working on a problem, how often do they seek advice from the same list of 10 individuals (as above). The responses were arranged as: 1= very often, 2= often, 3= sometimes, 4= not very often, and 5= rarely.

Closed-ended questions with a Likert-type attitude scale was designed to measure respondents' agreement or disagreement with statements about collaboration, thus providing an index of positive or negative effect (Henerson, Morris, & Fitz-Gibbon, 1978).

Independent Variables and Collaboration

Four characteristics were selected as the independent variables to describe the respondents in these two organizations. These common characteristics are age, length of affiliation with primary organization, location of regional office, and organizational position.

Five survey questions (numbers 37, 38, 41, 42, and 45) were combined into one dependent variable measuring the employees' approach to collaboration.

Responses Which Will Suggest a Collaborative Orientation

If a collaboration approach is being followed by employees in both organizations, responses would reflect high frequencies for hearing and seeking advice from external and boundary spanning sources. Participants answering that they hear about constituent problems from those directly involved in the situation is an indication of a co-learning process. If boundary spanners are a source of information to learn of constituent problems, at least sometimes, this shows a collaborative approach to outreach.

Traditionally outreach efforts have been provided to constituents given the advice from administrators and faculty. Internal sources have played a vital role in administering outreach based on their opinions and research. A collaborative approach proposes that individuals within university and the community, those directly involved in the problem, work together. If employees answer that they seek advice at least sometimes (or more) from people external to the university than they favor a collaborative approach which is a component of MSU's vision of community-collaborative service. Collaboration breeds teamwork as solutions are sought that integrate people's needs. Respondents with a high frequency to seeking assistance/advice from community or external individuals and spanners might be able to provide relevant information to constituents.

Pre-testing and Administering the Questionnaire

The survey instrument was initially tested and modified on the basis of a pilot sample of six employees (agents, faculty, support staff, and graduate students) selected from the accessible population at MSUE and ICYF. Individuals were selected for the pretest based on their understanding of the topic under investigation. Given the highly distinct nature of the topic (and questionnaire items), constructive and useful feedback would be provided by individuals with in-depth knowledge. Pretests were conducted in-person in order to provide clarifications on any questions the employees might have, and to learn as much as possible about respondents' reactions.

Jargon category/job description and references to regional locations used in the questionnaire to describe the various duties and classifications were part of the colloquial language of the employees in both organizations.

Because ICYF and MSUE were both entering a period of uncertainty at the time of this study, which involved budget and staff reductions, a decision was made to include the entire eligible population in the sample. Before the study was conducted, approval to conduct the study was granted by Dr. Gail Imig, Dr. Richard M. Lerner, and the Michigan State University Committee on Research Involving Human Subjects (UCRIHS).

One set of mailing lists were obtained from each organization. A cover letter was written by an assistant professor (the principal investigator) on department stationery. Questionnaires were addressed to all employees in the Institute for Children, Youth, and Families and Michigan State University Extension (Appendix A and B). All participants were asked to return the completed questionnaire in the self-addressed, stamped envelope that was provided. The questionnaires were mailed on May 10, 1993. After the return of about 400 surveys, (in the beginning of July), a follow-up postcard was sent to all 923 employees, whether they had returned the survey or not, to remind them to return the questionnaire. This was necessary since questionnaires were returned anonymously, a strategy purposefully selected to increase the overall response rate.

Data Analysis

For this study, the sources of people from whom one can learn about constituent problems or seek advice from when working on a problem were divided into three groups: Those persons internal to the organization, external to the organization, and boundary spanners. Administrators, aides, and agents, are the internal group, while constituents, volunteers, and other professionals in the field are the external sources to Michigan State University. Boundary spanners consist of faculty members and graduate students. These individuals are seen as linking the internal and external groups to one another.

For the "approach to collaboration" variable, a confirmatory factor analysis was run using questions 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, and 45, which deal with collaboration

(See Appendix B). A confirmatory analysis was initially run utilizing all the previously listed questions which produced a standard score coefficient alpha of 0.65 (N=284). An alpha of 0.58 was resulted with questions 33, 34, 35, and 39. Questions 34, 35, 39, and 40 produced a coefficient alpha of 0.71. Other confirmatory tests run on various groupings of the selected questions produced even smaller alphas. These test runs did not produce very significant factors so confirmatory factor analysis was unsuccessful in statistically realizing a factor from the pertinent questions measuring attitudes toward collaboration.

An exploratory factor analysis was then run to find out which questions measure the same construct. Questions 32, 33, 35, 36, 42, and 43 produced values of 0.68, 0.75, 0.57, 0.49, 0.55, and 0.40 respectively. Questions 37, 38, 41, 45, and 49 produced values of 0.59, 0.73, 0.65, 0.66, and 0.49 respectively. In preparing the questionnaire, five questions were developed and written to measure collaboration and so-designated a priori. Survey questions 37, 38, 41, 42, and 45 were specifically written to measure collaboration.

An analysis of variance (ANOVA) was used to test research question 3, whether there is a significant measurable association between collaborative orientation and employee's age, region of Extension office, organizational position, and years with organization. An ANOVA and an F test of significance is a technique for assessing a significance of differences among two or more population means based on data derived from independent samples.

A multivariate analysis of variance (MANOVA) was used in analyzing group differences (among the three sources of information) that are attributable to more than one independent variable. The MANOVA test was used for research questions 1a and 2a. Although an analysis of variance test can be computed separately for each of the dependent variables, the ANOVA approach ignores differences in the interrelation among the dependent variables (Norusis, 1993). Substantial information may be lost when correlations between variables are ignored.

The three dependent variables (internal employees, external constituencies, and boundary spanners) correspond to the three levels of a within-subjects factor that was assigned the name source. For questions 1a and 2a, a MANOVA combination of "source" (the three dependent variables) according to each of the 4 independent variables was computed, within each of the subjects and between-subjects factors. The level of acceptance for all the tests of significance were set a priori at 0.05.[7]

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[7] The 0.05 significant level is generally an acceptable threshold for scholarly journals in communication (Smith, 1988).

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter details the findings of the present thesis. Included is a presentation of the questionnaire responses and how the data reflect on the research questions from Chapter II. Of the 923 individuals who were sent a questionnaire, 466 individuals (433 in MSUE, and 32 in ICYF) responded, for a response rate of 50 percent.[8]

Respondents[9] to the questionnaire were administrators (n=53), agents (n=162), aides (n=7), faculty (n=66), support staff (n=136), graduate students (n=8), and others (n=32). Due to small numbers of aides and graduate student respondents, they were collapsed into the "other" category (n=47). Thus, there is a total of five categories of respondents for organizational position (administrators, agents, faculty, support staff, and others).

Sixty percent of all respondents (274 of 466) were female. Gender differed considerably according to position within the organizations.[10] For example, whereas 24.5 percent of administrators and 27.7 percent of faculty were female, 96.9 percent of support staff were female. The number of agents was evenly split by gender (79 females, and 81 males).

One organization of study, Michigan State University Extension, has offices throughout Michigan. Respondents were asked to specify where in Michigan their office is located. The region with the highest number of respondents was the Southwest region with 158. The other five regions each had between 43 and 68 respondents.

[8]The number of questionnaires returned from MSUE and ICYF are low probably because of major staff reductions in both organizations since the initial mailings.

[9]Two participants did not check off their position.

[10]There were eight respondents who declined to specify their gender.

The number of years individuals have been affiliated with their primary organization varies from less than one year to 35 years. Years have been divided into five time intervals: 0-2, 3-5, 6-10, 11-15, and 16+. Sixty-eight respondents (14.6 percent) had been with the organizations 0-2 years, 82 (17.6 percent) had been with the organization 3-5 years, 100 (21.5 percent) had been with the organization 6-10 years, 78 (16.7 percent) had been with the organization 11-15 years, and 116 employees (24.9 percent) had been with the organization 16 or more years.

Research Question 1

Do respondents hear about constituent problems from university employees, or from actual constituents? Do faculty frequently provide information about constituent problems? Does the respondent's age, length of employment, location of office (proximity), or position in the respective organization significantly influence from whom the employees hear about clients' problems? To answer these and related questions, research question 1 asked "From which sources do employees hear about constituent problems?" In answering this question, respondents circled numbers on a five-point scale[11] (1 =rarely; 2 =not very often; 3 =sometimes; 4 =often, 5 =very often) for types of people from whom they might hear of constituent problems. The internal source group consists of administrators, aides, and agents. The external source group consists of constituents, volunteers, and other professionals in the field (non-MSU employees). Faculty and graduate students are boundary spanning sources. Support staff and other people were excluded from this grouping.

Respondents "sometimes" hear about constituent problems from external sources (external consists of constituents, volunteers, and non-university professionals; $\overline{x}$ =3.02,

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[11]These scale items were recoded so that high values indicate more frequency and low values indicate less frequency.

std. dev. =1.01), and less often hear from people inside the organization (administrators, aides, and agents; $\overline{x}$ =2.68, std. dev. =0.82). Faculty and graduate students (boundary spanners) were less frequently a source of information concerning constituent problems ($\overline{x}$ =1.76, std. dev. =0.82).

Hearing About Constituent Problems According to Four Independent Variables

There are four independent variables in this study: Age of respondents, years affiliated with primary organization, region, and organizational position. The dependent variables, described as sources of information, are the internal, boundary spanning, and external sources. Multivariate analysis of variance (MANOVA) was used in analyzing group differences (among the three sources of information) that are attributable to more than one independent variable. Research questions 1a and 2a (see Chapter II, Research Questions section) were tested for significance using a MANOVA test. In this study, the dependent variable is not a single measure but three different responses provided by the respondent for each source of information. A MANOVA was applied to the aforementioned research questions instead of an ANOVA test, because ANOVA ignores the differences in the interrelation among the dependent variables.

The employees' ages (20 years through 67 years) were divided into four age units; 20-30, 31-40, 41-50, and 51+. Table 1, a 4 by 3-factorial design, shows the frequency with which respondents of all age groups hear from the three sources of constituent problems. This table displays the number of respondents, means, and standard deviations by respondents' age. The overall mean and standard deviation for each source appears across the row labeled "Total" on Table 1. The average means for each age category (column means) appear at the far right side of Table 1.

All four age units sometimes hear about constituent problems from both the internal (overall $\overline{x}$ =2.76, std. dev. =0.89) and external groups (overall $\overline{x}$ =3.07, std. dev. =0.99). Spanners are least used when it comes to hearing about problems for all age groups.

Respondents indicated hearing about problems with less frequency from the boundary spanners (overall $\overline{x}$ =1.86, std. dev. =0.99).

(Table 1 about here)

Table 2 indicates that there is a significant difference by age (at F value =1.30, probability =0.28). A low F ratio indicates that there is little between-group variability compared to the within-group variability occurring. The between-subjects factor subdivides the sample into discrete subgroups. In this table, the age category shows that age by itself has a significant difference. The row labeled "Interaction" is the response produced when the levels of one factor interact with the levels of another factor in influencing the response variable. In this case, interaction by age group (within-subjects) indicates the interaction of age by source (external, boundary spanning, and internal). The three dependent variables, sources, represent a single variable measured at three levels of the interaction. A significant difference exists (at α =0.05) between age of respondent and from which source he/she learns of constituent problems (at F value =1.97, probability =0.07). There is reason to believe that age does significantly influence from which sources employees hear about constituent problems.

(Table 2 about here)

Table 3, a 5 by 3-factorial design, shows the number of respondents, means and standard deviations of how often employees hear from sources based on respondents' length of employment (divided into five categories; 0-2, 3-5, 6-10, 11-15 and 16+) with primary organization. Employees for all years categories sometimes hear about constituent problems from both the internal (overall $\overline{x}$ = 2.76, std. dev. =0.91) and external sources (overall $\overline{x}$ =3.07, std. dev. =1.02). Respondents for all years hear with less frequency from the

Table 1. Frequency* which Respondents hear from Sources about Constituent Problems according to Employees' Age Group.

	Internal			Spanners			External			Average Means
Age	n	Mean	SD	n	Mean	SD	n	Mean	SD	
20-30	42	2.61	0.96	42	2.05	0.95	42	2.82	1.20	2.49
31-40	97	2.74	0.96	97	1.68	0.81	97	3.05	0.96	2.49
41-50	121	2.82	0.82	121	1.89	1.02	121	3.24	1.01	2.65
51+	73	2.75	0.84	73	1.92	1.14	73	2.98	0.85	2.55
Total	333	2.76	0.89	333	1.86	0.99	333	3.07	0.99	

Table 2. Multivariate Analysis of Variance by Age

Sources	DF	Mean Squares	F	Probability
Age	3	1.75	1.30	0.28
Interaction[a]	6	1.36	1.97	0.07

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[a]Interaction by age significant at α =0.05.

spanners (overall $\overline{x}$ =1.84, std. dev. =1.08), consisting of graduate students and faculty. Employees who have been working longer periods of time (11 through 16+ years) access both the internal and external sources more frequently than other employees with fewer employment years. Participants employed 11-15 ($\overline{x}$ = 2.98, std. dev. =0.93) and 16+ years ($\overline{x}$ = 3.00, std. dev. =0.84) had the highest means for learning of clients' issues from internal people. Individuals working 11-15 ($\overline{x}$ = 3.49, std. dev. =0.82) and 16+ years ($\overline{x}$ = 3.23, std. dev. =0.99) revealed high frequencies to hearing from external sources. Participants are accessing with less frequency from spanners to learn of constituent problems.

(Table 3 about here)

Table 4 indicates there is no significant difference in the length of employment in primary organization (at F value =4.13, probability =0.00). The row labeled "Interaction" shows the interaction between years of employment by source (external, spanner, and internal). No significant interaction effect exists (at F value =2.72, probability =0.00). Although the sample means observed were different, there is not sufficient evidence to conclude that a statistically significant difference exists in the population mean at the 0.05 level.

(Table 4 about here)

Figure 3, a line graph, displays the five categories of the length of employment plotted (x-axis) against the frequency means (y-axis) (from which sources respondents hear of constituent problems) of three sources accessed. Respondents employed 11-15 years (year category 4 on x-axis) with mean $\overline{x} \approx 3.5$ demonstrate a high frequency in hearing

Table 3. Frequency[*] which Respondents hear from Sources about Constituent Problems according to Length of Employment in Primary Organization.

	Internal			Spanners			External			Average Means
Length of Employment	n	Mean	SD	n	Mean	SD	n	Mean	SD	
0 - 2	53	2.60	1.03	53	1.88	1.04	53	2.71	1.05	2.40
3 - 5	66	2.55	0.84	66	1.70	1.07	66	2.97	0.98	2.40
6 - 10	75	2.60	0.87	75	1.93	1.28	75	2.88	1.06	2.47
11 - 15	61	2.98	0.93	61	1.80	0.89	61	3.49	0.82	2.75
16 +	93	3.00	0.84	93	1.89	1.05	93	3.23	0.99	2.71
Total	348	2.76	0.91	348	1.84	1.08	348	3.07	1.02	

Table 4. Multivariate Analysis of Variance by Length of Employment

Sources	DF	Mean Squares	F	Probability
Length of Employment	4	5.95	4.13	0.00
Interaction[b]	8	2.04	2.72	0.00

[*]Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[b]Interaction by length of employment is not significant.

from constituents, volunteers and other professionals. Participants for all years categories indicated low frequencies in hearing from boundary spanners. Hearing about constituent needs and problems from boundary spanners does not vary considerably according to employees' years with organization.

(Figure 3 about here)

Table 5, a 6 by 3-factorial, shows the number of Extension respondents, means, and standard deviations of how often employees hear from sources about problems based on their regional offices (East Central, North, Southeast, Southwest, Upper Peninsula, and West Central). Employees from all six regions responded "sometimes" hearing about constituent problems from external sources (overall $\overline{x}$ =3.09, std. dev. =1.00). Extension workers with offices in the East Central, North, Southeast, Southwest, and West Central regions sometimes hear about problems from the internal group (overall $\overline{x}$ =2.77, std. dev. =0.90). Those in the Upper Peninsula less frequently learn of problems from administrators, aides, or agents ($\overline{x}$ =2.42, std. dev. =0.77). In addition, Upper Peninsula regional employees report they "rarely" learn of clients needs from faculty and graduate students ($\overline{x}$ =1.38, std. dev. =0.52). MSUE employees from the other five regions (East Central, North, Southeast, Southwest, and West Central) less frequently hear ("not very often") about problems from the boundary spanners. Responses to hearing from internal and spanning sources varied by region, unlike higher frequencies displayed in accessing the external group.

Proximity plays an important role by which sources provide information concerning clients problems. Employees with regional offices in the Upper Peninsula (remote location) are physically distanced from the faculty and administration, who are usually situated near the university (Southwest region). It is expected that Upper Peninsula employees would hear more frequently from constituents, volunteers, and other professionals (non-MSU) than internal or spanners, because of their location.

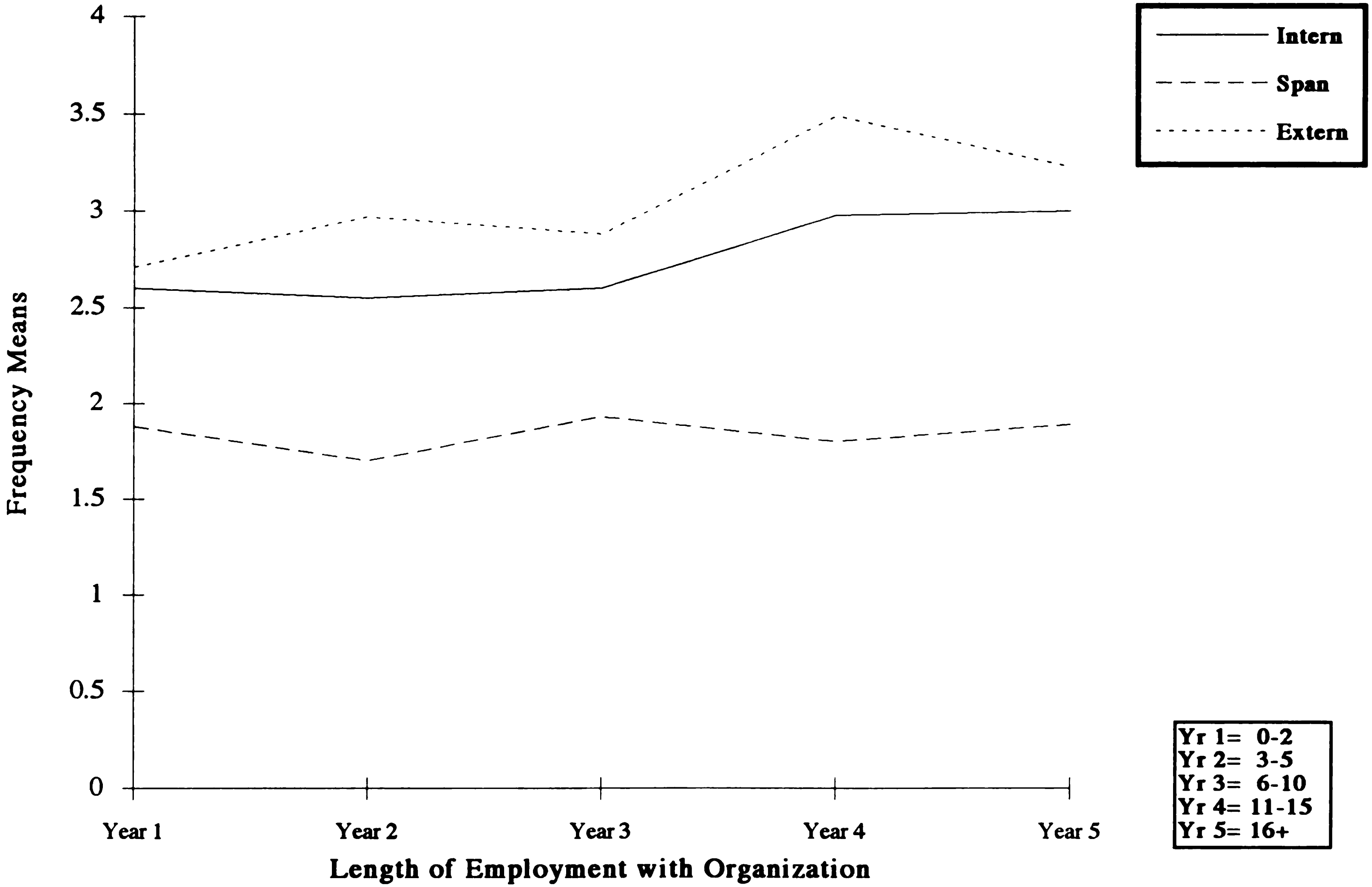

Figure 3. Hear from which Sources according to Length of Employment

(Table 5 about here)

Table 6 MANOVA test indicates there is no significant difference by (proximity) regional extension office (at F value =2.33, probability =0.04). Region category shows that the respondent's office location is not significantly different. The row labeled "Interaction" shows the interaction of office locations within each of the sources (external, spanning, and internal). No significant interaction exists between respondent's regional office location and which source he/she approaches to learn of constituent problems (at F value =2.37, probability =0.01).

(Table 6 about here)

Figure 4 displays the six MSUE regions plotted (x-axis) against the frequency's means (y-axis) (how often respondents hear of constituent problems) from the three sources. Participants in the Southwest responded with high frequencies to hearing from the internal and boundary spanners (highest frequencies within each source respectively). Extension employees in all office locations demonstrated low frequencies to hearing about constituents from the spanning sources.

(Figure 4 about here)

Table 7, a 5 by 3-factorial design, shows the number of respondents, means, and standard deviations of how often employees hear from sources about problems according to respondents' positions (administrators, agents, faculty, support staff, and other categories). Agents indicated a high frequency to hearing about problems from external sources ($\overline{x}$ =3.53, std. dev. =0.84). Administrators, faculty, and other employees sometimes hear

Table 5. Frequency* which Extension Respondents hear from Sources about Constituent Problems according to Region.

	Internal			Spanners			External			Average Means
Region	n	Mean	SD	n	Mean	SD	n	Mean	SD	
East Central	44	2.84	1.07	44	1.74	0.97	44	3.18	0.98	2.59
North	36	2.73	0.94	36	1.51	0.65	36	3.40	0.94	2.55
Southeast	50	2.81	0.92	50	1.83	1.67	50	2.97	1.02	2.53
Southwest	130	2.90	0.86	130	2.06	0.87	130	3.05	0.95	2.67
Upper Peninsula	32	2.42	0.77	32	1.38	0.52	32	3.01	1.15	2.27
West Central	44	2.55	0.81	44	1.56	1.15	44	3.05	1.07	2.39
Total	336	2.77	0.90	336	1.79	1.06	336	3.09	1.00	

Table 6. Multivariate Analysis of Variance by Region

Sources	DF	Mean Squares	F	Probability
Region	5	3.34	2.33	0.04
Interaction[c]	10	1.70	2.37	0.01

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[c]Interaction by region is not significant.

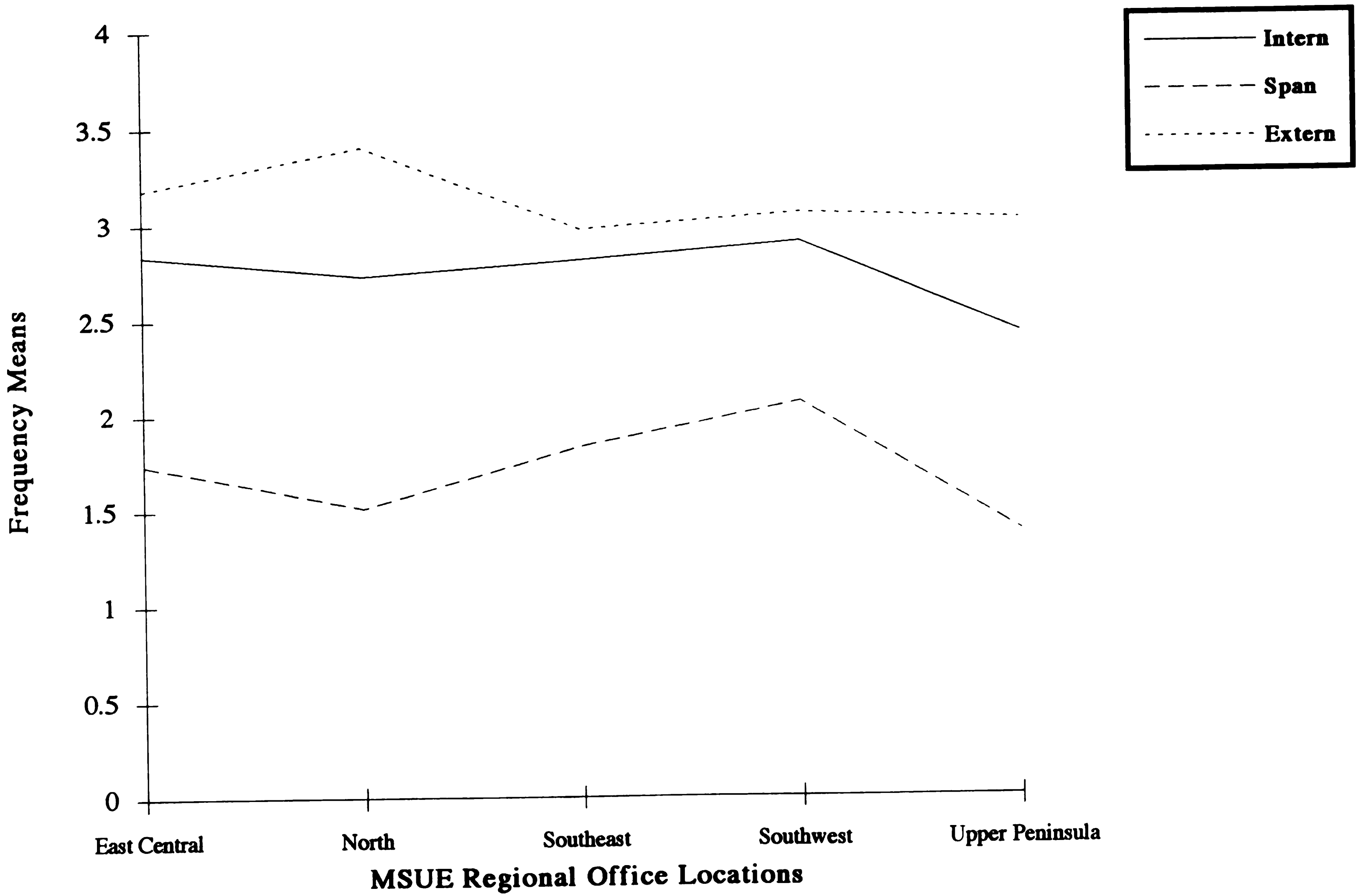

Figure 4. Hear from which Sources according to Region

from external people. Support staff indicated a low frequency for hearing from external people ($\overline{x}$ =2.39, std. dev. =0.89). It is expected that the support staff be least likely to learn of constituent problems from external sources. People in all five positions indicated the lowest frequencies concerning hearing from the spanners (overall $\overline{x}$ =1.85, std. dev =1.07).

Respondents for four positions (administrators, agents, faculty, and other), except for support staff, sometimes hear from internal individuals. On the other hand, support personnel demonstrated an average low frequency towards hearing from internal sources ($\overline{x}$ =2.33, std. dev. =0.96). Overall the support staff's responses, an average mean $\overline{x}$ =2.09 (column means at the far right side of Table 7), reveal they infrequently ("not very often") hear about problems from all sources.

(Table 7 about here)

<u>Table 8 indicates that there is no significant difference in respondent's position in primary organization</u> (at F value =16.43, probability =0.00). A high F ratio indicates that there is a great deal of between-group variability and little within-group variability occurring. The position category shows that the respondent's position is not significant. Interaction (within-subjects) shows the interaction of position by source (external, boundary spanning, and internal). <u>No significant interaction exists between respondent's position and which source of information he/she approaches to learn of constituent problems</u> (at F value =11.64, probability =0.00). <u>No reason to conclude that the sample is representative of population</u>.

(Table 8 about here)

Figure 5 shows employees' position at their primary organization plotted (on the x-axis) against the means (frequency) how often they hear from each source (on the y-axis). All respondents indicate low frequencies to hearing from boundary spanners. Support staff

Table 7. Frequency* which Respondents hear from Sources about Constituent Problems according to Position in Organization.

	Internal			Spanners			External			Average Means
Position	n	Mean	SD	n	Mean	SD	n	Mean	SD	
Administrator	48	3.01	0.81	48	2.31	1.33	48	3.04	1.02	2.79
Agent	138	2.89	0.88	138	1.58	0.64	138	3.53	0.84	2.66
Faculty	50	2.92	0.79	50	2.36	0.72	50	3.18	0.84	2.82
Support Staff	91	2.33	0.96	91	1.57	1.23	91	2.39	0.89	2.09
Other	36	2.71	0.75	36	2.31	1.40	36	2.85	1.09	2.62
Total	363	2.75	0.90	363	1.85	1.07	363	3.06	1.01	

Table 8. Multivariate Analysis of Variance by Position

Sources	DF	Mean Squares	F	Probability
Position	4	20.40	16.43	0.00
Interaction[d]	8	7.93	11.64	0.00

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[d]Interaction by position is not significant.

infrequently hear about constituent problems from all sources (downward trend by support staff indicated on the line graph).

(Figure 5 about here)

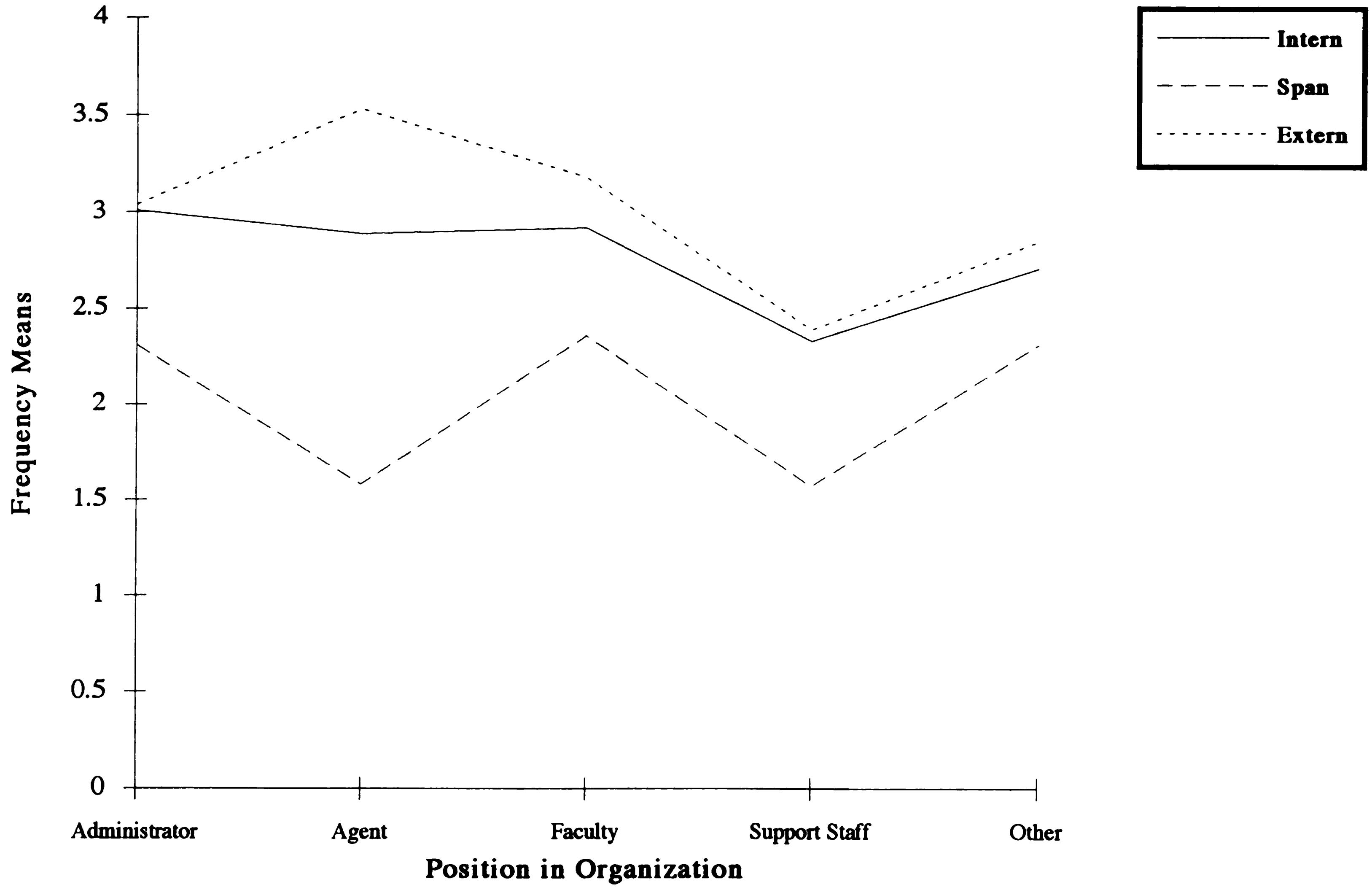

Figure 5. Hear from which Sources according to Position

Research Question 2

Are people seeking advice from employees internal to the university, or from those external to the university? Do administrators seek information from agents when attempting to assist constituents? Does the respondent's age, length of employment, location of extension office (proximity), or position in the respective organization significantly influence how often the employees seek advice from the three sources of information when working on constituent problems? To answer these questions and other similar queries, research question 2 asked, "How often do you seek advice from the following people?" In answering a similarly-worded question, respondents circled numbers on a five-point scale[12] (1 =rarely; 2 =not very often; 3 =sometimes; 4 =often, 5 =very often) for types of people from whom they might seek advice from when working on a problem. Sources of people from whom respondents can seek advice from were grouped into internal, boundary spanning, and external sources. The external source group consists of constituents, volunteers, and other professionals in the field (non-MSU employees). The internal sources includes administrators, aides, and agents. Boundary spanning sources are faculty and graduate students. Support staff and other people were excluded from this grouping.

Respondents "sometimes" seek advice from both the external sources ($\overline{x}$ =2.79, std. dev. =1.04), and internal sources ($\overline{x}$ =2.88, std. dev. =0.75). Faculty and graduate students (boundary spanners) are with less frequency sought for advice by respondents ($\overline{x}$ =2.15, std. dev. =0.92).

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[12]These scale items were recoded so that high values indicate more frequency and low values indicate less frequency.

Seek Advice When Working on a Problem According to Four Independent Variables

There are four independent variables in this study; age of respondents, years affiliated with primary organization, region, and position. The dependent variables, described as sources of information, are the internal, boundary spanning, and external sources. Multivariate analysis of variance (MANOVA) was used in analyzing group differences (among the three sources of information) that are attributable to more than one independent variable. In this study, the dependent variable is not a single measure but three different responses provided by the respondent for each source of information.

The employees' ages (20 years through 67 years) were divided into four age units; 20-30, 31-40, 41-50, and 51+. Table 9, a 4 by 3-factorial design, shows the frequency with which respondents of all age groups seek advice from sources for constituent problems. It also shows the number of respondents, means, and standard deviations based on respondents' age categories. The overall mean and standard deviation for each source appear across the row labeled "Total" on Table 9. Individuals for all age units responded they sometimes seek advice from both the internal (overall $\overline{X}$ =2.94, std. dev. =0.88) and external groups (overall $\overline{X}$ =2.85, std. dev. =1.09). The "Total" row on Table 9 indicates respondents for all age groups less frequently seek advice from faculty and graduate students (overall $\overline{X}$ =2.20, std. dev. =0.99) than the other sources. Boundary spanners are least frequently sought by respondents. Faculty and graduate students seem to be "out of the information loop" that centrally involves outreach workers and their community constituents.

(Table 9 about here)

Table 10 indicates that age (between-subjects) (at F value =0.84, probability =0.47) is significantly different at $\alpha = 0.05$. A low F ratio indicates that there is little between-group variability compared to the within-group variability occurring. The row labeled "Interaction" is the response produced when the levels of one factor interact with the levels of another factor in influencing the response variable. Interaction by age group (within-subjects) row displays the interaction of age by source (external, boundary spanning, and internal). No significant difference exists between age of respondent and the frequency he/she seeks advice from the three sources when working on constituent problems (at F value =3.57, probability =0.00).

(Table 10 about here)

Table 11, a 5 by 3-factorial design, displays the number of respondents, means and standard deviations of how often employees seek advice from three sources according to respondents' years of employment (divided into five categories; 0-2, 3-5, 6-10, 11-15 and 16+) with their primary organization. The overall mean and standard deviation for each source appears across the row labeled "Total". Employees for all years categories seek advice from the internal sources with more frequency than other sources (overall $\overline{x}$ = 3.00, std. dev. =0.88). Spanners are sought with less frequency by participants when working on a problem (overall $\overline{x}$ =2.19, std. dev. =1.03). Respondents affiliated with their organization for the years groups; 3-5, 6-10, 11-15, and 16+ sometimes seek advice from external people. Those affiliated with their primary organization for 2 years or less seek advice less frequently from the external group ($\overline{x}$ =2.28, std. dev. =1.04). Respondents in the 11-15 category seek advice with higher frequency from both internal ($\overline{x}$ =3.22, std. dev. =1.02) and external ($\overline{x}$ =3.36, std. dev. =1.10) people than the other years. This same group (11-15) responded with high frequencies that they seek advice from all sources (average mean $\overline{x}$ =2.99).

(Table 11 about here)

Table 9. Frequency* which Respondents seek advice from which Sources according to Employees' Age Group.

	Internal			Spanners			External			Average Means
Age	n	Mean	SD	n	Mean	SD	n	Mean	SD	
20-30	40	2.64	0.71	40	2.33	1.07	40	2.57	1.21	2.51
31-40	100	2.98	1.00	100	2.10	1.05	100	2.86	1.19	2.64
41-50	109	3.02	0.80	109	2.12	0.92	109	3.03	1.05	2.72
51+	70	2.94	0.89	70	2.40	0.98	70	2.71	0.88	2.68
Total	319	2.94	0.88	319	2.20	0.99	319	2.85	1.09	

Table 10. Multivariate Analysis of Variance by Age

Sources	DF	Mean Squares	F	Probability
Age	3	1.40	0.84	0.47
Interaction[e]	6	2.25	3.57	0.00

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[e]Interaction by age is not significant.

Table 12 indicates that there is no significant difference by length of employment (at F value =7.25, probability =0.00). Interaction (within-subjects) shows the interaction of respondent's length of employment and the frequency he/she seeks advice from the three groups (external, spanner, and internal). No significant difference exists between respondent's years with organization and the frequency he/she seeks advice from the three sources when working on constituent problems (at F value =2.75, probability =0.00). There is not sufficient evidence to indicate that the sample is representative of the population.

(Table 12 about here)

Figure 6 shows the length of employment plotted (on the x-axis) against means of frequencies of sources (on the y-axis) sought for advice. Respondents across all periods of employment access boundary spanners infrequently for advice when working on constituent problems.

(Figure 6 about here)

Table 13, a 6 by 3-factorial design, shows the number of extension respondents, means, and standard deviations for frequencies (how often) of seeking advice from three sources when working on constituent issues according to six MSUE regions (East Central, North, Southeast, Southwest, Upper Peninsula, and West Central). The overall mean and standard deviation for each source appears across the row labeled "Total". "Average means" (at the far-right side of table) correspond to respondent's years of employment and average frequency for all sources sought. Employees sometimes seek advice from external (overall $\overline{x}$ =2.87, std. dev. =1.06) and internal sources (overall $\overline{x}$ =2.99, std. dev.= 0.86). Extension people with offices in the East Central, North, Southeast, Upper Peninsula, and West Central regions seek advice less frequently from boundary spanners than MSUE

Table 11. Frequency* which Respondents seek advice from which Sources according to Length of Employment in Primary Organization.

	Internal			Spanners			External			Average Means
Length of Employment	n	Mean	SD	n	Mean	SD	n	Mean	SD	
0 - 2	54	2.77	0.87	54	2.10	1.05	54	2.28	1.04	2.39
3 - 5	60	2.83	0.89	60	2.22	1.15	60	2.97	1.09	2.67
6 - 10	72	2.84	0.82	72	1.99	0.93	72	2.52	0.92	2.45
11 - 15	55	3.22	1.02	55	2.38	1.14	55	3.36	1.10	2.99
16 +	93	3.17	0.80	93	2.26	0.94	93	3.01	1.01	2.81
Total	334	3.00	0.88	334	2.19	1.03	334	2.84	1.08	

Table 12. Multivariate Analysis of Variance by Length of Employment

Sources	DF	Mean Squares	F	Probability
Length of Employment	4	11.41	7.25	0.00
Interaction[f]	8	1.78	2.75	0.00

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[f]Interaction by length of employment is not significant.

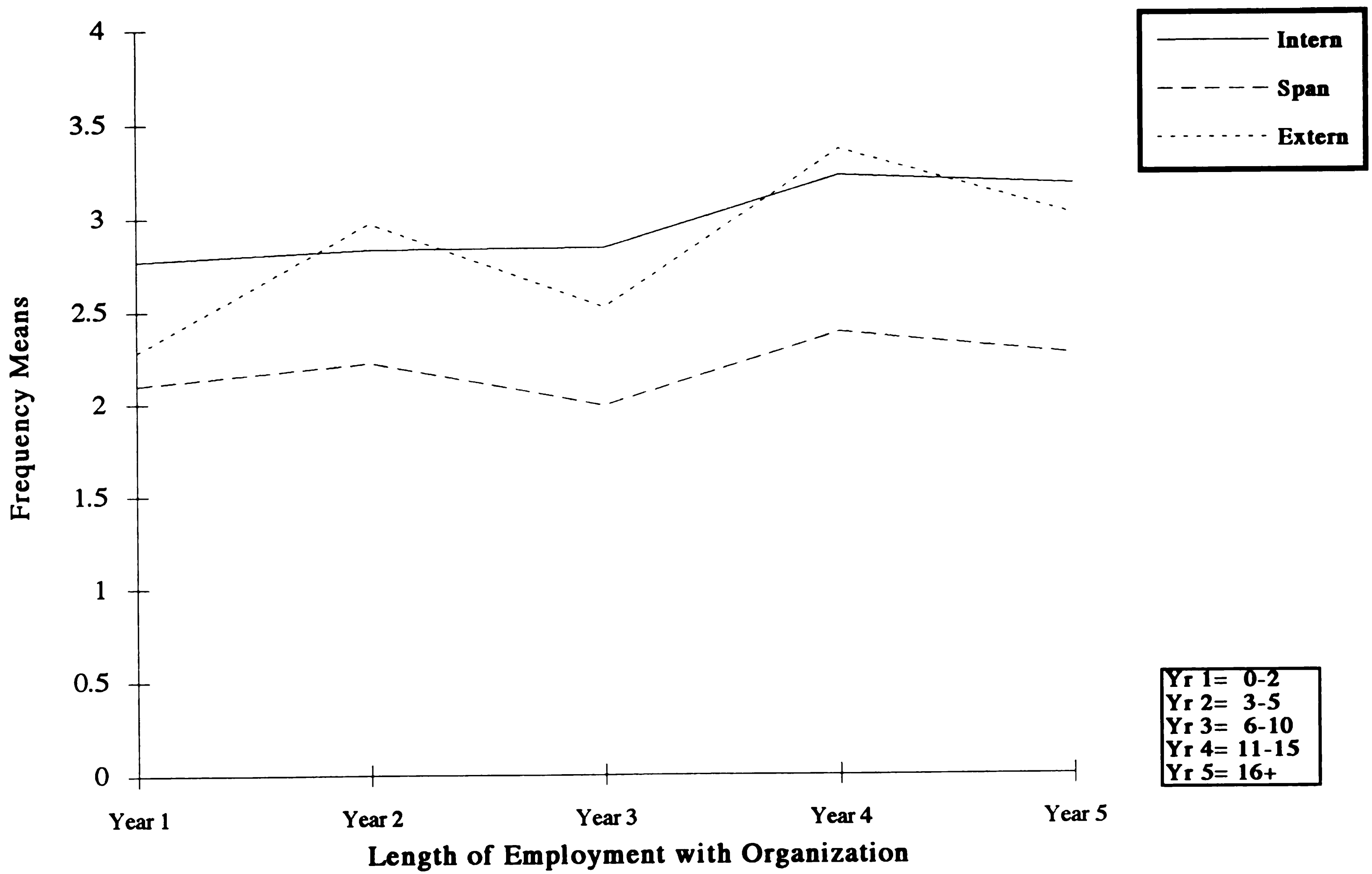

Figure 6. Seek Advice from which Sources according to Length of Employment

employees in the Southwest ($\overline{x}$ =2.53, std. dev. =0.97). A higher frequency in seeking advice from spanners is not an unusual response from employees in the Southwest region, especially since boundary spanners are centrally located near the university which is located in the Southwest region.

(Table 13 about here)

Table 14 indicates a significant difference by extension employees' regional offices at α =0.05 (at F value =1.07, probability =0.38). Interaction (within-subjects) indicates work proximity by sources which are sought for advice (external, boundary spanning, and internal). No significant difference exists between regional office location and the frequency he/she seeks advice from the sources when working on constituent problems (at F value =4.28, probability =0.00).

(Table 14 about here)

Table 15, a 5 by 3-factorial design, shows the number of respondents, means, and standard deviations of how often employees seek advice from the three sources according to respondents' positions (administrators, agents, faculty, support staff, and other categories). Employees from all positions responded that they sometimes sought advice from agents, administrators and aides (overall $\overline{x}$ =2.96, std. dev. =0.88). Faculty ($\overline{x}$ =3.14, std. dev. =0.77) and "other"(includes graduate students and aides) ($\overline{x}$ =2.70, std. dev. =0.94) participants indicated higher frequencies in seeking advice from the spanners. Administrators, agents and support staff less frequently seek advice from spanners. Administrators, agents, faculty, and other employees sometimes seek advice from external sources. Support staff less frequently seek advice from volunteers, constituents, and other

Table 13. Frequency* which Extension Respondents seek advice from which Sources according to Region.

	Internal			Spanners			External			Average Means
Region	**n**	**Mean**	**SD**	**n**	**Mean**	**SD**	**n**	**Mean**	**SD**	
East Central	41	2.99	0.93	41	2.13	0.89	41	2.95	1.10	2.69
North	38	2.93	0.64	38	1.93	0.71	38	2.83	1.08	2.56
Southeast	53	3.15	0.85	53	1.82	1.06	53	2.81	0.99	2.59
Southwest	116	2.99	0.77	116	2.53	0.97	116	2.85	0.98	2.79
Upper Peninsula	30	3.10	0.89	30	1.77	0.65	30	3.07	1.00	2.64
West Central	45	2.82	1.14	45	2.03	1.29	45	2.82	1.36	2.55
Total	323	2.99	0.86	323	2.15	1.01	323	2.87	1.06	

Table 14. Multivariate Analysis of Variance by Region

Sources	DF	Mean Squares	F	Probability
Region	5	1.79	1.07	0.38
Interaction[g]	10	2.51	4.28	0.00

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[g]Interaction by region is not significant.

professionals when working on constituent problems ($\overline{x}$ =1.97, std. dev. =1.06). Overall support personnel demonstrate a very low average means frequencies ($\overline{x}$ =2.16).

(Table 15 about here)

Table 16 indicates there is no significant difference according to respondent's position in their primary organization (at F value =19.96, probability =0.00). In this table, position (between-subjects) category shows that the respondent's position has no significant difference. Interaction by age group (within-subjects) shows the interaction of employees' position in organization by which sources (external, spanner, and internal) sought for advice. No significant difference exists between respondent's position and the frequency of which he/she seeks advice from when working on problems (at F value =18.30, probability =0.00).

(Table 16 about here)

Figure 7 shows five positions in the organization plotted (on the x-axis) against the means of each source sought (frequencies) on the y-axis. Respondent's position in organization (administrator, agent, faculty, support staff, and other) is plotted against the means for each source. Agents and support staff least frequently seek advice from boundary spanners, while faculty seek spanners most frequently. Support staff indicated low frequencies to seeking advice from boundary spanners and external people when working on problems.

(Figure 7 about here)

Table 15. Frequency* which Respondents seek advice from which Sources according to Position in Organization.

	Internal			Spanners			External			Average Means
Position	n	Mean	SD	n	Mean	SD	n	Mean	SD	
Administrator	37	3.28	0.82	37	2.35	1.06	37	2.98	0.81	2.87
Agent	136	3.03	0.82	136	2.08	0.72	136	3.31	0.85	2.81
Faculty	46	2.99	0.84	46	3.14	0.77	46	3.09	0.86	3.07
Support Staff	97	2.81	1.01	97	1.70	1.16	97	1.97	1.06	2.16
Other	33	2.74	0.71	33	2.70	0.94	33	2.91	1.12	2.78
Total	349	2.96	0.88	349	2.20	1.03	349	2.84	1.08	

Table 16. Multivariate Analysis of Variance by Position

Sources	DF	Mean Squares	F	Probability
Position	4	27.80	19.96	0.00
Interaction[h]	8	9.98	18.30	0.00

*Responses based on a five-point scale (5= very often, 4= often, 3= sometimes, 2= not very often, and 1= rarely).
[h]Interaction by position is not significant.

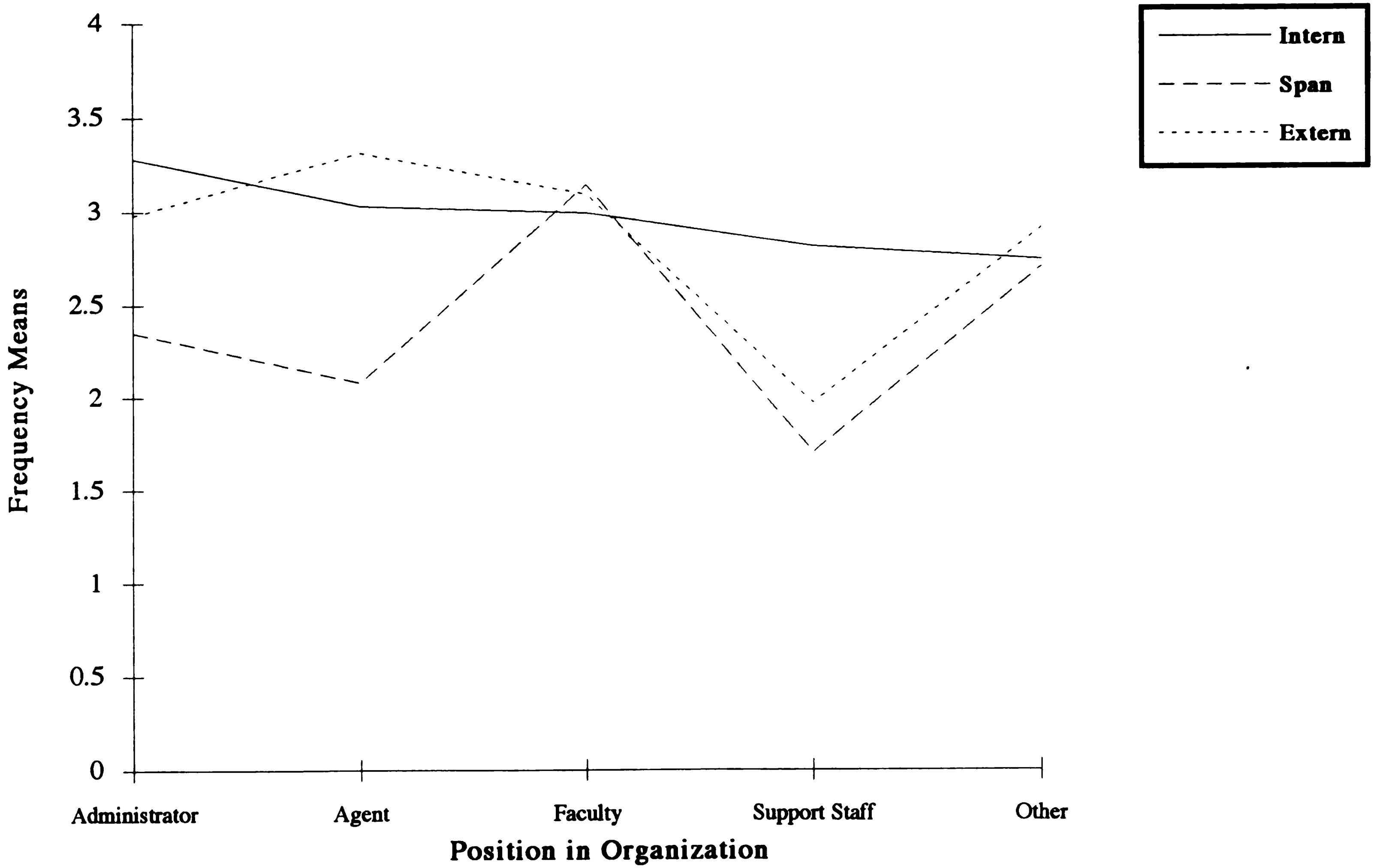

Figure 7. Seek Advice from which Sources according to Position

Research Question 3

Will an employee's age change his or her perceptions of the importance for collaborative efforts in outreach? To satisfactorily respond these and other similar questions, research question 3 asked: "Does the perception of collaboration vary by respondents according to demographic characteristics such as age, region, position, and years affiliated with primary organization?" These selected questions were answered by making a circle (on the numbered selection) on a five-point scale[13] (1 =strongly disagree; 2 =disagree; 3 =neutral; 4 =agree, 5 =strongly agree).

The five survey questions (questions 37, 38, 41, 42, and 45) shown on page 77 were computed as one dependent variable, "collaboration", which is a vital component of the new co-learning model. The survey questions were developed to measure attitudes towards collaboration and each question measures an aspect of collaboration. These five questions are concerned with solutions or benefits for respondents and constituents. Questions 37, 38, 41, 42, and 45 were tested using confirmatory factor analysis, but was unsuccessful in statistically realizing a significant factor, but resulted in an alpha of 0.52. Exploratory analysis testing did not group these five questions together. Four of the five questions (37, 38, 41 and 45) were placed together along with question 49 to measure collaborative orientation (See Chapter III, Data Analysis section). The questions clustered together in exploratory factor analysis are seeking to find to what degree collaboration benefits respondents and their work. The factor analysis contained four of the five questions which were set prior to writing survey. The five questions measuring collaboration were formulated from the inception of this study.

[13]These scale items were recoded so that high values indicate more frequency and low values indicate less frequency.

Survey questions measuring Collaboration

37. Working with constituents leads to better solutions.
38. I could work more effectively if I did not have to work with constituents.
41. I benefit greatly from working with my constituents.
42. My constituents benefit greatly from interaction within my organization.
45. There are many drawbacks to working with constituents.

A reliability analysis test was run on the above questions measuring collaboration which resulted in an alpha of 0.86, N=444. Another reliability analysis test was run on the five questions (37, 38, 41, 45 and 49 previously clustered together in exploratory analysis testing) with a result of 0.77, N=440. An alpha of 0.86 indicates a very high reliability of the questions measuring the construct "collaboration". The five original questions developed into one independent variable measuring collaboration is a very reliable indicator of respondent's collaborative efforts. Questions 37, 38, 41, 42 and 45, the collaboration variable, is consistent in measuring respondents' attitudes towards collaboration which is integral to the new model of outreach.

The degree of importance of collaboration by respondents' gender with the three sources did not vary. Collaboration is perceived to be important by both female ($\overline{x}$ =4.14, std. dev. =0.81) and male ($\overline{x}$ =4.29, std. dev. =0.66) respondents.

An analysis of variance (ANOVA) was used in analyzing the significance of difference among the independent means. An ANOVA, F test, is a technique for assessing significance of differences among two or more population means based on data derived from independent or related samples.

Table 17 shows the degree of importance of collaboration by employees' ages. The range of participants' ages (20 years through 67 years) were divided into four age units; 20-30, 31-40, 41-50, and 51+.

(Table 17 about here)

<u>Age is significant in demonstrating a collaborative style in the organization</u>. <u>Table 18 between groups category shows that there is a significant relationship</u> (level of significance is α =0.05) <u>between age and degree of importance to collaboration</u> (at F value= 1.60, probability =0.19). <u>Older employees indicated a more collaborative approach to outreach</u>.

(Table 18 about here)

Table 19 shows the degree of importance of collaboration according to outreach organization members by years with primary organization. Overall respondents in the five groups agree with a collaboration orientation to outreach (overall $\overline{x}$ =4.12, std. dev. =0.52).

(Table 19 about here)

<u>Table 20 indicates that the length of employment is significantly different</u>. The length of employment with primary organization is significant in relating a collaborative style in the organization. Those employed for longer periods tend to feel collaboration is more important (at F value= 2.92, probability =0.02).

(Table 20 about here)

Table 17. Degree of Importance of Collaboration* by Age

Age of respondents	Number of respondents	Mean	Std. Dev.
20-30	43	3.99	0.55
31-40	116	4.10	0.55
41-50	141	4.13	0.51
51+	95	4.20	0.52
TOTAL†	395	4.12	0.53

Table 18. Analysis of Variance by Age

Source	DF	Mean Square	F-value	Probability
Between Groups	3	0.45	1.60	0.19

*Responses based on a five-point scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, and 1= strongly disagree).

†This total row indicates the within groups total for the variable collaboration according to the age of respondents.

Table 19. Degree of Importance of Collaboration[*] by Length of Employment with Primary Organization

Length of Employment	Number of Respondents	Mean	Std. Dev.
0-2	60	4.03	0.56
3-5	78	4.03	0.54
6-10	94	4.07	0.53
11-15	72	4.20	0.54
16+	108	4.23	0.48
TOTAL[†]	412	4.12	0.52

Table 20. Analysis of Variance by Length of Employment

Source	DF	Mean Square	F-value	Probability
Between Groups	4	0.80	2.92	0.02

[*]Responses based on a five-point scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, and 1= strongly disagree).

[†]This total row indicates the within groups total for the variable collaboration according to the length of employment.

Table 21 shows the degree of importance of collaboration by where MSUE employees' offices are located (East Central, North, Southeast, Southwest, Upper Peninsula, and West Central) .

(Table 21 about here)

Table 22 indicates the means are significantly different for the sample of participants. The regional location has a significant difference on degree of collaboration approach (at F value= 1.12, probability =0.35). Proximity is significant to employees' approach to collaboration.

(Table 22 about here)

Table 23 shows the degree of collaboration according to organizational members' position in the organization. Administrators and agents indicated a higher frequency towards a collaborative approach in outreach. Support staff indicate lower frequency towards a collaborative orientation.

(Table 23 about here)

Respondent's position in the organization is not significant in determining if the respondent follows a collaborative style of outreach. Table 24 shows employees' position does not provide significantly different means for collaboration approach (at F value= 18.53, probability =0.00). The sample responses are not indicative of the total population.

(Table 24 about here)

Table 21. Degree of Importance of Collaboration* by Region

Region	Number of respondents	Mean	Std. Dev.
East Central	50	4.33	0.41
North	51	4.15	0.70
Southeast	65	4.11	0.73
Southwest	148	4.22	0.76
Upper Peninsula	42	4.03	0.67
West Central	53	4.27	0.90
Total†	409	4.20	0.73

Table 22. Analysis of Variance by Region

Source	DF	Mean Square	F-value	Probability
Between Groups	5	0.59	1.12	0.35

*Responses based on a five-point scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, and 1= strongly disagree).

†This total row indicates the within groups total for the variable collaboration according to the region where office is located.

Table 23. Degree of Importance of Collaboration* by Position in the Organization

Position in organization	Number of respondents	Mean	Std. Dev.
Administrator	50	4.28	0.46
Agent	159	4.28	0.48
Faculty	63	4.24	0.49
Support Staff	118	3.81	0.51
Other◊	43	4.02	0.55
TOTAL†	433	4.12	0.49

Table 24. Analysis of Variance by Position

Source	DF	Mean Square	F-value	Probability
Between Groups	4	4.50	18.53	0.00

*Responses based on a five-point scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, and 1= strongly disagree).

◊Graduate students and aides were collapsed into the"other" category because of their small numbers.

†This total row indicates the within groups total for the variable collaboration according to position.

CHAPTER V

CONCLUSIONS

Limitations to the Study

The researcher recognizes the following limits to the study:

1. Because the study was restricted to two outreach organizations at one university, the results of the study should not be generalized to other land-grant institutions or universities without further study.

2. Because of the limited number of individuals involved in the study (n=466), it is possible for the average perceptions of any group to change rapidly as the individuals assigned to the group change.

3. The organizations researched were not similar in the number of employees. Samples were MSUE (n=433) and ICYF (n=32), so comparison between organizations is problematic.

4. The primary weakness of survey collection techniques is that the data are not very rich. As such, conclusions may be drawn about groups as a whole, but not about particular members of either organization. One way to compensate this weakness is to utilize other collection techniques.

5. The organizational change of a "collaboration approach" expected to be adopted by MSUE and ICYF employees should be observed in a second study. A later study can be used to make comparisons.

Summary

To what degree do employees hear about constituent problems from internal, boundary spanning, and external sources? Respondents "sometimes" hear about constituent problems from external sources ($\overline{x}$ =3.02, std. dev. =1.01), and less often hear from people inside the organization ($\overline{x}$ =2.68, std. dev. =0.82). Faculty and graduate students (boundary spanners) were less frequently used as source of information concerning constituent problems ($\overline{x}$ =1.76, std. dev. =0.82).

Does the respondent's age significantly influence from whom the employee hears about clients' problems? There is reason to believe that age does significantly influence from which sources employees hear about constituent problems. Table 2 (see Chapter IV) indicates that there is a significant difference by age (at F value =1.30, probability =0.28). A significant difference exists (at α =.05) between age of respondent and from which source he/she learns of constituent problems (at F value =1.97, probability =0.07).

Does length of employment with primary organization influence whether employees hear about constituent problems from internal, boundary spanning, and external sources? Table 4 (see Chapter IV) shows there is no significant difference in the length of employment in primary organization (at F value =4.13, probability =0.00). No significant interaction effect exists (at F value =2.72, probability =0.00). Although the sample means observed were different, there is not sufficient evidence to conclude that a statistically significant difference exists in the population mean at the 0.05 level of significance.

Years with the organization was another variable of key interest. Employees in the category 11-15 years heard about problems and sought advice with high frequencies from both internal and external sources. Although boundary spanners were sought with less frequency, this age group indicated seeking from spanners more often than other ages. The orientation toward collaboration for the 11-15 group was also high. Employees who have been working two years or less with the organizations do not very often seek advice from external sources. Newer entrants to these organizations are less inclined to seek advice from constituents, volunteers, or other professionals in the field. Perhaps more tenure with the organization results in meeting more people, which then facilitates information seeking and learning about problems.

Does respondent's region influence whether employees hear about constituent problems from internal, boundary spanning, and external sources? Table 6 (see Chapter IV) MANOVA test indicates there is no significant difference by (proximity) regional extension office (at F value =2.33, probability =0.04). The region category shows that the respondent's office location is not significantly different. No significant interaction exists between respondent's regional office location and which source he/she approaches to learn of constituent problems (at F value =2.37, probability =0.01).

The Provost's Committee on University Outreach (1993) suggests that its outreach programs consider graduate students as valuable resources. Yet according to participants' responses, boundary spanners do not play a major role as information sources. The only exception was with those employees located in the Southwest who seek advice with a high frequency from spanning sources. A high frequency to learning about clients' problems from boundary spanners is expected from those employees located in the Southwest region, because of the heavy concentration of faculty and students in that area.

Allen (1977) found that the probability of communication decreases as distance increases. Keller & Holland (1983) found that nearness to sources affect which sources are sought in an organization. Similar to these findings, employees in the Upper Peninsula, remotely distanced from the university sought advice more often from external sources, rather than university sources. Propinquity to constituents, agents, and other professionals is an important factor to those employees located in the Upper Peninsula.

Does respondent's organizational position influence whether employees hear about constituent problems from internal, boundary spanning, and external sources? Table 8 (see Chapter IV) shows that there is no significant difference in respondent's position in primary organization (at F value =16.43, probability =0.00). The position category shows that the respondent's position is not significant. No significant interaction exists between respondent's position and which source of information he/she approaches to learn of constituent problems (at F value =11.64, probability =0.00). There is o reason to conclude that the sample is representative of population.

To what degree do employees seek advice from internal, boundary spanning, and external sources when working on a problem? Respondents "sometimes" seek advice from both the external sources ($\overline{x}$ =2.79, std. dev. =1.04), and internal sources ($\overline{x}$ =2.88, std. dev. =0.75). Respondents less frequently sought advice from faculty and graduate students (boundary spanners) ($\overline{x}$ =2.15, std. dev. =0.92).

Does age influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem? Table 10 (see Chapter IV) indicates that age (at F value =0.84, probability =0.47) is significantly different at α = 0.05. No significant difference exists between age of respondent and the frequency he/she seeks advice from the three sources when working on constituent problems (at F value =3.57, probability =0.00).

Does length of employment influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem? Table 12 (see Chapter IV) indicates that there is no significant difference by length of employment (at F value =7.25, probability =0.00). No significant difference exists between respondent's years with organization and the frequency he/she seeks advice from the three sources when working on constituent problems (at F value =2.75, probability =0.00). There is not sufficient evidence to indicate that the sample is representative of the population.

Does region (proximity) influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem? Table 14 (see Chapter IV) indicates a significant difference by extension employees' regional offices at α =0.05 (at F value =1.07, probability =0.38). No significant difference exists between regional office location and the frequency he/she seeks advice from the sources when working on constituent problems (at F value =4.28, probability =0.00).

Does organizational position influence whether employees seek advice from internal, boundary spanning, and external sources when working on a problem? Table 16 (see Chapter IV) show there is no significant difference according to respondent's position in their primary organization (at F value =19.96, probability =0.00). No significant difference exists between respondent's position and the frequency of which he/she seeks advice from when working on problems (at F value =18.30, probability =0.00).

Does a collaborative orientation vary by employee's age? Will an employee's age change his or her perceptions of the importance for collaborative efforts in outreach? Age is significant in demonstrating a collaborative style in the organization. Table 18 (see Chapter IV) between groups category shows that there is a significant relationship (level of significance is α =0.05) between age and degree of importance to collaboration (at F value= 1.60, probability =0.19). Older employees responded to using a more collaborative approach to outreach.

Does a collaborative orientation vary by length of employment? Table 20 (see Chapter IV) indicates that the length of employment is significantly different. The length of employment with primary organization is significant in relating a collaborative style in the organization. Those employed for longer periods tend to feel collaboration is more important (at F value= 2.92, probability =0.02).

Does a collaborative orientation vary by region? Table 22 (see Chapter IV) indicates the means are significantly different for the sample of participants. The regional location has a significant difference on degree of collaboration approach (at F value= 1.12, probability =0.35). Proximity is significant to employees' approach to collaboration.

Does a collaborative orientation vary by position? Respondent's position in the organization is not significant in determining if the respondent follows a collaborative style of outreach. Table 24 (see Chapter IV) shows position does not have significantly different means for collaboration approach (at F value= 18.53, probability =0.00). The sample responses are not indicative of the total population.

Implications

Universities and communities have been forced to interact. United States society confronts a host of major challenges that require higher education's active and creative involvement. Traditionally, outreach has meant the one-way dissemination of university-based knowledge to solve community-based problems. The leaders studied here envision a two-way flow of information and collaboration between the Institute for Children, Youth, and Families' and Michigan State University Extension's employees, and on the other hand, their constituents, or community-based clientele.

Resistance to a change initiative will be less if participants see the change as reducing rather than increasing their present burdens. Zaltman, Duncan, and Holbek's (1973) view might be the case with the new vision of outreach, which asks employees to seek out more, and more diverse, people and opinions. There will be less resistance if outreach is perceived to be compatible with values and ideals that have long been acknowledged by employees. The transformation of MSUE and ICYF came during a period of budgetary and employee cutbacks. Change is more difficult to bring about when people are concerned about their survival in an organization. Resistance will be less if participants have joined in diagnostic efforts leading them to agree on the basic problem. Less opposition will arise if the project is adopted by consensus group decisions. (Zaltman, Duncan, & Holbek, 1973, p. 102).

The process of change, according to Pascarella (1986, p. 72), "depends on a leader's ability to create a vision, the enthusiasm with which he/she communicates it, and the commitment that vision can uncover within the followers." The changing or establishing of a culture therefore, requires a person with a vision, and the capacity to get others to subscribe to it (Louis, 1985). Leaders are therefore those who pull followers toward a desired change with a vision rather than pushing subordinates with power of coercion (Bennis & Nanus, 1985). Cultural change therefore cannot be seen as a quick fix task for a leader. It takes time to have a value-based vision be accepted by members as important enough to cause movement away from past behaviors and beliefs. This is especially true in complex organizations like Michigan State University Extension.

Collaboration breeds teamwork as solutions are sought that integrate people's needs. The Provost's Committee on University Outreach proposes that MSU units should develop and use processes for involving external constituencies in identifying outreach issues, problems, and opportunities that pertain to unit mission (The Provost's Committee on University Outreach, 1993). The Committee suggested that even though it is important to engage external constituencies in the identification of problems and issues for outreach, the University and its faculty and staff have a right and a responsibility to play the role of critics, as well as collaborators with the surrounding society (The Provost's Committee on University Outreach, 1993).

The isolation of faculty and their graduate students from the university's extension and institutionalized outreach functions is the major obstacle identified by the present thesis to the realization of MSU becoming an "outreach university."

APPENDICES

APPENDIX A

CORRESPONDENCE

APPENDIX A

CORRESPONDENCE

566 Communication Arts Building
Department of Communication
College of Communication Arts and Sciences
Michigan State University
East Lansing, MI 48824-1212
April 21, 1993

Dear Participant:

My research team in the Department of Communication is studying communication patterns and cultural change within Michigan State University Extension and the Institute for Children, Youth, and Families. Both Gail Imig, Director of MSUE, and Richard Lerner, Director of ICYF, have helped our team in conceptualizing this study.

Your participation is completely voluntary, but your responses are very valuable to us in understanding your organization.

It should take approximately 25-30 minutes to complete this questionnaire. If you are affiliated with **both** MSUE and ICYF, answer questions by thinking only of the organization with which you are most affiliated.

By completing and returning this questionnaire, you indicate your voluntary agreement to participate. **Please do not write your name on the questionnaire. Your responses will be anonymous.**

Please feel free to contact me if you have any questions about our study or interested in the results of our study. We will be glad to share the results at the end of our research in 1994.

Cordially,

James W. Dearing
Assistant Professor

APPENDIX B

ORGANIZATIONAL CULTURE QUESTIONNAIRE

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DEPARTMENT OF COMMUNICATION
COLLEGE OF COMMUNICATION ARTS & SCIENCES
MICHIGAN STATE UNIVERSITY
EAST LANSING, MI 48824-1212

Definitions:

Constituents are people who are served by MSU Extension or by the Institute for Children, Youth, and Families.

Problem, an example might be having difficult time meeting with affiliates or acquiring the most recent information.

Support Staff Personnel is comprised of clerical technicians, secretaries, and administrative assistants.

PART ONE: This part of the questionnaire focuses on both demographic information and your position within MSU. Please place a check mark or fill in the blank spaces below. **Note questions 1-3 are optional.**

1) Gender:

______ Female

______ Male

2) Age (in years): ______

3) Ethnicity:

______ African American

______ Hispanic American

______ Native American

______ Asian or Pacific Islander

______ Caucasian

______ Other

4) Which organization are you affiliated with?

______ Michigan State University Extension

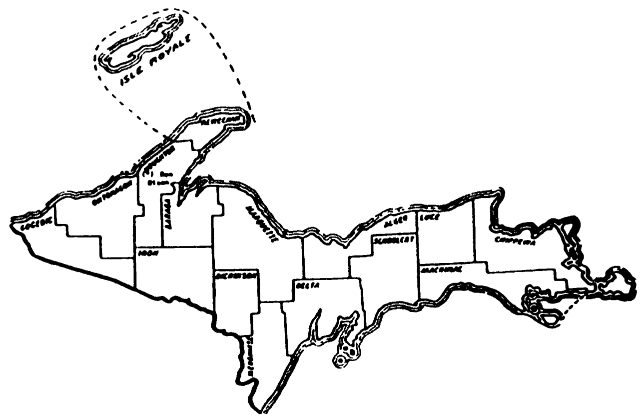
______ Institute for Children, Youth, and Families

______ Both (MSUE and ICYF)

a) If both, which do you consider your **primary affiliation**?

______MSUE

______ICYF



5) Place a check next to the region where your office is located

______ East Central

______ North

______ Southeast

______ Southwest

______ Upper Peninsula

______ West Central

6) How long have you been affiliated with this primary organization? Years_____ Months______

7) What is your position at MSUE or ICYF (Please check the one descriptor which best approximates your responsibilities.)

______ Administrator

______ Agent

______ Aide

______ Faculty

______ Support Staff (ex. secretary, clerical staff)

______ Graduate Student

______ Other____

8) What is your title? ________________________________

9) How long have you been in this position?

Years________ Months________

10) During an average month, approximately how much of your time do you spend doing each of the following:

1.	Administration	______%
2.	Support services	______%
3.	Research	______%
4.	Teaching	______%
5.	Outreach	______%
6.	Other	______% (Specify ____________)
	Total =	100%

11) Think of your average day. Approximately what percent of the day do you spend working with the following people:

1.	Administrators	_______%
2.	Extension workers	_______%
3.	Faculty	_______%
4.	Researchers	_______%
5.	Support service	_______%
6.	Other	_______% (Specify_______________)
	Total =	100%

PART TWO: Questions 11-30 are concerned with the sources that may be important to you for becoming aware of constituent problems. Please **circle the number representing** the frequency of the following
questions:

		Very Often	Often	Sometimes	Not Very Often	Rarely
		1	2	3	4	5

How often do you hear about constituent problems from the following people?

12)	Administrators	1	2	3	4	5
13)	Aides	1	2	3	4	5
14)	Agents	1	2	3	4	5
15)	Constituents	1	2	3	4	5
16)	Faculty	1	2	3	4	5
17)	Graduate Students	1	2	3	4	5
18)	Support Staff	1	2	3	4	5
19)	Volunteers	1	2	3	4	5
20)	Other Professionals in the Field (non-MSU)	1	2	3	4	5
21)	Other_____________	1	2	3	4	5

When working on a problem, how often do you seek advice from the following people?

22)	Administrators	1	2	3	4	5
23)	Aides	1	2	3	4	5
24)	Agents	1	2	3	4	5
25)	Constituents	1	2	3	4	5
26)	Faculty	1	2	3	4	5
27)	Graduate Students	1	2	3	4	5
28)	Support Staff	1	2	3	4	5
29)	Volunteers	1	2	3	4	5
30)	Other Professionals in the Field (non-MSU)	1	2	3	4	5
31)	Other_____________	1	2	3	4	5

	Very Often 1	Often 2	Sometimes 3	Not Very Often 4	Rarely 5
32) On average, how often do you initiate conversations with constituents in a given month?	1	2	3	4	5
33) On average, how often do constituents initiate conversations with you in a given month?	1	2	3	4	5

PART THREE: For each of the following questions, please circle the number which most closely represents the degree to which you agree or disagree with each statement.

	Strongly agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
34) I interact more with my constituents at the beginning of a project than at any other time.	1	2	3	4	5

35) Over the past two years, has the frequency with which you have interacted with constituents increased?

Yes _______ No ________ If yes, please explain how.

____

____

____

____

____

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	1	2	3	4	5
36) The constituent(s) is/are generally pleased with the amount of input s/he has.	1	2	3	4	5
37) There are many drawbacks to working with constituents.	1	2	3	4	5
38) Working with constituents leads to better solutions.	1	2	3	4	5
39) I could work more effectively if I did not have to work with constituents.	1	2	3	4	5
40) My co-workers think I should be working with constituents when doing outreach.	1	2	3	4	5
41) My supervisor thinks I should be working with constituents when doing outreach.	1	2	3	4	5
42) I benefit greatly from working with my constituents.	1	2	3	4	5
43) My constituents benefit greatly from interaction within my organization.	1	2	3	4	5

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	1	2	3	4	5
44) My constituents benefit more than myself from working together on projects.	1	2	3	4	5
45) Research is important in identifying the problem(s) of your constituents.	1	2	3	4	5

46) List the benefits you receive from and the advantages of working on projects with your constituents.

____

____

____

____

____

47) List the benefits your constituents receive from and the advantages of working on projects with you.

____

____

____

____

____

48) What are some of the problems you encounter when dealing with constituents?

____

____

____

____

____

	Very Often 1	Often 2	Sometimes 3	Not Very Often 4	Rarely 5
49) It is common for constituents to provide me with information that I could not otherwise get.	1	2	3	4	5
50) How common is it for constituents to come to you with a problem that you do not know the answer to immediately?	1	2	3	4	5

51) What is the general procedure you follow when constituents come to you with a problem that you know how to solve?

____

____

____

____

____

52) What is the general procedure you follow when constituents come to you with a problem that you <u>do not</u> know how to solve?

Thank you for completing this questionnaire.

APPENDIX C

OUTREACH BIBLIOGRAPHY

APPENDIX C

OUTREACH BIBLIOGRAPHY

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