

Re: Distance Learning Class in Transistor Theory

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- *From:* "Gary Schnabl" <LivernoisYards@xxxxxxxxxxx>
 - *Date:* Sun, 22 Jan 2006 03:20:39 -0500
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"Gary Schnabl" <LivernoisYards@xxxxxxxxxxx> wrote in message
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>

> "Joseph2k" <joseph2k@xxxxxxxxxxx> wrote in message

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>> Where to begin? MIT is trying to place its entire curriculum (all
>> fields)

>> on the internet for distance learning. University of Wyoming has been

>> developing distance learning curriculum for over a decade. University Of

>> Colorado is a player also. Capella University is all distance learning

>> (no

>> physical campus). Even america's ivy league schools (Prudue, Harvard,

>> Princeton) are getting in on it. United States Armed Forces Institute

>> (USAFI) was doing it my phymail in the 1960's and 1970's and may well be

>> doing it (though electronically) still. It is not a question of "Who is

>> doing it?" but of "Who is not doing it?".

>> --

>> JosephKK

>

> The world-wide mail-order USAFI courses were administered by the

> University of Wisconsin Extension in Madison until the military

> discontinued the program in the 1970s. The entire distribution operation

> was located in the basement of a failing strip mall - Park Plaza on South

> Park Street. I toured the basement after the mall went south. No much

> there but a fork-lift...

The following is a (rather lengthy) report on DX education at UW:

<http://www.uwex.edu/disted/gooch.htm>

They Blazed the Trail for Distance Education

by James Gooch

Last Update: November 11, 1998

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In this paper on trends in continuing education the author, who was formerly program information director for outreach services at the University of Wisconsin in Madison, reviews delivery systems that have made distance education possible and practical. The review begins with the introduction of correspondence study classes for off-campus students in 1891 and extends to today's computerized and satellite-delivered systems that make extension classes available to adult students worldwide.

Today's much discussed distance education movement is not a new phenomenon. The University of Wisconsin and other major universities have utilized correspondence study courses since the 1890s to provide off-campus learning opportunities for millions of adults.

During the 1960s, more than 70 years after the United States borrowed from Oxford and Cambridge Universities the concept of offering extension classes, a team of Wisconsin Extension consultants helped Great Britain develop off-campus teaching systems needed to establish the British Open University. It was also during the 1960s that UW Madison and University Extension specialists helped Kenya improve its schools by using a combination of broadcast and correspondence study systems — another example of distance education!

During the 1980s and early 1990s several factors focused new attention on distance education. An increasing number of adults found they needed refresher courses to keep up with the knowledge explosion and many preferred not to return to campus. Computers and space satellites had also made it practical for universities to package and deliver adult education programs to students thousands of miles from the campuses.

Outreach educators with the most experience in utilizing a variety of delivery systems were in the best position to apply the new space-age technology. To appreciate this fact, one need only to look at the telecommunications system Wisconsin uses to deliver extensions programs today, then step back in time and view the state's achievements in public broadcasting, in developing home study courses, and the innovative application of telephone networks for offering university classes away from campus.

Also of interest is the methods Wisconsin used to package and market extension programs and the use of a special team to help campus faculty utilize media for teaching continuing education classes.

Before we dig up the deep taproots that made the University of Wisconsin famous as a distance education institution, let's look at some of the people who led the University into the information age. Luke Lamb was lured from public broadcasting in Oregon in 1968 to head University Extension's communications division which included broadcast and print media services, photo media, and audio visual support. Ron Bornstein directed his WHA radio and television units and helped establish Wisconsin as a national pacesetter in public broadcasting. Bornstein would later take a leave to help rescue an

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ailing National Public Radio system and then return to serve as a UW System senior vice president.

An Extension Program and Staff Development unit also helped implement program delivery methods during the 1965–1982 period. This unit was headed by Patrick Boyle who was later to become chancellor of UW–Extension.

Extension went through a major reorganization in 1982 when most outreach programming was assigned to UW System campuses. Lamb continued to direct a telecommunications team that supported outreach programming at the UW System's 13 degree–granting universities and 13 two–year centers.

Now let's look at the birth of some of the program delivery systems that ushered in today's distance education movement.

Pioneers in Radio and Television Broadcasting

Doug Bradley describes the birth of WHA Radio in the following excerpt from a 1992 feature on the station's 75th anniversary:

"Terry is wasting his time with a plaything," whispered colleagues of UW physics professor Earle M. Terry in 1917. Undaunted, Terry and his students transmitted music and voice with the help of handmade vacuum tubes, and Station 9XM started experimental radio broadcasts from Science Hall that year. Then in January of 1922, 9XM was granted a new license and call letters — WHA. And in the decades to follow, WHA helped spark a run of innovations that would change public broadcasting forever.

Wisconsin citizens have always considered WHA Radio to be the friendly open door to their University, its faculty and knowledge base. The station has earned many awards. In 1937 it was presented the first of 50 Ohio State awards. The station has also won many Peabody and Gabriel awards.

Since its early beginnings with "School of the Air", WHA Radio has continued to broadcast educational courses in a variety of formats. "College of the Air" and later "University of the Air" offered listeners a chance to hear UW professors discuss a wide array of topics. Since creation of the UW System in 1971, WHA Radio has worked with all System campuses to produce audio credit courses, many of which have been distributed nationally. As of the late 1980s, 200 faculty were appearing on informational and WHA short course programs each year, and many more participated in popular "call-in" shows.

As of 1992, WHA Radio, licensed to the UW System, was an AM service broadcasting news and information to a 16–county area of south central Wisconsin. WERN–FM, licensed to the Station Educational Communications Board (ECB), was providing music and arts programming to the same listening area. Both services were also being heard across the state as part of Wisconsin Public Radio, a service jointly offered by UW–Extension and ECB.

WHA–TV began broadcasting in 1952 from improvised studios in the old

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Chemical Engineering Building on the Madison campus. After starting with a schedule of only two and a half hours of programming daily to a very small audience, WHA-TV, as of 1987, was broadcasting 18 hours a day to an 18-county area in south central Wisconsin, northern Illinois and eastern Iowa. The station had become a major producer of local, statewide and national general educational programming, focusing on cultural, performing arts, sports, and public affairs themes. Many of WHA-TV's productions were also being carried throughout Wisconsin over a Wisconsin Public Television network.

Since its early developmental years, WHA-Television worked with UW-Madison and other System campus faculty to make credit and non-credit instruction and community improvement services available to citizens throughout the state and nation. A review of awards earned indicates the station met its goals. In 1969 WHA-TV became the nation's first public television station to receive an "Emmy" from the National Academy of Television Arts and Sciences. The honor went to the film, "Pretty Soon Runs Out," part of the series "The Inner Core: City Within a City," which featured urban neighborhoods in Milwaukee. Other honors have included Gabriel Awards, the Dupont-Columbia Award for Broadcast Journalism, Ohio State and Chicago Film Festival Awards. WHA-TV has ranked among the top five public broadcasting stations in viewership since 1975.

As of 1991, telecourses were being offered to adult viewers on both WHA-TV and WHA Cable 33, which is a service of WHA-TV. WHA-TV has continued to offer credit and non-credit courses developed by UW System campuses and from the state's Vocational, Technical, and Adult Education (VTAE) system. The station also cooperates with the Educational Communications Board to offer Instructional Television (ITV) and provide daytime learning opportunities for elementary and high school students statewide.

As of 1994, many UW-Madison and other UW System outreach programmers were effectively utilizing UW-Extension's expanded telecommunications services. The UW-Madison College of Engineering was videotaping courses which made it possible to earn credits towards a master's degree without going to campus. Several campus colleges had joined with the UW-Madison outreach office, Extension Telecommunications Division, and the State Educational Communications Board to purchase a satellite uplink so the university could deliver instruction worldwide. The UW-Madison colleges of education and engineering and the UW hospital were also using a form of televised microwave delivery known as Instructional Television Fixed Service (ITFS) to bring programs to professionals at their work sites.

Independent (correspondence) Study

Although today's sophisticated program delivery systems are dramatic, it's important to review the early beginnings of correspondence study since home study is still combined with the new telecommunications services to provide a package for distance learning. Correspondence study has been an important component of the University of Wisconsin outreach program delivery system since 1891.

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In 1906 University of Wisconsin President Charles Van Hise asked Henry Legler, secretary of the State Library Commission, to act temporarily as Extension secretary, without extra compensation. He also appointed two full-time University staff members to carry out the chief work of Extension—Frank Hutchins as field organizer, and W. H. Lighty as director of correspondence work.

In 1907, Louis E. Reber took office as Extension's first Director and under his leadership, along with that of Hutchins and Lighty, the University Extension mechanism began to take shape.

Lighty continued in office until 1937 and is given much credit for developing a strong and stable correspondence study unit and for utilizing the UW pioneer radio station, WHA, for educational purposes. UW-Madison's 125th year report, published in 1975, states that correspondence study continued to be the backbone of Extension in the late 1930s, although after Lighty's retirement in 1937 a new director was not named until the early 1940s.

A 1989 history of Continuing Education in Engineering illustrates how some of the larger outreach departments have utilized "home study" courses since early in the century and how faculty members have taken advantage of new technology to better serve their correspondence study students.

Excerpts from the 1989 engineering outreach report follow:

"George A. Hool, who headed Extension's Department of Civil and Structural Engineering from 1908 to 1927, was a prolific writer. He and several other extension engineers contributed their accumulated experience to the development of correspondence courses. By 1911, the two largest units in the correspondence study department were engineering, with seven staff members, and business administration, with three staff members devoting full-time working with home study students."

The 1989 report also quoted from a 1911 engineering extension department report which stated that:

"Those who would belittle correspondence study contrived chants such as:

Pooh! Pooh! Harvard!
Pooh! Pooh! Yale!
I got my education through the mail!"

It was apparent that the early extension engineering students who completed correspondence courses were among the best members of university classes when they came to campus. As so-called factory or job training correspondence courses grew in popularity, a movement to provide more comprehensive training developed, culminating with legislation in 1911 that provided for local "continuation schools" in cities of more than 5,000. Many of these schools later became part of the state's vocational education

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system.

Of the 18 correspondence course texts in use before World War I, 16 were engineering-related. Advertising for these courses invited road laborers, foremen, inspectors, high commissioners, engineers, and government officials to enroll and take advantage of the benefits of correspondence study, including increased chances for promotion. Some of the 1911 correspondence study ads pointed to Abe Lincoln, Thomas Edison and Henry Ford as examples of men who had succeeded via the home study route.

During World War II, University Extension staff members shifted a large part of their efforts to war-related projects. The United States Armed Forces Institute (USAFI), established in Madison in 1942 with funding from the U. S. Department of Defense, became an integral part of the Extension correspondence study operation.

L. H. Adolfson, named correspondence study director in 1944 and later dean of University Extension, continued the development of strong academic departments to support credit programs in correspondence study, as well as at the emerging University of Wisconsin two-year study centers.

The 1958 University Extension annual report indicated the important role played by the correspondence study unit as it continued to offer university and high school courses and was also developing courses for more than 250,000 service men and women continuing their education through the USAFI contract.

Under a "What it does" heading, the 1958 report stated that the University of Wisconsin Correspondence Study unit:

Offers nearly 450 courses in nearly 150 areas of learning

Teaches 12,000 active students annually

Gives personal instruction on more than 80,000 written assignments

Cooperates with the Foreign Service Institute of the U. S. Dept. of State to teach Immigration Law & Visa Operations to foreign service officers

And contracts with the United States Armed Forces Institute (USAFI) to develop and teach 200 correspondence courses on the high school and university level and provide instruction for over 300,000 USAFI assignments
Indicating that the unit was an early innovator in making educational use of film and television, extension leaders reported in 1958 that their Correspondence Study staff had developed and produced 12 TV kinescopes on American Government at the request of training officers in the Department of Defense and also continued to offer TV-correspondence study courses over commercial TV channels in the State.

The Independent Study unit (the name of the unit was changed in 1965) has remained among the top five university correspondence study departments in

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the nation.

The enrollment has remained relatively constant over the years, excluding the 1942–1974 period when home study courses were provided for thousands of members of the armed services. (The U.S. Defense Department disbanded the USAFI unit in 1974.) A 1980–81 report by Independent Study Director Donald Kaiser showed an enrollment total of 10,327, with 5,068 enrolled for university credit, 3,463 for continuing education credit, and 1,796 enrolled for high school credits. It was during the 1980s that Kaiser worked with Extension and UW–Madison faculty and Extension media specialists to develop audio–print packages to enhance correspondence study activity. This Annenberg/Corporation for Public Broadcasting project resulted in special home–study packets utilized in other states, as well as Wisconsin. A 1993 report by Independent Study director Sylvia Rose showed correspondence course enrollments had increased to 11,908, with 7,889 enrolled for university credit, 2,020 for continuing education credit, and 1,688 for high school credit.

As indicated earlier, the extension engineering department was active in correspondence study programming from 1906 through the early 1960s. However, the introduction of a new engineering professional development degree program in 1965 added a new dimension for independent study courses since the post–baccalaureate program was designed to permit engineers to continue their education without leaving their home communities. The engineering department also led the way during the 1980s in supplanting printed study guides with new program delivery systems and techniques such as a portable videotape production studio, videocassette courses, and teleconferencing courses — including some that are satellite delivered to multiple locations.

To supplement other home study options, departments such as pharmacy and nursing also started in the 1960s to use audio cassette packets made up of notebooks containing recorded instruction, along with printed study guides. Extension Pharmacy Department head Melvin Weinswig reported in the October, 1978, issue of Extension News that taped continuing education courses had been used by more than 15,000 pharmacists and allied health professionals nationwide during the previous five years. Some inserted the cassettes into their car's tape decks so they could listen to the latest lesson while enroute to the office.

World's Biggest Partyline Creates Statewide Classroom

It was in November of 1965 when a telephone network was introduced to make continuing education programs available to Wisconsin physicians in their home communities. Dr. Thomas C. Meyer of the UW Continuing Medical Education department at Madison had earlier contacted Dean Theodore Shannon of the University Extension Division to appeal for such a service to save travel time for physicians.

When the service was initiated in 1965, a telephone company operator in Madison activated the network by simply calling each location 15 minutes

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before program time. Participants used standard desktop speaker phones to hear the programs and ask questions or make comments.

Program expansion soon made the use of conventional telephone lines and relying on operator assistance inadequate. In early 1966, UW–Extension leased a network of private, or dedicated, telephone lines from the Wisconsin Telephone Company. This provided exclusive educational use and 24–hour accessibility for Extension's new Educational Telephone Network (ETN).

When the UW department of postgraduate medical education initiated use of the "telephone circuit" in 1965, the following objectives were listed:

Offer instruction of the highest caliber and at a reasonable cost

Incorporate topics directly applicable to clinical practice

Reduce substantially the amount of time a physician must be absent from the responsibilities of a practice in order to participate in a continuing education program

Somewhat similar goals could be stated 23 years later (in 1988) when 346 programs were designed to reach 23,250 doctors, engineers, nurses, lawyers, farmers, business people, and social workers over the Educational Teleconference Network. (Although still utilizing the telephone system, the name of the Educational Telephone Network had been changed to Educational Teleconference Network.) UW continuing education programs accounted for just under 50 percent of these 1988 ETN programs. Nearly 17 percent were used for UW credit courses, 11 percent for public service announcements, and 24 percent were programs used by university and state agency staff for administrative communications.

In addition to the large Educational Teleconference Network, UW–Extension's Instructional Communications System (ICS) was by 1988 providing production and duplication services that ranged from studio and editing services, to duplicating of more than 80,000 audio cassettes. These special services were partly responsible for changing the unit's name to ICS during the 1980s. But the original educational telephone network, often referred to as "ETN, the world's biggest party line," has remained a key program delivery component of the unit.

By 1989, the 23rd year that continuing education, credit, and public service programs were delivered to Wisconsin's 72 counties via ETN, the network connected 169 dedicated sites and five fixed dial–up sites.

Forty–seven UW departments, state agencies, and nonprofit groups sponsored 1,949 hours of ETN programming during the 1988–89 fiscal year. Largest ETN users during that year were 4–H & Youth Development, 194 hours; Family Living Education, 172 hours; Library & Information Studies, UW–Madison, 143 hours; and Allied Health, UW–Madison, 120 hours.

Many refinements and new technologies were added to the basic ETN system by

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1991. Managed by Extension's Instructional Communications systems, these services included:

WisLine, a telephone conference call service that could link from three to 68 locations, anywhere in the world

WisView, a distance education delivery system combining audio teleconferencing with a computer-based display of charts, text, and color pictures

Videoconferencing and an electronic bulletin board that provides information on upcoming national satellite videoconferences

Audio production and duplicating services which include narrators, studios, editing, mixing, audio cassette, cartridge, and reel-to-reel duplications

Electronic publishing, an "audiotext" service providing horticultural, food preservation, and food safety information accessible from a telephone to consumers in metropolitan areas

Packaging and Marketing

Extension Programs

How could Extension and campus faculty best utilize available program delivery and media support systems to assure success of their outreach classes and services?

What administrative and support arrangement would be most effective in helping outreach faculty "package and market" their programs? And how could media managers and marketing specialists best help instructors reach and serve their adult students, without infringing on the tenured faculty's responsibility for determining course offerings and curricula?

These issues had long challenged outreach administrators and staff. A 1979 service needs survey conducted by the UW-Extension Office of Program Information indicated great variation in the value which extension administrators, programming faculty, and county Extension agents placed on direct mail, newspaper features, and broadcast media announcements for promoting the institution's image and program enrollments.

The 100 programming faculty, 60 county agents, and 12 Extension administrators responding to the survey showed that 75 percent of the administrators looked to media coverage to enhance the image of their institution. In contrast, more than 50 percent of the programming faculty were most interested in the impact which publicity and promotion had on enrollments in their classes and programs.

When asked for their judgment as to the most effective methods for announcing programs or services, 73 percent of the programming faculty rated direct mail first, 27 percent chose newspapers or broadcast announcements.

The survey indicated that large Extension programming departments, such as

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Engineering and The Management Institute, were less dependent on media announcements since faculty planned programs years in advance and had well-defined client groups that could be reached by direct mail. Departments offering programs on social issues, health concerns, communications, and liberal studies were most dependent on print and broadcast media support for enrollments. Many of their programs had been developed to meet a new and timely public concern or interest and effective direct mail lists were difficult to assemble and maintain.

It should be noted that until 1965, when several UW Madison campus outreach units were transferred into a free-standing University Extension institution, the University's extension services were served by two independent media support offices. The UW Agricultural Journalism Department provided news and publications support for programs in agriculture, home economics, and 4-H and youth development. A separate media office publicized other extension programs plus learning opportunities at the University's two-year centers.

After the 1965 creation of a single large statewide outreach unit, Agricultural Journalism specialists continued to provide media support for all Cooperative Extension Service programming. A University Extension Program Information Office produced publicity and publications to support programs in business, education, engineering, law, health care, communications, liberal studies and the arts, and edited Extension News, an institutional newsletter published by the University Extension Chancellor. The roles of these two media support units were to change again when a 1982 decision was made to return most of extension programming responsibility to the UW System campuses. The Agricultural Journalism Department and UW-Madison continued to support the Cooperative Extension programs, but most other extension programming was promoted by the various System campus news and publications offices.

Testing an Articulated Instructional Media Model

A 1964-69 experimental effort called the Articulated Instructional Media (AIM) program didn't immediately produce dramatic new program packaging and delivery formulas. This Carnegie-funded project is worth a review, however, since it identified some of the challenges in putting together a team to help outreach faculty use different classroom teaching techniques, radio and television, correspondence study, and special audio-visuals to reach and teach adult students. There is also reason to believe that the AIM program eventually had an impact on the ways in which outreach programming faculty utilized new technology to promote and improve what has become known as "distance education." As will be noted later, the program also aided system and campus leaders in establishing other programs for off-campus students.

The AIM project was first proposed and co-directed by Education Professor Charles A. Wedemeyer and Journalism and Mass Communications Professor Clay Schoenfeld. Liberal Studies Professor Robert E. Najem later joined Wedemeyer to co-manage AIM. A stated purpose was "To effect change at every level of

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the academic hierarchy, in every process dealing with the adult part-time learner, so the very special learning needs of such off-campus students will be met."

The following observations are from a term paper written by Sylvia Rose of UW-Extension's Independent Study unit in 1983.

The AIM experiment was based on the assumptions that the articulated instruction approach was necessary so that more people could continue their education, and that an articulated program would conserve funds and faculty time, and broaden and enrich learning opportunities.

It was assumed that a non-resident student could earn credits that would compare favorably with those accumulated by a resident student. Given faculty and administrative support, it was further assumed that a non-resident student could earn a degree in a special major program. So, in essence, AIM not only offered individual courses but was also designed to be an off-campus degree program.

Structurally, AIM had its own administrative staff and was introduced in 1964 as an all-university activity, housed in Extension but reporting directly to the UW central administration in Madison.

After a year of operation, the staff found that AIM students were not progressing as rapidly as first expected. In making an analysis of the existing program (largely correspondence instruction) the staff felt that the policy of allowing the students complete freedom to move at a self-determined pace without any constraints was unrealistic. Therefore, a more directed and structured format was established. Although students were mature, motivated to learn, and willing to discipline themselves, they were wary of exposing themselves to criticism. They lacked confidence in themselves as learners in the new methods of learning. Despite these facts, the AIM dropout rate was consistently below 10 percent, due to careful screening, counseling, testing, and interviewing.

On July 1, 1966, AIM officially became part of University Extension, a move that considerably altered the program, according to the following statement issued three years later by the project co-directors Wedemeyer and Najem.

Initially the program explored ways of offering a credit program to highly motivated, non-resident students in imaginative new ways. Once the program became a part of the University Extension, however, it had to adjust to and live in a more constraining environment. The freedom of experimental exploration was seriously curtailed.

Although there were 150 AIM students at the time, it became apparent in 1966 that, with a large part of the Carnegie grant expended, AIM would have to narrow its objectives to offering only freshman and sophomore courses, and place more emphasis on reaching students via radio, television, and telephone. The focus was also shifted from innovative campus-based courses, which had been modified for off-campus adults, to courses that had been designed especially for the independent adult learner by Extension's academic departments.

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AIM experienced some successes and numerous problems before the project was terminated in 1969. "On the plus side," AIM's co-director Najem recalled during a 1992 interview, "many of today's extension programmers are now using the 'high tech' communications systems that were promoted by the AIM staff to introduce distance learning." He also felt that the AIM concept and many of its program delivery techniques were later adapted by UW System and campus leaders to establish Extended Degree programs for off-campus students.

AIM concepts were also adapted by educators in England and Australia. Wedemeyer spent much time consulting with educators in both countries and his writings became a base for many concepts of the Open University in the United Kingdom during the 1960s.

Reviewing challenges and problems, Najem said the AIM program was made less effective when transferred from UW central administration to University Extension in 1966. He thought a great flaw of AIM was the assumption that courses developed for campus classrooms could be used for individual adult students. It proved to be difficult to adapt multimedia packages designed for campus use to the teaching packages needed for the individual learner. Najem found that Extension departments resisted developing special courses for these individual students, because of the high cost of necessary slides, tapes, and media equipment.

Another problem existed, recalled Najem, because Extension offered no degrees and therefore had no system for applying earned credits, as did the UW campuses. "We even faced some antagonism from some UW administrators who mistakenly felt the AIM concept might reduce campus enrollments," Najem remembered.

The AIM project may be reviewed by future outreach leaders looking for "right and wrong" ways to assist extension programmers in carrying out their mission. The experiment is credited with helping establish guidelines for some continuing education program fees and for identifying the type of counseling needed to best serve the adult learner.

A major result of the project, however, may have been to demonstrate how the academic community and media support staff can best work together to improve adult education programming. This outcome is discussed in a summary section from the Wedemeyer and Najem 1969 AIM report.

After pointing out that AIM program direction was handled by tenured faculty while program implementation was handled by media and technology specialists, Wedemeyer and Najem concluded there was a need for the two groups to develop more of a team effort.

They concluded that:

"This advocacy relationship (between media specialists and faculty) can even have advantages. If both groups are competent, the dialogues that result

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provide an example of how a University community should function—probing the purposes of higher education, the nature of program content, the characteristics of learners, the relevancy of learning experiences, the means of teaching, the processes of learning, and the validity of tested results. In such a give-and-take atmosphere, the quality of the performance of the media and technology specialists is particularly important. The media specialists must make suggestions, probe, demonstrate, and challenge all along the line. If they feel inferior they will not follow through adequately and will yield where they should not. However, if they are inflexible, they may alienate the academic community."

Experiences gained in this team approach to packaging and delivering outreach programs served the University well during the 1970s and 1980s. Many academic departments at the UW System campuses had appointed outreach specialists to help faculty develop programs and services for so-called non-traditional adult students. And by 1990, faculty and staff were utilizing old and proven delivery systems, plus computerized and satellite-delivered classes, as they entered what was being referred to as the "distance education" era. Of course the engineering and business faculty at UW-Madison could recall with pride that their schools had started the "distance education" movement early in the century by utilizing a dynamic correspondence study unit.

When Patrick Boyle, a forceful advocate for extension programming, retired as UW-Extension Chancellor in August 1993 he was replaced by distance education proponent Donald Hanna.

UW System President Katharine Lyall said Hanna was selected in part because of his expertise in using satellite technology and telecommunications for distance education services at Washington State University.

A governor's commission looking at budgets and roles of governmental and educational agencies issued a 1995 report which recommended that the UW take a critical look at the scope and expenditures of its extension services.

Providing an expanded distance education system continued to be a major assignment for UW-Extension, however. The Governor's budget proposal issued in February 1995 reflected this challenge since it included funds for more space and equipment in Madison for the additional staff and technology needed to provide distance education services.

As was the case with early home study services, UW System campus and Extension leaders were proceeding with caution to assure that the new expanding distance education networks utilized campus resources and didn't replace critical campus contacts between faculty and students. The existing distance education systems were already being utilized by UW System campuses, however, as well as an increasing number of Wisconsin public schools and vocational, technical, and adult education centers.

URL: <http://www.uwex.edu/disted/gooch.htm>

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- **References:**

- ◆ **Re: Distance Learning Class in Transistor Theory**

- ◇ *From:* Gary Schnabl

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