



~~THE CHRONOLOGICAL DEVELOPMENT OF THE~~
INDUSTRIAL EDUCATION DEPARTMENT

The Industrial Education Department at Oregon State University was first organized in the academic year 1913-14. Prior to that date, the Department of Industrial Pedagogy, under the direction of Professor E. D. Ressler, combined with the School of Engineering to offer courses recognized as being for the preparation of manual training teachers. In 1910, Professor E. P. Jackson taught the first of these courses in a program designed to promote the care and use of shop equipment, methods, and materials of manual training.

In the catalogue for 1913-14, the first mention of Industrial Arts is found. The catalogue stated:

"The courses in Industrial Arts are designed to meet the needs of those who are preparing to teach or to supervise manual training in the elementary grades, and in the high school of this State."

A college degree course in industrial arts was provided in the year 1913-14. The curriculum was in the School of Engineering under the Department of Mechanical Engineering with the Department of Industrial Pedagogy providing the professional courses in special methods in manual training.

Professor Ressler was Head of the Department of Industrial Pedagogy in 1913-14 with Henry Clay Brandon, former principal of the Portland School of Trades, as a member of the department. Professor Brandon was Head of the newly formed Department of Industrial Arts, Director of Shops in the School of Engineering, and taught the industrial education professional courses in the

Department of Industrial Pedagogy. The new Department of Industrial Arts offered a special degree course (B.S.) in Industrial Arts in the School of Engineering and Mechanic Arts.

Professor Brandon's first staff consisted of four members other than himself. The curriculum was made up largely of courses in wood-working and drawing designed especially for teachers, plus basic subjects in the metals areas such as foundry, blacksmithing, and machine shop. The curriculum also included a number of traditional engineering requirements in hydraulics, machine design, and testing of engineering materials.

In the early days of the industrial arts program at Oregon State University, teacher education was conceived as a responsibility of the various technical schools or subject-matter divisions, with the further requirement that those interested in the teaching certificate would complete the necessary courses in psychology and education under the general guidance of the Department of Industrial Pedagogy or Industrial Education as it was renamed in 1915.

In 1915, Frank Henry Shepherd replaced Brandon in industrial education, in the Department of Industrial Education. Professor Brandon retained his position as head of the Department of Industrial Arts in the School of Engineering.

The Department of Industrial Education became the School of Vocational Education in 1918. The Industrial Education Department became one of the six major departments of the school. Courses in Practice Teaching were also offered for the first time by the new

school with Professor A. R. Nichols serving as critic teacher for industrial education. A change in titles occurred with the term "Trades and Industries" appearing in place of "Manual Training in the description of the areas of preparation of teachers. Under the new Vocational Law, professional courses were also offered for those persons working in vocational or trade programs.

In 1921, a degree curriculum (B.S. in Vocational Education) was established in the School of Vocational Education. This made it possible for those desiring work in supervisory or administrative positions, or to prepare for teaching combinations of vocational subjects to obtain preparation in two subjects such as manual training and shop mathematics.

The department enjoyed a normal growth and increasing prestige during the mid-nineteen twenties. The addition of the Master of Science degree in Vocational Education (first awarded in 1924) provided an essential link in the improvement of the total teacher education program.

Professor Brandon resigned his position as Head of the Industrial Arts Department in 1927. At the time of his resignation, the courses in teaching methods for industrial arts students, and supervised teaching for these prospective teachers, was under the direction of the School of Vocational Education, while all of the technical instruction, in industrial arts subject-matter courses, was under the direction of Professor Brandon and his staff, in the School of Engineering. The appointment of Professor Brandon's

successor, Professor George B. Cox, in September 1927, happened to coincide closely with the resignation of the staff member who had been responsible previously for the industrial arts teaching methods and supervised teaching in the School of Vocational Education; and also with the appointment of new deans in both Education and Engineering. There developed naturally a situation which brought about a closer relationship between the various phases of the industrial arts teacher education program. Professor Cox was given the combined responsibility of directing both the technical and professional phases of industrial arts teacher education. The program soon became known as the Curriculum for Industrial Arts Education, with the technical subjects in the School of Engineering continuing under the heading of "Industrial Arts", and the professional courses, including methods, techniques, and supervised teaching, listed as "Industrial Education" courses.

Under the guidance of Professor Cox, many major changes were made in the curricula of the department, as well as in its facilities. One of the earliest changes was the elimination of typically engineering courses, and the initiation of other subjects normally included in the industrial arts teacher education programs of other recognized schools. These were not startling changes, but were more a reorganization of content and redirection of course objectives. The fact that the administration of the program had been centralized led to a unified approach to the overall problem instead of handling the certification requirements by a footnote in the catalogue. The

courses in psychology and education, which were then basic to the certification requirements, were written into the curricular program and published as such in the catalogue.

The first coordinated, full program, summer session in industrial arts was established in the summer of 1928. The session lasted six weeks and attracted students from all states west of the Rocky Mountains. Another first was also recorded in 1928 with the approval of the Master of Science degree in industrial arts education to be awarded beginning with the fall term in 1928.

In 1932, the School of Vocational Education at Oregon State College, became the School of Education. Permission was granted for major curricular to prepare teachers of science, agriculture, mathematics, home economics, industrial arts, secretarial science, and approved combinations of these subjects, and for educational and vocational guidance. The technical courses in Industrial Arts continued under the School of Engineering and Industrial with professional industrial education courses provided by the School of Education. The School of Education offered a major in Industrial Arts with a degree granted by the School of Education. The School of Engineering continued to offer the professional curriculum for industrial arts teachers with the B.S. degree from the School of Engineering and Industrial Arts. The program in the School of Education required 192 term hours while the School of Engineering professional curriculum required 204 term hours.

In 1932 the Master of Science degree in Education replaced the M. S. in Vocational Education.

During the 1930-1940 period the program grew and gained in national prestige due to the strong technical program offered the industrial arts majors. This strong program was made possible through the expansion of the Industrial Arts Department and the continued development of two engineering programs administered by the department. These engineering programs shared basic courses with the teacher education program and resulted in expanded offerings not possible for one program. Enrollment reached its peak numbers in 1941, just prior to World War II. This peak would not be surpassed until 1950 and the graduation of the returning veterans.

A major change occurred in the technical curriculum in 1949, with the addition of a choice of a wood or metal technical option. The curriculum was altered to include a basic core of technical subjects with student option as to whether the specialization would be in metal or wood subjects.

The professional curriculum for Industrial Arts Education was transferred from the School of Engineering and Industrial Arts to the School of Education, effective July 1, 1950. There was no change in the responsibility of the students to any of the staff in the Department of Industrial Arts (School of Engineering) nor to the Department of Industrial Education (School of Education). Neither was there any change in the curriculum other than an eventual reduction of the total credit hours from 204 to 192 credit hours. The students enrolled were transferred to the School of Education, reporting to Dean Zeran instead of Dean Gleeson of the School of

Engineering and Industrial Arts. The total program remained under the direction of Professor Cox, who was responsible to both schools.

The State Board of Higher Education granted approval for a major in Trade and Industrial Education in September 1954. This provided opportunity for the development of a four year degree program for teachers of trade and industrial subjects with the Department of Industrial Education. The program was jointly supported by the State Department of Vocational Education and Oregon State College. Dr. Gerald Cannon became the on-campus professor directing the program both on the campus and state-wide.

In 1958 W. R. Flesher, Ohio State University, conducted a comprehensive survey of public vocational-technical education in Oregon. Pages 211-213 of the survey report deals with the trade and industrial teacher education program and offers suggestions for improvement.

A seminar for students in Supervised Teaching (IEd 407) was instituted in the spring of 1960 to improve the teaching experience and the coordination between the college and the schools.

Professor George B. Cox retired as Head of the Industrial Education Department in the spring of 1962 and was replaced by Dr. Chester B. Ainsworth. With the retirement of Professor Cox, the technical and professional education courses were no longer under the direction of a single head. Dr. Ainsworth was appointed as Head of the Industrial Education Department with responsibility for the direction of the industrial education program. The engineering shops in which the technical courses were offered for industrial arts education were placed under the direction of Mr. Milton Sheely who was appointed as Head of the Production Technology Department.

The technical aspect of the program continued in organization somewhat as in the past, with the new Department of Technology offering service courses for industrial arts majors and for majors of other schools. This return to an administrative division that had been true prior to Professor Cox's arrival at Oregon State created problems in integration of the technical and professional aspects of the program as well as limiting the development of necessary new fields of study in the technical major.

The Industrial Arts curriculum was re-evaluated by a committee of secondary teachers, administrators and the University Industrial Education Department faculty in 1962. The recommendations of this committee brought about a strengthening of the technical major through changes in required courses, the addition of required courses in mathematics and science, and the change of the technical major to eliminate the separate wood or metal option so that the students might be more broadly prepared in the technical fields. Recommendations were also made concerning the addition of new fields of study for the technical major as well as the development of a general shop (multiple-activity laboratory) to meet the need for instruction in this popular form of secondary industrial arts course organization. Planning for the general shop facility was started in 1962 with the actual facility being obtained in the spring of 1963. The first courses were taught in the facility during the Summer Session of 1964.

In 1963, changes in State Teacher Certification Requirements brought about a need for the development of a Planned Fifth-Year

Program for industrial arts majors. The fifth-year program was planned to provide continuity of teacher education in the field of industrial arts education while meeting the State requirements for the five year teaching credential. The program recognizes the need for professional preparation beyond the B.S. degree and provides opportunity for those teachers who are unable to meet entrance requirements for the master's program to obtain a fifth year of teacher education in a planned program. Those eligible for the master's program and desiring a master's degree are able to meet the certification requirements as a part of the master's program.

The curriculum for an Industry-University cooperative teacher education program was approved by the Curriculum Council in September, 1963. Outstanding graduates of two year technical education or community college programs may apply for admission into the B.S. degree program in Trade and Industrial Education. Upon meeting the qualification requirements, the student enrolls in the degree program and completes twenty months of full-time work in industry during the first two years while he attends courses offered through the Division of Continuing Education. The work-experience phase is coordinated and supervised by the Oregon State University Industrial Education Department. After the industrial work experience, the student returns to the campus and completes his course work and examination leading to the B. S. degree.

In 1964, Dr. Chester B. Ainsworth resigned as Head of the Industrial Education Department. Dr. Earl E. Smith was appointed as Acting Head of the department. Dean Zeran, Dean of the School

of Education appointed an Industrial Arts Advisory Committee in May, 1964 to assist in the selection of a new department head for the Industrial Education Department and to study and advise concerning improvements in the industrial arts education curriculum. The Committee is advisory in nature and includes representatives from the public schools, State Department of Education, and administrative and teaching personnel from Oregon State University. The Committee has met monthly during the academic school year since May, 1964 and is now to be continued as a permanent advisory committee.

The work of the committee has been based on recognition of the following factors as they relate to the Oregon State University industrial arts teacher preparation program.

1. That extensive changes in technology and the secondary school industrial arts programs have created a need for instruction in additional technical fields.
2. That new forms of course and program organization are being used in the public schools and that the teacher education program must provide teachers prepared for these new organizational patterns.
3. That the teachers must be prepared to teach in either multiple-activity or unit specialized programs or both.
4. That better integration and correlation of technical content and professional methods are essential if the teachers are to be adequately prepared for career positions in the public schools.
5. That the fifth-year and graduate programs should provide opportunity for increased specialization in both the technical and professional aspects of teacher education.

The Committee, after extensive study and review of the existing program, other university programs, recommendations from visiting consultants and materials submitted by the Industrial Education

Department faculty, recommended several major changes for the total Industrial Arts Teacher Education Curriculum. The Industrial Education Department, with the guidance of Dean Zeran and the Curriculum Council then initiated the following changes in the industrial arts major.

1. The technical major has been revised starting September, 1965 to develop a better balance in technical subjects studied. The major now emphasizes broad preparation in technical fields with the graduate prepared to teach at least first year high school subjects in four major technical fields.
2. The major provides opportunity for additional specialization in a fifth technical field.
3. The revised major includes five new multiple-activity courses that have been approved by the Curriculum Council as "X" numbers for the year 1965-66. These new courses stress the integration of technical and professional knowledge and skills. The courses also provide opportunity for stressing the multiple-activity form of course organization, which is the major organizational pattern of the secondary school industrial arts programs. The General Shop, or Multiple-Activity Laboratory, started in 1963, has been developed as the facility for offering these new courses. These courses have greatly enriched the total industrial arts teacher education program.
4. The revised technical major has been planned to include instruction in Power Mechanics, Power, Electricity, Electronics, and Graphic Arts. These technical areas are being implemented as follows:
 - a. It was possible to obtain Power Mechanics as a service course through the Agriculture Engineering Department. This course is included as a required in the 1965-66 curriculum.
 - b. The courses in Power have been discussed with several Schools and Departments, but it appears unrelated to other curricular efforts so the Advisory Committee is seeking ways that the Industrial Education Department might develop this sequence of courses.
 - c. Electricity is being taught by the Production Technology Department during the academic year with the Industrial

Education Department providing the instruction and equipment during the Summer Term. The Production Technology course is being directed toward production control systems which make it unsuitable for industrial arts programs. The Committee has advised that the industrial arts program either establish its own program with the equipment it has or seek a suitable course in the newly developing Engineering Technology programs.

- d. The Electronics has been taught in the Summer Term by the Industrial Education Department since 1962. The Advisory Committee has also recommended that Electronics be offered during the academic year either by the Industrial Education Department or if a suitable sequence is developed by another department that it be used.
- e. Graphic Arts has also been recommended as an essential technical field for the major. During the Summer Term 1965 a workshop in Graphic Arts was offered as the first step in the development of a sequence suitable for preparing teachers to teach Graphic Arts in secondary industrial arts programs. The Advisory Committee has recommended that Graphic Arts be developed in the Industrial Education Department as it is not presently taught on the campus or related to the educational efforts of other Schools or Departments.

The Advisory Committee has also been studying the development of physical facilities. Possible ways of adding the facilities for the new technical areas are now under consideration with the hope that the essential new technical sequences can soon be activated as part of the technical program during the academic year.

The multiple-activity laboratory facility has been under development since 1963 and in the fall of 1965 was activated full time with five multiple-activity courses and two professional courses being taught by Industrial Education Department faculty. Equipment and supplies have been added as funds are available with the shop presently operating in some activities on a minimum equipment basis.

As a part of the Advisory Committee efforts the planned fifth-year program for industrial arts teachers was also studied and revised. This program is to meet the need for a fifth-year for State Teacher Certification requirements. The Committee viewed the curriculum for industrial arts teachers as a total program with each level of the curriculum making a specific contribution to the educational preparation of the teacher. The fifth-year as viewed by the Advisory Committee is to provide opportunity for increased technical specialization in a technical field or fields and also to include opportunity for additional study in professional subjects related to career needs. The request for the course numbers IA 406, Projects and IA 408, Workshop, now before the Curriculum Council, is to provide opportunity for offering technical specialization courses that best serve the teachers who seek a fifth-year or those seeking additional technical knowledge and skills but who do not need or desire degree credit.

The courses provided for fifth year students also serve the total program in other ways. The courses add:

- a. Opportunity for professional enrichment for undergraduate majors.
- b. Advanced technical and professional courses for the experienced teacher with his master's degree.
- c. A source of courses for additional technical preparation for those students desiring to enter graduate level technical courses but who lack the necessary undergraduate preparation.

The Advisory Committee has also studied and made recommendations for the graduate program. Specific problems apparent in the graduate curriculum included the following.

1. The need for opportunity for students to specialize in technical areas rather than broad study of technical fields.
2. A need for recognition of technology as the central focus of industrial arts program content and organization in the public schools. This to include a reduction in the emphasis upon craft activities in the graduate program.
3. A need for increased breadth of technical offerings to provide teachers for the expanding programs in the public schools. The broadened undergraduate program also increased the need for a broader graduate program to provide opportunities for technical specialization.
4. Improvement of the professional sequence of courses was also needed to aid the teachers in correlation and integration of the professional, technical and general aspects of the advanced degree work.

The master's degree program for industrial arts majors was revised in the spring of 1965 with the following specific changes based upon the Advisory Committee's recommendations.

1. The technical major was revised so that the student could obtain fifteen hours of advanced technical specialization in a technical field of his choice but based on adequate undergraduate preparation in the same field.
2. New areas of technical preparation were added to the master's degree program as well as new technical courses that provide for integration of technical fields.
3. A sequence approach to the use of IA 506, Projects (for technical specialization) and IA 506, Workshop (for integration of the technical field) was also developed. This provides for a sequential development of understandings and skills in the graduate program while also providing opportunities for altering the technical offerings to meet changing technology.
4. Professional courses have been revised in objectives, scope, and content. Requests are now before the Curriculum Council for specific changes in title, number and content for most of the core professional graduate courses. Additional graduate professional courses are also being requested in the areas of curriculum, adult education, and safety education.

The Advisory Committee is presently reviewing the changes effected in the total industrial arts curriculum prior to seeking further improvements in the program. Under study at the present time are:

1. The possibility of a core undergraduate program of 60 hours with 15 hours of specialization in one of six different technical fields.
2. The development of courses and facilities for Graphic Arts, Power, and Electricity-Electronics.
3. Long range plans for curriculum and facilities improvements.
4. Possible correlation of some professional course requirements in the Industrial Arts and the Trade and Industrial Education programs.

Teacher education in Trade and Industrial and Technical Education is currently offered through a cooperative arrangement between the State Department of Education and Oregon State University. The University summer session program offers all of the courses required for state industrial-technical instructor certification.

The Trade and Industrial office in the Industrial Education Department provides vocational-industrial teacher education courses in major population centers, through the Division of Continuing Education, during the academic year. These courses serve the vocational instructors in public and private schools and are also available to individuals with occupational experience, who wish to become vocational teachers.

The Trade and Industrial office also organizes and conducts teacher education courses for local and state agencies requesting such service.

In Spring 1965 an evaluation study of the vocational teacher education program at Oregon State University was carried out. The study was financed by a \$14,300 grant from the State Department of Education and \$3,500 from the university. Dr. Lawrence Borosage, Professor of Education at Michigan State University directed the evaluation project. In addition to Dr. Borosage, prominent educators in the fields of Industrial Arts, Trade and Industrial Education, as well as in the fields of Agricultural Education, Home Economics Education, Distributive Education, and Business Education were assisting as consultants in the study. Since a close working relationship exists between the industrial arts and certain aspects of vocational education, an examination of the industrial arts teacher education program was included in this general study of the vocational teacher education program. The study findings and recommendations are currently being considered.

In September, 1965, Dean Zeran established an Advisory Committee for Trade and Industrial Education to review and make recommendations for the Trade and Industrial Education Teacher Education program. This Committee will seek to accomplish basic changes in the Trade and Industrial Education program to better serve the needs of the students and the rapidly changing programs in vocational and industrial education. The Committee membership is drawn from the many educational institutions involved in industrial education and includes representation from the State Vocational Education Department, Community Colleges, Vocational Schools, Secondary Schools, and University administrative and teaching faculty.

In August 1966 Dr. George Storm resigned from his position as teacher trainer in Trade and Industrial Education to go to Ferris Institute in Michigan. He resigned at such a late date that it was impossible to employ another person to take his place during the 1966-67 school year. In September 1966 Dr. Pat Atteberry became the Head of the Department of Industrial Education and Dr. Heath was employed to head up the work in the area of electronics. The State Advisory Committee in Technical and Vocational Education is working under the direction of Dr. Atteberry to revise the undergraduate and graduate offerings in that area.