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READOUT

Industrial Education and Technology Department
Western Kentucky University

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ENVIRONMENTAL SCIENCE AND TECHNOLOGY BUILDING

Pictured above is the Environmental Sciences and Technology Building, which will include space for the Industrial Education and Technology Department. It is under construction between State and Chestnut Streets next to Hardin Planetarium. The building will also house the departments of Agriculture, Geography and Geology, and Engineering Technology. Agriculture and IE & T will share the first and second floors.

Industrial Education and Technology will get about 22,000 square feet which will be used for several labs and all 20 offices of the department. The labs will be:

1. Developmental resources lab will be used primarily for seminars and workshops and will have extreme flexibility.
2. Plastics and plastics material evaluation lab will have equipment for use in plastic mold design and facilities for testing such things as shear strength and flow rates of plastic.
3. Thermo metals lab will include sand casting of iron and aluminum. It will also contain welding units, heat treating and forging.
4. Machine tool technology lab equipment will come from present metals lab with some additions. This lab will include a layout room, a metals identification and inspection room and an enclosed grinding area.
5. The metals technology lab will have basic metal working equipment and will include sheet metal.
6. The multiple activities lab will be a comprehensive general shop with much portable equipment for flexibility.

The building should be completed sometime in 1975 at a cost of approximately \$4 million.

The present main building will be renovated and will then house a drafting area, graphic arts and woods. Space in the Helm Library and the annex 2 (old Home Ec. Bldg.) will be vacated. Auto mechanics and electricity-electronics will remain in the Science and Technology Hall (old Training School Bldg.).

VIEWPOINTS*

A PHILOSOPHY OF INDUSTRIAL ARTS — ?

by Donald Redrup - Graduate Assistant

Since I am heavily slanted in the direction of Industrial Arts in terms of my professional preparation and concerns the gist of this article is Industrial Arts oriented and directed at Industrial Arts teacher majors rather than technology majors. So all of the prospective Industrial Arts teachers lend me your ears, because I am speaking of you.

It has been apparent to me for some time now that many of the Industrial Arts teacher majors lack an awfully important professional characteristic when they journey out into the field. Specifically, they seem to lack a basic philosophy of Industrial Arts, that line of thinking defining the ultimate purpose of our discipline. It is as if they never really thought about it or maybe never cared to think about it. Many of them have a fragmented or vague perception of what they feel it is all about, but not their own well thought out and organized body of convictions concerning what Industrial Arts is all about which could be construed as a philosophy.

It seems unfortunate that all Industrial Arts graduates don't leave Western with a personal line of thinking concerning the purpose of our discipline, but it is probably partly due to the fact that there is not an accepted philosophy on the purpose for Industrial Arts written in a book somewhere that we can go read, commit to memory, and with no muss, no fuss, have a philosophy. There just isn't any consensus on what Industrial Arts' purpose is, consequently it is important that each one of us personally weigh the arguments and information available and assimilate our own philosophy. You must ponder the objectives of Industrial Arts, look at the needs of the students in our school, evaluate the significance of industry in our society and from analysis of these factors forge your professional outlook towards Industrial Arts.

It is hard to conceive how a teacher in our field could formulate an Industrial Arts program without first having a philosophy concerning its overriding purpose. Think about it, how can one build a program to fulfill a purpose when you don't even know or at least have a well ordered perception of what that purpose is? I'm confident that there are many Industrial Arts programs now in existence that are "dead end programs", because they were formulated with little thought for purpose and consequently, if carefully scrutinized

have little or no purpose or justifiable rationale guiding them. Without getting any deeper into the subject of the relevancy of many Industrial Arts programs let's consider what happens when many of us go out into the field. We usually get out there and man we really learn the "nuts and bolts" of our profession, but never give much serious thought as to the purpose for it all. We just never developed our own philosophy concerning the purpose for Industrial Arts, consequently we simply perpetuate what we find in the school or wait for the administration to tell us what shape the Industrial Arts program should take. It seems sad to me that the principal or some other uninformed administrator should even need to begin to tell you what constitutes a viable program.

Let us for the moment arbitrarily separate the approaches to Industrial Arts programs into the following three categories, Traditional Approach, Traditional Innovative Approach and Progressive Approach. I have defined each one of these categories as follows:

Traditional Approach - A program that involves mainly the manipulation of media and manipulative skills within a study of industry.

Traditional Innovative Approach - A program that involves and emphasizes the manipulation of media and manipulative skills, but has a much broader study of industry as its base than the above approach.

Progressive Approach - A program that rejects the traditional type Industrial Arts courses and their over-emphasis on skills and media and replaces these with a dynamic study of industry with emphasis on concepts.

Accepting these three categories of approaches to Industrial Arts programs, which approach would you feel comfortable supporting? First of all, in order to support anyone of these approaches and feel confident it is a viable one, you must first decide on what the overriding purpose of Industrial Arts is. Once you have determined your own ideas as to what our discipline's overriding purpose is you can use this as the all important nucleus for formulating reasonably easily your entire professional outlook.

In the final analysis, it is important for every teacher major who leaves this department to do so with his or her own solid perception, a philosophy if you will, of what Industrial Arts is all about and attempting to do. Finally, I want to stress

the fact that I would not be surprised if those philosophies were quite diverse, because each of our philosophies will have to develop from the manner in which we perceive and translate the factors of industry in our society, needs of students and the stated objectives of Industrial Arts.

A COMMENT

by Dr. Franklin Conley

The energy crisis problems presently facing our country will cause people to look to educational institutions for help in finding immediate and long range solutions. Rising labor costs, pollution problems, shortages of resources, foreign competition and a multitude of other factors will bring about a demand for more technical workers prepared to cope with these problems.

Our faculty has been working vigorously to improve program options and to allow more specialization in several technical fields. We are looking to other departments such as Engineering Technology, Business Administration, Psychology, Sociology, Chemistry, etc., for help in offering interdisciplinary programs that will meet the needs of students who will have to cope with these awesome problems. Technical education and those engaged in it have both a challenge and an opportunity. I am happy to be involved.

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STUDENT vs FACULTY SPORTS

by Gary Bywaters - Senior I.Ed. & Tech.

Is a teacher better than a student in shooting a basketball or knocking a ping pong ball over the net? How about picking up a strike in the tenth frame? These are some of the questions being answered in the Industrial Education and Technology Department this semester.

The Industrial Education and Technology Club has started a championship series of events to determine who the best athletes are in the department—the students or the faculty. Every other week the two groups clash in low pressure, often humorous combat in a different event—and some of the results can be striking.

The first event, bowling, was handled very easily by the faculty, as all the faculty bowlers rolled consistently high marks while the students floundered in the gutter. However, the next time around saw the faculty on the short end of the stick in ping pong. But the student's win was not a run-a-way as some had expected, as all of the faculty players surprisingly showed good form and quickness. The third event was another downfall for the students. The faculty and graduate assistants outshot the students 33-23 in a closely fought basketball game. However, in this event the faculty was allowed to choose one student, and they used their choice to an advantage.

There will be two more events this semester and the overall champion will then be crowned. The champion will get to keep the Championship trophy which is now in possession of the winning team from the previous event. However, the loser's do win something—the Loser's Trophy—an old beat up tennis shoe.

So—How good do you think the faculty really is?

DEPARTMENT POSSESSES E.D.M. CAPABILITY

by Donald Redrup - Graduate Assistant

The abbreviation E.D.M. stands for "Electrical Discharge Machining". Basically, the E.D.M. process involves an extremely rapid series of electrical discharges across a regulated gap between an electrode and an electrically conductive workpiece in a controlled environment. The electrode of the machine is comparable to the cutting tool in a conventional machining process. The E.D.M. technique does not produce a chip as metal is removed as is the case in conventional machining processes. In the E.D.M. process the metal particles are disposed of completely by vaporization or reduced to microscopic size.

The Department's E.D.M. was manufactured by the Vega Corporation and is only satisfactory for educational purposes, but does serve to allow students to become acquainted with this extremely important metal working process.



Hascal Haile

CRAFTSMAN AND GUITAR GENIUS SPEAKS

One of the world's finest guitar craftsmen, Hascal B. Haile of Tompkinsville, Kentucky, spoke to the Industrial Education and Technology Club at its March 20 meeting. Mr. Haile creates guitars for discriminating customers all over the world. Classical guitarists and country music stars such as Chet Atkins, Porter Wagoner, Dolly Parton, Grady Martin, Hank Snow, and Tommy Jones, play Haile guitars.

Mr. Haile made period furniture for approximately 40 years before turning his talents to guitar making. His instruments are immaculate when finished. Brazilian and East Indian Rosewood, White Silver Spruce from Germany, Spanish pine and Honduras mahogany are the principal woods used. Mrs. Haile works closely with her husband especially in the inlaying and finishing operations. The guitars are inlayed to the customers specifications.

The program was outstanding and afforded the students and faculty an opportunity to meet and hear a true craftsman of the highest order.

The machining technique can be used to machine, fairly easily, irregular shapes, extremely hard metals, heat sensitive metals and difficult surfaces all to extremely close tolerances. E.D.M. can achieve reasonably good surface finishes which usually require only careful surface polishing after removal from the machine. The electrical discharge machining process is not a panacea for the metal working industry, but it has become a common and important tool in most mold and tool making operations.

COMPUTER CONTROLLED MACHINERY AT W.K.U.

by John Bochan - Graduate Student

Western Kentucky University, under the direction of Mr. Anthony Sroka of the Industrial Education and Technology Department, has embarked on a program in Numerical Controlled Machining, a process that is widely used in industry today.

Numerical Control essentially is a computer program made by a draftsman/programmer describing the type of machining to be done on a particular part. The computer program is then converted into a tape which is fed to the computer. The computer reads the tape, then sends electrical impulses to the connected machine which in turn converts these electrical impulses into mechanical functions.

The primary and most significant advantage of numerical controlled machining is that a prototype design does not have to be machined by a human operator—a process which takes even a highly paid skilled machinist much time. The entire machining process can be accurately planned on paper, so when the job is performed the first time, an exact duplicate of the planned part is made in less time and less expensively than it takes the human machinist. It offers error free performance 24 hours a day.

Although numerical control is essentially a new field of study at the university level here, its basic techniques go back functionally as far as World War II. Aircraft engineers at that time had problems machining one piece airplane wings which were hollow, yet strong enough to withstand flight stresses. Human machine operators lacked the desired repetitive skills to do the close quarter work, so the idea of machines being controlled by computers evolved. Gradually the industry expanded into the giant it is today.

WESTERN WINS AT KIA

by Gary Bywaters - Senior I.Ed. & Tech.

Two Western Kentucky Industrial Education students walked away from the 1973 Kentucky Industrial Education Association Convention with a first place award. The students, Jim Strain, a senior from Lebanon, Ohio, and Jan Bundy, a Bowling Green senior, were awarded a first place trophy for a live demonstration of airbrush rendering at the K.I.E.A. Convention, November 16 and 17, at Louisville's Fairground Pavilion. The students and their faculty advisor, Mr. Wandell Dye, were very pleased with the interest shown by the visitors to Western's exhibit.



MR. NALBACH HONORED

Mr. Walter Nalbach was honored with a surprise banquet last spring. Mr. Tom Hill, Spring 1973 IE & T Club President, is shown above presenting a plaque to Mr. Nalbach signifying the establishment of a scholarship fund in his name. Dr. Donald Wendt (right above) was the master of ceremonies for the occasion.

Dr. Franklin Conley (left above) was named department head effective fall 1973. Dr. Conley received the EdD degree from the University of Missouri in 1968 and the BS and MA from Eastern Kentucky University. He was a Carnegie Fellow for two years while working on the doctorate. Dr. Conley has been at Western for 6½ years.

Mr. Nalbach has been teaching full time during the 1973-74 school year and plans full retirement summer 1974. He has recently purchased a 16-foot fishing boat and an 85 hp motor and says that he is really going after those big 'ens. He and Mrs. Nalbach are also looking forward to traveling the world over.



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