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ABSTRACT

These proceedings contain the texts of the following four papers presented at a conference on research needs for extension education: "4-H Makes a Difference--Or Does It?" by Gerald Parsons; "Research Needs in the Administration and Supervision of Cooperative Extension," by Patrick Boyle; "Research Needs in Extension Personnel Development," by Patrick J. Borich; and "Evaluation Research Needs for Extension Education," by Howard Ladewig. A list of symposium participants concludes the volume. (MN)

PROCEEDINGS FOR THE SYMPOSIUM ON RESEARCH NEEDS FOR EXTENSION EDUCATION

OHIO STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE
AND
AGRICULTURAL EDUCATION

DR. KEITH L. SMITH, COORDINATOR
FAWCETT CENTER FOR TOMORROW

MAY 25 AND 26, 1983

OSU

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TO: Extension Educators

The four papers which are found in this publication are the result of some rigorous efforts by four respected Extension educators to identify Extension research needs in the following four areas: 1) 4-H and youth development, 2) administration and supervision, 3) staff development, and 4) evaluation. These papers were presented on May 25 & 26, 1983 at the Fawcett Center for Tomorrow on the campus of The Ohio State University.

Extension educators and agricultural education faculty from across the country, as well as Ohio State, joined in this symposium with these presenters in lively dialogue and discussion. The Ohio State Cooperative Extension Service has already formed a committee to examine the research needs as identified by the presenters and also, the other ideas expressed through dialogue and reaction panel members to formulate the research needs for the Ohio Cooperative Extension in the future. We invite other Cooperative Extension Services throughout the country to involve themselves in similar scholarly efforts.

Sincerely,

The Symposium Planning Committee

Keith L. Smith, Chairman
Leader, Personnel Development, OCES
and Assistant Professor, Ag. Ed.

Larry Miller
Professor, Ag. Ed.

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KLS/jt

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4-H MAKES A DIFFERENCE -

OR DOES IT?

Gerald Parsons

State 4-H Leader

Iowa State University

4-H Makes A Difference—Or Does It?

4-H makes a difference! Ask 4-H'ers seeking membership on a county or state 4-H council and they'll quickly tell you how 4-H has changed their lives. Ask the president of one of our leading agricultural advertising agencies and he'll proudly share the benefits he's received from his 4-H experience--and he wasn't a high achiever in 4-H. Talk to members of a community where a 4-H club has just finished a community resource development project and they'll say 4-H has made a difference because they can see and feel it.

Ask Deans or Directors of Extension and they'll have a variety of reasons how 4-H has made a difference. It may be the legislature has just voted continued or increased appropriations for Extension because of 4-H. Ask governmental leaders and they'll tell you how important 4-H is to their constituents.

Of course, 4-H makes a difference, but can we document it! Can we show substantive research evidence that young people or adults are different because they participated in 4-H. There is not as much research data available as we should have or need. There are not many sound scientific research projects. So does 4-H make a difference? Frankly, we don't know as much as we need to.

Research in the 80's

One of the hallmarks of 4-H in the 80's must be research. We can't continue to survive on testimonial data to maintain existing support or gain new support. Everyone from a county staff member in the smallest county to the federal administrator must have research data to use in making decisions related to continuing, adapting or creating new 4-H programming for youth in the 1980's. Note I didn't project this need, as sometimes we do, as a need for the future. We needed it last year and this year and even more as each year passes.

We need two types of research data. First, we need impact data to demonstrate results of our educational programming. Second, we need research data to use in improving our existing methods of working with youth and adults in 4-H and to help us design new programs for existing and new audiences. Gone are the days when we can afford to design 4-H educational experiences on myths or the ever popular intuition. Resources (time, energy, money) are scarce. We don't have the luxury of experimenting as we go. We need to base programming on sound research so we can reduce risks and increase efficiency and effectiveness.

Impact Studies

Impact studies need to grow out of program priorities and therefore, a state by state listing of research priorities is more appropriate than a national master list of needed impact research needed. At the same time, it is important to recognize we need to aggregate data on a national basis to document accomplishments in 4-H. As a result states as well as the federal partner should identify impact data needed.

Presented to Symposium on Research Needs for Extension Education at Ohio State University, Columbus, OH, May 25, 1983 by Jerry Parsons, State Leader, 4-H and Youth Programs, Iowa State University, Ames, IA 50011.

My list of impact studies is short because of the way I've chosen to categorize the needs. They are from an Iowa perspective but I believe they also reflect some national concerns and needs. I'm suggesting the following impact studies:

1. **Life Skills**
   We need to develop a series of studies to document the life skills learned by 4-H'ers who participate in a specific event, activity, or project. There is a real need to know if youth who participate in a livestock project have learned life skills or when young people go to a State Leadership Workshop what life skills they have learned. One of the criteria for evaluating events, like our State 4-H Conference, should be whether delegates learn some life skills or was it just a good outing. At least in Iowa we don't have these answers and we need them.

2. **Skills and Knowledge**
   In the previous priority, I was talking about life skills but we need to know about subject matter skills and knowledge young people learn in 4-H. For example, we need to know what 4-H'ers have learned about integrated pest management, meal planning, raising livestock, caring for a pet or whatever they have studied.

   In recent years 4-H has been criticized by some subject matter specialists who say we aren't interested in subject matter skills and knowledge. This is not true learning subject matter skills and knowledge is as important as it always has been. In my judgment, both are important. One aspect of our 4-H heritage is that 4-H started as a way to teach canning and corn production. We taught children production skills so that could teach their parents those skills. In 1980 this concept is still valid. In Iowa I think we "missed the boat" with IPM. We should have introduced a 4-H IPM project at the same time we introduced IPM for adults. There are numerous other examples where youth and adult education can and should be closely interrelated. If we aren't careful, we'll do the same with computers.

   We need is to demonstrate through research that young people do learn useful subject matter skills and they do teach their parents or other adults. (Incidentally, this means we need to be teaching "cutting edge" knowledge to youth--not outdated subject matter or skills as we do sometimes.)

3. **Longitudinal Study**
   I hesitate to introduce my third priority because it is a traditional practice for researchers to identify longitudinal studies as a need. I had it on my list and crossed it off, but then finally said, "Yes, we do need it!" I started this discussion saying we accept 4-H as making a difference. We believe it influences the lives of young people but most often these results are not recognized at the end of a project or a camp or when the young person ceases to participate in 4-H. If we could document this growth, we could easily command increased fiscal resources and unprecendented increase in attitudinal support. Longitudinal studies are the only way to do this but they are costly and difficult to manage. Studying matched sample of youth involved in 4-H with those not in 4-H as they move from childhood into adulthood would be invaluable.

It would be a daring step. Most youth-serving agencies aren't able or willing to risk the scrutiny of such a study. After all the results may not be positive. 4-H can and should!

Program Research

Earlier I alluded to specific 4-H methodology - projects, workshops, community clubs, school enrichment, etc. - that enables us to effectively work with young people so that they learn life skills and subject matter skills and knowledge. We believe strongly in these methodologies and have some evidence that they are successful. In the 1980's we need more data to sharpen our ability to deliver effective educational programs for youth. In fact, my list is longer (it's not so easy to consolidate) and equally important as impact studies. The Extension in the 80's report clearly states this as a need. I see the following as priority research needs in this decade:

1. **Progression of Experiences**
   In recent years we've moved to short term learning experiences - school enrichment, special interest - in addition to our more traditional long term experiences--community clubs. We have debated and discussed if our short term experiences will encourage young people to progress to longer term experiences such as community clubs.
   Now is the time to evaluate this progression of learning experiences phenomena to see:

   a) is it really happening,

   b) if so, what methods or approaches are more effective, and

   c) how can we become more effective and efficient.

2. **Delivery Modes**
   During the last decade 4-H has become a multiphased educational program. As such we have used a number of delivery modes--special interest, school enrichment, TV, community clubs, project groups, etc. A scientific research study is needed to document the strengths, weaknesses, accomplishments, as well as successful organizational strategies for each mode so program developers can match delivery modes with needs of youth, subject matter, etc.

3. **Publications**
   After staff salaries and benefits, the next largest expenditure in 4-H is publications. Ironically, we know very little about the effectiveness, use or format of publications for 4-H'ers. We continue to develop, print and distribute publications like we know these answers. We don't! We need to!

4. **Volunteer Staffing**
   Volunteer staffing is the backbone of 4-H. Someone from industry who saw this recommendation would be aghast and rightly so. We do not have research data to demonstrate the most effective and efficient volunteer staffing pattern. We have a variety of volunteer staffing patterns in the United States, even in a single state, and we need to analyze these patterns and based on research data make recommendations for implementation.

5. **Professional Staffing**
The same can be said for paraprofessional and professional staffing patterns. In Iowa we have two major 4-H staffing patterns and at least a dozen variations. We have very limited data to document our staffing decisions. We need more. This situation is duplicated in most states.

6. **Self Directed Learning**
Allen Tough is, I believe, the premier adult education researcher. His research has been replicated around the world with adults and youth. Yet in 4-H we only use his data in a limited way. We desperately need to conduct applied research to adapt the Tough concept of self directed learning to 4-H for youth and adults.

7. **Computer Learning**
Lastly, this idea is probably the responsibility of traditional educators but why leave the really innovative research to others? As a result I'm suggesting Extension researchers get involved. Do we really know how computers aid learning? Can we really teach decision-making skills with a computer or are we using the computer as a device to attract attention? We need to know more about computer assisted learning. In 4-H we have many opportunities to be involved in a landmark research effort.

Strategies for 4-H Research

Professional 4-H staff members tend to be trained as practitioners. They are skilled in designing and implementing programs. Until more recently, they have had limited skills and competencies in research. This situation is changing rapidly but at the county level we'll never have highly skilled researchers (nor do I believe we should have). In addition, the work load of professional 4-H staff is heavy and demanding. They have little time for insightful contemplative research thinking.

With the decentralization of Extension programming, the diverse youth needs and multiple delivery methods for teaching youth there still exists a need to aggregate research data across county, state, and regional lines. This situation provides a unique opportunity for researchers to design ways to facilitate research data collection, interpretation and utilization. The pragmatist in me tells me we need to do several things to enable research to occur and to help use research data. I suggest:

1. **Research Linkages**
With a few exceptions, state 4-H departments have no direct linkage to academic departments with research components. To compensate, some 4-H staff groups have hired a 4-H research or evaluation specialist. The latter staffing pattern I believe is an acceptable approach but may be limiting in it's ability to secure and deliver research data to youth programming.

   For a long time I have believed at least some of the state 4-H staff members should be directly linked with academic departments. Note, I said departments. I believe we need to utilize research from several different disciplines or departments. At Iowa State University, these would include Child Development, Family Environment, Agricultural Education, Adult Education, Elementary and Secondary Education to name a few. Not only do we need to have access to research faculty but we need to utilize teaching faculty resources to augment the competencies of Extension specialists.

Forging 4-H and academic ties is not easy. Academic rank, tenure, staff interests and goals and objectives all complicate the situation. The need does exist and we should work towards a goal of forming strong linkage between 4-H and academic departments.

2. **State Staffing Pattern**

Many of us who are administratively responsible for 4-H need to rethink our state staffing pattern so the synthesis of research, creative programming, implementation of programs is more efficient and effective. There are at least four major state staff functions (when you include the state leader). These functional staff positions are:

a) specialist - collects research data and synthesizes it into useable information for implementing programs for youth and adults and develops and refines effective youth educational experiences.

b) field support - assists field staff members with program development and implementation, including applied research, liaison with state staff and stimulaties of new program implementation.

c) program assistant - handles routine procedural matters like publications, data processing, events and records.

d) administrative - supervise personnel, provide linkage with other program leaders and assists with resource development.

Currently many states, including Iowa, mix these functions so a staff member is expected to do all or at least the first three. As a result staff have widely differing responsibilities. In our staff I'm noting frustration and a lack of good research development and utilization. Under this staffing pattern application of research is probably not done unless we have hired specialists who are really interested in research and then they probably short-change the other functions or are extremely over-extended in their work.

3. **Q.E.E. Approach**

We need to be able to use the Q.E.E. approach to 4-H research--quick, efficient and effective. Note I did NOT say "quick and dirty."

We need to aggregate data but staff are busy and as it said at the field level not necessarily highly competent researchers. We need some research models that can be easily and quickly used. We need to have the methodology spelled out, questions designed (of course, we could modify them) microcomputers packages to facilitate data analysis and reporting. These models need to be ready so they can quickly and efficiently be applied to a problem and we can effective secure research data.

Wouldn't it be great to say to a staff members, here is a research package you can use to gather data on life skills learned in livestock projects and when they are done, they would have usable data for their situation, but at the state, regional or national levels we could aggregate these data because a standardized methodology was used.

It would be a great research project for a doctoral student to design, and test a workable model? I'm ready to use it in Iowa--NOW!

4. **Financial Resources**
I can't leave this topic without saying something about financial resources. Yes, resources are scarce. Yes, private resources can be used. If we believe evaluation is an integral part of the 4-H program development process (at least I do), then we need to allocate some of our present resources to research/evaluation before we ask private donors for support. It's not fair to ask private funds to do something we ought to be doing and aren't willing to do with our own resources.

Summary

I'm reminded of the old adage we've often attributed to an old-time, crusty, county agent (note I didn't say 4-H staff member) who advises the new Extension staff member to not get too excited about the new program from the state office. You know the statement--"this too will pass!" When talking about 4-H research I don't believe it and furthermore, if we as professional Extension educators "let it pass," we will be short-changing our clie[illegible]e - 4-H'ers and the adults who work with youth.

My crystal ball tends to be a bit cloudy--cloudy with my biases--but then I'm not speaking for all state leaders or county, state, or federal staff. I believe these are some of the pressing research needs and some ways we can improve research data collection and use. I hope my thoughts will stimulate researchers to undertake these projects or these ideas will stimulate even better research ideas.

One last thought! 4-H/Motherhood/Apple Pie have been labeled as "All-American." It is interesting to note the last two have come in for much scrutinizing during the last decade and some do[illegible] have been expressed about our undying loyalty to the old concepts we have he[illegible] about both. Perhaps we need to be concerned about 4-H, too. In 4-H we may believe in and practice what just might be a myth or an unproven facts. Is it possible that we resist research because we aren't sure of the outcome?

Of course, 4-H makes a difference! Or does it? Do we really want to know? I for one do. And I do believe "4-H Makes A Difference."

JP 5/83

RESEARCH NEEDS IN THE ADMINISTRATION AND SUPERVISION OF COOPERATIVE EXTENSION

Patrick Boyle

Vice Chancellor

University of Wisconsin

RESEARCH NEEDS IN THE
ADMINISTRATION AND SUPERVISION OF COOPERATIVE EXTENSION

Introduction

I am most pleased to be with you today. I compliment you at Ohio State for organizing this useful symposium.

During the past two years I have been in the role of administering a rather large Extension organization. This experience has given me a fairly broad perspective of the administration of three major types of Extension units:

Cooperative Extension:	560 faculty/staff with a broad program and a $25 million budget.
General Extension:	445 faculty/staff with an extensive program in general, liberal, and professional continuing education and a $22 million budget ($15 million program revenue).
Telecommunications:	140 faculty/staff and a $3.6 million budget to operate statewide radio and television plus teleconference and dial access facilities and slow-scan TV operations.

In addition, we have 200 staff and nearly $5 million in administration and administrative services to support the programs of the three programming units.

The University of Wisconsin-Extension is not merely a free-standing institution. It is the budgetary and program coordinating mechanism for the extension, continuing education, and outreach activities of the 13 universities and 12 centers of the University of Wisconsin System. In the past year, we have carried out an extensive internal reorganization to simplify our relationships with the other 13 universities and the 12 two-year center campuses of the UW System. And, we are in the midst of fulfilling a UW Board of Regents policy to "integrate" all extension programs with the departments, schools, and colleges of the UW universities and centers. The agricultural and home economics programs and several other Cooperative Extension programs have been integrated with the University departments for many years ... but the current challenge is to integrate the extension faculty/staff of all the continuing education programs in such areas as health, medicine, engineering, and business.

Presentation by Acting Chancellor Patrick G. Boyle, University of Wisconsin-Extension, May 25, 1983, Symposium on Research Needs for Extension Education, Ohio State University, Columbus, Ohio.

Many people believe that the administrator of such a large and complex educational institution would spend most of his or her time dealing with important issues of budget, program, and personnel. This is true ... a large share of my time is devoted to resolving concerns over these important questions. However, a large share of my time also is spent in other ways. As examples, I'd like to list a few of the concerns that demanded my attention this week:

- A draft statement from the faculty senate on collective bargaining.
- A letter from an irate legislator demanding that more extension faculty and budget resources be located on a two-year center campus in his district.
- An insurance claim for a small fire in one of our conference centers.
- A question from the facilities manager over what to do with some surplus chairs and desks stored in an office he wanted to assign to a new employee.
- A survey request from a UW System committee studying the archives policies of the UW institutions ... and another request to appoint an Extension archives committee because we realized that we didn't have any archiving policies.
- A question from the President's Office on what Extension personnel were planning to attend a retirement party for a state legislator.
- A request for my participation in a workshop on sexual harassment.
- Approval of some vacation request forms from Chancellor's office staff members.
- A request for a child care center for extension employees.
- A decision over what color carpeting to use in remodeling the Chancellor's conference room.
- A donation for flowers for a staff member with a death in the family.

All this goes to show is that there's much more to being the administrator of a large institution of higher education than meets the eye. And all these small concerns are important insofar as they contribute to building staff morale, inspiring trust, and letting people know that the administrator is a human being who cares about their personal concerns, as well as about the big issues that affect the entire institution.

The experience of the past couple of years has caused me to put the internal management of a CES in perspective when trying to relate the University of Wisconsin-Extension to the University of Wisconsin System Administration, the Board of Regents, the chancellors of the other UW System institutions, state government, and many specific interest groups and constituencies.

So my observations about the research needs of the administration of Cooperative Extension are derived not only from several years within Cooperative Extension, but also from this broader perspective of a very comprehensive Extension program.

Cooperative Extension Administration and Supervision

The job of an administrator in Cooperative Extension is not an easy one. A number of factors, separately and in relationship, have emerged over the past decade or so which have impacted greatly on the roles of Cooperative Extension administration. These include such things as:

1. The complexities of the university today and the pressure demands on top university administrators who are frequently unfamiliar, inexperienced, or disinterested in programs such as Cooperative Extension.

2. Social and economic change - the increasing public and government focus on human rights, equal employment opportunities, and affirmative action. The sorry economic situation of the past several years has led to a strong public and government focus on the responsibility of educational institutions to re-educate workers, to aid in economic recovery, to assist business people, and to provide more economic impacts for the investments of tax dollars in education.

3. The increasing number of agencies and institutions entering and desiring to enter the educational and informational fields Extension engages in. For example, large corporations, such as Wang and IBM, are now offering continuing education and advanced training programs for their employees, to fill the gaps in advanced technology that institutions of higher education simply aren't ready to fill yet. And, with more mandated professional education requirements, professional associations are conducting their own continuing education programs. We also have competition from state agencies, vocational schools, civic groups, private clubs, private schools and colleges.

4. The move of society, generally, and educational institutions, specifically, toward participant inputs into decision making, into all decisions affecting their well-being, including unionization and standardization.

5. The emergence of numerous "special interest" groups and organizations which have entered the lobbying field and are influencing decision making at the community, state and national levels.

Thus, the Extension administrator who once spent a large proportion of time relating directly to the program priorities and personal management of the extension operations no longer has time to be personally acquainted with all of the staff, nor to deal with many of the key program and policy issues directly. Rather, the administrator must devote his/her time and many additional financial resources to concerns of these special interest groups; to interagency and interinstitutional competition and cooperation; to the decision making power structure of the counties, the state and the federal

government; to lawsuits or threatened individual personnel actions of various types; and to "educating" university administrators, regents, and state executive officials about the role and value of Extension programs.

The social changes also have affected the roles of other types of Extension administrators, who must devote more of their time to accountability, external relationships, and responding to concerns that are beyond the immediate scope of their programs. The societal factors I outlined have contributed significantly to the difficulties and complexities of today's Cooperative Extension administrators. I believe they have also contributed to the research needs in Cooperative Extension administration and supervision.

To establish a framework for our discussion of research needs, let me describe my interpretation of administration and of research. Administration involves both an art and a science, particularly when we think of art as being skillful in working with people; providing them an opportunity to utilize their talents to the maximum; providing them an operational situation which continues to challenge their initiative; and providing that type of counsel and support which instills in them an appreciation of being a member of an efficiently functioning team.

There also is an ever-deepening appreciation of the fact that extension administration needs to know more about the science of administration. Skill in performance is always improved when that performance is based upon facts and tested with proven principles. We have many more tools now at our disposal, such as computer information systems. The challenge is for administrators to learn how to use them effectively.

This leads me to my favorite definition of an administrator's role. According to Daniel Griffiths:

> An administrator directs and controls the decision-making process. If the administrator is the controller of the decision-making process, rather than the maker of organizational decisions, the decisions will be more effective.

Another old and very simple definition of administration is:

> "The guidance, leadership, and control of the efforts of a group of individuals toward some common goal."

Perhaps we also need to define research. "Research is not the mere collection of facts which are infinitely numerous and most uninteresting but the attempt for the human mind to order these facts into satisfying patterns."

Research Needs for CES Administration

What are the important research needs for the administration and supervision of Cooperative Extension today? As you might guess, these needs are more complex and far-reaching than they once were, in the days when education, like everything else, was simpler.

I've categorized the needs for research in Cooperative Extension administration into nine general areas. In each, I've noted some questions that need research answers to be helpful to Cooperative Extension administration. I'm sure the reactor panel will be able to think of more:

1. The first area for research is the Image of Cooperative Extension. This area refers to the perception that the formal and informal leadership of a state has of CES. An organization's image determines to a great extent its influence and effectiveness. Image includes publicity, the public presence of Extension and the idea that people have of the organization. With regard to public decision-makers, we can ask two questions:

   A. What criteria do decision-makers use to judge the value of Extension?

   B. What factors contribute to a favorable/unfavorable image of Extension or causes decision-makers to be impressed and allocate more resources?

With regard to the general public, the audiences or participants in extension programs, we can also ask some research questions:

   C. What factors influence members of the general public to be impressed with extension programs and want to participate in them?

   D. How does the image of extension influence participation by more urban people, as farm and rural populations decline?

2. The second area for research is Administrative Climate. Administrative climate refers to the whole atmosphere generated within an organization by those persons in administration. A favorable ego-enhancing administrative climate helps to give employees a sense of acceptance, of security, of having ready access to superiors. It adds to the faculty's contentment, productivity, enthusiasm, and sense of well-being.

   A. What is a productive and effective administrative climate?

   B. What conditions need to exist for a productive climate?

   C. What factors or conditions cause the administrative climate to be either positive or negative?

   D. How does an administrator's personal style influence his/her effectiveness?

   E. Are Cooperative Extension administrators more autocratic or democratic and is either style a cause for success or a detriment to Extension programs?

3. A third area for research is Decision-Making Within the Organization. Contemporary theories of decision-making and reasoning have considerably strengthened our potential for effective action. The challenge is to effectively and consistently implement a decision-making model within the organization.

   A. What is participatory decision-making? On what basis is it effective?

   B. What processes should the administrator use in making decisions across program areas?

C. What hierarchical structure is most conducive to establishing formal communication channels and relationships for decision-making?

D. Can the Extension administrative process be made more effective by greater adherence to either formal or informal organizational concepts?

4. Fourth on my list of research need categories, and related to the administrative climate, are studies of Organizational Behavior. Organizational behavior is a broad concept referring to inter-personal relations, group actions, interactions and human relationships of all kinds, both formal and informal, within the organization. It includes the group factors that contribute to organizational performance and effectiveness. It pertains also to those employee attitudes and reactions to management that affect productivity. Organizational behavior should be looked at from both a macroscopic and a microscopic point of view.

A. What factors contribute to effective interactions and communications among a CES faculty?

B. How can the authoritarian or overly permissive behavior of a district supervisor be controlled? Should it be?

C. Are professional development experiences in inter-personal relations effective? Under what conditions?

5. A fifth area of research need concerns Personnel Management and Collective Bargaining.

The critical tasks of recruitment, selection, orientation, training, and performance appraisal are familiar to all of us. The research needs relative to these unanswered questions are numerous. Collective bargaining is a major new dimension of personnel management.

A. What does a new employee really need to know about Extension, program development, etc., during the first year on the job?

B. How does collective bargaining affect the middle manager's role?

C. Does collective bargaining affect participatory decision-making or the decision-making structure of CES?

D. Does collective bargaining improve the educational program? How?

6. A sixth category for research deals with Supervisory Approaches and Middle Managers.

The concept of supervisory approaches encompasses the arrangements an organization makes for appraising performance, staffing, training, and implementing the reward system. This is an area within administration that has to do with management's efforts to have employees work together toward the objectives of the organization.

A. Under what conditions is counseling more effective than advising? Is advising ever desirable in a supervisor-agent relationship?

B. What criteria should be used to evaluate the effectiveness of middle managers (program leaders/district directors)?

C. What characteristics of middle managers influence the satisfaction and productivity of employees?

7. A seventh area for research is Resource Allocation and Fiscal Management.

Resource allocation includes the legal and administrative requirements, accounting policies and assignment of accounting responsibilities. Allocation of resources involves the question of relative values. It's not the challenge of deciding whether a particular activity is worthwhile, but of whether it is more worthwhile than other things on which the funds could be spent.

A. In a generic sense when or how does administration judge the optimal allocations to a program or an area of need; e.g., agriculture versus home economics; evaluation versus long-range planning; personnel versus capital equipment?

B. What would be the effect of expanding the resources available by charging student fees for selected Cooperative Extension programs?

C. How can reallocations best be handled as one program is judged to have met a need while another is emerging as a high priority?

8. An eighth area of needed research is Constituent Relationships and the Political Arena.

In these days of heavy demands for accountability, budget cutting of what are seen as "non-essential" programs, tight public funding, and large numbers of citizen and private lobbying groups on all sorts of special interests, constituent relationships and political know-how have emerged as high priority needs for Extension administrators.

A. What types of group efforts are most effective in gaining the favorable attention of state legislators, county supervisors, and other decision-makers?

B. How can a program such as Cooperative Extension, with an historically rural image, gain acceptance as a positive benefit by a large number of powerful urban legislators? Does it need to?

C. What are the professional development needs of CES administrators for them to become knowledgeable and effective in the political arena?

9. My ninth suggested area for research has to do with the mission and priorities of the Cooperative Extension Service. Cooperative Extension has changed with the times in many cases. In some states, however, traditional agricultural extension work has remained the priority since the CES was founded. Other states have moved on to deal with emerging concerns, such as energy, small business development, environmental

resource development, groundwater quality, and many other areas. This research area concerns the emerging needs of people and communities as the numbers of people involved in agriculture, homemaking -- and even the numbers of young people available for youth development programs -- decline in the future. What can we as administrators do to ensure that our programs do not become obsolete? What are our CES priorities for the future and how do we arrive at them?

A. What internal decision-making and long-range planning processes will be effective to define the future CES mission and program priorities?

B. Who will be involved in making decisions on future needs and priorities?

These are only a few of innumerable possible areas for research in the administration and supervision of as complex an organization as Cooperative Extension. I'm happy to be able to share my ideas with you today and am eager to hear the interpretations and ideas of the reactor panel on these important areas of need. When questions such as these are answered, with a scientific body of data to back up the conclusions, the administration of CES will be in a better position to face the future.

RESEARCH NEEDS IN EXTENSION PERSONNEL DEVELOPMENT

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Research Needs in Extension Personnel Development

I. Introduction

The organization and management of Extension personnel has been a topic of discussion since the inception of Cooperative Extension work in 1914. Historical review suggests that as soon as the Extension Services in various states became larger than a single director in a university office, processes and functions of the organization emphasized improving the quality and quantity of Extension staff at every level. Early reports about district conferences and staff meetings identify personnel development as a significant goal. We, in Cooperative Extension, have been about the business of personnel development for a long time. Depending upon who you talk to however, we have succeeded beyond our fondest dreams or failed miserably in developing the staff which comprise Cooperative Extension Services across the United States.

Personnel development is a complex process. That complexity is apparent as we attempt to define the process. To me, personnel development is all of the procedures and functions that affect a staff member in an organization while he or she is attempting to accomplish the goals encompassed in the work environment. This definition goes far beyond what is commonly conceived of as staff development and includes the personnel practices of hiring, selection, orientation, performance appraisal and feedback so important to the development and growth of Extension faculty members. I have conceptualized this process in a model (Figure 1) which we have used with some success at the University of Minnesota. This model suggests that personnel development actually begins when a vacancy occurs

and includes a number of processes which are cyclically repeated throughout an individual's career. Processes like program planning, specific performance expectations, staff development, performance development and review, and performance evaluation occur annually in most Extension organizations. All of these impact on an individual in their work environment.

One of the problems in many organizations is that these functions are not addressed as a comprehensive whole. Program planning is accomplished without regard to performance evaluation. Staff development is an autonomous function many times not related to specific performance expectations. The processes of performance development and review or performance evaluation are accomplished in order to assign a merit salary or academic promotion rather than as functions related to improving work performance of the staff member. We are too often intent on improving "our" processes while expecting the Extension faculty member to bridge the gaps between these functions.

An example of this diversity is provided by an examination of where the personnel and staff development functions originate. Their separate roots in most organizations suggest to Extension administrators and faculty members little relationship between personnel practices and staff development opportunities. It is my thesis that these functions must be related and integrated if their impact is going to have a logical or sensible effect on the individual Extension worker. If our concern is to improve the capabilities of the Extension staff member, close coordination of these processes is necessary.

II. Research Needs

Much research must be accomplished to better understand not only the relationships between but also within each of the processes identified on the personnel development model as I have conceptualized it. I will attempt to identify some possible research topics in each of these functional areas recognizing that no collective survey has been accomplished. In fact, I would suggest that an important initial research project would be testing the impact of this personnel development model on a Cooperative Extension organization.

Search Process

In any typical year at the University of Minnesota Agricultural Extension Service we search for about 50 staff members. Consequently, there are a number of search processes operating simultaneously. Yet we know very little about what constitutes a productive search. In some cases a number of candidates apply. In other cases something goes awry so that few appropriate candidates indicate an interest in the position. The impact of equal employment opportunity on the search process is not known. Profitable methods of search and recruitment have not been tested. How Extension Services communicate with potential applicants through the search process is uncertain. Typically we do things the way we have always searched unless forced by some new federal legislation or university court order to alter our process.

Selection

Once the applications arrive we make judgments about the best potential Extension faculty members. The National Study on Personnel Selection gave us some ground rules and guidelines for selection. The national study

may have provided a basis but certainly a major finding of the study was a non-finding. Very few of the procedures we have used in a selection process seem related to success on the part of the county Extension worker. For instance, we do not know if there is a relationship of various academic backgrounds to successful performance and length of service as a county Extension agent. We truly do not know the key factors that seem to generate successful Extension work.

Orientation/Induction

Orientation is the process whereby a new staff member finds out about the organization that employed them. Induction provides information to the new person about his or her specific role in that organization. Extension administrators have long been concerned about this process. The concern generally has been based on where the processes are effective and provide ease of entry into the organization. Extension needs a comparative study of orientation and induction processes with a measure of resultant attitudes, commitments, and performance in an attempt to identify some relationship of the processes applied to the performance and satisfaction of the new staff member. We need to know more about how educational backgrounds ought to influence the orientation or induction process. We also need to determine with more precision what an oriented or inducted staff member looks like. In the meantime we go merrily on our way applying band-aids when in fact major surgery may be required.

Program Planning and Goals

Much has been written about research in planning Extension programs. The relationship however, between program planning and personnel development has not been as clearly articulated in the literature. A common attitude

held by Extension staff is seeing the program planning process as "something done for administration" rather than understanding it as a basic process for improving performance, results, and personal growth.

Specific Performance Expectations

Specific performance expectations are usually assumed to be communicated through revised position descriptions. However, most position descriptions I have seen are generic and encompass the world rather than really providing guidelines for an individual's performance. When questioned, supervisors suggest they want to provide the individual job freedom and individuals suggest they do not want anyone "backing them into a corner." In fact, the lack of precision in specific performance expectations often fails to set direction for either improved performance or personal growth.

We do know from research that role dissonance is a major source of dissatisfaction and reason for employee turnover. What we lack are models for effectively determining specific performance expectations and processes for modifying and changing those expectations as the organization and/or the individual changes. We need to explore the impact of specific performance expectations on actual performance.

Staff Development

Inservice education opportunities are often provided for Extension staff by our organizations. In Minnesota we provide inservice education where the individual selects the kinds of opportunities they feel best suited to their personal growth and inservice training where the organization identifies the type of educational opportunities needed by a staff member and requires participation. We do this based on the feeling that it is important for continuing educators to continue their education. But, we are not certain

of the relationship of these educational interventions to improved employee performance, increased commitment, or satisfaction. What factors are most affected by staff development? Does it do what we want it to do? We also ponder whether participation in staff development generates movement out of the Extension Service rather than more effective performance.

We conduct a number of other staff development opportunities without the benefit of any understanding of the preferred learning style of county Extension agents. It often appears that we are more concerned about teaching than learning. We need to investigate what causes change in behavior of Extension faculty most effectively and efficiently. Incidently, learning more about how our faculty learn and change might give us additional insight/answers into how our clientele learn and change.

With regard to methodologies, we deliver staff development the same way we do Extension programming for our clientele. We are not sure about different delivery systems nor do we place a high priority on learning and whether computer based staff development, correspondence courses, radio or video tapes really provide learning for our staff as well as or better than the traditional workshop or classroom setting.

Too often in staff development we assume quantity is quality. Possibly a better understanding of the individual faculty member, their work environment, and a preferred learning style would help us eliminate the shackles of staff development tradition and bring us closer to true personnel development.

Performance Development and Review

Performance development and review is a part of the performance appraisal process. It is an interaction whereby an individual serves as

a helper in providing feedback to an individual on their performance and suggesting ways to encourage personnel development. No judgment or scores are offered but rather this is an opportunity to problem solve with the individual. How important are these interactions to the performance and success of an individual Extension worker? What is the proper methodology for doing performance development and review? Can a supervisor truly do performance review as a helper or must it be an unbiased outsider? We make the assumption that this type of personal attention is positive, however, what happens when personality conflicts prohibit communication? Might it be better that no performance development and review occur?

Staff Development Through Graduate Study

A number of studies relate to the importance of graduate study to successful Extension work. It appears to help successful performance. On the other hand, how does graduate study relate to a specific individual within their work environment. Is graduate study important if inservice education and inservice training are provided in ample quality and quantity? What input should the Extension organizations put into the development and design of graduate courses? Do Extension education courses really benefit agricultural or home economics county agents? Does performance improve as the percentage of staff in the state with advanced degrees increases? We make some large assumptions without supportive data.

Performance Evaluation

Performance evaluation is the process whereby a judgment is made about an individual's performance based on established goals, past performance

or comparison with other similar staff members' performance. A basic reason for performance evaluation is to make a judgment and provide feedback in order to stimulate improved performance in the future and to provide a basis for merit salary increases or academic promotion. We really still do not know what successful performance of county Extension agents looks like. We do not know the relationship between performance evaluation as a process and an agent's job performance. We wrestle with the weighting of relative criteria and standards necessary to make a judgment on performance. We discuss the "correct" process for doing performance evaluation while wondering if there is such a process. If it would truly stimulate personnel development, this one process of performance evaluation needs a great deal more research to measure its impact on the effectiveness of an Extension organization.

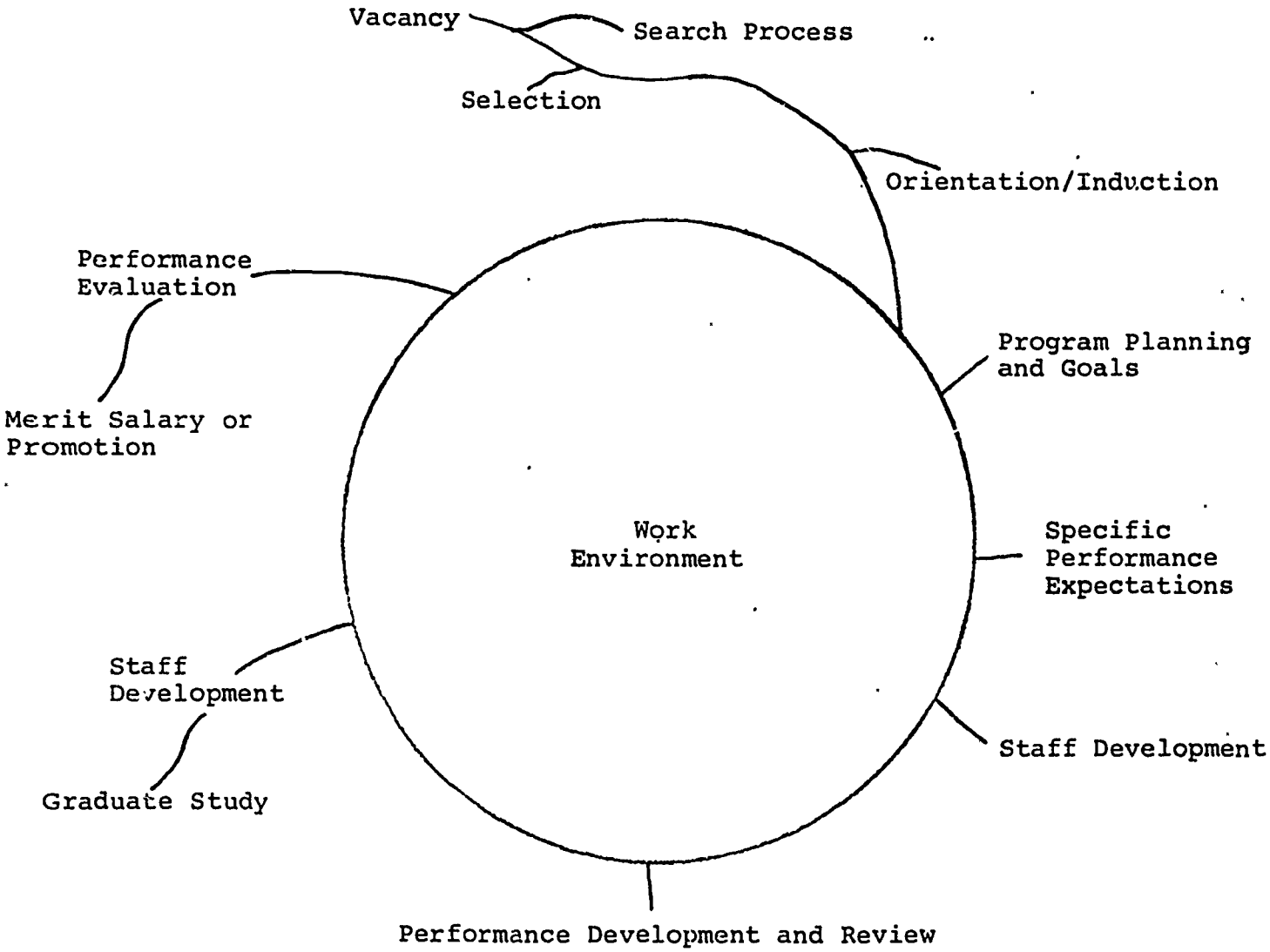
III. Conclusion

The above questions and suggestions relate to a personnel development model which recognizes that an Extension faculty member exists in a work environment. The personnel development processes are repeated annually once the individual joins the organization. We all take our piece of the process as Extension administrators in an attempt to shape and mold the work environment in a better way. Yet most Extension Services have no master plan for personnel development. We accomplish the functions with a great deal of fervor--somewhat similar to a group of carpenters nailing boards with great enthusiasm, each following their own set of blueprints. Research on these functions and their relationships, and the impact they have on the individual staff member in Extension may be the most productive

effort we as Extension workers can do to help our organization survive and succeed. Most importantly, we who are in personnel development need these answers to provide the best and most systematic environment for our colleagues' personal growth and successful Extension work performance.

Figure 1

PERSONNEL DEVELOPMENT MODEL



EVALUATION RESEARCH NEEDS FOR EXTENSION EDUCATION

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INTRODUCTION

A call for the identification of evaluation research needs for Extension education has come at a most opportune time. In fact, it closely follows a communication from the Administrator of Extension Service, USDA alerting State Extension Directors and others that Extension is increasingly being challenged to identify and evaluate program results, impacts and consequences. The communication further points out that questions asked of Extension in recent years, especially by Congress, have shifted from "how much and what are you doing with whom?" to "who is benefitting, by how much, and what difference did it make that Extension was involved?" (Greenwood, 1982).

On first impression, it would seem that the establishment of program results, impacts and consequences would not be difficult. After all, Cooperative Extension Service does have a long history of "helping people to help themselves." Unfortunately, County Extension agent success in demonstrating program accomplishments through evaluation have been somewhat limited. Not only have many Extension evaluations encountered difficulties in measuring consequences, the results of some studies often have been misinterpreted. The Citizens Review Panel (1980), responsible for critiquing the national evaluation of Extension programs, expressed a deep concern that due to insufficient and sometimes misleading data, Congress could draw the wrong conclusions about the usefulness of Extension programs.

One explanation for this limited success in evaluating Extension programs is offered by Patton (1980a) who says that the reason for these limitations is simple--there is no single treatment to be studied. Because every county and every state designs subject-matter educational programs differently, there is no such thing as "the" Extension program. Given the diffused nature of Extension programs, it is Patton's belief that national evaluations of national programs typically disguise more than they reveal. He explains (1980a: 73):

> When a standardized data-collection format is imposed upon thousands of local projects across the country and data collected in this standardized fashion is aggregated across the country, the result is more myth than reality . . . When national programs are implemented at the local level, the variations that result are so complex and so tied to local circumstances that no standardized format and no scheme of aggregation can reasonably represent and do justice to that complexity and those multitudes of adaptations.

A second explanation for the limited success in measuring the effectiveness of Cooperative Extension Service is that most evaluation efforts have been limited in scope. Some have focused on standardized subjective measures of citizen reactions to Extension programs (Bennett, 1982; Christenson and Warner, 1982). Others have turned to effectiveness in meeting clientele needs including learning by clientele, applications of learning resulting in practices or actions carried out by clientele, and results of applications including social or economic benefits accruing to clientele (Kappa Systems, Inc., 1979).

While such efforts may prove to be useful, generally, they have not provided adequate information to answer the question,

"what difference did it make that Extension was involved?" Nor do they reflect the many ways that Extension is involved in helping people to help themselves. Hall (1982) argues that many of these activities are contradictory in nature. That is, organizations (such as Extension) may be more or less effective in regard to the variety of goals they pursue, the variety of resources they attempt to acquire, the variety of constituents inside and outside the organization and the variety of time frames by which effectiveness is judged. Hall (1982) concludes that no organization is effective. Instead, organization can be viewed as effective (or ineffective) to some degree in terms of its efforts to meet multiple and conflicting environmental constraints, goals, constituents, and time frames.

A third explanation for the limited success in measuring the effectiveness of Cooperative Extension Service is that while recognition has been given to the diffused nature of Extension programs, few have attempted to link standardized measures of individual performance to measures of program accomplishments. Such linkage is becoming increasingly necessary because, while role expectations of individuals may be determined within the broader organizational context (Kahn et al., 1964), there are times when individual discretions are crucial for organizational survival (Hall, 1982). In addition, multiple and often conflicting time frames and goals can have a major impact on both job satisfaction and productivity of individual employees (see Mulford et al., 1977).

Finally, most training efforts to improve the quality of program evaluations have focused primarily on improving the competencies of Extension field and support staff in evaluating individual programs. Only recently have efforts been directed toward the development of an evaluation system or framework by which evaluation efforts could be guided. Organizations that employ a systems approach to evaluation generally attempt to:

1. Evaluate the program as a whole.
2. Use a problem solving approach with a strong-relationship between evaluation and decision-making (identify relevant evaluation questions for which decision-makers need information).
3. Reach agreement between decision-maker and evaluator on data needed and how data will be used to answer the evaluation questions.

Patton (1980b) describes this approach as evaluation research and offers the following definition:

> Systematic collection, analysis, and interpretation of information about the activities and outcomes of actual programs in order for interested persons to make judgements about specific aspects of what the program is doing and affecting.

According to Patton (1980b) and many others, the purpose of evaluation research is to provide relevant and useful information to decision-makers, the criteria for usefulness and relevance being negotiated between evaluator and decision-maker during the conceptual phase of the evaluation.

It is the position of the paper that a systems approach utilizing evaluation research methods is essential if Extension Service is to accurately determine "what difference did it make that Extension was involved?" It should be noted that neither a

systems approach nor the use of evaluation research methods are new to Cooperative Extension Service. Darcie Byrn and others (1959) have long advocated the use of the scientific approach in providing facts as a basis for making decisions, drawing conclusions, or forming judgements about the organization and conduct of extension work. They point out that while evaluation may range from casual every day evaluation to scientific research, the difference in evaluation methods is a matter of degree rather than kind. It lies in the difference in the degree to which scientific method is necessary to the solution of problems.

In today's environment of complex problems, budget restraints, and expensive program alternatives, a systems approach to evaluation can help resolve many of the factors hindering the successful implementation of evaluation efforts. It can also provide the foundation for training field, support, and administrative staff in measuring the oganizational effectiveness of Cooperative Extension Service at the county, state and national level.

This paper will attempt to identify some of the evaluation research needs which must be addressed if Cooperative Extension Service is to base its evaluation research efforts on a systems perspective. Because the evaluation research needs of those at the county level often differ from the needs of those at the state or national level, both will be addressed.

EXTENSION EDUCATIONAL SYSTEM

The first evaluation research need to be resolved is the diffused nature of Extension programs. If Patton's (1980a) assessment is correct (there is no one Extension program), then it will be most difficult to use evaluation research technology in determining "what difference did it make that Extension was involved?" If programs are that varied, then state level Extension reports have little meaning. In addition, county level reports are not comparable. On the other hand, if there are major activities necessary for Extension to carry out its mission, these activities can provide the foundation upon which a systems approach to evaluation can be built.

It may be recalled that the Extension Committee on Organization and Policy (ECOP) has endorsed the view of Cooperative Extension Service as a dynamic educational system oriented to the development of educational programs designed to meet the changing needs of diverse publics. ECOP believes that the strength of this system is in its involvement of people in the program development process in determining, planning and carrying out programs that meet their needs. In developing educational programs, Extension considers it especially important to involve people in identifying needs, concerns, and interests and to analyze problems that concern and affect them (Lawrence et al., 1974). An illustration of the Extension educational system is provided in Figure 1.

(Figure 1 about here)

Several major activities have been identified by Lawrence et al. (1974) as being critical to the effective implementation of the extension educational system. First, it is necessary for Extension staff to establish the program development concept of "helping people to help themselves." The process of Extension education involves working "with" people and not "for" them. The second major activity is to involve people in the process of developing programs. This process requires interaction of clientele, Extension staff (including agents, specialists, supervisors, and administrators), and Extension advisory and support groups. Third, educational program priorities must be established. Lawrence et al. (1974) list four activities to help determine such priorities:

1. Determine expressed needs of people as derived from local Extension program development committees.
2. Analysis of the environment and other conditions of society.
3. Emerging research results.
4. Administrative response to recommendations and pressures of Cooperative Extension support groups.

Program priorities are then reflected in an Extension plan of work.

The fourth major program development activity of Cooperative Extension Service is to implement its educational programs as defined in a plan of work. Activities in support of this effort include arranging facilities and resources for educational programs, conducting teaching activities, coordination of

educational events with other organizations and involving lay people in the conduct of the Extension program.

The final activity in the program development process is to objectively evaluate the progress and accomplishments made toward program goals. Extension staff are expected to assess the degree to which goals are achieved, determine the effectiveness of specific inputs for achieving change and use results of evaluations in redirecting program efforts and adjusting strategy (Lawrence et al., 1974).

This paper advocates using the major activities of the Extension program development process as the foundation for evaluating the effectiveness of Cooperative Extension Service. These activities are equally applicable at the county, state, and national level. In addition, the scope of an evaluation research effort could be as narrow as a specific subject-matter goal at the county level or as broad as an interdisciplinary goal at the state or national level. The important point is that each of the program development activities can be evaluated in a systematic fashion. If the strength of Cooperative Extension is in its involvement of people, then it is just as important to measure the consequences of people's involvement in developing educational programs as the consequences of their participating in educational programs.

Several evaluation research questions that can be used in determining consequences of people's involvement in developing educational programs are as follows:

1. What is the problem? (Nature, extent and location of specific problem.)

2. Who is the target population?

3. How does the goal and list of activities of the educational program relate to the specific problem of the target audience?

4. Can the delivery system designed reach the target population effectively?

5. How does helping the target audience to solve the identified problem support the mission of the organization?

It also is important to measure the implementation activity of the program development process. The utility of such measurement is aptly illustrated by Rossi et al. (1979: 132) who have found that a large proportion of programs that fail to show impacts are really failures to deliver interventions (programs) in ways specified. The authors list three potential failures:

1. Little or no program is deliverable to the clientele.

2. The wrong program is delivered.

3. The program is uncontrolled, unstandardized or varies across target populations.

To reduce the possibility of such failures, the following research evaluation questions should be addressed:

1. What types of educational activities and subject matter content were offered?

2. Who participated in the program?
   a. Characteristics of participants and nonparticipants
   b. Intensity of participation by different client groups

3. What are the reactions of participants and others to the quality and content of the educational program?

In summary, while the Congress of the United States and others may have shifted the emphasis of their questions to "who is benefitting, by how much, and what difference did it make that Extension was involved," it must first be established "why" and "how" Extension was involved. Then it can be determined if a planned program designed to produce intended changes in a target population achieved its objective.

EVALUATION RESEARCH DESIGNS

A second evaluation research need relates to the types of evaluation research designs that should be used to determine "what difference did it make that Extension was involved." It may be recalled that Darcie Byrn and others (1959) have illustrated evaluation approaches along a continuum ranging from informal (casual everyday evaluations, self-checking evaluations, and do it yourself surveys) to formal (Extension studies and scientific research). Unfortunately for county Extension agents, it seems that while informal evaluations are easier to implement, their results often are difficult to interpret. Conversely, while formal evaluations could provide interpretable results, they often are time-consuming and difficult to implement.

This section of the manuscript will discuss the types of changes made by target audiences that are most often measured and the evaluation designs necessary to measure such changes. In addition, criteria for determining appropriate evaluation designs will be provided.

Measurement of Change

There are several types of changes that could be achieved by a target population. As such, an evaluation research effort could be directed toward collecting data to answer one or more of the following questions.

1. Did a change occur in the target population?
   a. Attitudes changed
   b. Knowledge acquired
   c. Skills developed
   d. Practices adopted
2. What are the consequences of changes made?
3. What is the cause of the change (or lack of change)?

Evaluation Designs

Two types of evaluation designs are available for use in determining whether a change occurred in the target audience: designs that estimate change and designs that measure change and attempt to explain the cause of the change. Designs commonly used to estimate change include:

1. Projections based on other studies
2. Projections from clientele
3. Follow-up survey of participants
4. Case study
5. Observations by experts

For some decision-makers, an estimate of changes made by clientele is satisfactory. For others, an accurate measure of change and the cause of the change is important. Possible explanations for causes of change that have been identified (Campbell and Stanley, 1966) include the following:

1. Some would have made the change anyway.

2. Long-term trends mask program accomplishments (inflation).

3. Short-term events influence accomplishments (weather).

4. Those who participate in Extension programs are volunteers. As such they possess personal characteristics which may differ from nonparticipants.

5. The program influenced the participants to make changes.

In evaluations where change is measured by estimate, interpretations of the results are difficult and often unconvincing (Fitz-Gibbon and Morris, 1978). When more accurate measures are needed by decision-makers, comparison groups may be necessary. The following evaluation designs are recommended when comparison groups are required (Rossi et al., 1979):

1. Randomized design. Every person in the target audience has the same chance as any other person to be selected to participate either in the program or in a control group that does not receive the same program. In other words, different groups receive different programs or receive the same programs on a delayed basis.

2. Constructed controls. Persons who do not participate in the educational program but who are similar to those who do participate are compared to the participants. Control groups may be established through individual or aggregate matching. Individual matching, generally, is preferred.

3. Statistical controls. Use of multivariate analysis techniques to measure accomplishments of programs that have been in operation for several years. The reliability of the measure is established statistically. Cross sectional studies often are used to provide such measures.

4. Reflexive controls. Many Extension programs contain long-range goals and are carried out with the same clientele for several years. Such programs allow participants to serve as their own reflexive controls. The procedure, referred to as time-series design, requires that individuals be measured for at least three

points in time. It is recommended, but not required, that the first measurement point be before or early in the implementation phase.

In considering the four designs, it should be noted that they are neither easy to implement nor without limitations. For those Extension programs where it is truly important for Extension Service to provide, with as much certainty as possible, measurement of change and causes of changes made by those who have participated, such evaluation designs may be necessary. However, unless the evaluator has some knowledge of the strengths, limitations, and appropriateness of each design; the evaluation results could provide insufficient or misleading information and, thereby, influence others to draw wrong conclusions about the effectiveness of Extension programs.

Current efforts by Extension Service, USDA in calling for State Extension Services to provide accomplishment reports and impact evaluations appear to be a very positive step in helping states determine appropriate evaluation designs (see Greenwood, 1982). Accomplishment reports consist of brief narrative reports of program results representing statewide aggregation of data. The intent of an accomplishment report appears to be one of estimating changes made by target audiences. Conversely, impact evaluations are technically valid in-depth national or state evaluations conducted to assess:

1. The economic or social consequences of selected high priority programs.

2. Specific other aspects of Extension inputs, operations, or programs.

EVALUATION REPORTS

A third major evaluation research need relates to the reporting of evaluation results. One of the most discouraging facets of evaluation research is when the evaluation report is not read by the audience for whom it was prepared. The procedures recommended in this paper do not insure that the report will be read or that the results used. It does insure that the decision-maker will be aware that the evaluation is being conducted and that its purpose is to provide the decision-maker with relevant and useful information about what the educational program is doing and affecting.

The following outline is provided as a guide in the development of an evaluation report (Wentling, 1980). This outline serves a second purpose in that it identifies evaluation research needs that must be addressed in evaluating educational programs.

I. Evaluation Objectives
   A. Purpose of evaluation
   B. Audience of the report

II. Program Description
   A. Statement of problem
   B. Program goals
   C. Characteristics of participants (number and type)
   D. Description of educational activities conducted and subject matter covered

III. Description of Evaluation Methodology
   A. Specific parts of the program development process to be measured
   B. Time frame of evaluation
   C. Description of evaluation procedures
   D. Possible bias of the methods used

IV. Results
   A. Reactions of target audiences
   B. Changes made by target audience

V. Evaluation Conclusions
   A. Consequences of the changes made
   B. Effectiveness of the Extension program
   C. Recommendations

PERFORMANCE APPRAISAL

The final evaluation research need to be discussed in this paper refers to the linkage between performance appraisal and program accomplishments. At this time, a relationship has not been adequately established between measures of individual behavior necessary for effective performance (inputs), individual performance (outputs) and changes in behavior of constituency (program accomplishments). It is the position of this paper that the program development process can be used to establish such a relationship. An illustration of this relationship is presented in Figure 2.

(Figure 2 about here)

An accurate and relevant performance appraisal system could contribute to determining whether programs are being carried out in ways specified in the plan of work. However, most Extension performance appraisal methods have been based on personal traits or characteristics having little relationship to measurement of organizational effectiveness. In recent years, there has been growing support by Extension administrators and others for an accurate and relevant performance appraisal system that could contribute not only to judgemental decisions about personnel but

also to development decisions concerning individual performance related to program accomplishments.

According to Cummings and Schwab (1973), judgemental appraisal provides results for administrative decisions concerning such aspects as rewards based on merit, promotions, transfer and termination. Developmental appraisal provides results to help improve performance by identifying areas for program improvement and individual growth. By focusing on both past accomplishments and on improvements in future performance, a performance appraisal system becomes an important component of organizational effectiveness.

Methods of Performance Appraisal

Two general approaches to performance appraisal can be linked to organizational effectiveness. One approach to performance appraisal focuses on behavior by identifying the critical behaviors necessary for effective performance. A second approach concentrates on measurement of accomplishment of performance goals (Haynes, 1978).

Critical Behavior

Performance appraisal methods used in measurement of critical behavior necessary for effective performance generally are based on comparisons of individuals to absolute standards. Procedures used to compare individual performance to absolute standards normally follows one of two approaches. The first approach uses a qualitative basis to determine the existence of

performance behavior. That is, the supervisor is asked to indicate whether the employee possesses or does not possess the performance characteristics of interest. The second approach attempts to quantify the degree to which the employee possesses certain performance characteristics.

With some modifications, comparison of individuals to standards can be related directly to measures of organization effectiveness. The following sections describe the nature of those modifications.

Existence of Behavior

The development of indicators to measure the existence of performance characteristics generally is based on the critical incidents technique. The critical incident technique identifies activities that are critical to one's job. Outcomes of performance are then measured against those activities. The advantage of the critical incident technique is that it provides more feedback of required information and it can seek available items that have been shown to differentiate between successful and unsuccessful performers. The disadvantage of the critical incident approach is that considerable time is needed for collecting items critical to one's job performance. A partial listing of critical incidents in program development was reported in Figure 2.

The weighted checklist method generally is used to measure behavioral outcomes of performance using a conventional interval-level scale of measurement. An example weighted checklist is

presented in Figure 3. One's performance evaluation score is determined by summing the weights of the outcomes that have been checked (Cummings and Schwab, 1973). As illustrated by the outcomes listed in Figure 3, critical incidents necessary to successful job performance also are necessary for effective programs.

(Figure 3 about here)

Knauft (1948) describes four advantages in using the weighted checklist to score outcomes of performance.

1. It provides an objective and rapid method of scoring the completed forms.
2. The exact values or weights of each outcome are unknown to the raters and may not be readily deduced by them.
3. Raters require very few directions and no extensive training program in rating techniques.
4. The weighted checklist may be used as an overall criterion measure if it is constructed to sample a large number of different aspects of the employee's on-the-job behavior.

The weak point of the weighted checklist is arriving at a proper weighting of various items on the checklist (Haynes, 1978).

Degree of Behavior

Linkage between organizational effectiveness and the degree to which employees display critical behavior necessary for effective performance can be obtained using a behaviorally-anchored rating scale. According to Cummings and Schwab (1973), scale items are based on the critical incident process described earlier and are divided into several categories of items. The value assigned to each item is weighted (similar to the weighted

checklist) from very low to very high. The evaluator is asked to select the one item which best describes the employee's behavior for each category measured. An employee's evaluation score is the sum of the category scores. An example behaviorally anchored rating scale is presented in Figure 4.

(Figure 4 about here)

Performance Goals

The second major approach to performance appraisal relates to accomplishment of performance goals. Measurement of performance goals involves the supervisor and the employee in a discussion to set performance goals or objectives in support of the organization. Performance appraisal methods often used in such settings include management by objectives and direct indexes.

Management by Objectives

Management by objectives (MBO) measures performance in terms of goal accomplishment. According to Cummings and Schwab (1973), the employee (with supervisor approval) defines goals to be accomplished during some specified time period. Goal statements may be set for methods, means of accomplishment, or desired outcomes.[1] MBO can be related directly to organizational effectiveness when such goals are stated in terms of desired

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[1] Goal statements related to methods or means of accomplishment are often based on standards of critical behavior.
determinant of performance. In addition, performance can be

program outcomes. Illustrations of performance goals were reported in Figure 2.

One major strength of MBO is that it sets unique goals for each employee and supports the view that goals are an important accurately measured in situations where jobs can vary with the capabilities and interests of the individual. Conversely, MBO can lead to the unrealistic adoption of rigid and/or quota-oriented goals. Also, MBO provides limited information for the equitable distribution of rewards because goals are individualized and may not be comparable across individuals. When such comparisons are needed, measures of critical behavior should be used.

Direct Indexes

A second measure of goal accomplishment measures productivity directly. Direct indexes are used to measure quantity or quality of output. Examples of quantitative indicators include hours worked, miles traveled, meetings conducted, publications prepared, people reached, and changes made by clientele. Quality measures include clientele reactions to programs and publications and supervisory observation of agents in action. As reported earlier, Christenson and Warner (1982) describe how constituent satisfaction can be used as a measure of organizational effectiveness.

Summary

This section has attempted to link critical behaviors necessary for effective performance (inputs) individual performance (outputs) and changes in behavior of constituency (program accomplishments). This linkage is becoming increasingly necessary as county Extension agents and others attempt to cope with multiple and other conflicting environmental constraints, goals, constituencies, and time frames.

The primary evaluation research needs to be met if such linkages are to occur is the validation of the performance appraisal system. That is, the procedures used to construct and test a performance appraisal instrument must be verifiable. Steps in the development of a performance appraisal instrument to be verified include job analysis (content analysis), item selection, item scoring system followed, and procedures used to measure reliability and validity.

The Ohio Cooperative Extension Service is in an excellent position to establish the linkage between individual and program performance because it has already undertaken a preliminary test to verify its performance appraisal system (Ladewig and Shiao, 1983). A remaining task is to more closely tie performance appraisal to an overall system of organizational effectiveness.

SUMMARY AND CONCLUSIONS

There is much concern that the diffused nature of Extension programs restricts the ability of Cooperative Extension Service to meaningfully evaluate its programs. This manuscript argues,

however, that Extension does have an educational program that can be evaluated--the program development process. In fact, Extension leaders have stated that the involvement of citizens in the development and implementation of educational programs is one of the major strengths of the Extension educational system in carrying out its mission of "helping people to help themselves."

Because the major activities of Cooperative Extension Service relate closely to the involvement of the target audience in the program development process, this paper has recommended that efforts to evaluate the organizational effectiveness of Cooperative Extension Service should be based on the Extension educational system of program development. It was pointed out that because all organizations are effective to some degree in terms of specific constraints, goals, constituents, and time frames, the contradictory nature of organizational effectiveness must be considered in analyzing effectiveness of Extension Service to carry out its system activities. It was recommended that because of the importance of individual performance in carrying out such activities, measures of program accomplishments should be linked to measures of individual performance.

In sum, this manuscript has advocated that a systems approach utilizing evaluation research technology is essential if Cooperative Extension Service is to accurately determine "what difference did it make that Extension was involved." Neither the systems approach nor the evaluation research methods advocated are new to Cooperative Extension Service. What is different is

the degree to which the scientific method is necessary in providing facts as a basis for making decisions, drawing conclusions, or forming judgements about the organization and conduct of extension work.

Five procedural requirements are necessary if such an approach is to provide accurate and relevant results. First, evidence of relevant problems to be addressed must be established. Without documentation of constituent problems, goal accomplishments may have little meaning. Second, citizen involvement in program development must be documented. This will enable analysts and others to recognize both the range of options open to Extension Service and the existence of factors beyond organizational control as Extension copes with constraints and mandates in working toward goal accomplishments in support of its mission. Third, a job analysis of critical incidents necessary for effective performance must be accomplished to provide a basis from which defensible performance standards can be derived. Otherwise, it will be most difficult to link measures of performance appraisal to measures of program accomplishments. Fourth, the information needs of decision-makers within and external to Cooperative Extension Service must be considered. Finally, the resources necessary to carry out recommended evaluation research design must be provided if Extension is to accurately answer "what difference did it make that Extension was involved?"

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Figure 1

Cooperative Extension Educational System

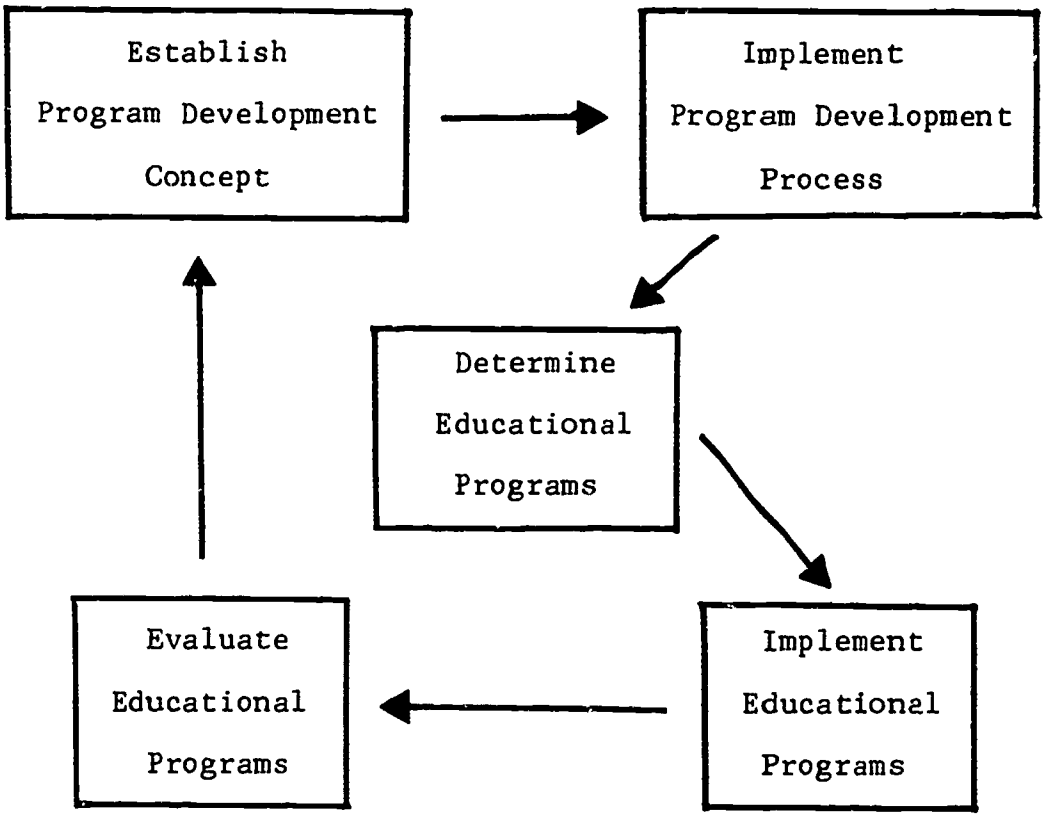

Figure 2

Personnel and Program Evaluation of the Cooperative Extension Educational System

System Component	Performance Evaluation County Extension Agents		Program Evaluation
	Critical Behavior (Inputs)*	Performance Goals (Outputs)*	Constituent Behavior Desired (Results)*
Establish support for program development	Interact with constituents	Constituents accept concept of program development	Level and quality of support for program development
Implement program development process	Identify potential members for program development committee	Program development committee organized and trained in program development process	Constituency representativeness of the committee Knowledge of the committee
Program determination	Plan meetings Provide resources	Plan of work	Committee involvement in planning programs Documentation of relevant problems and target audiences to be addressed
Program implementation	Advertise programs using relevant dissemination methods Prepare for educational programs	Conduct timely educational programs on relevant topics using appropriate educational techniques	Involvement of target audiences Reactions of target audiences
Program evaluation	Develop an evaluation plan	Conduct program evaluation and prepare a report of findings	Measure changes made by target audiences Use evaluation report for program accountability and program improvement

* Examples provided as illustrations

Figure 3

Example Weighted Checklist of Behavioral Outcomes

Item	Scale Values
Has good community representation at planning sessions to set county priorities	3.5
Conducts well-organized educational programs	1.5
Minority involvement in program exceeds minimum requirements	3.5
Programs branch out to reach new audiences	1.5
Has little or no premature turn over among volunteer leaders	3.5
Uses needs assessment survey results to determine relevant program priorities	2.5

Source: American Institutes for Research, 1979. Manual for County Extension Agents--Performance Review, Analysis, and Planning. Washington, D.C.

Figure 4

Example Behaviorally Anchored Rating Scale of Program Implementation Behaviors*

Category	Value	Item
Extremely good performance	7	Conducts programs in the county in all locations to meet the needs of all people, irrespective of race, color, national origin, or economic circumstances.
Very good performance	6	Always does some teaching in every educational activity for which he/she has responsibility.
Good performance	5	Specialist involvement in educational programs using appropriate methods of teaching.
Neither poor nor good performance	4	Involves a few volunteers and local leaders in implementing programs.
Slightly poor performance	3	Gives generalized answers to callers with specific inquiries.
Poor performance	2	When he/she receives calls for technical assistance, makes excuses for not providing assistance requested.
Extremely poor performance	1	Gives information not documented by research.

*Items are provided strictly for illustrative purposes. Values are not based on empirical evidence.

Source: American Institutes for Research, 1979. Manual for County Extension Agents--Performance, Review, Analysis and Planning. Washington, D.C.

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