Land-grant Universities and Digital Extension Service
A Need for Partnerships between Libraries & Extension

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Introduction

Land-grant Universities have a strong history of bringing information to the people through personal contact and printed material. The Agriculture Experiment Stations were developed to bring research and experts to rural communities throughout the United States. The Land-grant Universities placed emphasis on academy, science and service and have been adding to our body of knowledge for over 100 years. The underlying philosophy of Extension has been to "help people help themselves" by "taking the university to the people" (Rasmussen, 1989) The importance of the Land-grant Institutions to the United States should not be underestimated. Extension has been a force of change throughout is tenure through the dispersal of knowledge gained by experts both in the field and at the universities. While in the past Extension was aimed at helping rural populations, today Extension is serving a larger amount of urban residents. The advent of technology has changing the way Extension reaches out to people. Using the latest technology from the telephone to the Internet and instant messaging, the Extension agencies are reaching out to more people then ever before. Libraries have often partnered with Extension to help disperse this knowledge but seldom do we see real cooperation in libraries and Extension in taking information and knowledge to the people. Cooperation between the two could benefit both entities. Libraries can learn from Extension and Extension can learn from libraries. The purpose of this paper is to describe the history of Extension and information dissemination, what libraries can learn from the experiences of Extension and to look at partnerships between libraries and Extension. By partnering with libraries, Extension will be able continue to offer continuing education and education methodology to help people help themselves through researched base

education. Solving peoples problems is what the Cooperative Extension Service was put in place to do. In allowing libraries and librarians to help them disseminate the knowledge, acknowledging that librarians are experts in a field that deals with information in all of its forms, and librarians acknowledging that Extension has transferred the information to the people for years, a partnership between the two could produce a cooperative institution with a strong commitment to public service that would take both through the 21st century an beyond.

History of Extension

Extension can be divided into three different missions: education, research and Extension. Each part of Extension can be traced the passage of historical Federal Acts. Extension began as "AN ACT Donating Public Lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and Mechanic Arts" -- First Morrill Act, 1862 – (IFAS, 1994-2000). From its inception, land-grant institutions have enjoyed federal support, first with the acquisition of federal land on which the land-grant institutions were to be built, and then with federal dollars to support the research and infrastructure. Prior to the 1862 land-grant institutions higher, education was reserved for and helped to preserve the status quo of an educated aristocratic society. The land-grant universities at their inception were not intended to serve the workaday needs of society. Morrill was more interested in the link between democratic access to higher education and the maintenance of a political democracy. He believed free access to education as a democratic right (Rasmussen, 1989). This is where the educational component of the land-grant universities was developed.

The next act that changed the original mission was the Hatch Act of 1887. This act provided the funds for the establishment of the agricultural experiment stations. The Act that brought the research to the people was the Smith-Lever Act in 1914. Through this act the cooperative Extension service was born. The basis of the tripartite mission of these three Acts are really the foundation from which the Cooperative Extension Service is based today. Congress has modified, expanded upon and reaffirmed the land-grant charter many times and today we still have federal support of the land-grant universities. Today the land-grant institutions in research institutions have grown enormously diverse and complex and are vastly different from the land-grant based institutions they once were. Agriculture still plays a key role in many of these institutions but there are other interests and pressures at work that may change their role. Through it all, the primary role of the land-grant university has been to disseminate information. As the role changes, so to does the technology and the ability of Extension serves to the people through personal interaction and technology.

Early Information Transfer

The land-grant universities were intended to support the rural community by bringing research and technology to the people. Each state university followed it's own path to becoming a land-grant university. In Oregon, the first Agricultural Experiment Station was built in 1888 and the first Station Bulletin was published in 1889. The first Station Bulletin was the very beginning of the information transfer process to the community. At this time the Station really only served the Willamette Valley. Communications to the farmers were station publications that covered subjects such as the problems of raising hogs, controlling weeds, irrigating pastureland, improving soils,

selecting the right varieties and constructing buildings (Oregon State University, 1990). The early publications contained both descriptive and experimental information and were written primarily to answer letters or queries from farmers. In the early 1890's, farmers' institutes were held around the western parts of the state. The farmers' institutes brought some of the workers directly in contact with the farmers and growers themselves. This is the first indication that the agriculture experiment stations would soon be forming the Extension agent as a mobile information broker. The stations were strategically located throughout a state so that the rural community could have access to the science available at the time. By the 1900's, officials of the Experiment Station's were discovering that they needed to develop a way to work with the farmers and their families in their homes. The first Branch Station was a result of the federal relationship requiring that the Experiment Station serve all of the state. So in 1901 the first Branch Station was established in northeast Oregon. In the early years, the stations were there to help improve agricultural results. With this success, they soon became inundated with requests from farmers for information. (Oregon State University, 1990)

With the Smith-Lever act of 1914 the real agricultural Extension agent was sent out to help the rural community. There are, in fact, county agents, youth clubs and specialists all making up the agricultural Extension agency network. The county agents' work was to teach farmers how to increase agricultural production as well as educational work and purchasing and marketing. They were the field agents who taught the farmers how to improve their farms by bringing the latest techniques to the rural community. The youth clubs helped with the family life of the rural communities by bringing different projects that became popular with all members of the family. Specialist were connected

to the agricultural colleges and helped with the creation of new technology and research. The program was well under way and, though it has changed some since its conception, it's role is almost the same.

The Changing Face of Extension

Today Extension is serving both rural and urban residents through horticultural, urban gardening, family economics, nutrition, and 4-H programs. The noncommercial horticultural programs are can be financed in a number of ways. The work is mainly done by volunteers and the support is often through the county. Where it is not, Congress has earmarked money to be set aside for these programs. This has led some farm organizations to oppose these programs or to suggest that the rural problems be given precedence. This vision has been gradually changing through the years as the farming community changes from the rural small farm to the larger corporate farm. In Taking the University to the People, Rasmussen states, "But since the work is funded by all of the public, it will not be workable in the future to treat rural and urban populations unequally." (Rasmussen, 1989) Some land-grant universities are changing and exploring a changing role in their mission as Extension for predominantly agriculture purposes (McDowell 2000 }). In this same time period, Extension was looking at how people seek information to learn how Extension could better serve the public (Pounds, 1985). The study that Pounds did in 1985 was used to help Extension specialists at Iowa State University to serve their people. The study concluded that Extension needed to get more information out to professionals and businesses. She also did a study on the types of media that the people used to get their information. The study showed that newspapers, magazines and the television were used the most by people seeking information.

Extension has historically relied on person to person interaction, printed information pamphlets and the telephone. The age of information is changing to be the age of communication. The telephone, computer and the Internet are allowing information to be exchanged in real time over long distances. This has again forced Extension to take a look at both the organization and technology that it has used in the past (Ezell, 1989). In her article, Ezell discusses how the availability of new technologies and changes in information processing are causing some Extension leaders to look ahead so they will still have a function in a global digital environment.

<div align="center">Extension in the Digital age</div>

A study on Extension field staff and on how they find and utilize information indicated that they were still using print sources more then electronic sources. This study which took place in 1991, found that the top three information sources used by these agents were Extension publications, Extension specialists and personal files. The authors expected this to be true and also indicated that their lack of technological know how and the lack of technological support could become a problem in the future. It should also be noted that the agents in this study did not use libraries as sources for information (Shih & Evans, 1991). The main reason stated for the lack of use of the electronic sources were satellite problems, user friendliness, and the lack of field level information. Some of the current technologies that are changing Extensions are the convergence of communications, computers and media through the computer and digital technology. Networks can now be nationwide, if not global, and bring together voice, data and video to the rural Extension agent. In Oregon, digital communication technology is being used to bring the members of the Ocean Policy Advisory Council (OPAC) together in a virtual

community using a computer network called OPACNET (DeYoung, Harris, and Larson, 1995). The creation of this network brought the community together and allowed the users to utilize international databases and information to develop a Territorial Sea Management Plan.

Purdue University's Agricultural and Safety Health Resource Guide has been published since 1990 as part of the Rural Indiana Safer Kids Project (Freeman, et. al., 1997). As the Extension became more financially restricted they sought another way to supply the educational materials developed in the program. The entire safety guide was placed on-line in 1995 and has been used by the Cooperative Extension staff, educators and the volunteer leaders as it was intended to. The Extension agents did indicate that the Internet was still to expensive for them to access the page frequently but felt that as the price for Internet service dropped the usage would increase.

Training of Extension agents is another way that technology is being used to lower cost associated with agent instruction. The agents are able to take classes remotely from their site and most agreed that the quality of education was similar to that of face to face interaction (Lippert, et. al., 1998). One of the best examples of digital Extension as an empowerment for the rural community is that of Washington State University's Center to Bridge the Digital Divide. Washington State has the infrastructure and personnel to deliver educational programs throughout the state. With the help this network and the incorporation of a number of existing Cooperative Extension assets, the university has developed a nationally recognized community network (OUTREACH SYSTEM 2002).

Cooperation between land-grant universities also exists. The University of California, Davis, Oregon State University, Michigan State University, Cornell

University and the University of Idaho have cooperated to bring EXTOXNET on-line. EXTOXNET is the Extension TOXicology NETwork (EXTOXNET, 2002) and the web page states, "Some of the goals of EXTOXNET are to stimulate dialog on toxicology issues, develop and make available information relevant to Extension toxicology, and facilitate the exchange of toxicology-related information in electronic form, accessible to all with access to the Internet. The EXTOXNET InfoBase is accessible via the World Wide Web (WWW)." There are many of examples of Extension services going on-line. Extension mission is still getting new information to the people but technology is changing how that information dissemination is being transferred.

<p style="text-align:center">Libraries and Extension</p>

Libraries in land-grant institutions have often worked with Extension but there is no real joint effort on either part to become cooperative partners. Extension as disseminators of information should be involved with libraries. Libraries also can learn from the Extension experience. The National Agricultural Library's (NAL) mission is to ensure and embrace access to agricultural information for a better quality of life. Historically it has been partnered with the land grant institutions through Cooperative Extension. In the Report prepared by Beth Sandore, AGRICOLA Across The Internet—End User Needs, the point is made that the technology for Internet access is in part for the Cooperative Extension Service (Sandore, 1994). The Federal Government and Extension are tied together through the NAL. It seems that each university library and Extension would benefit from such a partnership too. Another cooperative effort between the land-grant universities and the NAL is AgNIC which is a guide to quality agricultural information on the Internet (Gardner, 2000). This is another NAL effort and

utilizes Extension experts at the various land-grant institutions to help with the virtual reference desk that is a part of the AgNIC effort.

At Oregon State University in 1996 the Extended Library Service Coordinator et. al. came up with the idea for regional training of Extension agents to help them with the latest technology available to them (Avery, 1997). The idea was to bring librarians to the Extension agents and train them at a few regional sites instead of having them come to Corvallis or for the librarians to travel to each Extension office. This kind of training will become more important as Internet resources become more readily available to the Extension agent at remote sites.

Another way to help Extension disseminate information is to use the public library system. The infrastructure is already set up for the public to have a place to go to get information. If the libraries are able to get the Internet connections that most rural libraries will have in the future it seems likely that Extension could partner with them in some kind of network. This option may become more agreeable as rural areas and Extension lose funding. There are successful projects using libraries as outlets for information in Massachusetts, and the formation of the Intermountain Community Learning and Information Services (ICLIS) project in Wyoming, Utah, Montana and Colorado (Pinkerton, 1993). The ICLIS is a network of cooperative links between Extension and local libraries as well as other organizations.

The role of Academic Research Libraries (ARL)in Extension and Outreach is also becoming apparent. Universities are trying to let the public know how research in higher education contributes to significant public benefits. In a response to a growing concern that traditional funds will become harder to come by, many academic libraries are

expanding their role as outreach to cultivate new advocates external to the universities'

traditional supporters or clientele (SPEC Kit 233, 2002). SPEC Kits put out by the ARL

are survey resources that libraries interested in learning more about a particular evolving

concept can use for their own institutions mission or goals. This kit covers the survey

results that were used to determine how ARL libraries are participating in extension /

outreach through three objectives: identify the level of involvement; determine the types

of outreach service; ascertain the impact on the library. A secondary goal was to identify

any major issues or trends related to extension / outreach. Libraries and Extension do

have a history of working together and it seems that more cooperation is developing all

the time. It is apparent that the future of both Extension and libraries is going to become

more digitally based. Whether the two public service institutions decide to cooperate and

work together will only be determined by the future.

<center>The Future of Extension</center>

Can we use digital reference to bring rural communities together? How would

online chat work for communities with similar interests and needs be able to talk to each

other in real time? Interconnected minds would be able to work out more of their related

problems. It seems that the future of Extension will need to be on-line if it is going to

survive. With the amount of money available for Extension, university libraries and

public libraries getting more restricted and harder to come by each year, it seems logical

that formation of networks would be a viable option. By cooperating and forming virtual

communities through the use of Internet technology, Extension and university libraries

could cooperate and bring the information to the people together. Technology, research

and education all lie at the heart of the land-grant university and Extensions role to the

people. With more cooperation between the libraries and Extension both missions statements could be met.

Conclusion

Digital libraries will help blur the distinction between laboratory, classroom, library, and the research teaching and outreach programs of the land-grant university. With the lessons and experience behind Cooperative Extension in taking the information to the people from its conception, Extension has an additional role to play in this digital age. Libraries and Extension are historically both institutions that collect, organize, and disseminate information. Libraries have in the past been the store houses of knowledge that the people went to when they needed information. Extension agents went to the people with their knowledge and experience. Today, that distinction may be changing as digitization and electronic transfer of information blurs the boundaries between the walls of the library and the fields of Extension. In the future the two may become like one, both together but still separate in their missions as disseminators of knowledge.

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