



LIFT FOR FLOOD VICTIM

U.S. Coast Guardsman lifts Mexican girl into Coast Guard helicopter as she and 16 others are rescued from farm near Matamoros, Mexico. Flooding Rio Grande river threatened their home. (AP Wirephoto)

A&M Scientists Don't Fit Generally-Accepted Image

The picture of the lonely scientist clutching a test tube in an obscure garret should be retired to the album. It was never very accurate, anyway.

The new view in research is the "interdisciplinary" approach. It's the teaming-up of scientists from different fields of study to solve a particular problem.

This approach is becoming more evident at universities throughout the United States, including Texas A&M, where it's being used on problems ranging from space capsules to statistics.

"Exhaustive studies have been made on what the federal government gets for its research dollar and they show it gets relatively little from individuals," says Harry Whitmore, director of Texas A&M's Space Technology Division which is heavily engaged in interdisciplinary projects.

SOMEWHERE between the concepts of "two heads are better than one" and "too many cooks spoil the soup," lies the payoff. The Manhattan Project, the team effort which built the first atomic bomb, is one example.

"Oddly," says Whitmore, "most universities are incapable of taking on these jobs because they aren't structured to do it."

In many cases—and this was once true at A&M—one scientific subject may be under research at a number of places on a campus with little communication among the separate researchers.

"Although it may jump traditional boundaries within universities, the process of unifying research is mandatory today," says Whitmore.

ONE EXAMPLE of interdisciplinary unification at A&M is work on "Project Themis," a program funded by the Department of Defense to discover better ways of design and management of processes and projects. "Optimi-

zation" is the work and both theoretical and "practical" disciplines are involved. Another part of "Project Themis" is a program of subjective weather forecasting for localized areas and here meteorologists team with statisticians and computer technologists to arrive at the answers.

If "optimization" sounds a little stuffy, consider a case in point where a research team picked an existing design of the tail of a well known airplane, reworked it using the figures for some new materials, and came up with a design which showed it could be made stronger or lighter.

NOT ONLY in the physical sciences does the interdisciplinary team approach seem to work well, but it appears the biological sciences are headed toward some form of unification.

This year, Texas A&M established a new Institute of Life Sciences which aims to bring together the various splintered disciplines of biology.

The institute's director, Dr. J. van Overbeek, declares: "Modern biology differs a great deal from the old biology, which was frag-

mented. Now, through molecular and cell biology, all disciplines come together."

For instance, hormones in both plants and animals are being studied side by side with the old distinctions between zoologist and botanist fading.

In one sense, the history of science shows that few great discoveries were truly individual. Einstein used the physical observations of Michelson and some of the mathematics of Lorenz in his theories.

"You can't take 15 professors and say 'Go do research,'" notes Whitmore. It requires the services of a person who may not be a specialist in any of the particular fields but who knows enough about each to act as a catalyst, or mediator to keep the effort from being splintered in 15 different directions.

Whitmore says it all adds up to this: It is probable that more knowledge has been gained in the past decade than in all the ages past. In the succeeding decades, the important discoveries are likely to be made by multi-specialist groups.

EG Profs Publish Problems Book

A basic problems book prepared by Texas A&M's Engineering Graphics Department has been published by the Addison Wesley Company of Reading, Mass.

Contributors include James H. Earle, Samuel H. Cleland, John P. Oliver, Lawrence E. Stark, Paul M. Mason, North E. Bardell and Michael P. Guerard.

Dr. Earle, associate professor in charge of engineering graphics, said the content is structured to serve as an introductory course in the general field of engineering. He noted emphasis is placed on utilization of graphics as a vital part of the creative process rather than merely as a communication medium.

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Office Of Continuing Education Covers Wide Area Of Courses

One of the busiest offices on campus serves adults and youths who are not seeking college credit. The Office of Continuing Education helps sponsor line up courses for groups of far-ranging size — from seven for an on-campus seminar to more than 100 for an annual 4-H Round-up.

Popularity of continuing education has grown through the years. Upwards of 75 conferences now attract as many as 10,000 persons annually. These figures do not include more than 100 conferences conducted off campus for as many as 5,000 persons.

Earliest records show A&M hosted 21 short courses in 1939 with 6,939 persons attending. But more than half that number attended a single get-together, the

Texas Farmers Short Course, a forerunner of today's 4-H Round-up.

PRIOR TO that time a number of short courses were staged, many of them no longer in existence. The Ice Manufacturers Association is one of the sessions which went the way of the wild goose.

Meetings today vary from the Texas Tennis School to supervisory courses, justices of the peace seminars and air pollution control workshops.

Actually, the Office of Continuing Education is only four years old, having been established in 1963 to fill a need cited by A&M's Century Study of 1962. That study called for a quality continuing education program which offers a service to a community or an individual to give convincing evidence of A&M's partnership in the welfare of Texans.

Philosophy of the program is to encourage meetings of educational and professional societies at Aggieland.

A BOON to regional meetings at A&M has been the installation of air-conditioning in dormitories, says Bill Hensel, coordinator of continuing education facilities. But air-conditioned dormitories also have helped push summer school enrollment up, creating a scheduling problem.

Hensel hires part-time help to aid conferences with registration, receipts, typing of name tags and selling luncheon tickets.

Poison Safety To Be Subject At Weed Study

James W. Hammond, industrial hygiene director for Humble Oil and Refining Company, Houston, will address an industrial weed control conference here Oct. 23-24. Hammond's topic, "Herbicides Safety and Toxicology," was announced by Dr. Wayne G. McCully, associate professor of safety science at A&M.

A registered professional engineer, Hammond is a past president of the Gulf Coast Section of the American Industrial Hygiene Association. He is a member of the Air Pollution Control Association, American Water Works Association and a former mayor of West University Place.

Hammond HAS a master's degree from Mississippi State University. He also is a diplomate of the American Academy of Environmental Engineers.

Dr. McCully said the conference will emphasize practical aspects of industrial weed control. Seminars are scheduled for selective weed control, soil sterilization and aquatic weeds and drainage ditches.

Another featured speaker will be Dr. F. Leonard Timmons, weeds investigation leader in aquatic weed control areas for the Agricultural Research Service, USDA, Plant Science Division, University of Wyoming. He will discuss the possibility of pollution of water with applied herbicides.

REPRESENTATIVES of chemical companies and formulators will describe industrial weed control products. Displays of products and equipment will be exhibited throughout the conference.

"Dealing with all sorts of people is the most interesting part of this job," Hensel commented. "We have all sorts of emergencies arise such as the need for projectors or sound equipment, but these problems are usually quickly solved by our personnel."

BA Conference Begins Oct. 22

A management seminar sponsored by the School of Business Administration is set here Oct. 22-28, announced W. E. Eckles, executive development programs director.

Eckles said the seminar is expected to attract approximately 30 executives from throughout the Southwest.

Guest speakers include William Oncken Jr., president, William Oncken Associates, New York City; Edward J. Green, president, Planning Dynamics Inc., Pittsburgh, Pa.; J. W. Miller, vice president, Employers Casualty Insurance Company, Dallas; and L. D. Collins, operations vice president, Central Power and Light Company, Corpus Christi.

Other speakers are Dr. Robert J. Potts, regional medical director, Mobil Oil company, Dallas; D. B. Campbell, former manager, Plastics Department, Sabine River Works, DuPont Inc., Orange; and Dr. J. P. Abbott, distinguished professor of English, Texas A&M.

Among topics are goal-oriented management, communications, organization, planning, decentralization and performance evaluation, decision making and establishment of effective controls.

Knebel, Holcomb Attend Seminar

Dr. Earl Knebel and John Holcomb of the Agricultural Education Department are in Chicago this week attending the National Seminar on Vocational-Technical Teacher Education.

The session will explore fresh approaches in the education of vocational-technical teachers who will be preparing students for new and changing occupations.

Knebel said seminar participants will analyze results of recent research, experimental programs, and new developments in teacher education.

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