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YEARBOOK

4 1955

Superior Practices

in Industrial Arts Teacher Education

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American Council on Industrial Arts Teacher Education

Superior Practices in Industrial Arts Teacher Education

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American Council on Industrial Arts Teacher Education

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FOREWORD

The American Council on Industrial Arts Teacher Education is pleased with this opportunity to present Yearbook IV to the profession. As a study of superior practices in industrial arts teacher education, it should serve as a guide needed so badly in our profession to point the way toward improved teacher education.

The Council is especially appreciative of the many hours of research and hard work given by R. Lee Hornbake and Donald Maley and any who have assisted them on this study, during the two year-period that it was being conducted.

Any commendation by the Council of the McKnight & McKnight Publishing Company is small indeed for the outstanding service being rendered the profession in publishing the yearbook series and distributing copies to its membership. This symbolizes the confidence and support these publishers have long given our profession. It should ever give us renewed inspiration in our efforts toward professional growth.

The Council also wishes to take this opportunity to express its deepest appreciation for the efforts and accomplishments of Walter R. Williams, Jr. over the past several years in initiating and developing the yearbook series to its present high professional level. Acknowledgment is also due all other members of the Publications Committee for their assistance in the volume. Thanks also for the many others who helped in some way to bring this yearbook about.

John A. Whitesel, President
American Council on Industrial
Arts Teacher Education

Atlantic City, New Jersey
April 27, 1955

ACKNOWLEDGMENTS

Yearbook IV of the American Council on Industrial Arts Teacher Education is the product of the efforts of many people. More than 200 persons, whose names appear in Appendix A, have contributed to this project. Much of its value is derived from the extensive institutional coverage that has been achieved. Sincere appreciation is extended to the many teacher educators who responded to the Inventory and or submitted descriptions of practices which prevail in their schools.

The editors are grateful to Doctors W. Earl Armstrong, Elroy Bollinger, Paul Diederich, B. Lamar Johnson, Allen D. Patterson, Frank L. Sievers, and David M. Trout for writing introductory statements to the major divisions of the study. The significance of their contributions will become apparent as the profession searches for more defensible concepts and practices.

Doctor John R. Ludington, Specialist for Industrial Arts, United States Office of Education, Department of Health, Education and Welfare was most helpful in the preparation of the Inventory and in reading a draft of the final report. The study required extensive correspondence and record keeping and the materials which were submitted passed through several stages of typing. These tasks were assumed by Mrs. Edith Atkins, Mrs. Walter B. Waetjen, Mrs. R. Lee Hornbake, Miss Barbara Yadgi, and Robert Winkler.

The editors are grateful to the American Council on Industrial Arts Teacher Education for the privilege of participating in its yearbook development program.

R. LEE HORNBAKE
DONALD MALEY

SEPTEMBER 18, 1954
COLLEGE PARK, MARYLAND

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CHAPTER I

A Report to the Profession

A profession makes progress only as it pushes forward its frontier of theory and practice. The educational frontier is always irregular or jagged, never a straight line. This is so for two reasons. First, the barriers to progress are, in some places, resistant, even formidable, whereas in other places the milieu is open and friendly. Second, the pressure for advance is sometimes maintained at a point over a long period and by many people and the line is pushed far forward. At the same time other areas are almost completely neglected and there is little or no advance to report. The teacher education frontier is also extensive because the preparation of teachers involves a unique integration of behavioral, social, and physical sciences as well as mathematics and the language arts.

Purpose of the Yearbook

This Yearbook presents a profile of the educational frontier in Industrial Arts teacher education at the undergraduate level. It reports on concepts and practices where our people have been resourceful and diligent and where these efforts have resulted in defensible, professional achievement. It reports also on concepts and practices where the energy and creativity have been somewhat less and where progress has been slow or halting. The emphasis, however, is on the positive side and it is placed there by reporting on superior practices wherever they were to be found. Neglected areas become apparent as one observes the contrast between numerous superior practices in certain aspects of shopwork and drawing, for example, and the very few superior practices in program evaluation, as a case in point.

If the Yearbook does nothing more it merits recognition (1) for establishing a base line from which the profession can locate and measure the progress it makes in the future and (2)

for providing a rounded view of the total professional effort so that the areas of greatest difficulty or of major neglect can engage the effort of our people. In this sense, then, the Yearbook is a report to the profession — to college presidents, to boards of trustees, to deans, to Industrial Arts teacher educators, and to graduate school faculties.

Yearbook IV has an overarching purpose perhaps more fundamental than either of the two mentioned. The comprehensive purpose is to make known to the profession as a whole superior Industrial Arts teacher education practices which are carried on day-by-day, sometimes in less well known schools, at other times in institutions of national fame. Inventions and discoveries in education are frequently lost not because of any effort to conceal them but rather due to the lack of means to communicate them to others. This Yearbook serves a communication purpose. It creates nothing new but simply reports on practices which are judged to be superior.

While it is acknowledged that the most effective educational program is developed in terms of purposes and resources indigenous to a school and to the community which the school serves, a professional curriculum such as Industrial Arts teacher education should eventually incorporate a common core of purposes, services, and student experiences. There is no endeavor in this Yearbook, however, to blueprint a master plan for Industrial Arts teacher education. The technique of reporting fractionalizes the practices so as to preclude a do-as-we-do suggestion. The Yearbook may provide some direction to more defensible programs by making superior practices widespread in their applications.

The adequate preparation of Industrial Arts teachers is not something a department can do alone. Instead it involves the entire college in which the program occurs as well as many additional university departments. This should be manifest to the reader regardless of whether he studies the technical education aspect, the general education phase, or the professional education area. Ways of improving the program must therefore become the concern of the colleges and departments which are mutually concerned. The Yearbook is addressed to the total problem of Industrial Arts teacher education and can be used to best advantage when it engages the attention of all the people who participate in or contribute to the program.

Plan of the Yearbook

The plan of the Yearbook is direct and simple. All of the schools which were known to have, or were reported to have, Industrial Arts undergraduate programs were contacted. Only the continental United States was included. Initial contact was made by way of a cover letter and Inventory, a copy of which appears in Appendix B, pages 165 through 182. The latter was addressed to: "Chairman of Industrial Arts Department."

The respondent was asked to select ten (of 221) teacher education practices which the college or university performed in a superior manner. Responses were tabulated on a master chart. Then each respondent who identified his superior practices was asked to provide brief descriptions of from two to seven of these practices. Descriptive statements received as a result of these requests constitute the body of the Yearbook.

As stated, the basic instrument of the study is the Inventory. The Inventory was developed after an extensive study of the research and associated literature in the general field of teacher education, as well as in Industrial Arts teacher education. Successive drafts were presented to informed people in the process of refining the instrument. There are five major divisions in the Inventory with one division subdivided two ways and a second division subdivided three ways. The result is eight Roman numeral headings. They are:

- I. Student Personnel Practices
- II. General Education
- III. Early Professional Experiences (Freshman-Sophomore years)
- IV. Later Professional Experiences (Junior-Senior years, Exclusive of Student Teaching)
- V. Student Teaching
- VI. Technical Education (Shopwork and Drafting)
- VII. Technical Education (Exclusive of Shop and Drawing)
- VIII. Program Evaluation

Under each of the eight divisions there was listed a series of practices which describe the division in a detailed manner. In general, the practices listed are regarded favorably in professional education literature. It should be observed that there are practices which differ in their assumptions and administrative policies. For example, item 118 reads: *Students par-*

icipate in a program common to all curriculums during the freshman and sophomore years and are accepted or rejected by the department at the junior level. On the other hand, item 301 implies that students as freshmen and sophomores should be apprised of the duties, responsibilities, and importance of Industrial Arts teachers. Both practices exist and the rationale was to discover and report upon them as they operate in a superior manner.

Table I presents a summary of the effort made to contact institutions where Industrial Arts undergraduate programs occur. The Inventory was sent to 202 schools in 45 states. Responses were received from 165 schools in 44 states; this represents an 82 percent return. Nine schools reported they did not have an undergraduate, degree-granting program in Industrial Arts and a tenth was discontinuing at the end of the 1953-54 school year. This left 192 schools eligible to indicate "superior practices" and 147 schools in 40 states did so.

TABLE I

Geographic Scope of the Study by States Indicating the Number of Colleges and Universities Contacted and Their Responses in Terms of the Inventory and Reports of Superior Practices

State	Number of Schools Contacted	Responses of All Types	Schools Returning Completed Inventory	Schools Supplying Descriptive Statements of Superior Practices
Alabama	3	3	3	3
Arizona	2	2	2	0
Arkansas	4	2	0	0
California	8	8	7	7
Colorado	4	2	2	1
Connecticut	1	1	1	1
Delaware	0	0	0	0
Florida	6	6	5	4
Georgia	3	3	3	3
Idaho	3	1	1	1
Illinois	9	7	7	4
Indiana	3	3	3	3
Iowa	3	2	2	2
Kansas	6	5	5	4
Kentucky	5	3	3	3
Louisiana	5	5	5	4
Maine	1	0	0	0
Maryland	2	2	2	2
Massachusetts	2	2	1	1
Michigan	6	5	5	5
Minnesota	7	7	7	5

TABLE I Continued

State	Number of Schools Contacted	Responses of All Types	Schools Returning Completed Inventory	Schools Supplying Descriptive Statements of Superior Practices
Mississippi	2	1	1	1
Missouri	7	4	4	3
Montana	3	2	2	2
Nebraska	7	6	5	4
Nevada	0	0	0	0
New Hampshire	1	1	0	0
New Jersey	2	2	2	2
New Mexico	4	4	3	3
New York	6	6	4	4
North Carolina	4	4	4	2
North Dakota	5	3	3	2
Ohio	8	8	8	7
Oklahoma	15	12	9	4
Oregon	1	1	1	1
Pennsylvania	4	4	4	4
Rhode Island	0	0	0	0
South Carolina	2	2	2	1
South Dakota	5	4	4	2
Tennessee	8	7	6	6
Texas	13	8	7	4
Utah	3	3	2	1
Vermont	1	1	0	0
Virginia	3	3	3	3
Washington	8	6	5	3
West Virginia	3	1	1	0
Wisconsin	3	2	2	2
Wyoming	1	1	0	0
TOTALS	202	165	147	114
PERCENT	—	82	76*	59*

There was very considerable duplication in items checked. Item 600 was checked by 54 schools as being conducted in a superior manner, item 618 by 45 schools, item 108 by 40 schools, and item 318 by 25 schools. At the other extreme, numerous items were checked by as few as four schools or three schools and 23 items were not checked by any school as being conducted in a superior manner. The Inventory in Appendix B provides a recording of responses to each item.

When a large number of schools checked the same item, not all schools could be invited to write on that particular item.

* Nine schools of the 202 reported no undergraduate, degree-granting program in Industrial Arts teacher education. One reported closing the program in June 1954. This percentage is, therefore, based on a divisor of 192.

Selections were made by the editors, item by item, and on the basis of several criteria such as the size of the department, geographic location, and type of college or university. In these respects a wide range of situations was desired. Each school official who returned an Inventory indicating his superior practices was asked to write descriptive statements on the superior practices which the editors chose from his total list. It was specifically intended to use contributions from all institutions which provided descriptive statements of their superior practices and this intention was fulfilled.

Descriptions of superior practices were provided by 114 schools in 38 states. The material supplied by these institutions constitutes the major content of the Yearbook. Editing was nominal. Introductory paragraphs were omitted in a few instances when such introductions were substantially restatements of the item to which the response was made. Sentences within paragraphs were eliminated in a few instances for the same reason. In no case was any alteration made to change the meaning or intent of the statement and no change at all was the rule rather than the exception.

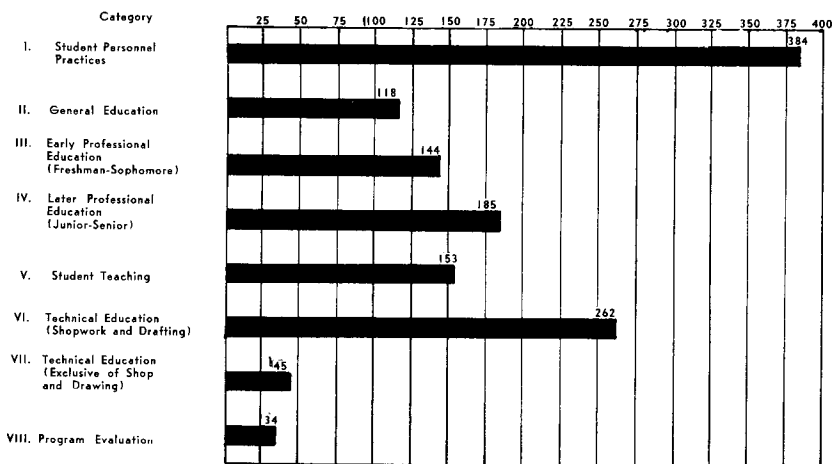
The several chapters of the Yearbook have a uniform pattern of presentation. There is an introductory point-of-view statement prepared by a national authority in the area of teacher education represented. In one instance there is a joint authorship. The intent of the introductory statement is to provide a criterion by which each reader may make his own appraisal of our professional stature and by which he may raise his sights. It will be noted that the authors of the foreword statements are persons who have distinguished themselves in the over-all field of education.

Immediately following the introductory statement the editors present an overview of the responses within the chapter. Here the effort is in the direction of citing obvious strengths and weaknesses, of noting the distribution of professional effort, and of drawing certain implications. These overview statements do not summarize what is to be found in the chapter but rather place the chapter in focus and give the reader some leads in his perusal of the descriptive statements.

Finally the items of the Inventory are reproduced, item by item, followed by the descriptive statements of practices provided by the respondents.

While the Inventory separates Early Professional Experiences (Freshman-Sophomore Years) from Later Professional Experiences (Junior-Senior Years) the two are combined in Chapter IV as "The Professional Education of Industrial Arts Teachers." Similarly, the Inventory distinguishes between Technical Education (Shopwork and Drafting) and Technical Education (Exclusive of Shop and Drawing) but Chapter VI covers both as "The Technical Background of Industrial Arts Teachers."

CHART I
Total Number of Superior Practices Named by Respondents,
Identified by Categories

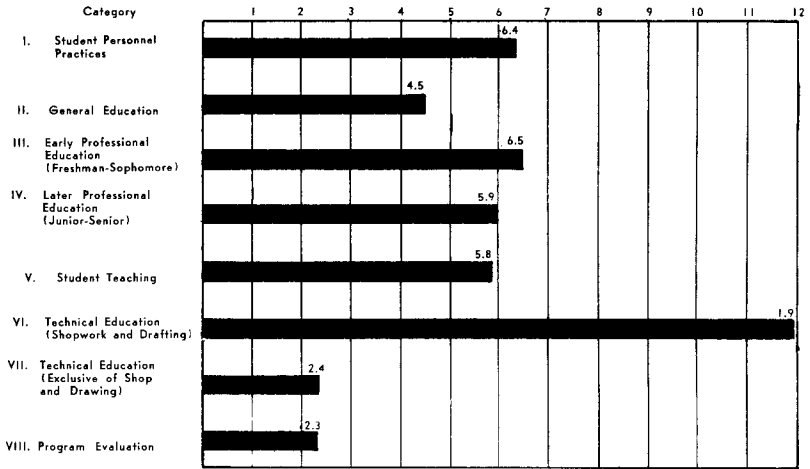


Charts 1 and 2 summarize in a graphic manner the profession's own estimate of its strengths and, by interpolation, its weaknesses as well. Chart 1 reports by categories on the total number of items which the institutions considered themselves to be performing in a superior manner. The greatest number of favorable reactions are in Student Personnel Practices; next in order is Technical Education (Shopwork and Drafting).

Chart 2 provides a better indication of strengths and weaknesses in the profession by taking into account the number of items in each of the eight categories. There were 60 items, for example, in Student Personnel Practices and only 22 in Technical Education (Shopwork and Drafting).

CHART 2

Ratio Between the Number of Items Within a Category of the Study and the Number Identified as Superior Practices



By far the highest ratio of superior practices to number of items is in the area of Technical Education (Shopwork and Drafting). Careful inspection of the items in this area reveals that three of 22 items (items 600, 602, 615) account for 48 percent of the 262 superior practices and these three items pertain to basic skill development, to contacting a variety of shop areas, and to developing greater skill and understanding in one or two areas of shopwork. In this same phase of technical education, items pertaining to basic manufacturing and fabrication processes, to experiences which reflect industrial practices, and to occupational information pertaining to the various crafts obtained a superior practice rating in only 12 instances and account for slightly less than five percent of the total. The reader is provided with a sufficient amount of the raw data of the study to permit him to make numerous similar observations about the status of professional practices.

Technical Education (Exclusive of Shopwork and Drawing) is next to the lowest in its rating. This condition is cause for concern especially when it is realized that "we are living not only in a marvelous industrial age but in an even more marvelous technical age. Our simple machines have become highly

technical machines; our mechanical environment a highly technical environment."¹

Program Evaluation is lowest in its ratio of superior practices to number of items. Perhaps the further development of program evaluation must await a clearer definition of learning outcomes or competencies to be developed in Industrial Arts students and a more systematic follow-up of graduates in their employment.

In reading the descriptions it will become apparent that some of the practices presented are the direct result of the efforts of members of the Industrial Arts department while other practices are carried on by a designated department as a campus-wide service. Then, too, there are services, such as placement, which are in part departmental and in part college or university in scope. No single pattern of strength and weakness emerged in this dichotomy. In the instance of Student Personnel Practices much of the stimulation comes from the overall college or university program and, as stated, schools checked many of these practices superior. In contrast, Program Evaluation, although a total school concern, received little impetus from the departments or from the colleges in which the departments are located.

Although many persons have changed positions since the original data were gathered, each descriptive statement in the Yearbook is identified by the name of the person who submitted it and the school with which he was associated at the time.

No school has had the opportunity in this Yearbook to tell its full story since the plan has been to have many schools report on specific practices rather than have a few schools report more extensively. Every institution enjoys the privilege of describing its program in full through brochures and professional publications and many have done so. Perhaps the Yearbook will encourage numerous exchanges of descriptive literature and, where colleges are in close proximity of one another, their representatives may choose to get together to share ideas and practices. Progress will be made as our concepts and practices are improved and as these superior practices become prevalent in all of our institutions.

¹ This quotation is taken from Elroy Bollinger's point-of-view statement which appears in full on pages 118-119.

Student Personnel Practices

Point of View Statement¹

Two basic student personnel needs which deserve increasing recognition by those engaged in the preparation of Industrial Arts teachers are: (1) a reliable source of student supply and (2) facilities adequate to accomplish appropriate personal, social, and professional development of every student. A brief discussion of each will provide an introduction to the selected student personnel practices described in this chapter.

A Reliable Source of Student Supply.

A few students continue to enter Industrial Arts teacher education programs upon the advice of persons who know them to be weak academically and who regard the program as not unduly strenuous. Then, too, some students who dislike academic study wander in, hoping to find an easier route to a teaching certificate. The would-be engineers who failed mathematics, decided to teach, and befuddled youngsters — victims of over-enthusiastic teacher-recruiters — also plan half-heartedly to major in Industrial Arts. In contrast there are numerous students who have chosen this specialty as a result of systematic self-study and an understanding of professional demands and rewards. They benefited from selective counseling and guidance which probably began in the seventh or eighth grade.

Their experience suggests a clue to a reliable source of student supply and it begins in the secondary-school classroom. The best prospective Industrial Arts teachers who will be graduated from college in 1963 are now completing the eighth grade. Suppose their teacher this year lends dignity to his profession

¹ Prepared by David M. Trout and Frank Sievers. Dr. Trout is the President of the Student Personnel Association for Teacher Education and is Dean of Students at the Central Michigan College of Education. Dr. Sievers is the Secretary of the American Personnel and Guidance Association, 1534 "O" Street, N. W., Washington 5, D. C.

through personal appearance, dress, speech, general culture, teaching skill, and by superior personal, professional, and community relations; suppose also he is devoted to his profession as a life work, recognizes his obligation to guide promising students into it, and enlists the support of the guidance and counseling staff of the school. Each year students in junior high school may begin to plan for Industrial Arts teaching. Stimulated and guided by teachers and counselors, such students will provide a well-selected, reliable supply of college students. Of course, the overall task of providing an adequate number of Industrial Arts teachers involves many persons and institutions; some of these responsibilities are cited in the pages which follow. Then, too, the social context must be considered. Young men capable of teaching our children and youth will be attracted to the profession only as society rewards them for their efforts by acknowledging the significance of their work and by remunerating them reasonably.

Facilities Adequate to Accomplish Appropriate Personal, Social, and Professional Development of Each Student.

Imagine all the students from freshmen to seniors now studying to be Industrial Arts teachers. If we could know each of them thoroughly we would find among them a wide variety of personal, social, and physical deficiencies, especially when the norms of professional educators constitute the criterion. Some persons with serious disorders are still being graduated and certified not only in Industrial Arts but in all other teaching fields simply because we do not clearly see how we can fulfill our professional obligations as regards selection and elimination. Minimum legal and academic requirements are satisfied. But these minimum requirements at best only assure familiarity with a subject area and an acquaintance with certain school management procedures.

While it is not presumed that well organized and efficiently functioning student personnel services can be effective in remedying all of the personal, social, and professional deficiencies students suffer, persons in charge of such services are obligated to assist these individuals through the facilities of the program and within their skills. This involves being fully acquainted with all of the facilities available on the campus and within the larger community in order to make proper referral of those students who require further specialized assistance.

The vast majority of persons preparing to teach are normal. These students have extensive need for personnel services not because of abnormalities or perplexing problems but rather because the student personnel program is an instrument whereby the student can make an optimal adjustment to college life and also an instrument whereby the college can serve its clientele to best advantage.

A positive student personnel program operates in behalf of all students and provides these services:

- 1. Assists other college officials in establishing better student selection procedures,*
- 2. Accumulates and establishes adequate information upon each student from such sources as secondary school records, comprehensive tests and inventories of attitudes, aptitudes, and personality adjustment,*
- 3. Makes counseling services available to each student — both applicants for admission and those accepted,*
- 4. Aids the student in the selection of courses, co-curricular and extra-curricular activities which offer him the opportunity for his fullest development,*
- 5. Provides information upon course offerings, job opportunities, and implications for closer articulation of collegiate preparation and professional expectations, and*
- 6. Establishes follow-up procedures for assisting the student in his adjustment on the job and utilizes follow-up findings for the continued improvement of the instructional and personnel programs.*

A growing number of teacher education institutions provide professional counselors, clinical psychologists, psychiatrists, physicians; remedial work in speech and academic deficiencies; broad opportunities for social development; testing; and many other resources for developing teachers who know not only subject-matter but — what is vastly more important — are good persons to lead the children and youth of the nation. The teacher education program with all its allied services should strive to develop wholesome individuals in whom parents and youth may find security and proper leadership. It should be the function of the personnel services of the institution to provide a variety of services, activities, and programs whereby this can be accomplished.

Several colleges have set up selective procedures through which teacher-education students who do not measure up to desired personal characteristics can be denied admission to candidacy for certification when they fail to respond to guidance and counseling in correcting these personal inadequacies. There is a further need for integrating such services into the total program, rather than dealing with these future teachers in facets, such as academic, personal, etcetera.

Robert Hutchins once said, "We are so busy doing the urgent that we never have time to do the important." For many decades we have been busy turning out scholastically qualified teachers of Industrial Arts and many of them have met most exacting professional standards. But we have not developed a long range plan to assure a reliable supply of student candidates, and we have not refined our techniques to assure a product of uniformly high quality.

But we are making progress. The student personnel practices presented in this chapter indicate some of the newer and better accepted attempts of the profession to lift teacher selection and preparation well above academic and legal minimums. This growing emphasis may supply the profession of Industrial Arts teaching with personnel who will make it their life work, protect it against those who swarm into it when depressions come, and desert it again when money beckons elsewhere.

Overview of Reported Practices

There are five divisions in this section dealing with student personnel practices. They are (1) recruitment, (2) selection, (3) orientation, (4) student records, and (5) placement and follow-up. Because of the scope there are more items in this section than in any other. Many of the practices reported in this chapter prevail throughout a college or university, rather than being confined to a single department. The reader will be able in most instances to place responsibility for the practice from the descriptive statements.

Recruitment of prospective teachers is an activity engaged in extensively by teacher education institutions. The most prominently mentioned technique is to sponsor activities which bring secondary school pupils to the campus and the second most frequently used procedure is to provide counseling service for persons who contemplate coming to the college or university. There is less effort expended in the way of organized group

recruitment involving alumni, teacher organizations, and school administrators. Brochures, films and film strips, radio and TV programs, spring conferences and barnstorming tours are among other recruitment procedures mentioned.

It is manifest that the profession exerts itself year by year to obtain a student body. This takes considerable time and effort and, since recruitment is frequently assumed by staff members in addition to their instructional responsibilities, the burden may become very great. There is little evidence offered whereby the effectiveness of recruitment enterprises may be evaluated. Multiple or compounded efforts are used so that the contribution of a designated recruitment project is submerged by the total recruitment program. Perhaps, too, the responsibility of the college and the department for the promotional aspects of recruitment remains an open question worthy of careful consideration.

Selection has two complementary aspects. In one sense there is career selection on the part of the student and there is the acceptance or rejection of the student on the part of the department. Acceptance or rejection by the department is influenced by the availability of students and availability, in turn, depends, in part, on the effectiveness of recruitment.

It is significant that the most frequently mentioned selection practice is an on-campus counseling service maintained to help a student in his choice of a college career. The most prevalent reported selection criterion pertains to the student's mental and physical health. Schools reported, as a superior practice, their plans whereby selection operates not only at the freshman year level but throughout the four-year period; five schools indicated a plan whereby there is a common curriculum for all students for the first two years with departmental acceptance occurring at the beginning of the junior year.

Numerous devices and techniques are said to be in use by institutions in their selection programs. Among them are tests of general intelligence, of reading ability, of achievement in selected subject areas (English and literature, mathematics, science, history, and social studies), of speech, of emotional and social adjustment. Interviews, high school scholastic records, scholastic achievement in college, and physical examinations are also named. A program of selection that is continued through the four-year period is normally administered on the basis of the student's point-hour scholastic average.

There was frequent response to services and activities associated with orientation. Pre-school orientation periods, the appointment of a faculty adviser for each student, remedial clinics and remedial classes, assistance in making the transition from secondary school to college, and direct efforts to bring faculty and students into close relationship are among the orientation functions most commonly described.

The concept of orientation conveyed in this series of items implies the external frame of reference; that is, the student is expected to adjust to conditions prevailing in the college and in the curriculum. This point of view may be justified on the basis that the Industrial Arts student is enrolled in a professional curriculum which has its own unique requirements.

Student record keeping appears in good order. That is, in addition to obtaining and reporting course grades, further data about students are submitted by instructors and other college staff members and this information is recorded. These data reported under "Selection" are part of the cumulative record. Student record keeping is the responsibility of one or more professional persons who are also said to be capable of interpreting the data to faculty members.

Placement services are extensive with large numbers of schools reporting systematic handling of data about prospective and in-service teachers, in contacting employers, in arranging for conferences between hiring officials and students, and in making an effort to place the student in a position commensurate with his abilities and interests.

No college reporting in this study described a placement practice wherein the Industrial Arts department was completely independent of a college-wide placement service. Practices approaching autonomy were presented. Placement offices also perform data gathering services fundamental to occupational guidance; these data include placement record for the preceding year, number of requests and their origins, major-minor combination requests, and starting salaries.

The follow-up of graduates, once placed on the job, is limited very largely to reports and evaluations made by public school administrators to the college. No school reported as a superior practice a plan whereby faculty members visit their graduates for follow-up purposes and, similarly, none reported an allocation of faculty time for this purpose. From the data available it would appear that the follow-up of graduates is an area in

which appreciable improvement could be made. The relative time and effort spent on recruitment and the follow-up of graduates appears to be in imbalance.

Reports on Superior Practices

Section A: Recruitment

100. The Industrial Arts department and the alumni of the department have developed cooperatively a recruitment program.

No response to this item.

101. Industrial Arts teacher organizations in the district or state assist the college recruitment program.

The California Industrial Education Association has established a committee in the southern section of the state to prepare a teacher recruitment brochure which will be available for distribution in the very near future. The State organization has gone on record by resolution favoring an active recruitment program and has implemented the intent by suggesting that each district organization of the state effect a local program. Most of the districts have scheduled one or more dinner meetings to which each member is expected to bring a future teacher. Teacher educators are usually invited to make a presentation and discussion follows. Some of the districts have invited administrators and counselors and have offered a similar program.

Kermit A. Seefeld — University of California at Santa Barbara, Santa Barbara, California

There is an effective program existing between the Industrial Arts teacher organization in this state and the college to aid in the college recruitment program. Our college teachers are members of the organization; our students appear on their programs. One or more times a year, this organization meets on our campus to conduct a state-wide Industrial Arts contest for students of the high school level.

E. A. Miller — Langston University, Langston, Oklahoma

102. There is a planned program of visitation by the college faculty to the public schools for the purpose of recruiting Industrial Arts teachers.

A planned program of visitation is a school planned project. Beginning in February, two or more members of our faculty with a group of students begin visiting high schools in our service area. Each department furnishes members for this visit so that no one department has the entire responsibility and all departments have representation. The students are also chosen from the various departments. They are coached for an interesting assembly program for the high school. This program is of such nature as to be entertaining and at the same time to give the high school some idea of what our college has to offer, and something of what college life on our campus is like.

As a special effort from our department, our instructors visit Industrial Arts departments in schools to meet the boys and also have some

contact with former graduates. Some of our seniors also go out for observation by special arrangement. This is not as extensive as we would like but we are developing it.

L. D. Wallis — East Tennessee State College, Johnson City, Tennessee

Two members of the faculty spend approximately one half of their time visiting the high schools of Middle and West Tennessee. Their primary purpose is to recruit students for the college. They talk with the students in groups, and for those students who wish further information, they hold private conferences.

Leon Bibb — Austin Peay State College, Clarksville, Tennessee

103. Recruitment is assisted through services rendered by faculty members of the Industrial Arts department to public schools.

Members of the instructional staff in the Industrial Arts department are called upon periodically to act as consultants in public school planning programs. Assistance has been given school districts in the state in matters pertaining to shop planning and equipment selection, planning Industrial Arts courses and general shop programs for both junior and senior high schools, and in establishing new basic programs in small schools. Recruitment is benefited indirectly through these services, although immediate results are not always apparent.

George L. Sogge — Central Washington College of Education, Ellensburg, Washington

We have come to see that our responsibility does not end with graduation but expands into placement and in-service education. As the Industrial Arts teacher education faculty begins to accept the wider concept of responsibility, it becomes more conscious of the needs of teachers in the field and brings many services to them. These may be of specific help in planning a new shop or in replanning an existing shop; selecting a text for a given course or selecting reference shelves for a shop or drawing room; suggesting course content; providing teaching aids on a loan basis, and making available other types of instructional materials. These services provide a number of inter-personal relationships with teachers in the public schools and stimulate the public school teacher to recruit superior students for teacher education. Most of our data on recruitment indicates that those preparing to be teachers became interested through a teacher already in the profession. Thus, the services which the faculty of the department of Industrial Teacher Education is able to provide to the public school teacher in the area which the institution serves, is believed to be very effective as a part of the total recruitment program.

Gerald Baysinger — Wayne University, Detroit, Michigan

104. The college is the sponsor of professional organizations of counselors, principals, and superintendents, and these organizations have recruitment as a part of their programs.

No response to this item.

105. Specific efforts are made to keep the high school principals, counselors, and student advisers informed regarding Industrial Arts teacher supply and demand.

Our placement office works in close cooperation with the Industrial Arts department and information flows both ways between cooperating agencies.

Superintendents and principals attend Industrial Arts meetings, serve on the programs, keep up contacts. The Industrial Arts staff is represented at meetings and outings of administrators.

The Industrial Arts department keeps a current record of all Industrial Arts graduates and makes the complete list of graduates, together with their composite experiences, available to the placement office and to graduates of the department.

Trips are made to visit high schools of the district. In all cases both the administrators and the Industrial Arts teachers are contacted.

N. B. Grinstead — Central Missouri State College, Warrensburg, Missouri

106. The college has an extensive scholarship program in which the Industrial Arts department shares.

During the school year 1952-53, a scholarship program in Industrial Arts was started. Three \$500 scholarships were made available to entering freshmen. These scholarships were secured from local industrial concerns.

Under the one scholarship program, 12 outstanding students were selected from throughout the state. They were brought onto the campus for a day of professional activity. From this group, the three top boys were selected for the \$500 scholarships.

John L. Feirer — Western Michigan College of Education, Kalamazoo, Michigan

Resident students of Louisiana attending state-supported colleges are eligible to receive scholarships from various sources. Needy students may secure a legislative scholarship ranging in amounts from \$25.00 to \$300.00, by applying to their representative or senator. A T. H. Harris scholarship, \$150.00 to \$200.00, is available to students, who in addition to need, have a high scholastic record. In addition to the above scholarships which are outright grants-in-aid, the college offers approximately 300 working scholarships, exclusive of athletics. The rate of pay is 45 cents per hour.

Industrial Arts students are eligible to share in any of the scholarship awards. Three years ago the department inaugurated a state-wide contest in Industrial Arts for the purpose of screening projects for entrance in the Ford contest. Students with a junior or senior rank, whose combined test and project ratings are the highest in any area receive a scholarship, if they choose to enter Northwestern State College and major in Industrial Arts. This excludes the recipient from payment of fees, and if he needs it, the department may assign him a working scholarship. This plan has proven quite successful as a recruiting method for students with a background and aptitude for Industrial Arts.

Walter J. Robinson — Northwestern State College, Natchitoches, Louisiana

107. "Future Teachers" and similar organizations in the high schools are aided by or organized by the college.

Colorado A. & M. College organized a Future Teachers of America chapter in 1949. The college club members come from the six schools on the campus giving a very cosmopolitan group.

Since its beginning it has been active in helping the Future Teachers Club at the Fort Collins High School, Fort Collins, Colorado. The FTA members, officers, and faculty sponsor, offer and give assistance to the high school groups. Many teachers of the educational courses and other schools on the campus attend these meetings as speakers, guests, and moderators.

The local chapter and club are active in the statewide assemblies and conventions. The Colorado FTA Delegate Assembly meets at Colorado Springs each year in December. This appointed group is the policy making board for the state FTA activities. The Colorado FTA State Convention was held at Colorado A. & M. College the past year. All FTA members are invited to these conventions. Colorado's colleges and universities are hosts to these conventions on a rotating basis. These meetings are held in April every year. There is also a Colorado FTA Advisory Committee appointed by the CEA. These six members are from the high schools', colleges', and universities' teaching staffs.

L. L. Gibbons — Colorado A. & M. College, Fort Collins, Colorado

A regular faculty member of the College of Education acts as sponsor and adviser for "Future Teachers of America" on both a local and state wide basis. Through the Extension Division of the University of Alabama, College of Education faculty members visit schools over the State and therein aid in the organization and continuity of "Future Teachers" and similar groups.

Harlan Clark — University of Alabama, University, Alabama

108. The college sponsors activities which bring secondary school pupils to the campus (e. g. open house, conferences, sports day, senior day).

The college sponsors a variety of activities which bring secondary school pupils to the campus. Of these activities the Industrial Education and Art department make use of the "open house" and "senior day". Open house is specifically for pupils interested in Industrial Arts. The pupils are registered and arranged in groups, each group having a guide or host. These groups are taken on tours through the department and institution. Refreshments are served at the end of the tour. After the noon luncheon, a program is provided. Following the program, prizes are awarded for lucky registrants, schools coming the greatest distance, and schools having the largest registration.

On senior day pupils meet with the faculty and are interviewed regarding their interests and possible college work. The general process is somewhat analogous to our enrollment period. Following this period pupils tour the campus, visit exhibits, familiarize themselves with the campus, and attend a general program. For open house, invitations go to every

school having Industrial Arts. For senior day, invitations go to all high schools. Open house is a one-day program while senior day takes two.

O. A. Hankammer — Kansas State Teachers College, Pittsburg, Kansas

Each spring our college conducts a high school day. Seniors from the schools in this district are invited to the campus where they attend musical programs, dramatic plays, an A. F. R. O. T. C. drill, a baseball game, a barbecue dinner, and the exhibits in a number of departments.

The Industrial Arts department in cooperation with the Industrial Arts club operates an information booth and soft drink stand. The various shops and other rooms are open where student work is exhibited and members of the classes demonstrate a number of hand and machine tool operations.

We believe that this project is one of our best student recruiting activities.

Kenneth L. Bing — East Carolina College, Greenville, North Carolina

Miami University offers a wide variety of activities that brings hundreds of secondary school students to the campus every year.

Prospective Industrial Arts education students come to the campus as members of track or field teams, music or scholarship contests. Groups that come less frequently include: Junior Achievers, Junior Red Cross, Future Farmers of America, and similar organizations.

Last year, the department of Industrial Arts education inaugurated a scholarship exhibit which was open to all high school students in the state who were interested and who were scholastically recommended for teacher preparation in Industrial Arts. The prize winning exhibitor was awarded a one year tuition scholarship at Miami University. The winner of the exhibit is a freshman in the department this year.

W. D. Stoner — Miami University, Oxford, Ohio

109. The Industrial Arts department produces publications which are directed towards high school graduates.

At the present time the department has 13 printed, lithographed, or mimeographed releases directed toward the prospective student. The office of the president of the University is happy to work with the department in the production of these materials.

Another phase of the program is the "personalized form letter" developed by this department. In what is known as a "form paragraph book" are written 79 separate paragraphs suitable for, and directed toward, 79 different situations. Thus, by combining several of these form-paragraphs into a letter it is possible to produce a letter that is personal in nature, tone, and content but a form letter in terms of execution. This is an extremely useful device for letters to high school graduates since most of them desire individual attention but the same sort of information.

Paul E. Powell — Wayne University, Detroit, Michigan

Douglas Sherman — Wayne University, Detroit, Michigan

The Industrial Arts department, during the 1952-53 school year, produced four pamphlets containing a description of the program in Industrial Arts at North Texas State College and each publication contained a working drawing of a different project. These publications were mailed to the superintendents, principals, and Industrial Arts teachers and a special effort was made to place copies of these publications in each school where Industrial Arts was not included in the curriculum.

Prior to the 1952-53 school year, the department published and distributed one bulletin which contained a description of the over-all program and pictures of the various phases of the Industrial Arts taught at North Texas State College. It is the plan of the staff at North Texas State College to produce and distribute a revised bulletin during the 1953-54 school year that will contain information concerning Industrial Arts at North Texas State College and other information pertinent to planning a college career.

E. B. Blanton — North Texas State College, Denton, Texas

110. The Industrial Arts department has moving pictures or still pictures which explain Industrial Arts teaching as a profession.

A series of colored slides were prepared with tape recordings, records, and script to help explain teaching as a profession to prospective applicants. Photos of teachers at work and photos of each of the Industrial Arts laboratories in the college were a part of this series.

The life of a teacher is reflected in descriptions of social experiences teachers are expected to have. Emphasis was placed on the need for a well-rounded wholesome life for teachers.

Gordon O. Wilber — New York State College for Teachers, Oswego, New York

A 16-mm sound-film, *Career Decision*, has been produced cooperatively by department faculty and students, and selected secondary school staff and student personnel. Appropriate campus and local school facilities were utilized. The film and script very effectively portrays and narrates the cycle of experiences exemplary of the successive steps a high school youth takes in order to prepare for Industrial Arts teaching as a professional career.

This sound film has been shown state-wide and showings are continually in demand on the campus as well as before high school assemblies and other community organizations interested in guidance services.

Glen D. Brown — University of Maryland, College Park, Maryland

111. Mass media (press, radio, television) are used extensively in the recruitment program.

Extensive use of the press is made in bringing the offerings of Bemidji State Teachers College to the attention of people of Northern Minnesota. We have excellent relations with the local newspaper. Hardly a day goes by that some item of interest concerning the College does not appear. Most of the copy is used exactly as we submit it. Besides the local paper, we circulate the area papers about twice a month. The papers in the 19

northern counties of Minnesota use much of the material we send them.

The owners of the local radio station extend us every courtesy. Some of the programs we have had are: short plays, science facts, literary discussions, and explanations of various offerings of the college.

C. H. McClintock — State Teachers College, Bemidji, Minnesota

112. An information service is provided for students already enrolled in college but who desire further information before making a definite career decision.

In order to make a satisfactory career choice, the student needs information about careers and also information about himself — his abilities, relative interests, and special aptitudes.

Information about careers is available in the library, and also in the counseling section of the Student Personnel Office. This includes career monographs, occupational outlook briefs, and other summary material about fields and specific jobs. In addition, information is made available through such sources as a series of lectures which all students are free to attend, in order to find out about the career fields represented by majors available to them at the university.

Further career information, along with information about themselves, is offered to students, as part of the counseling service of the university. Tests of aptitudes, interest, personality, and achievement are available.

Arnos Tamminen — University of Minnesota, Duluth Branch, Minnesota

A central guidance center is maintained at North Texas State College for the purpose of working and counseling with students who have not made a career decision at the time of entrance. In addition to the central guidance center, some of the various departments provide student personnel services. The Industrial Arts department provides such services, working in connection with the guidance center. Several different test batteries are used to help ascertain student's interests, aptitudes, and so forth. This information becomes a part of the permanent folder for each student and is available to all of the various staff members of the department.

E. B. Blanton — North Texas State College, Denton, Texas

113. An on-campus counseling service is available to persons who desire assistance in making decisions about college entrance.

The on-campus counseling service which is available is called the Testing Bureau. This bureau was organized in 1939 and serves as a clinical resource in the field of vocational and educational guidance of college students and high school pupils. The program of the bureau is organized to discharge the following general functions: to provide clinical services for the use of college counselors; to carry on educational and vocational counseling with individual students; to disseminate information about guidance and educational research methodology; to conduct research in the development of guidance instruments and methods. Any high school student may make an appointment with the bureau to go through the testing program and subsequent counseling. This may be done anytime during high school or just prior to entering college.

Lowell L. Carver — Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa

This college is designated as a special service school for public education in an area composed of 15 counties in the northeastern portion of the state. One or more staff members of the college act as coordinator or coordinators for each county. These coordinators contact high school seniors and others who may be interested in college entrance. When the specific interest of an individual is determined, literature from the college is mailed explaining the services of the college in this area. The chairman of the department is notified of the individual's interest. The chairman then often writes a personal letter inviting the individual to come to the campus to visit the college, the department, and counsel with staff members.

In addition to the above general program, there is a central Personnel Office and a Public Relations Office which correlate much of the above.

Marion E. Franklin — Northeastern State College, Tahlequah, Oklahoma

Miami University provides a full-time counseling service open to all students without cost. The staff administers the psychological tests to all incoming freshmen as well as the sophomore and senior tests.

Appointments for individual counseling are encouraged and many students discover strengths and weaknesses which they were not aware of prior to the counseling appointments.

Inter-divisional transfers of students on the campus are made or denied upon the recommendation of the counseling service.

W. D. Stoner — Miami University, Oxford, Ohio

114-115. Write in items.

No response to these items.

Section B. Selection

116. Student selection procedures operate prior to the student's admittance to the campus (i. e. prior to his acceptance by any college or department).

Counselors in the high schools which are our principle sources for students have been advised of our requirements for admittance. As early as the junior year in high school, requirements are checked and students placed in academic work to meet them. Entrance to City College of New York is based upon a written entrance examination and high school work. The counselors do not forward applications, in general, of those who are low in scholastic ability.

Practically every candidate is interviewed before filing an application. This is individual and may last as long as one hour.

A. R. Spillman — City College of New York, New York, New York

117. Students are accepted by the college or the university on the basis of an overall policy but the Industrial Arts department may accept or reject those admitted to the campus.

No response to this item.

118. Students participate in a program common to all curriculums during the freshman and sophomore years and are accepted or rejected by the department at the junior level.

All freshmen and sophomores are enrolled in the University College, which administers work of the Lower Division including pre-professional work for the Upper Division Schools and Colleges and a core program of basic education for all students.

The general education program includes comprehensive courses in American Institutions, the Physical Sciences, Reading, Speaking and Writing, Practical Logic, Fundamental Mathematics, the Humanities, and Biological Science.

Upon the successful completion of the University College program, the student receives the Certificate of Associate of Arts before applying for admission to the Upper Division School or College for which he has prepared. Each applicant for admission to the College of Education is screened by the Admissions Committee on the basis of Lower Division record, various tests, and continual faculty appraisal.

Roy F. Bergengren, Jr. — University of Florida, Gainesville, Florida

All students are required to take:

English and Speech	12 units (Semester basis)
Social Science	9
General Psychology	3
Science (Physical and Biological)	10
Art	2
Music	2
Controlled Electives	6
Military Science	6
Physical Education	2

At the present time it is not mandatory that all the above be taken in the lower division (freshman and sophomore years). The thinking has been that students enjoy getting some experience in their specialty as freshmen. There is a strong likelihood in the future that 9 to 12 units of work will be permitted, by controlled electives, to be taken from any of the departments of the college. Then the entire lower division core will become mandatory. Anyone who passes a proficiency, health, and speech examination and has an average scholarship record is accepted for major study at the junior year.

Kermit A. Seefeld — University of California at Santa Barbara, Santa Barbara, California

119. Student selection procedures are operative throughout the four year college period.

The School of Education at Miami University provides a program of progressive student selection throughout the four years.

All state-supported institutions of higher education in Ohio are required to enroll any graduate of a four year high school in the state.

The University administers a battery of freshman tests which provide a very reliable percentile ranking of all freshmen. Probation and drop standards constitute additional selective procedures as follows:

1. Freshmen — 1.4 average; upperclassmen — 1.7 average.

2. A professional average of 2.0 is required in the School of Education at the end of the sophomore year.
3. A 2.5 average in all teaching fields is required for student teaching eligibility.
4. An accumulative average of 2.0 on all work undertaken is required for graduation.
5. A satisfactory rating in at least five credit hours of student teaching is required for certification.
6. A recommendation from the dean of the School of Education is necessary for certification even though the student satisfactorily meets the requirements specified above.

W. D. Stoner — Miami University, Oxford, Ohio

Student selection is a process that starts prior to entrance and continues throughout the four years. A prospective Industrial Arts candidate may declare, upon entrance, "I am going to be an Industrial Arts teacher." The fact of the matter is he must win that right. The department has a selection committee. Basically, before he is cleared by the college personnel committee and recommended for teacher education and admitted into candidacy at the close of his sophomore year, he must satisfy numerous criteria set up by the department selection committee. Fundamentally, he must show aptitude in the Industrial Arts field. He must possess certain personal qualities and in addition an overall scholastic average of 1.5 or better and 2.0 in the major field of Industrial Arts. Since this department committee has been established practically every grade which has been returned to the department from the college personnel committee and has rated the applicant either A or B as a candidate for teacher training.

1. Selection Committee receives reports from department staff members regarding the candidate who is applying for credential training. These reports cover his personal attributes, his technical ability, and skill, and an estimate of his probable success as an Industrial Arts teacher.

2. Selection procedures continue through the student teaching period, at the close of which the candidate may be passed; required to do additional student teaching; or failed.

H. A. Sotzin — San Jose State College, San Jose, California

120. Selection procedures involve interviews in which department representatives participate.

No response to this item.

121. Selection procedures involve an established testing program.

The established testing program at the Teachers College of Connecticut includes tests of general intelligence, reading ability, comprehension, and an assessment of high school content. After administering these tests for a number of years, it was possible to establish certain criteria which would tend to indicate whether or not a candidate could successfully pursue a collegiate program of study.

These tests are designed to provide a quick and accurate appraisal of the candidate's background and knowledge in each of four basic areas, as

follows: (1) English and Literature, (2) Mathematics, (3) Science, and (4) History and the Social Sciences. The total score furnishes an over-all evaluation of the student's general mastery of the subject matter content in these fields.

These tests also serve as a guide in detecting weakness which may exist in a specific area. The beginning student is then advised to take special work in order that his background in this area may be strengthened.

Tests for admission are administered periodically during the entire year, with the majority taking place during the spring quarter. All applicants are required to take these tests. In addition, they are required to appear for a personal interview, thereby providing an opportunity for the interviewing committee to assist in making the final selection of candidates.

Paul N. Wenger — Teachers College of Connecticut, New Britain, Connecticut

All applicants to Xavier are required to take college entrance examinations, irrespective of the school or locality from which they come. Periodically entrance examinations are given by counselors in various centers in the surrounding states. Those who fail the test, although they have expressed a preference, are not accepted. However, applicants who show a weakness in one or two subjects such as reading, English, and arithmetic are accepted and required to do remedial work in these subjects. A satisfactory grade is required in these subjects before credit is given. In addition to test data, students or applicants must present a photograph and health certificate and must be of good character.

Raymond Floyd — Xavier University, New Orleans, Louisiana
Julian Parker — Xavier University, New Orleans, Louisiana

122. Selection procedures involve the high school and/or college scholastic record of the student.

The student upon application for entrance pays a registration fee which covers the cost of procuring his past academic record and its evaluation. No student is admitted to full standing until all records have been evaluated. Students are carried as special students until all clearance has been made and the past scholastic record reviewed.

Students are admitted as regular students only when their past record in high school or college is satisfactory and is balanced on credit units and grade points earned. Those students with a deficient record are placed on probation and must maintain a satisfactory record during the next semester if they are to remain in school.

All entering students take entrance examinations which must be passed satisfactorily. Students accepted as special students are held to a limited number of units until their record is satisfactory. Decisions on acceptance of new majors having poor scholastic records are referred to the Industrial Arts department for review of their past training.

C. Thomas Dean — Long Beach State College, Long Beach, California

123. Selection procedures involve a "tryout" period, at least for some students.

Our institution has a junior college. All students enter this college. After the first year they make application for major work. Any student, even in junior college, who has definitely made up his mind to take Industrial Arts, for example, is permitted to take certain trial courses during his freshman year. His application for admission to do major work is approved professionally on the basis of interview and level of performance in these trial courses. He comes to a major department on probation.

Raymond H. Larson — State Teachers College, Saint Cloud, Minnesota

124. The criteria which serve as the basis for selection have been stated and the types of data which they require have been anticipated.

No response to this item.

125. These criteria (item 124) are continually evaluated through the subsequent performance of graduates.

No response to this item.

126. Specific efforts are made to determine the physical and mental health of the applicants.

The College makes an effort to determine the physical health of the applicants through a rather thorough examination which is given to each student at our modern 44 bed campus hospital. Our students have the services of two physicians; six nurses; a dentist, part-time; eye, ear, nose, and throat specialist, part-time; one physical therapist; and one laboratory technician. The College maintains a working relationship with psychiatrists, and students referrals are made to specialists whenever there is need.

An effort is made to determine the mental health of applicants through the sources provided by the College Counseling Service. Among the tests administered to students during orientation week is the Bell Adjustment Inventory, which points up the areas of satisfactory or unsatisfactory adjustment; for example, home, health, or emotional areas. The services of a clinical psychologist and speech therapist are available. Individual counseling is provided for all persons who enroll at the College and who experience difficulties of any kind.

D. N. Henderson — Virginia State College, Petersburg, Virginia

Consultation — Students may have any number of consultations at the Health Service.

Physical Examinations — Routine freshmen, seniors, athletes, students on special programs and when deemed necessary.

Follow-up — Follow-up on students who are found to have a deviation from normal at time of physical examination.

Laboratory Tests — Hemoglobin and urinalysis are routine for new students. Urinalysis, blood counts, bacteriological smears, sedimentation, basal metabolism, Wasserman, and other serology tests when deemed necessary for diagnosis and follow-up.

Immunization — Smallpox vaccination at time of routine physical examination, Schick test at time of routine physical examination and if

positive followed by the diphtheria-tetanus toxoid. Mantoux test at time of routine physical examination or when deemed necessary — other immunizations upon request or as needed.

Chest X-Ray Program — Mobile unit on campus once a year for all students and personnel. Follow up if necessary.

Emotional Problems — Students with emotional problems referred to psychology department for psychometric examination and counseling in conjunction with Health Service Physician.

Physiotherapy — Hydrotherapy and diathermy.

Medications — Some medications are dispensed at Health Service (penicillin, cough medicine, nose drops, cold tablets, milk of bismuth, etcetera). Prescriptions are given for further medications.

First Aid and Emergency Care — First aid and emergency care for all students and personnel on campus.

Minor Surgery — Minor surgery as deemed feasible on an out-patient basis.

Supervision of Healthful Environment — Supervision of healthful environment of campus — (includes cafeteria and swimming pool).

Hilda Schumacher — *University of Minnesota, Duluth Branch, Minnesota*

127. An on-campus counseling service is maintained to help a student in his choice of a college career.

In addition to the Testing Bureau for the entire University, there is a large Counseling Bureau for the College of Education — of which we are a part. The Bureau gives tests of many kinds and reports scores and ranks to departmental chairmen for use by the staff and for filing in student folders. One staff worker in the Bureau is assigned to our department and we are in close touch with him. The Bureau has record of the progress (probation, etcetera) of our students and the staff member mentioned attends meetings of the Students' Work Committee to present facts on cases and to report on interviews and correspondence on each case at issue.

All transfers to us from other colleges on campus, and from those at a distance, clear through this bureau.

We are in close touch with our own students and seem to be effective in counseling as to whether a student is making an appropriate choice and, if so, how he may make the best possible adjustment in view of such decision.

Homer J. Smith — *University of Minnesota, Minneapolis 14, Minnesota*

Upon entering the college, students are asked to indicate plans in so far as they are known. Freshman counselors try to advise based upon declared plans and other available data. A series of tests are given in order to determine aptitude and to furnish additional information for counseling purposes. Efforts are made to encourage students to reappraise plans based upon their record at the end of the sophomore year and rechart the course, if necessary. It is expected that once the student embarks upon a

known "major" the departmental chairman will operate continuously as an adviser. Individual counseling is always available to the student through the personnel division. A final re-evaluation is made at the beginning of the senior year.

Victor L. Bowers — Southwest Texas State Teachers College, San Marcos, Texas

128-129. Write in items.

No response to these items.

Section C: Orientation

130. Provisions are made for a pre-school orientation period to assist the beginning student.

Pre-school orientation of beginning students at the Kansas State Teachers College of Emporia takes place during the week preceding regular enrollment. The activities open with a convocation of new students, with the student council in charge. At this time the members of the administration are introduced, and the week's activities are outlined.

A portion of each of the first three days of the orientation period is devoted to the giving of entrance examinations, with the remaining time during each day spent in acquainting the students with the campus through conducted tours, with special attention being given to the library and its facilities. Each evening, some form of entertainment is provided, such as a movie, square dancing, or informal dancing. New students are also given a chance to become acquainted with the various campus organizations.

During the remaining days of the week, each student is individually advised by a faculty member to whom he is assigned, his program of studies is outlined, and he is enrolled, before the upperclassmen arrive on the campus.

Ruth Shillinger — Kansas State Teachers College, Emporia, Kansas

We spend considerable time with new students especially freshmen helping them to understand the college, curriculum requirements, and enrolling procedures. We also give quite a number of tests before students enroll, so that from the results we can better plan their programs.

S. M. Dell — McPherson College, McPherson, Kansas

Almost the entire first week of the school year is devoted to an inclusive orientation program. The student is given an extensive battery of tests, he meets with his adviser, he is conducted on tours of the campus, he takes a complete physical examination, and he participates in a social program. As a result of these experiences a student has a better understanding of the college and the college has an extensive record of the student. The test results are quickly processed on IBM equipment and immediately made available to the student's adviser and his instructors.

In this way any early difficulties can be dealt with intelligently and adequately.

Ira H. Johnson — State Teachers College, Mankato, Minnesota

131. The beginning student is assigned a faculty adviser to assist in his orientation.

Each incoming Industrial Arts freshman is assigned a faculty adviser from the department to whom he may go for counsel during his entire college stay. Prior to registration each faculty adviser meets with his advisees to explain the college administrative organization, the courses offered, rules and regulations of the college, and the registration procedure.

The faculty adviser approves each academic program before the time of registration. He meets with his advisees either in a group or individually whenever the need arises. The advisee is free to take academic or social problems to his adviser at any time during his office hours.

Thomas I. Monteleone — Teachers College of Connecticut, New Britain, Connecticut

During the first week of a semester, designated as "Freshman Week", the University College conducts a program of orientation for freshmen. Various tests are given to assist counselors and students in the selection of courses and educational objectives. Each student is assigned to a counselor who is a member of the faculty selected from the division of the University in which the student is chiefly interested.

The student is required to confer with his counselor before he selects his program of studies and at the end of the seventh and thirteenth weeks to receive and discuss his grade reports. He is urged to confer with his counselor at any time to discuss his personal problems of any nature.

The University administration feels that this program helps to guide the student during the period of transition from high school to college.

Charles R. Kinison — Ohio University, Athens, Ohio

132. There is a planned program of meetings, social events, and discussions for the purpose of orienting the beginning student.

There is a planned program of social events and meetings designed for orienting the new students at North Texas State College. The general pattern of these events over a period of years is as follows: First, a general assembly is held for all freshmen and transfer students at which time general instructions and information are given concerning the various schools and departments. Second, the advisers for the various schools and departments meet with each group of students for further information and guidance concerning the nature of the work in each department and the scheduling of classes. At that time, approximately one hundred upper-class students who returned two days early and referred to as "Ask Me Students," assist in seeing that each individual student receives assistance in the usual problems that confront a new student. Third, all beginning students complete a testing program and report to their advisers for further counseling and guidance and the making of a tentative schedule.

Fourth, a social event, referred to as the "President's Theatre Party for Freshmen" is held. Fifth, a "Get Acquainted Party" is held at which time staff members of each department are urged to attend and to participate. Sixth, effective fall of 1953, each student is finally assigned to a staff member who agrees to serve as an adviser for the duration of the student's stay at this institution.

E. B. Blanton — North Texas State College, Denton, Texas

The first week of the semester is devoted to the orientation of the beginning student. This is called Freshman Orientation Week and consists of tests, general organization meetings, and specific study groups. Some of these may be listed as follows:

- General assembly with the administration and faculty
- General meeting and assignment of advisers
- General meeting and discussion of school facilities
- Informal mixer in the Student Union Ballroom
- Play night, consisting of dancing, swimming, bowling, etc.
- Special group meetings with the adviser for lecture and discussion of special topics and services of the college
 - a. Social clubs
 - b. Departmental clubs
 - c. How to study
 - d. Using the library
 - e. Student organizations

Asbury Smith — Central State College, Edmond, Oklahoma

133. Provision is made for an upper-classman to assist a beginning student in his orientation ("big-brother" idea).

All students upon arriving at the campus in the fall as freshmen are assigned to a big brother or sister, as the case may be. These upper classmen advise with the freshmen and try to make their beginning days in college as easy and profitable as possible.

Leon Bibb — Austin Peay State College, Clarksville, Tennessee

134. Specific effort is made in the orientation program to provide for the transition from high school to college with respect to such factors as personal responsibilities, quality and quantity of work, nature of the work, rights and privileges.

The transition from high school to college is made a delightful experience at this institution. The entire family is greeted upon their arrival on the campus by some faculty member who assists in getting located in dormitory quarters. After the majority of families have arrived, an informal gathering for newcomers, their families, and college staff is arranged in the student union where refreshments are served and the strangeness of new surroundings begins to disappear.

A program of assemblies, entrance tests, dean's meetings, and a session with counselors are scheduled the following day. In these meetings, new personal responsibilities, being a good citizen of the college community, observing traditions and customs, and the importance of good study habits are discussed. Each night of the first week has an event to assist the

freshmen to acclimate themselves to college life. Such evenings as getting acquainted, informal dancing, pep meetings, and all church welcomes are to be found on the calendar.

Delbert A. Dyke — Sul Ross State College, Alpine, Texas

All freshmen in Industrial Education are required to enroll in Industrial Education 111 - 112. These are orientation courses which extend over the entire freshman year and the students discuss such topics as: (a) To whom to look for advice, (b) Problems of college level, (c) The organization of the college, (d) What is my major in life?, (e) How to study, (f) How to use the library, (g) How to prepare written assignments, and (h) Planning my educational program.

Alvin I. Thomas — Prairie View A. & M. College, Prairie View, Texas

The numerical grade-point average that is required of freshmen at the end of the first quarter is somewhat lower than that which is required of more advanced students. This gives the beginning student an opportunity to become adjusted to the study habits and the fulfillment of class assignments and yet remain as a student in good standing.

Each new Industrial Arts student is assigned to a faculty member of the Industrial Arts department, who continues to serve as his adviser during the entire college program. This gives the student an opportunity to become closely associated with a faculty member who can counsel with him and assist him, especially during the first few months.

The program conducted during "Orientation Week" which precedes the opening of college in September and the "Orientation Course" which is conducted throughout their first term, are both designed to assist the student to resolve his new responsibilities and to recognize his rights and privileges as a college student.

Paul N. Wenger — Teachers College of Connecticut, New Britain, Connecticut

135. Special effort is made through handbooks, bulletins, and other publications to assist in the orientation of the student.

No response to this item. The presence of these devices is implied in other responses.

136. Effort is made to provide orientation procedures that are flexible and based upon the needs of the current student body.

No response pertinent to this item.

137. Specific efforts are made toward developing rapport between students and the faculty.

Our greatest success in developing rapport in our department is through the Industrial Arts Club. Our current club project — a statewide Industrial Arts fair to take place in April — calls for the delegating of various responsibilities to students. Giving students a "pat on the back" for good work in such an undertaking helps to develop rapport.

A. A. Bettina — Eastern New Mexico University, Portales, New Mexico

In addition to the informal relationship that exists between students and the faculty because of the size of the college, several student-faculty committees function in the promotion of rapport between the two groups. The membership of 21 of the Policy and Planning Committee is constituted in part by college students.

The Student Union Activities Committee is composed of nine students and nine faculty members.

The informal facilities of the Student Union provide a natural environment for the growth of rapport between students and faculty.

Asbury Smith — Central State College, Edmond, Oklahoma

Throughout the year, picnics, dances, socials, receptions, and other affairs are held in attempt to develop rapport. A Student Handbook and a Faculty Adviser's Handbook are available to all students. Student members are elected to and serve on all but a few of the faculty committees. They have equal voting power and are free to enter all discussions. The Student-Faculty Government Association and the Student Council are made up of faculty and students.

A note of informality is stressed when Industrial Arts students meet with members of the departmental faculty, regardless of whether the meeting takes place on the campus or in the office. The office door is always open and students feel free to drop in at any time and talk over areas of interest that range all the way from current events to academic standing. This informality, we feel, goes a long way toward developing the type of rapport that breaks down barriers of misunderstanding between students and faculty.

Paul N. Wenger — Teachers College of Connecticut, New Britain, Connecticut

138. Specific experiences are provided the student for the purpose of better personal adjustment and optimal academic achievement.

No response pertinent to this item.

139. Provisions are made for remedial clinics and remedial classes (e. g. reading, grammar, mathematics, and speech).

Regular clinics are provided for all students throughout Oregon State College and are designed particularly to identify, diagnose, and give remedial assistance to any and all students who do not make satisfactory scores on the tests given in reading, mathematics, and speech. These remedial classes include the following: vocabulary building, corrective English (largely grammatical and basic structure), review mathematics, and remedial speech work in the form of corrective speech, voice and diction, and special coaching for foreign students.

The diagnostic tests in mathematics, speech, and English are required of all entering students. Deficiencies are discovered and remedial courses recommended, in accordance with the listings above.

George B. Cox — Oregon State College, Corvallis, Oregon

One of our entrance tests, Cooperative English Test, is administered by the English department. All freshmen falling below the median score are automatically scheduled for a remedial class in English. They meet this class twice each week for one hour one semester and are given two semester hours of credit for successful completion of all requirements. Drill in grammar fundamentals and reading comprehension in keeping with vocabulary level comprises a major portion of the remedial instruction. This course counts as a required elective.

One member of the English department staff has been especially prepared for giving remedial instruction in reading and grammar. An interesting experiment is now under way in the teaching of slow readers. The elementary method of teaching reading, adapted to the level of adults, is being tried.

Students from all fields of interest are urged by counselors and department heads to consider a fundamental course in speech as an elective early in their program of studies.

Delbert A. Dyke — Sul Ross State College, Alpine, Texas

This practice is a direct result of the records submitted to the Case Conference Committee. The students who are found to be weak in the areas mentioned above are given remedial treatment either by members of the department, a student tutorial staff or sent to the instructors in other areas of the university whose major function is instruction in a particular area mentioned above.

Henry L. Thurman, Jr. — Southern University and A. & M. College, Baton Rouge, Louisiana

140-141. Write in items.

No response to these items.

Section D: Student Records

142. Records kept of student achievement include data pertaining to all of the objectives of the teacher-education program.

To begin with, we have the ACE scores on most of our entering students by administering the tests during the high school senior year. We then give tests in mental maturity, science, mathematics, English mechanics, and subject content.

Records are kept of the work which each student does and any student who has difficulty is immediately reported to the director of student personnel who contacts the student and the parents of the student. Comprehensive records are kept in the registrar's office on the student's academic achievement as well as on important character traits.

Faculty members are all familiar with a schedule of behaviors which the college hopes to achieve listed under the "portrait of a college graduate." Each department of the college strives to achieve these objectives.

J. Howard Kramer — Southern State Teachers College, Springfield, South Dakota

143. All teachers contribute data to the cumulative record of the student, in addition to providing a course grade.

The complete records of students are kept in the registrar's office except that a folder file on each student is kept in the office of the director of personnel. The director of personnel accumulates such information as personal data, previous schooling, previous occupations, scholastic achievement, and vocational objectives. In addition to that, each year every student is rated by five faculty members, who know the student. Data are collected on twenty important character traits.

Any teacher who has the student in class transmits pertinent information to the director of personnel.

J. Howard Kramer — Southern State Teachers College, Springfield, South Dakota

All teachers contribute to this record by making an annual evaluation or re-evaluation of each student major. Such character traits as cooperation, initiative, attendance, participation, neatness, and dependability are rated on a sliding scale.

R. J. Coltharp — Memphis State College, Memphis, Tennessee

This practice in our department is a part of our guidance program.

At the end of the first six weeks and at intervals of three week thereafter teachers, having contact with majors in the department, submit a grade and other information as to the student's progress, personality, and accomplishments (both academic and extracurricular). This information is used by a Case Conference Committee to evaluate students and give them aid where it is needed.

Henry L. Thurman, Jr. — Southern University and A. & M. College, Baton Rouge, Louisiana

144. Student records are kept up-to-date by professional staff members who are capable of interpreting the records to faculty members.

When the student enters the Industrial Education program coming as a freshman or as a transfer on the campus, an individual folder is established. This includes the record of scores made on the battery of tests used for admission, orientation scores, rank in high school, and personal history on a personal data sheet, including previous work experience. These records are kept by a member of the Industrial Arts staff.

All students are counseled periodically and from the record. These records aid in pre-registration and registration. When the student completes the semester's work, the grades are posted to the record. The individual folder becomes a depository for a set of records submitted by the student during his summer work experience program for which he receives three credits. The folder contains the confidential faculty recommendations, ratings by the supervising teacher for practice teaching, and a copy of the placement office record. Prospective employers frequently call at this office to consult the record before interviewing or employing the student.

Harry S. Belman — Purdue University, Lafayette, Indiana

The personnel division of the college keeps the student folders up to date and qualified counselors are prepared to give tests to students and also talk over with faculty members and students the test results. In light of these test results and other information turned in by faculty members they assist the student in making proper adjustments to his college work.

George F. DePuy — Central Michigan College of Education, Mount Pleasant, Michigan

The office of the director maintains scholastic records of all students in the division. These records include high school percentages, results of psychological and entrance examinations given by the college, all term grades in all subjects.

The bureau of psychological services furnishes data to the division of Industrial Arts and there is a staff member of the division capable of interpreting the data.

Each term the record of each student is reviewed when his program for the following term is made.

A. R. Spillman — City College of New York, New York, New York

145. The student's record, while confidential, is available to faculty members.

The registrar keeps a confidential card on teacher ratings of students. The ratings are never placed in correspondence but the faculty members and prospective employers may refer to them at any time.

W. H. Washington — Clemson Agricultural College, Clemson, South Carolina

A complete history of the student is kept in the general office. The various tests the students take and grades made in various courses are available to any faculty member.

W. L. Olsen, James Millikin University, Decatur, Illinois

146-147. Write in items.

No response to these items.

Section E: Placement and Follow-up.

148. There is an Industrial Arts teacher placement service supervised by the Industrial Arts Department.

The Industrial Arts department assumes an active part in the placement service of its graduates, and works very closely with the placement director at this college. Rarely is a graduate recommended for a teaching position without the approval of the Industrial Arts department. Before the placement record of the graduate is complete in the placement office the department staff evaluates the candidate by indicating his strong points and suggests the type of schools where he should be most successful. When a position is available the director asks for further suggestions in getting the "best" person or persons to recommend.

While many requests for teachers come directly to the placement office and the complete data sheets are filed there, a large number of teaching positions in Industrial Arts are filled by students who are recommended directly through the Industrial Arts department. Especially is this true when an immediate need for a teacher arises. An extensive acquaintance with schools and school administrators in the area served by the college may make the Industrial Arts teacher placement service a valuable contribution to the placement service of the college.

Milo T. Oakland — Northern Illinois State Teachers College, DeKalb, Illinois

149. The Department maintains active contacts with employing officials in the district, state, or even wider area.

This institution maintains a teacher placement bureau which through the years has become well known by superintendents in this state and surrounding states. The Industrial Education department cooperates closely with this teacher placement bureau and with the superintendents. It has been possible for members of the department to become personally acquainted with nearly every public school superintendent in the State and with quite a number in the nearby states. Utah schools are well consolidated and there are only 40 school districts in the entire state. This situation makes it much easier to become better acquainted with superintendents than in a place where there are many school districts.

Upon occasion, visits are made by department staff members to most of the school districts throughout the state and this personal contact with the superintendents helps both in becoming acquainted with the problems faced by these superintendents in their districts and in informing them of prospective teachers who may fit well into their situation.

When a request for a teacher comes into the placement bureau, the Industrial Education department is notified and students are contacted by staff members and arrangements made for interviews. Sometimes the calls come directly to the department head who works with the superintendent and also with the placement bureau. Prospective teachers who are interested are notified and interviews arranged. Staff members are always available if superintendents wish to discuss qualifications of any candidates.

W. E. Mortimer — Utah State Agricultural College, Logan, Utah

Each year the department prepares a brochure of the graduating seniors. This brochure lists the qualifications, a picture, and all personal pertinent information that is desirable from an applicant. In addition, the brochure contains information about the department — curriculum accreditation, and the like. It is mailed to all principals and superintendents in the public schools of Tennessee; many are also mailed out of the state.

The prospective employer can look over the qualifications of several candidates and correspond with the department about the one in whom he is interested. In this way we have built up a wide area of contacts and school administrators expect this brochure to be mailed to them each year

as an aid in helping them fill teacher vacancies. After placement is made, follow-up letters are mailed for the first year concerning the progress, weakness, and teaching ability of the graduate.

W. H. Lewis — Tennessee Polytechnic Institute, Cookeville, Tennessee

The college has a department of placement with a director in charge who maintains active contacts with employing officials and others. The Industrial Arts department cooperates directly with this placement department and also keeps in contact with employing officials through meetings, conventions and cooperation in the development of plans, courses, and shops in communities of the state.

George A. Willoughby — Michigan State Normal College, Ypsilanti, Michigan

150. Placement publications, listing graduates and their qualifications, are published regularly and are available to employing officials.

Two or three weeks before the spring quarter comes to an end, there is published by the college a complete listing of the spring and summer students expecting to be graduated. This booklet contains a picture of the graduate and his qualification. Copies of the booklet are sent to all principals and superintendents within the service area.

Leon Bibb — Austin Peay State College, Clarksville, Tennessee

See also reference to this item in 149.

151. The placement office prepares summarizing statements about job opportunities, salaries and salary schedules, and teacher turnover.

The placement office prepares for the faculty a statistical summary of placement activity for each year. The information thus made available contributes to wiser counseling of students. Each report lists the number of men and women graduated from the departments and divisions of the college and the number placed in teaching positions. For those not going into teaching jobs, their numbers are recorded in such categories as status unknown, not placed, other work, advanced study, married, or military. Average salaries paid for the different teaching positions are also listed for the current and preceding years since 1950.

To give some idea of the areas from which calls for teacher placements are received, a tabular listing of calls is also included. The purpose of this tabulation is to show the widespread scope of territory in which Northern Michigan College graduates have an opportunity for placement and to give an idea of the calls received from the different states.

The third phase of the report analyzes the calls for teacher placement. Calls are classified into a major teaching area and then broken down into the subject matter areas requested. The number of requests for each subject is listed. An Industrial Arts major, for example, can at a glance see how many calls were received for his specialized type of instruction for the current as well as the past year. The student can also make a wiser choice of minor subjects for teaching by studying the subject areas in demand.

In addition to the report, the placement office maintains a daily bulletin board which lists current placement opportunities by subjects. The listing shows the job location as well as any special requirements. A large state map is placed nearby for handy reference. Any interested candidate for the posted job is free to inquire, and is urged to do so, at the placement office for further information and details.

No Industrial Arts student is placed through the placement office without a personal conference and discussion of the candidate's qualifications with his adviser in the Industrial Arts department.

K. A. Wahtera — Northern Michigan College of Education, Marquette, Michigan

Our placement office sends a weekly statement of job opportunities to each department; prepares periodic detailed summaries of all job opportunities; arranges interviews with school officials and business representatives; obtains reports of graduates' performance during the first year on the job and keeps complete records which are available to advisers.

R. M. Torgerson — Bowling Green State University, Bowling Green, Ohio

152. Special effort is made to furnish the student with personal materials such as letters of recommendation, statements of outstanding achievements, grades, special competencies, and personal qualities that would assist him in applying for a position.

A complete folder of personal data is made up for each graduate of this college. This folder contains the academic record, the record of awards and achievements, the social and extracurricular activities participated in, the reports of critic teachers and supervisors of his student teaching, and personal letters of recommendation from at least five instructors. These letters of recommendation are from instructors in the arts and science departments as well as from the instructors in Industrial Arts. The complete folder of all graduates remains at the college and graduates use this service when seeking new positions and promotions.

George L. Sogge — Central Washington College of Education, Ellensburg, Washington

A complete portfolio is made up for the student. These are sent to persons who are contemplating hiring the student. These records are confidential, available only to faculty people and prospective employers.

The portfolio contains information pertinent to the student's abilities, qualities, and the like.

W. L. Olsen — James Millikin University, Decatur, Illinois

It is a practice at this school for all faculty members to write letters of recommendation and file them with the placement office, School of Education.

L. J. Haynes — Alabama Polytechnic Institute, Auburn, Alabama

153. The placement office assists the student in contacting employers and in making arrangements for interviews.

The placement bureau receives notices of positions open from employers and checks these against credentials on file. Usually three or four candidates with the proper qualifications are given a notice of the vacancy. These notices, which are mailed to the student, carry a brief description of the position. Students are informed that they may and should contact the placement bureau to discuss any details of the opening. Simultaneously, the employer is contacted and is sent the names and credentials of the candidates. Employers are encouraged to visit the placement bureau and interview candidates in private conference rooms.

If the employer comes to the campus, students are contacted and brought to the interview rooms by appointment. Students are, of course, advised to indicate in their letter of application a willingness to come to the place of employment for an interview.

Alex Daughtry — Kansas State Teachers College, Emporia, Kansas

154. Special effort is made to place a student in accordance with his interests, abilities, and other factors contributing to success.

During a full year of student teaching we get a rather comprehensive view of each individual's abilities, accommodations, and the like. We have good personnel records by this time (third quarter of junior year to close of senior year).

It is required that all seniors file in the Bureau of Recommendations and none is permitted to file enrollment blanks for the final quarter until this has been done. This process results in a concentration of descriptive facts as well as of special reference statements and forms. As appeals come to the Bureau, in connection with positions, there is usually a selection made there of about three well-matched students. Because of our departmental knowledge of officials and work-places throughout the State, we are able to help on these screenings or to revise them. Superintendents often drop in to see us after examining credential papers of the few nominees, — or they write or phone us directly about special requirements or peculiarities of the position.

When candidates have been led to apply or after they have been interviewed in the case, they commonly consult with us. One of our men moves about the state a good deal (was formerly state supervisor) and he knows much of many situations.

Homer J. Smith — University of Minnesota, Minneapolis, Minnesota

In the placement of students in this college, a full acquaintance with each student's interests, abilities, and personality are a part of the information which placement officers hold. Each and every student is known by all who have any part in his placement. In addition every community is known to the placement director. No student is guided into a position in which all factors of both student and community have not been correlated. A full and honest appraisal of the student is given by personal interview, personal letter or telephone to the prospective employer. Likewise, a full ap-

praisal of the characteristics of the community and employing agent is given to the student. Only when all factors correlate in such a way as to assure success, is the student advised to make application or otherwise become a candidate.

Glenn W. Hildreth — Nebraska State Teachers College, Chadron, Nebraska

155. The placement office has detailed data about positions and schools so that the student may be advised of his meeting the job expectations.

No response which gives data beyond that provided in item 154.

156. The data which the placement office has relevant to a student are sufficiently descriptive to permit an intelligent decision by the employing official.

No response to this item.

157. Special effort is made to eliminate the factor of favoritism and prejudice in the reporting of openings to prospective teachers.

The philosophy of placement policies here does not lend itself to favoritism. A list of students eligible and qualified for certain types of positions is kept by the various departments and by the institution as a whole. In cases of openings or job opportunities this list is sent to the prospective employers for selection and further details are supplied by the institution upon request of the employer. Whenever there is an opening for a teacher in a particular field, each prospective teacher is notified and urged to contact the prospective employer.

Charles O. Stout — Maryland State College, Princess Anne, Maryland

The University has a central placement office. All of our students are recommended to this office and have documents on file. This office, however, refers specific jobs in our field to a designated member of our department. All jobs are listed on a special bulletin board. Descriptions of the job are listed on each slip. No graduate has ever failed to receive individual recommendations.

R. L. Thompson — New York University, New York, New York

Evaluation is made at the end of the sophomore year and the last semester of the senior year. In each case, students' records are considered by the entire staff on the basis of an outline. Through the give and take of the discussions we feel we give each student as fair an evaluation as we know how to give.

Conflicting viewpoints are noted on the record, so the potential employer can realize the necessity for using judgment.

Burl N. Osburn — State Teachers College, Millersville, Pennsylvania

158. There is a planned program of placement conferences with the college faculty, students, and public school people participating.

No response to this item.

159. There are provisions for placement and follow-up liaison between the college and the public schools.

After contracts have been completed, a college department staff member with the new teacher will visit the school and prospective shop and together make plans for possible rehabilitation of working quarters and plans for improving the instructional program. If this should occur before the opening of summer school, the new teacher may enroll for a credit course during summer school in which he will prepare up-to-date course materials for the shops he will teach in the coming school year. After teaching is under way, a college Industrial Arts staff member will again visit him for further conference.

Naturally the above program is greatly restricted when the student takes a teaching position a great distance from the college center.

Walter A. Klehm — Eastern Illinois State College, Charleston, Illinois

160. Graduates with experience (teaching experience and work experience) are informed about positions where greater maturity is needed.

At the University we have a very active and competent bureau of teacher placement with which the graduates may register from year to year or when they so desire. As the various requests for applicants or notification of vacancies in Industrial Arts come into the University, the placement bureau and I go over the requirements and then try to match the requirements with the experience of the people we have available. In this manner we find it very easy to place people with experience in positions of responsibility and at the same time make the other positions available for people with less experience. We have fine working cooperation with this department and practically all Industrial Arts men are placed through the cooperative effort of the bureau of teacher placement and the Industrial Arts department. Both are in the College of Education.

Athol R. Baily — University of Washington, Seattle, Washington

161. There is a planned program of faculty visitation for follow-up purposes.

No response to this item.

162. Provision is made in the allocation of time for college faculty members to conduct follow-up visitations.

No response to this item.

163. There is a planned program of student follow-up involving periodic reports by the graduate back to the college.

No response to this item.

164. There is a planned program of meetings and conferences between the college staff and public school people for follow-up purposes.

No response to this item.

165. There is a planned series of reports and evaluations made regularly by public school administrators as a part of the follow-up activities.

Each year contact is made with employing officials requesting information on progress of the teacher. These reports are treated in curriculum and program changes.

Harold G. Palmer — Iowa State Teachers College, Cedar Falls, Iowa

166. Follow-up activities are carried on by having a series of back-to-school meetings of former graduates.

No response to this item.

167. There is a systematic plan for using the follow-up reports in the improvement of the program.

No response to this item.

168-169. Write in items.

No response to these items.

The General Education of Industrial Arts Teachers

Point of View Statement¹

Ought our teacher education programs give central emphasis to courses in education? to work in the field — Industrial Arts, for example — in which the student is preparing to teach? to general education? What is the relative importance of general and of professional education² (including courses in education and in Industrial Arts) for the teacher of Industrial Arts?

It is the purpose of this presentation to examine some of the implications of these questions and to consider them as a basis for answering this question: What should be the relationship between general and professional education in the preparation of teachers of Industrial Arts?

What is General Education?

General education has had many and varied definitions. It has been described as "that education which leads to an understanding of the major fields of knowledge and of the interrelationships among them." It has been referred to as "the non-specialized, non-vocational education which should be the heritage of all." It has been defined as "education for the common life," as an "education educating man's humanity rather than indulging his individuality," and as "that form of education which prepares people for their common activities as citizens in a free society." Some definitions stress fields of learning and their relationships. Some see general education as a core of absolutes to be found, for example, in the "great books." Some emphasize the common needs and activities of students. Some

¹ Prepared by B. Lamar Johnson. Dr. Johnson is a Professor of Education, University of California at Los Angeles.

² The term *professional education*, as used in this point of view statement, refers to the professional education of teachers of Industrial Arts, including courses in education and in Industrial Arts.

single out the needs of society and the demands these needs place upon all citizens. Others recognize both the characteristics of students and those of society. Some regard general education as a body of subject matter, others as an approach to learning, and others as a combination of content and process.

Although general education cannot adequately be defined in a single succinct statement, for the purposes of this paper, general education will be regarded as that part of education which encompasses the common knowledge, skills, and attitudes needed by each individual to be effective as a person, a member of a family, a worker, and a citizen.

More appropriately, and certainly more accurately, general education may be defined in terms of its objectives. Such a definition is illustrated by the following statement of purposes developed for use in a study of general education in which the writer recently participated:³

The general education program aims to help each student increase his competence in:

Exercising the privileges and responsibilities of democratic citizenship,

Developing a set of sound moral and spiritual values by which he guides his life,

Expressing his thoughts clearly in speaking and writing, and in reading and listening with understanding,

Using the basic mathematical and mechanical skills necessary in everyday life,

Using methods of critical thinking for the solution of problems and for the discrimination among values,

Understanding his cultural heritage so that he may gain a perspective of his time and place in the world,

Understanding his interaction with his biological and physical environment so that he may adjust to and improve his environment,

Maintaining good mental and physical health for himself, his family, and his community,

Developing a balanced personal and social adjustment, Sharing in the development of a satisfactory home and family life,

Achieving a satisfactory vocational adjustment, and

Taking part in some form of satisfying creative activity and in appreciating the creative activities of others.

³ B. Lamar Johnson. *General Education in Action*. Washington, D. C.: American Council on Education, 1952, p. 2. See also pp. 19-32.

What is a General Education Program?

The questions are often asked: What is a general education program? Does it consist of a particular group of courses (communication skills, family life, general biology, and the like) specifically planned for the purposes of general education? Or is it a college-wide program in which faculty members in all courses and fields (including, of course, Industrial Arts and other professional education areas) utilize the opportunities which they have to contribute to the achievement of general education outcomes? These questions must be answered by any faculty which is planning a program for teachers of Industrial Arts.

The answers to these queries are, in large measure, conditioned by the definition of general education which has been presented above. If general education is best defined by stating its purposes, it necessarily follows that general education occurs at any point in the student's experience at which he advances toward the achievement of one or more of the goals of general education. This is true, regardless of whether that experience occurs in a course in communication or in calculus, in graphic arts or in drafting; regardless of whether it occurs in a course in family living or in philosophy, in photography or in forestry; regardless of whether it occurs in a counseling conference or in the councils of student government, on the athletic field or on the staff of the college annual.

Under this concept a really effective program of general education cannot be limited to a few selected courses labeled "general education." Faculty members in all fields and departments, sponsors of extra-class activities, and student counselors must be aware of their potential role in contributing to the general education of the students with whom they work.

It would be dangerous and fallacious to accept this viewpoint and thereupon to conclude that in a program with college-wide emphasis, no specific courses giving central emphasis to particular general education objectives are necessary. Regardless of the extent to which teachers in drafting and design, music and mathematics, contribute to the skills of communication, all students will need specific instruction in the language arts. Regardless of the extent to which sponsors of clubs, coaches of athletic teams, and instructors in automotives and economics recognize the principles of human relations and personal adjustment, courses in the direct study of human relations and of

personal adjustment (as exemplified in some psychology courses, for example) are essential. Similarly, specific courses directed to particular goals of general education are needed in such areas as family life, citizenship, health, and expressional arts.

Clearly the effective program of general education is one which gives both college-wide emphasis to goals of effective living and also provides courses (and in student programs, time for taking them) directed toward specific general education objectives.

How Can a Program of General and of Professional Education be Developed?

General and professional education must not, and need not, be set one against the other as competitors. The one defensible unity in education is that which occurs within the learner, the student. To be effective, a person, as a worker, requires a happy home life, the ability to communicate, and ability to work with people — outcomes commonly regarded as purposes of general education. It should be pointed out that these outcomes are important for and essential to the teacher of Industrial Arts, as they also are for representatives of other professional and vocational fields.

The relationship between the general education and the professional education of Industrial Arts teachers is suggested by the following generalizations:

- 1. General education can most accurately and best be defined in terms of its purposes.*
- 2. General education can occur in professional courses; similarly, general courses can contribute to professional education.*
- 3. The effective general education program requires the participation of all faculty members, including teachers of professional courses.*

The faculty which is committed to developing a program for Industrial Arts teachers consistent with these viewpoints will find the following steps necessary:

- 1. Agree upon the purposes of general education; in other words, define general education.*
- 2. Develop faculty-wide plans and programs for making appropriate contributions to these purposes in all fields of instruction and counseling, extra-class activities, and administration.*

3. *Develop courses particularly planned to achieve general education objectives in such universally important fields as communication, creative activity and appreciation, family life, citizenship, and personal adjustment.*
4. *Provide in students' programs sufficient time to take those general education courses required for professional success and for effective living.*

Conclusion.

Throughout the development of the educational program, the faculty should recognize that the only defensible unity of emphasis in the curriculum occurs: (1) In the needs and other characteristics of students, and (2) In the needs and other characteristics of the society in which students live and of which they are a part. Any program thus conceived will inevitably provide for the general education of students. Such a program can best function through providing both a faculty-wide emphasis on general education and courses addressed to specific general education outcomes, including time in students' programs to schedule such courses.

Overview of Reported Practices

Experiences aimed at the general education of students are part of every Industrial Arts teacher education program. No effort has been made here to get at the percentage of the curriculum which is designated as general education; likewise, names of courses or blocks of courses were not solicited. Rather, the emphasis in the data gathering instrument was placed upon purposes and areas of understanding, attitudes, appreciations and values. Names of courses do appear in the descriptions provided by the respondents. Naturally much of the effort in general education is the responsibility of non-Industrial Arts staff members, particularly for those courses to which Doctor Johnson refers as "courses addressed to specific general education outcomes."

The reader will note that respondents had difficulty in confining their coverage to a single numbered item; each seemed to require enough background explanation to carry over into one or more additional items. This condition permits the generalization that all items were treated either directly or in the description of complementary practices. Items 222 and 223 can be identified also in Chapter II, "Student Personnel Practices."

On the other hand there are areas where the general education of Industrial Arts teachers may have been reported by numerous schools as superior practice but, in light of present data, the case is not supported. For example, item 205: *Significant social-economic conditions and trends are studied* and item 208: *The student studies the policies and programs of groups representing special interests such as agriculture, business, labor, health, etc.* are among those for which no response was received. Of comparable significance is the fact that there was only one response to item 207: *There are opportunities for developing an understanding of the social impact of industry (e. g. urbanization, specialization, dependence upon the job of work, need for old-age security, etc.)*. This is not to state, however, that the general education of Industrial Arts students should differ essentially from that of other college students. Rather, from the viewpoint of an Industrial Arts educator, the experiences implied by these statements would seem to merit attention in any contemporary general education program.

There is considerable diversity among the experiences reported; this condition would appear to be in keeping with the broad scope of items to which reactions were sought. It seems permissible to draw the inference that Industrial Arts students are actively engaged in the total program of the college they attend, regardless of whether it is a teachers college or a university. No plea was made in any response for a reduction of the general education program for Industrial Arts students or for special treatment within the areas of general education.

Reports on Superior Practices

200. Specific effort is made to have the student develop or refine a point of view or philosophy of life.

Two of the aims of this College, as listed in the current catalog, are to develop a philosophy of life including values which are socially constructive and personally satisfying. Another is to learn historical origins and cultural heritage which serve as a background of present-day problems.

All teachers are concerned with the above two objectives, and there are courses in the Industrial Education curriculum that have a direct relationship to the two objectives listed above. For example, our course titled "Human Relations" carries the following description:

"An integrated study in historical perspective of major cultural and social processes of American society. General social science, using data of anthropology, economics, political science, social psychology, and sociology."

Our course "Problems in American Society" is described as:

"Analysis, interpretation, and synthesis of sociological phenomena with purposive solutions to attain a social philosophy of life."

John A. Jarvis — The Stout Institute, Menomonie, Wisconsin

Each Industrial Arts professor accepts an obligation to help students arrive at a set of values based on philosophical thinking. It is the expressed requirement of three continuing professional classes to give historical-philosophical backgrounds, to develop basic epistemological understanding, and to help the student stabilize his own philosophy.

Kermit A. Seefeld — University of California, Santa Barbara, California

Ricks College is owned and operated by the Church of Jesus Christ of Latter-day Saints. The Doctrines of the Gospel of Jesus Christ permeate through all classes in the school. The Gospel of Christ teaches that we are placed here upon this earth for a definite purpose to grow and progress. We all have the potentiality of becoming like God, providing our development is according to the plan of our Father in Heaven. The philosophy of life that all the students in the institution, including Industrial Arts, are encouraged to develop is: They have a purpose for being here and to the degree that they learn the eternal laws that govern life and the universe, and live them, they will be much further along the path to Godhood, the goal we seek.

Members of the Church attending the School are required to attend classes in religion. Non-members are encouraged to take classes in the general principles of Christianity, but may be excused from such classes by the approval of the President of the College.

Karl E. Hart — Ricks College, Rexburg, Idaho

201. Experiences are provided for the student to develop an understanding of his cultural heritage.

All students who graduate from Bemidji State Teachers College receive the same courses in general education. We help the student develop his understanding of his cultural heritage in the following courses — Freshman Communication, World History, Biological Science, Understanding Literature, Music Appreciation, and Art Appreciation.

C. H. McClintock — State Teachers College, Bemidji, Minnesota

202. Specific experiences are provided so that the student may understand and appreciate democracy as a way-of-life.

The following specific experiences are provided so that students may "understand and appreciate democracy as a way of life":

1. Emphasis is placed upon the scientific method as a means of withholding judgments until appropriate data are secured and analyzed, and efforts are made to inform students of effective ways of using their environment (scientific and natural) constructively.
2. In basic mathematics students are taught to use mathematics in planning the wise use of resources and in computations which are

necessary for normal life in a democracy. Problems deal with actual experiences of present day Americans in budgeting income, computing tax returns, planning and understanding installment and long term purchases.

3. All students are required to study History of Civilization and American History and Government.

Certain experiences are provided in all areas of the program of basic education to aid students in understanding and appreciating democracy as a way of life. Such experiences include the following:

1. Emphasis by teachers upon the scientific and reflective processes and carefully analyzed data upon factors in learning.
2. Group work and individual assignments to stress cooperation.
3. Numerous reference readings have replaced the one textbook or one source approach to teaching.
4. Resource persons are invited to make contributions to class work.
5. Students are aided in studying the foundations of democracy and in analyzing the origins, principles, purposes, and procedures which are the earmarks of democratic living. Analyses of current material and world events are vital phases of this study.
6. Students are aided in their study of such basic readings as *Plato's Republic*, the *Magna Carta*, the Beatitudes, the Constitution of the United States, and other great papers which present concepts basic to democracy.
7. Students are given the opportunity to develop a personal philosophy and to plan ways of implementing these philosophies so that the democratic concept will be put into practice in their lives.

A. G. Macklin --- Virginia State College, Petersburg, Virginia

Students from any area of the college, which includes Industrial Arts, serve on faculty committees. Each faculty committee, except those which concern only the faculty, has two or more student representatives on it. The Student Council, which is fairly large, has several students from the Industrial Arts program included.

"Industrialites", an organization of the Industrial Arts and trade education students, conducts its own activities, holds regular meetings, sponsors programs of its own interest, and also sponsors one or two all-college activities during the year. Industrial Arts students are also involved in evaluating the quality of teaching and the courses given. These students also participate in the publication of the "Industrialite" an Industrial Arts and Vocational Education publication. They are included on the college paper staff, and participate in all other college activities. The college is run on a very democratic basis and all students have a chance to participate in determining policies and procedures.

J. Howard Kramer --- Southern State Teachers College, Springfield, South Dakota

203. A study is made of the basic social institutions (e. g. home and family, constitutional government, church, education).

No response to this item.

204. Emphasis is placed upon having the student develop some understanding of and appreciation for contemporary cultures.

It is our contention that all teachers should be "educated" before they are "professionalized." Furthermore, it is our belief that prospective teachers should have a sound basic training in English, speech, social science, natural science, psychology, and art prior to beginning professional training. An appreciation for former and contemporary cultures is stressed in the departmental course "History and Philosophy of Industrial Arts and Vocational Education," in various art courses, in the social studies, as well as in natural science. We desire our students to have a knowledge of contemporary cultures, as well as earlier cultures, in order to project their thinking into the future. Furthermore, it is our contention that our majors must be liberally educated in addition to their specialty of Industrial Arts. We desire our graduates to be men of vision who are free from prejudice, superstition, and narrowness. But above all it is our hope that by their daily lives they will show that higher education does ennoble. If it fails to do so, then education has failed and failed miserably.

H. A. Sotzin — San Jose State College, San Jose, California

205. Significant social-economic conditions and trends are studied.

No response to this item.

206. The organizational patterns of business and industry are studied.

In a two quarter-hour, required Industrial Arts course, "Industries," representatives of two or more manufacturing enterprises explain their respective organizations. This pertains not only to the production divisions but to the whole scope of activities, including plant maintenance, employee training, finance, personnel and human relations, sales, and the like. Handbooks especially prepared by industries for their employees are reviewed. Tours of several large manufacturing companies not included in shop courses are conducted by the class.

The text offers opportunity for development of intelligent background of organization, growth, and status of industry in the United States, as, for example, the chapter "Technology: The Course it has taken and the Problems it Raises." All experiences in the course are pointed to the contribution which they will make to an Industrial Arts teaching career.

The files on "Occupations," prepared and kept up to date by the Guidance Division of the Department of Education, are a source of information for the students' study of occupations in industry.

E. W. Tischendorf — Kent State University, Kent, Ohio

We offer a basic and advanced course in "Industrial, Community, and Labor Relations." Our economics and business courses as well as business and industrial psychology are oriented in this direction. Local businessmen have talked to several groups, and we expand this local experience to its

broader counterpart in the classroom work. The study of current market reports and present business trends are emphasized.

Kenneth E. Harris — Northern Montana College, Havre, Montana

A course, *Modern Industry*, is available to the upper-undergraduate Industrial Arts students. The course provides an overview of manufacturing industry in the American social, economic, and culture pattern. Representative basic industries are visited and studied from the viewpoints of personnel and management organization and control, industrial relations, communications, production practices, distribution of products, and other essentials of importance in teaching Industrial Arts as an indispensable phase of general education.

Glen D. Brown — University of Maryland, College Park, Maryland

207. There are opportunities for developing an understanding of the social impact of industry (e. g. urbanization, specialization, dependence upon the job of work, need for old-age security, etc.)

In our general education program each student has a 12 unit social science requirement. One three unit course, "Contemporary Economic Society," deals especially with this phase of the program.

D. W. Nichols — San Francisco State College, San Francisco, California

208. The student studies the policies and programs of groups representing special interests such as agriculture, business, labor, health, etc.

No response to this item.

209. Emphasis is placed upon effective study techniques and work habits.

When a student first enters college, he is usually surprised at the amount of study required. He discovers that the pace is much faster in college than in high school and the requirements are more demanding. Probably one of the biggest handicaps of a freshman is in not knowing how to study.

The first step followed in teaching students how to study is to determine all those who are experiencing reading difficulty. Slow readers are sent to the reading clinic for developmental practice.

All students are taught how to use the library. The emphasis is upon efficient methods and timesaving devices as well as finding reference materials. Using the group discussion method, good and poor study habits are thoroughly discussed. Some of the study procedures considered are as follows:

1. Analyzing a paragraph for information
2. Summarizing a chapter
3. How to listen
4. Note taking
5. How to study for a test
6. Planning one's work

Students who have an unusual amount of difficulty in their study are given individual counseling based upon a careful study of their capacities and achievements.

Nelson A. Hauer — Louisiana State University and A. & M. College, Baton Rouge, Louisiana

A unit in the Freshman orientation program which is required of all freshmen deals with effective study techniques and work habits. The unit is introduced with a film and film strips related to effective study habits. At least three class sessions are devoted to discussing "How to Study Effectively." Student participation in these discussions is encouraged, and problems which are very real to the students are considered.

John D. Rowlett — Eastern Kentucky State College, Richmond, Kentucky

All freshmen students of the Institute attend study hall where individual instruction is given by responsible faculty members in the techniques of studying.

Through the aid of work assignments on the campus, laboratory (industrial apprenticeship) classes, and off-campus cooperative industrial internships emphasis is placed upon the need for the correlation of effective study techniques in the development of mental and manipulative skills.

Withro McEnge — Tuskegee Institute, Tuskegee, Alabama

210. Assistance is given the student to improve upon his basic skills of reading, writing, speaking, listening, computing.

In communication skills courses, which constitute one area of the basic education program at Virginia State College, students have the opportunity in three semesters of instruction progressively to develop skills in reading, writing, speaking, and listening. Emphasis is placed upon early analysis of individual problems and upon wide student participation in the planning and the evaluation of class activities. The courses are designed to give students frequent practice in speaking and listening, two areas which are often neglected.

Students learn such techniques as outlining, note taking, and the writing of summaries, as they gain knowledge of the current scene. A writer's guide is one of the basic texts, and special bibliographies prepared for each of the three levels are used. For example, the bibliography for the second level includes collections of essays and short stories; for the third level, references on propaganda, public opinion, and bias.

For listening periods, which are held once a week, tape recordings of radio broadcasts provide one source of material. The College's current affairs forum, guest speakers, and individual and group presentations in class furnish further listening experiences.

Talks by individual students in the class as well as formal and informal discussions give students opportunity to develop skill and facility in speech.

Students who have special problems in speaking or writing are referred to the Speech Laboratory or to the Writing Laboratory so that they may receive individual assistance and instruction.

Grace C. Harris — Virginia State College, Petersburg, Virginia

A general course in communications is required of all students in all departments. In addition there is a special department for students with speech defects. Obviously this is a general college service and is not restricted to Industrial Arts students.

Dan Blide — State Teachers College, Minot, North Dakota

When a student is found inadequate, non-credit courses are assigned. Our program of elective courses is elastic and courses are recommended to improve a student's weaknesses.

John Pollock — University of Georgia, Athens, Georgia

211. The student is provided with experiences through which he may develop or improve his systematic thinking procedures and mature his judgment.

We use committees in our classes. These committees are assigned certain phases of the course in which they have to develop and defend certain ways of doing a thing and certain methods of instruction in front of the entire class. We also have very good relations with other areas on this campus and are able to set up similar situations in associated areas of learning.

Raymond H. Larson — State Teachers College, Saint Cloud, Minnesota

In our college all students must take the core curriculum which consists of approximately one-third of the courses required for graduation. The core curriculum is designed to give the student a breadth of knowledge over a general background.

Menzo H. Stark — Wilmington College, Wilmington, Ohio

212. The student is given opportunities to develop greater competence in his ability to communicate with others. (This implies not only skills and techniques of communication but also those values and attitudes which make interchange of ideas possible.)

No response pertinent to this item.

213. Outlets of communication through the expressional arts are encouraged (e. g. music, dramatics, painting, writing).

Industrial Arts students are encouraged to participate in the expressional arts of their choice. The following outlets are available: speaking, music, writing, dramatics, and painting. All students have the opportunity of enrolling in courses in the areas mentioned as a part of their general education. If seriously interested they may also participate in associated activities. For example, they may take a required course in speech but will elect to participate in radio programs. They may participate in the development of the yearbook or the school newspaper. Some play in the college band or orchestra. Those wishing to sing may join the men's glee club. A few show interest in dramatics and participate in the school plays. The major portion of the Industrial Arts students take two courses in fine arts. In these courses they come in contact with music and painting. Certain periods are set aside in which the student may listen to the classics in music or try his hand at painting, etching, and other art media.

O. A. Hankammer — Kansas State Teachers College, Pittsburg, Kansas

Curricular club membership provides opportunities for prospective teachers of Industrial Arts to pool their individual strengths in creating, planning, and constructing floats for homecoming day which is an annual affair.

Through the publication of a news sheet, which is mailed to all graduates, the membership of the curricular club develops skill in reporting and writing brief items of news. Cartoons accompany many of the news items.

Encouragement is given to students to submit for publication in such journals as *The Industrial Arts Teacher*, *Industrial Arts and Vocational Education*, and *School Shop*, projects and other instructional materials.

In the pursuance of electives for which the Industrial Arts Education curriculum makes limited provision, students are encouraged to take such subjects as freehand drawing, modeling, and photography.

Joseph A. Schad -- Virginia Polytechnic Institute, Blacksburg, Virginia

The college has a very strong arts and crafts department which opens its doors nightly to those interested in the field for avocational purposes. Three times each quarter, the dramatics department produces a play, auditions to which are open to the entire enrollment of the college. Membership in the various choruses and instrumental groups is also encouraged by giving special recognition to those participating.

Lawrence M. Frederick — New Mexico Western College, Silver City, New Mexico

214. The student comes in contact with the basic disciplines of science and mathematics, humanities and social studies and understands their contributions to his own education.

The student on entering this college as a freshman is expected to complete 50 semester hours of credit during the junior college years, in what is classed as general education. This 50 hours of credit will include not less than eight hours in science, 12 hours in social studies, and five or six hours in humanities. Mathematics is not required but is one of the electives which may be used to satisfy the total requirement and is recommended for those who expect to major in Industrial Arts.

Marion E. Franklin — Northeastern State College, Tahlequah, Oklahoma

The four-year curriculum in Industrial Arts education is somewhat rigid in its requirements in the fields of mathematics, science, humanities, and social science. The requirements include college mathematics (algebra and trigonometry), chemistry, physics, history, and economics. These are basic rather than composite courses. The application of these courses to the teaching objective of each student is made in each technical subject undertaken.

DeWitt Hunt — Oklahoma A & M. College, Stillwater, Oklahoma

The curriculum of general education requires the student to take among other courses the following: physics, eight semester hours, United

States history, six semester hours, government, three semester hours, and world literature, six semester hours.

Special emphasis is given both in regular course work and counseling, to the relationship of these disciplines to teacher education.

The overall scholastic attainment of Industrial Arts majors ranks at or near the top in the School of Education (800 students) as evidence of the results of the above program.

Statistics bear out the point at issue. One to two Industrial Arts majors have been graduating each year *Cum Laude* and approximately six to eight are making the Dean's List (B+) each semester. With 45 majors these figures indicate a higher percentage than any other department in the School of Education and compare favorably with the entire University.

J. R. McElheny — University of Miami, Coral Gables, Florida

215. The student studies man in relation to his natural environment.

No response to this item.

216. The student studies the biological and social development of man.

Our general education requirements include six credits in general biological science and eight credits in history and government.

C. O. Newlun — Wisconsin State College, Platteville, Wisconsin

217. The student is provided with opportunities to discover his unique talents and special abilities.

The student has opportunities for taking courses in other departments such as music, art, physical education, home economics, and others. In these departments opportunities are afforded for finding out students' interests and for participating in various activities. The Industrial Arts department has ample facilities for developing skills of many kinds. It also affords opportunities for student teaching in the training school.

O. K. Moe — Western Montana College of Education, Dillon, Montana

218. Activities are sponsored wherein the student may develop leadership abilities.

In the attempt to provide leadership opportunities students are encouraged to participate in the activities of the Industrial Arts Club, Epsilon Pi Tau, various departmental committees held in conjunction with such events as the Four-State Conference, Open House, Senior Day, Homecoming, and other activities involving the Industrial Education and Art department. Much of the committee work is in the hands of the students. They handle and manage the funds, programs, and usual details in conjunction with faculty sponsors. In certain class work they prepare, reproduce, and assemble certain instructional materials on a student organized basis. On certain work crews a foreman is in charge. Students assist in social events and in greeting special visitors.

O. A. Hankammer — Kansas State Teachers College, Pittsburg, Kansas

The Student Activities Committee of Bemidji State Teachers College sponsors and fosters many co-curricular activities. Students are urged to join them and to participate as actively as possible. Reports of the student's participation are made to the Personnel Office. These activities include: athletics, drama, convocations, music organizations, and various area-interest clubs. The Industrial Arts Club is very active. One of the yearly projects is the repairing of toys which the Bemidji residents donate to needy children.

C. H. McClintock — State Teachers College, Bemidji, Minnesota.

The Arts and Crafts Club, sponsored by the Industrial Arts department, is open to all Industrial Arts students and is strictly a student organization. In no way does the Industrial Arts staff influence the operations of this club except to furnish a sponsor. The Club elects its own officers and carries on its activities without obvious faculty control. The contributions of the students constitute most of the programs. A group of four students and their sponsor attended the 1953 American Industrial Arts Association Convention.

L. T. Smith — Western Kentucky State Teachers College, Bowling Green, Kentucky

Industrial Arts students are provided with many opportunities to participate and to develop leadership abilities. (1) The Industrial Arts club is open for membership to all Industrial Arts students. In addition to the regular meetings, which are held once a week, other activities are sponsored by the club such as evening socials and afternoon picnics, field trips, special technical and professional movies, hobby demonstrations by students and people outside of the department. The club officers are changed each semester to give a greater number of students an opportunity to have experience in the various offices. (2) Membership in Epsilon Pi Tau fraternity is provided for qualified junior and senior students. (3) Exhibits are provided by the department each year at the county fair. (4) Industrial Arts students attend and participate in the state and area chapter of the State Industrial Education Association. (5) Industrial Arts students participate in dramatics, musical activities, athletics, and general social and professional extracurricular activities of the college.

E. E. Siro — Chico State College, Chico, California

219. The student is assisted in developing greater social and civic competence.

Practically every student is placed to carry out a program or initiate one in a community center. This is carefully supervised work, there is no financial return to the student, reports are submitted by the college supervisor and by the director of the center.

There is a decorum of behavior set up for our classes in both the classroom and the shop. Infractions of social competence are diplomatically called to the attention of the students.

A. R. Spillman — City College of New York, New York, New York

220. The student is assisted in developing or intensifying his intellectual interests.

No response to this item.

221. The student is assisted in developing greater social adeptness with his peer group.

Our Industrial Education Club is functional in this regard. Our students are also members of the Future Teachers of America and of other social organizations. Their wives have a club of their own. Undergraduates frequently take a course in public speaking, and clinical help is available for those with speech difficulties. Finally, we strive to build up good fellowship in our classes and advisement procedures.

H. H. London — University of Missouri, Columbia, Missouri

222. The student is aided in identifying and resolving most of the personal problems which beset him.

No response to this item.

223. The student develops and/or maintains good health — both physical and mental.

No response to this item.

224. The student is assisted in developing wholesome and socially acceptable out-of-school interests and activities.

The Industrial Arts department sponsors an Industrial Arts club which provides activities designed to develop the individual as an acceptable social being. The students are urged through the medium of class discussion to participate in the extracurricular offerings of the college which have as their aims the development of these attributes. Through these activities, students are encouraged to develop hobbies that do not necessarily relate to the actual training situation but do relate to the total educational program. Thus a contribution is made in assisting the student to increase his out-of-school interests.

During the practice teaching period provisions are made for the students to participate as co-sponsors in the school's activities and in the overall program of the school and community.

Charles O. Stout — Maryland State College, Princess Anne, Maryland

Our department encourages and sponsors club activities and helps to develop avocational interests. Each student is encouraged to participate in a "Share Your Faith" evangelism crusade program which is student sponsored and controlled.

Richard E. Fisher — Pacific Union College, Angwin, California

225. The student is assisted in developing a background for understanding the social function of his chosen occupation.

The various fields of student concentration in Industrial Arts are listed. The department invites successful business men as well as successful tradesmen in the various fields of student concentration to talk to our students, advise them, and participate in round-table discussions. We know

the students get first hand information of what is expected of them from those whom they may later work with or work for. These meetings are planned with special care and are conducted each month. Students are asked to place questions in a designated box if they desire any special specific information on a particular phase of their work. All meetings are held at night in the projection room of the Industrial Arts department.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

The Professional Education of Industrial Arts Teachers

Three parts of this study deal with the professional education of Industrial Arts teachers. The first covers the professional experiences of prospective Industrial Arts teachers during their freshman and sophomore years. The second reviews professional experiences during the junior and senior years. Student teaching was singled out for special attention and constitutes the third part of the professional education treatment. This chapter reports on professional experiences exclusive of student teaching.

Point of View Statement¹

According to the organismic concept of psychology, growth and development begin with the whole and differentiate toward the parts. Applied to teacher education this concept suggests three phases in the education of a teacher. In the main they are separate stages though there is obviously some overlapping. They are:

All teachers should be well educated persons.

Being well educated means that the teacher is neither over-generalized nor overspecialized. He does not know a little about everything nor everything about something inconsequential. Instead he has a broad knowledge about the major aspects of living in our society and enough specialization to give him an "at home" feeling in his chosen area of knowledge. His knowledge is functional enough that he can live in relative peace and happiness in our society and can make a reasonable contribution to its improvement.

All of this is a prerequisite to specific preparation for any kind of teaching, though some of it may be taking place at the same time.

¹ Prepared by W. Earl Armstrong. Dr. Armstrong is the Director, National Council for Accreditation of Teacher Education, Mills Building, 17 and Pennsylvania Avenue, Washington 6, D. C.

All teachers need some understandings and skills which go beyond those that make a well educated person.

These are the things that characterize the person as a teacher as contrasted with an engineer, a doctor, a nurse, or a social worker. They do not mark him, however, as a specialist in kindergarten teaching, speech correction, or Industrial Arts teaching, in the sense that one would be known as a surgical nurse, a psychiatric social worker, an electrical engineer, or a pediatrician. In other words, these are the understandings and skills which should be common to all teachers in order that they may think like teachers and work effectively as members of a team on problems which they have in common with other teachers.

It is at this point that the professional experience for all specialists, including Industrial Arts teachers, is often weakest. There are two broad areas of experience which will give all teachers those understandings which they need in order to provide a unified educational program in the schools and in order to be able to work effectively and harmoniously with their colleagues. The first of these relates to society and the second to the individual learner.

All teachers need to understand the forces at work in our society and the implications of such forces for education. Some of these forces are obviously desirable and education should assist them. Some may have both advantages and disadvantages for society which education should recognize. Still others are clearly inimical to the general welfare and should be corrected in so far as possible through education.

To illustrate, one marked trend in our society is for more people to work for somebody else rather than for themselves. Already 75 percent of the workers are in this classification and the percentage rises each decade. The force moving society in this direction is mass production through the application of science. Since society needs the production which this force can deliver and since there seems to be no other way to get it except through such large scale operations, then education must help those who will work in these operations in a variety of ways, one of which is to have them learn what they need to know to be able to work well in groups. This is only illustrative; there are many more trends in our society caused by forces that all teachers who would make the school an institution for the preservation and improvement of our society should understand.

Such insights should include not only the sweeping forces that involve all of society, but those of local concern as well. In other words, all teachers need to understand how the school may serve to improve all aspects of living in the local and the broader community.

The second of these broad areas of professional experience is human growth and learning. All who teach, regardless of grade level or subject field, need to understand the basic principles underlying the stages of development through which children and youth pass in our society, what may reasonably be expected of them at the various stages, and the nature and causes of deviations that may appear at any stage. Often the point of view here presented has been violated in two respects. First, many institutions have offered either general psychology or educational psychology, neither of which has been organized or taught from the growth and learning point of view. Second, some institutions that have used the growth and learning approach have limited their coverage to the age-group the teacher expects to teach; birth to age 12 for the elementary teacher, and age 14 to 18 for the secondary teacher. What is called for is a coverage of the whole range for both.

Each teacher needs some additional understandings and skills to fit him for a specific position.

Those interested in the preparation of Industrial Arts teachers are, of course, interested in this phase as it applies to that field. The point of view expressed with reference to the division of teacher education into these three phases is meant to include the subject matter as well as the strictly professional aspects of the curriculum. Applied to phase three, it would suggest that most of the concentration or major, and all of the professional work not included in phase two should be included here.

The professional experience for Industrial Arts teachers should emphasize two areas of understanding. The first of these is the material of instruction to be used by persons teaching in the field of Industrial Arts. The teacher will, of course, draw upon his own subject-matter background in his teaching, but the specific subject suitable for adolescents will not be the same that he has learned as a college student. He will need to know about the various textbooks, reference books, course outlines, audio-visual material, and the like that are available. He will

also need to know how to evaluate the broad array of material that is available, because he will not be able to use all of it. A part of this he will get from reading and from dealing first hand with materials of instruction. The rest will have to be developed as a part of a laboratory experience involving secondary school pupils.

This leads to the second broad area of professional understanding; namely, the application in a real situation of all that has been learned, including subject matter and professional insights. Both logic and experience lead to the conclusion that the final testing of all we have learned should be done in a typical situation over an uninterrupted period of time. A "typical situation" should include a school representing a reasonable cross-section of the population, a community with fairly well demonstrated interest in education and reasonably well organized channels for dealing with it, and a school faculty that is giving some attention to the improvement of the school curriculum. The experience should include not only some observation, participation, and responsible teaching under the direction of one teacher; but also some observation of teaching being done by other teachers, some participation in faculty group meetings, some participation and planning and carrying out school-wide activities (assemblies, exhibits, and the like), participation in the work of the administrative office, and some participation in school-related community activities.

Chapter V is devoted to student teaching and hence further comment will be left to that part of the report. Student teaching is mentioned here in order to make this point of view statement pertaining to the professional preparation of Industrial Arts teachers complete and valid.

Overview of Reported Practices

An effort has been made to delineate between the nature and extent of professional experiences offered to Industrial Arts freshmen and sophomores and those provided for juniors and seniors. For this reason items in the 300 series are confined to the former and those in the 400 category are pertinent to the junior-senior level.

As regards the first two years, a professional orientation course is very common; either a college-wide course captioned "Introduction to Education" or a departmental course bearing a title similar to "Survey of Industrial Arts Education." Where

the course enrolls all the students within the freshman class the several departments, including the Industrial Arts department, assume specific professional responsibilities for students within the department. Some of the student personnel services described in Chapter II are included within these orientation courses. In general, the professional orientation course endeavors to help the student make a firm decision of acceptance or rejection of teaching as a career and formulate a receptive professional attitude, if he chooses to remain in education.

Colleges report the practice of having freshmen and sophomores visit school shops and laboratories either on campus in "demonstration" schools or off campus in schools not associated with the college. These experiences may be found either in the orientation courses discussed previously or in initial courses in child study or educational psychology. There were no reports, however, of freshmen or sophomores sharing formal teaching responsibilities in classroom or laboratory situations involving children and adolescents.

Learning experiences are offered in order to help students understand the contribution Industrial Arts makes to the American educational program and, in turn, the functions of education in a democratic society. Freshmen and sophomores are initiated into the realm of professional literature with special concern being shown for periodicals. In the same vein, membership in national, state, and local organizations is encouraged during these early years.

It is significant that Industrial Arts students, even during the first two years, have opportunities in some colleges to participate in planning course content and learning activities, to the extent of their familiarity and understanding. This would seem to be an effort to make students aware of the process of course planning as well as sensitive to the contributions which may be expected from persons who are concurrently students in a course.

By far the most often reported professional activity during the freshman-sophomore years centers about Industrial Arts clubs. A host of professional experiences and opportunities are coordinated through this student organization: group subscriptions to professional magazines, field trips, speakers from business, industry and labor, solicitation of members for national, state, and local organizations, sponsorship of "open house," and the like. These and similar experiences are significant and

comprehensive. One may question the "extracurricular" role assigned to the activities. There is also the concern whether a club can provide a wide range of professional experiences for *all* of the students. Participation in club activities rarely, if ever, approaches 100 percent. It should be noted, too, that the Future Teachers of America is an organization which engages Industrial Arts men in active participation.

Nearly all of the professional activities started during the freshman-sophomore years are continued through the junior-senior years with the exception of the formal orientation course. There is a definite increase in the activity during the latter years. Industrial Arts clubs continue to share in the professionalizing responsibility. Honorary, professional fraternities enter, also, at the junior-senior level and perform, for a segment of the student body, many of the functions associated with clubs.

The junior-senior professional experiences occur in a wide variety of structured or formal courses. Courses which are closely related to the organization and management of the secondary school Industrial Arts program are most prominent. Included here are courses in shop planning, equipment selection, the development of instructional aids, and the preparation of instructional units. Student teaching and "methods" courses occur universally and are reported in Chapter V. In contrast, courses which pertain to providing educational perspective as suggested by educational sociology, community study, history of education, and principles of education occur much less frequently. Similarly, courses which include specific educational techniques such as the use and interpretation of standard tests, scales and inventories, or contacts with curriculum laboratories and reading clinics are reported infrequently. Although there is compensation for some of these omissions during the period of student teaching, too great a remainder of the professional program may be assigned to the student teaching period. From these data it would seem that rather broad areas of educational perspective and educational techniques receive only minor or cursory consideration. In this sense, then, "the understandings and skills which should be common to all teachers," to use Doctor Armstrong's words, constitute the area on which the profession should focus its attention.

Certain schools have made definite attempts to establish professional courses in a sequential pattern in order to give

balance to the program and to prevent unwarrantable overlapping or duplication.

Although the shopwork and drafting courses constitute one phase of the student's technical education, rather than his professional education, technical courses do establish a close working relationship between the student and the Industrial Arts staff, especially when the technical courses are taught by members of the Industrial Arts department. Colleges frequently reported excellent rapport between students and faculty and account for it in part by their numerous contacts in shop and laboratory settings. Then, too, the technical courses begin in most curriculums in the freshman year so that the student can identify his course work, semester by semester, with his professional ambition; namely, Industrial Arts teaching.

Reports on Superior Practices

Freshman-Sophomore Years

300. The student is encouraged to formulate a positive attitude toward the teaching profession or to reject teaching as an occupation.

We have an orientation course for the freshman year in which the students are given various standard tests. Through these tests, and individual consultation, we attempt to bring the student to a point where he can objectively weigh his qualifications, likes and dislikes with factors supposed to be necessary for success in the teaching field. We also deal with the demands and compensations of the teaching profession.

Raymond H. Larson — State Teachers College, Saint Cloud, Minnesota

Two courses are required of Industrial Arts majors in their first year of study:

1. "Introduction to Education," and
2. "Survey of Industrial Education."

In both courses, one on a general basis and the other on a specific Industrial Arts basis, special emphasis is placed upon the formulation of a sound philosophy and attitude pertaining to the teaching profession. Guidance is given in the sophomore year toward strengthening this positive attitude. Students who do not comprehend the end results of this program are encouraged and/or requested to change their educational objective.

J. R. McElheny — University of Miami, Coral Gables, Florida

During exploratory courses at the freshman and sophomore years considerable emphasis is placed upon an understanding of the role of the teacher in society. Two courses in professional education are designed for the purpose of helping the student develop a positive attitude toward teaching. The staff in these courses works closely with the educational

counselors; students who seem not to form a positive attitude are counseled into areas of greater interest.

W. H. Hinely — Florida State University, Tallahassee, Florida

301. Specific efforts are made to apprise the student of the duties, responsibilities, and importance of the Industrial Arts teacher.

The School of Education at Miami University requires all students to participate in an introduction to teaching course during one semester of their freshman year. Three clock hours each week are devoted to a variety of lectures, discussion, and observations and participations in pupil-teacher learning situations.

Instructional personnel for Industrial Arts education students include: the dean of the school, the director of the division of practical arts, the head of the department of Industrial Arts education, and at least one other education staff member.

Additional experiences for acquainting beginning students with the problems of teaching are provided through the introductory freshman and sophomore years. These initial courses stress problems and methods of teaching as well as the subject matter materials involved.

Students frequently work in laboratories along with secondary school pupils from our campus laboratory school.

W. D. Stoner — Miami University, Oxford, Ohio

A major part of the emphasis in a special orientation course "Industrial Arts Education I" is directed toward apprising students of the duties and responsibilities of the Industrial Arts teacher. Films and slides are used extensively to bring to the students a realistic picture of the activities of an Industrial Arts teacher. These vicarious experiences are followed by a series of visits to selected Industrial Arts laboratories where students can observe the teacher at work. Opportunities are provided for students to talk with and ask questions concerning program, laboratory organization, and teacher responsibilities. These visits are then followed by class discussions covering all phases of the teachers' activities including relationship to the community, other departments of the school, and professional organizations.

Another important way in which students are alerted to the requirements and needs of the profession is through the meetings of the Industrial Arts club. At these meetings various aspects of the profession are discussed by the group, and by invited speakers, including successful teachers from the field.

Gordon O. Wilber — New York State College for Teachers, Oswego, New York

During the entire college career of Industrial Arts students, the role of the Industrial Arts teacher is discussed. Emphasis is placed on the fact that Industrial Arts is a part of general education and that the teacher has duties and obligations to his school and community over and above that of his specialized field.

Norman W. Bedwell — Mississippi Southern College, Hattiesburg, Mississippi

The value of and necessity for Industrial Arts teachers' duties and responsibilities are stressed in the following manner: Each student is assigned a supervisor for his four-year training program. In addition, several group meetings are scheduled each quarter for Industrial Arts majors to discuss professional problems with the faculty. Duties and responsibilities are stressed in methods courses throughout the program, and weekly seminars are conducted by the supervisor for practice teachers.

H. A. Sotzin — San Jose State College, San Jose, California

302. Experiences are provided for the formulation of initial insights into the principles and factors of human development and learning.

No response to this item.

303. Specific efforts are made to show a relationship between education and man's material, spiritual, and social well being.

All students enrolled at Tuskegee Institute participate in three religious activities per week. The Sunday Morning Chapel and Evening Vesper are formal services where guest speakers of the Institute deliver general addresses to the entire student body. The Y.M.C.A. and Y.W.C.A., student civic clubs, and the respective shop organizations offer the individual student an opportunity to participate in the discussions of problems pertaining to man's material, spiritual, and social well-being.

Withro McEngle — Tuskegee Institute, Tuskegee, Alabama

Xavier University is a religious institution founded by the Sisters of the Blessed Sacrament. The aim of Xavier is to offer young men and women an opportunity to receive a thorough liberal education, an education that will develop all the faculties of soul and body and find expression in clear thinking and right acting. A trained mind and critical judgment although essential to happiness and success, are of little avail unless controlled by a strong will and directed by a keen moral sense.

Mother M. Agatha — Xavier University, New Orleans, Louisiana

304. Contacts are provided with children and youth in structured situations so that the student may learn how he reacts to them and they, in turn, to him.

No response to this item.

305. Experiences are provided for understanding the unique contributions of Industrial Arts education to a democracy which has a predominately industrial economy.

This is achieved partly by planned and supervised trips to industry, partly through the use of films such as the "Industrial Revolution," "The Story of Steel," "Productivity, Key to Plenty" and others, and partly through the use of readings assigned in the different shop and drawing courses.

H. H. London — University of Missouri, Columbia, Missouri

A definite effort is made in the courses in history and philosophy of Industrial Arts to bring about a better understanding on the part of

trainees of Industrial Arts practices, human relationships and technical problems of the industrial world, through outside readings, class reports and shop practices.

L. T. Smith — Western Kentucky State Teachers College, Bowling Green, Kentucky

Students may select and use two to six semester hours of work in Industrial Arts to satisfy one of the group electives which will meet the requirements of 50 hours in general education for the first two years. The courses offered to meet this elective demand are, general shop, general woodwork, general metal work, and drafting. These courses are organized and taught with one of the major objectives being to develop an understanding of the need for and contribution of Industrial Arts to the education of an individual in our modern industrial society.

Marion E. Franklin — Northeastern State College, Tahlequah, Oklahoma

306. Through planned experiences the student comes in contact with professional literature, publications, and reports.

1. Each instructor emphasizes the importance of and utilizes an optimal amount of professional literature and publications through class assignments.

2. Most of our majors and minors subscribe to the *Industrial Arts and Vocational Education* magazine and have access to the *School Shop* magazine.

3. Our student departmental club is affiliated with the American Industrial Arts Association and receives the *Industrial Arts Teacher*.

4. Our students attend local and national professional meetings, having attended the American Industrial Arts Association meeting in Detroit in the spring of 1952.

5. Special reports are given periodically pertaining to professional literature and publications in our departmental club meetings.

6. Professional literature and publications are displayed prominently in the departmental library and on bulletin boards.

Hugh L. Oakley — Murray State College, Murray, Kentucky

1. Maintaining strong departmental library in the department.

2. Student study and lounge in same room as library.

3. Books, periodicals not locked up.

4. Student subscriptions to leading magazines.

5. Bulletin boards with reviews and articles.

6. Reference and individual research type of instruction.

Marvin F. Poyzer — University of North Dakota, Grand Forks, North Dakota

Each staff member requires and/or recommends considerable reading in connection with regular class activities. Each year ample opportunity is given for students to subscribe to at least one professional magazine. Attention is directed to numerous publications that may relate to specific

problems and studies at various times in the career of the student. The department subscribes to more than thirty publications, a majority of which are industrial publications. All professional journals are available in the departmental library. Selected periodicals are kept in the main library of the college. Publications of the State Industrial Arts Associations, college (department of Industrial Arts) publications, etcetera are posted on a special bulletin board. Teachers refer to these publications in class activities.

An honest attempt is made by the staff to emphasize the usefulness of individual reading and research efforts in connection with laboratory activities.

Victor L. Bowers — Southwest Texas State Teachers College, San Marcos, Texas

307. There are planned and supervised visits to elementary and secondary schools.

An organized program of school visitation for students with majors in Industrial Arts.

In this program students visit schools of different sizes and types with various kinds of work. Each year some of our graduates will have been in more than 50 different schools and observed the Industrial Arts program in action. These contacts are very valuable and permit students to understand some of the problems confronted by Industrial Arts teachers and thus add significance and reality to their teacher preparation work.

Sylvan A. Yager — Indiana State Teachers College, Terre Haute, Indiana

Industrial Arts club activities are organized to include visits to Industrial Arts shops. Our campus school shop is also frequented by students for both observation and participation.

Emerson Neuthardt — New York State College for Teachers, Buffalo, New York

308. There are planned and supervised visits to places such as detention homes and state homes for abnormal children.

No response to this item.

309. Opportunity is provided for the observation and study of pupils as they participate in classroom, laboratory, and school shop activities.

The University of Maryland is unique in providing prospective Industrial Arts teachers with the same opportunities as others in its College of Education in respect to observation and study of pupils in real school situations. A year-long observation and study of an individual pupil is an integral part of basic courses dealing with the principles of human development. Each Industrial Arts teacher-preparation student is required to complete the course and in the process spends one-half day per week in the observation-study of selected pupils in near-by public schools.

Glen D. Brown — University of Maryland, College Park, Maryland

310. Opportunity is provided for observation and study of boys and girls as they participate in out-of-class activities (e. g. school playgrounds, hobby clubs, games).

This is an outgrowth of item number 424. Besides these non-school activities, college students observe children in the extracurricular activities of our Laboratory School. Some of these activities are Scouts, intramural sports, competitive athletics, and student council conferences.

C. H. McClintock — State Teachers College, Bemidji, Minnesota

311. Opportunity is provided for observation and study of boys and girls as they participate in out-of-school activities (e. g. playgrounds, hobby clubs, Scout activities, Boy's Clubs).

We have an active Industrial Arts club which sponsors club activities such as displays, special meetings with industrial leaders, hobby nights, and general services to authorized college activities. Staff members are active in Scouting, and a number of students also participate in the program.

R. J. Coltharp — Memphis State College, Memphis, Tennessee

312. There is a professional orientation course during the first part of the freshman year.

A required professional Industrial Arts education orientation course is scheduled for each first semester freshman. This first course in the professional sequence is designed to introduce students to college work and to Industrial Arts teaching as a profession.

The first part of the course is devoted to orienting the student to the college itself as well as to effective techniques and procedures for use in college study such as use of the library, organization of materials and special aids, and resources. The qualifications and characteristics of a good teacher are also covered.

To provide a background for the student's future preparation, consideration is given to the nature and purpose of education in a democratic society and the relationship of Industrial Arts to general education.

Field trips and visual aids are used to acquaint the students with different types of public schools and the function of the Industrial Arts teacher in these school systems. Talks by in-service Industrial Arts teachers, public school administrators, and upperclass student teachers help to introduce the students to the function of the public school and the responsibilities of the Industrial Arts teacher.

Time is also devoted to the development of a complete cumulative record on each student covering all phases of his educational background and experience. Use is made of this record to plan a tentative program of college studies and extracurricular experiences designed to produce a well rounded Industrial Arts teacher by the end of this pre-service period.

James R. Hastings — New York State College for Teachers, Oswego, New York

All freshmen entering college are assigned an adviser; the adviser is the department head of the student's major field. This adviser assists the student in planning his course of study each quarter he is in school. This

adviser has a certain hour each day, posted on his office door that students may come to him for conference. On each Thursday from 11:00 to 12:00 noon all freshmen majors in Industrial Arts meet with their adviser in a special class designated as orientation. The text we use is "Successful Adjustment in College." No college credit is given for this course but it is required of all freshmen. The adviser keeps a complete file on each student assigned to him which is given to the dean of students at the end of the freshman year. The file is continued in the dean's office thereafter as long as the student remains in school.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

A freshman orientation course conducted throughout the fall and winter quarters is a requirement. Meeting twice weekly, the course carries one credit hour (not applicable to the total load). Special emphasis is placed upon the vocational guidance and information aspects. The work of all departments is presented along with the functions of the various college organizations. A test covering the course is given at the conclusion of each quarter.

Lawrence M. Frederick — New Mexico Western College, Silver City, New Mexico

The usual freshman orientation program starts three days before the college year opens and is then continued for one full quarter. While this program is not a specialty of the Industrial Arts department the staff and prospective students of Industrial Arts have ample time to get together.

Dan Blide — State Teachers College, Minot, North Dakota

313. There are opportunities for the teaching of others (either classmates or younger-age groups).

We believe that as soon as a person selects Industrial Arts teaching as a career he should begin teaching other persons those skills and information topics of his specialization. In each of our major courses we expect each student to teach one lesson as a part of his course requirements.

Undergraduate students are encouraged to work in the private and public recreation centers and with other organized groups of youngsters.

D. W. Nichols — San Francisco State College, San Francisco, California

Our department offers a number of major shop courses. These are woodworking, electricity, graphic arts, general metalwork, and comprehensive general shop. We also offer such minor courses as textiles, ceramics, transportation, arts and crafts, and drawing.

Beginning the academic year 1954 all freshmen will take *part* of their major courses. In their sophomore and junior years they will take the *latter part* of their major courses. The first half of the major course will consist of teaching the skills to freshmen.

R. L. Thompson — New York University, New York, New York

314. There are opportunities for the student to participate in determining course purposes and in planning instructional materials for shop, drawing, and general classes.

The Industrial Arts department introduced a project this fall which was an outgrowth of previous student-teacher planning carried on successfully for some time. Prior to this year, students in the freshman and sophomore general metals and drafting classes were encouraged in group discussion during orientation and introduction to each subject area, to present units of work that they thought should be incorporated in the instruction program. After eliminating duplications and getting agreement on the topics and units to be included, they were incorporated into the course of study.

Beginning with the 53-54 school term, those students who had participated in previous course planning and were second semester sophomores, drew up a course of study for their final Industrial Arts drafting course with the aid and assistance of the instructor. Four weeks were spent in determining the objectives and purposes of the course, both general and specific, and the remaining 14 weeks were set aside for discussion and drafting. Each drawing plate that was assigned had a specific purpose and served to meet some objective. The six and 12 week examinations were also devised by the students, again with the aid of the instructor, to evaluate their progress.

This approach has seemed to make the students work harder, read more without specific assignments, and also has given them more incentive to progress. It has made all work seem more meaningful.

K. A. Wahtera — Northern Michigan College of Education, Marquette, Michigan

Early in the orientation course which our entering freshmen are all required to take, each student is given a check sheet and required to visit the Industrial Arts department in his home school or some other and study it intensively from the standpoint of the check sheet. After returning, extensive discussions are held from which the above materials are derived.

D. R. Lowman — Ohio Northern University, Ada, Ohio

315. There is an initial, short-time participatory experience in an elementary or secondary school (i. e. engaged in a teaching situation but not as a student teacher).

To provide for teaching continuity and to provide early teaching experiences for students, this department has arranged a pre-student teaching program at a private school near the campus. It is a comprehensive general shop with woodworking, textiles, ceramics, general metalwork, graphic arts, and arts and crafts, being taught simultaneously. The shop is well equipped with both hand tools and machine tools. The classes are composed of pupils (both boys and girls) from the fifth, sixth, seventh, and eighth grades.

This program is a part of one of our methods courses. Our students purchase all supplies (funds furnished by the private school); do all the

teaching, being responsible for all teaching materials, such as, slides, charts, teaching aids, mimeographed instruction sheets, and examinations. Our students are entirely responsible for all class and individual instruction, organization and revision of course content, discipline problems, methods and procedures of teaching, class organization, shop maintenance, and evaluation of teaching efficiency.

The educational philosophy of the comprehensive general shop and the methods of attaining this philosophy are studied and then experienced by each student in as practical a manner as possible. This early experience, under the direct supervision of our staff, has improved the caliber of our student teachers.

R. L. Thompson — New York University, New York, New York

316. There is an initial, short-time student teaching assignment during the freshman, or sophomore years.

No response to this item.

317. Opportunity is provided for students to attend local, county, regional or state meetings of a professional nature.

In Washington the Industrial Arts teachers have formed a state organization known as the Washington Industrial Arts Association. This association meets once a year. This is due primarily to the difficulty of crossing the mountains during a large part of the winter season. As a result the state has been divided into six geographical areas. These groups meet two and three times a year. One of the regional meetings of the Washington Industrial Arts Association meets in Seattle or the surrounding county. All students in Industrial Arts teacher education at the University automatically become members of this organization without payment of dues. They are notified of all the meetings and are urged to attend. A great many of them do attend those meetings and find it well worthwhile. As a result they are beginning to build a professional background and attitude. It gives the students contacts with teachers and helps to inform them of job openings and current problems in this area. They may belong to the Washington Industrial Arts Association by paying a fee of 50 cents. However, even though they do not pay this fee, they are welcomed and are invited to the state association meetings.

Athol R. Baily — University of Washington, Seattle, Washington

The administrative officers of this college have cooperated with the Industrial Arts department in providing opportunity for students to attend local, county, regional, state or national meetings of a professional nature.

During the years 1952-53, students majoring in Industrial Arts attended national convention of the A. I. A. A. at Chicago and Detroit, I. V. A. state conventions at Peoria, and the national A. V. A. convention at Chicago. Not fewer than ten and as many as 30 students were in attendance at these meetings. A number of the students were from the freshman and sophomore classes.

Milo T. Oakland — Northern Illinois State Teachers College, DeKalb, Illinois

In our region a very active association of Industrial Arts teachers and supervisors is found, "The Mid-Western Ohio Industrial Arts Teachers Association." We provide transportation and urge all majors and minors to attend all meetings. They are urged to attend all other professional meetings in our region and under certain conditions additional credit is given for attendance at special meetings.

D. R. Lowman — Ohio Northern University, Ada, Ohio

318. Students participate in organizations of a professional nature (Industrial Arts Club, Future Teachers of America, Industrial Education Association).

The department encourages and gains wide participation of students in a number of local, state, and national organizations by leadership of qualified students and the Industrial Arts staff.

Complete membership in the campus Industrial Arts club is made possible by scheduled daytime meetings, reasonable dues, a faculty adviser, a limited social program, and professional and service projects of a challenging nature.

Most departmental areas such as graphic arts, metal, electricity, have either fraternities or clubs which deal with the specific problems of their interest. The charter chapter of Gamma Epsilon Tau, the national graphic arts teacher education fraternity, is predominant among these groups.

The Industrial Arts club, Epsilon Pi Tau, and the special organizations encourage membership and participation in the American Industrial Arts Association and the California Industrial Education Association.

Ralph K. Nair — University of California at Santa Barbara, Santa Barbara, California

It is a practice in our department to encourage an Industrial Arts club and to encourage freshmen to join the club when they enroll in an industrial class or decide upon Industrial Arts as a major field of specialization. This club meets weekly and many of the programs are dedicated to movies dealing with industry, to talks by persons from industry, with demonstrations, and with matters relating to professional education.

Talmage B. Young — Berry College, Rome, Georgia

Students enrolled in the Department of Industrial Education, both those enrolled in the Industrial Arts curriculum and those enrolled in the Vocational Industrial curriculum, are members beginning with the freshman year of the Industrial Education Society and many affiliate during the sophomore year with Alpha chapter of Iota Lambda Sigma. Some students also affiliate with the local campus chapter of the Future Teachers of America. All students are encouraged to affiliate through the student membership plan with the Pennsylvania Vocational Association, the American Vocational Association, and the American Industrial Arts Association.

S. Lewis Land — Pennsylvania State University, State College, Pennsylvania

Students who are majoring or minoring in Industrial Arts join the Industrial Arts club. This is an organization for students and faculty,

in which there is a maximum amount of student participation. Individuals or groups of three or four students provide the program material in the form of reports or panels. Professional and business men in the field make occasional contributions to discussions on topics related to Industrial Arts teaching. Social events occur during the year. The Club makes a major contribution to the annual homecoming activities.

An annual "Roundup" of Industrial Arts teachers is held each year; majoring students assist in planning and conducting the program which is both professional and social in nature.

N. B. Grinstead — Central Missouri State College, Warrensburg, Missouri

Every Industrial Arts student is encouraged to participate in the various clubs. We make provision for those who can profit by attending state Industrial Arts meetings to do so. There is at least one joint meeting of all the Industrial Arts department students to review and discuss problems after state and local meetings.

Norman W. Bedwell — Mississippi Southern College, Hattiesburg, Mississippi

Membership in the Industrial Arts club is open to freshman and sophomore students. They are also given an opportunity to attend the state and area chapter meetings of the State Industrial Education Association.

E. E. Siro — Chico State College, Chico, California

319. Opportunity is provided for students to attend faculty meetings: secondary school, college or both.

Students representing each of the four college classes are selected by fellow classmates to attend regular faculty meetings. They have the privilege of entering discussions concerning any question which arises.

A student advisory committee representing each college year also meets with the Industrial Arts staff to discuss problems relating to the welfare of the departmental program.

Ralph W. Whalin — Eastern Kentucky State College, Richmond, Kentucky

320. Students are urged to hold memberships in national professional organizations through group membership efforts of the college.

Our students become members of the local, regional, and state associations through our group affiliation with these organizations. A portion of the affiliation fee is paid by the University to encourage participation and thus contribute to professional growth.

D. R. Lowman — Ohio Northern University, Ada, Ohio

With the organization of the students who major in Industrial Arts, there is started a professional attitude for organizations. When they join their own local club, most of the students pay student membership in the state and national Industrial Arts associations. The club here is an affiliate of the American Industrial Arts Association. In addition to becoming

members of the professional organizations, they subscribe to the professional magazines.

C. L. Hill — Oklahoma A. & M. College, Stillwater, Oklahoma

321. Students are apprised of working conditions in teaching, of teacher supply and demand, of tenure, of retirement, etc.

During the spring quarter of the sophomore year a course entitled "Introduction to the Teaching of Industrial Arts" is offered. In this course the entire teaching field is surveyed. Advantages and disadvantages, supply and demand, requirements for success, tenure, salaries, and retirement are all given consideration. Time is also given to considering the possibilities which are open to a graduate in case he does not find a satisfactory position or decides not to teach.

In addition, meetings are planned in cooperation with the student clubs to cover the above-mentioned items. Outstanding educational leaders are called in to speak to the group.

Lowell L. Carver — Iowa State College, Ames, Iowa

Students enrolled in this institution are required to take a common freshman year before being permitted to select a major. However, the vocational orientation program which is conducted by the institution for freshmen provides opportunities for a lecture to the students at which time conditions are considered. Near the end of the freshman year each student is required to visit his prospective majoring department for a brief orientation period at which time conditions are again considered.

B. S. Proctor — Hampton Institute, Hampton, Virginia

Junior-Senior Years

400. Specific efforts are made toward assisting the students in developing a philosophy of education.

The students majoring in education are required to attend classes taught in history and philosophy of education. This, too, is a State Department of Education requirement in order that a person may obtain a teaching certificate. Our Industrial Arts teachers hence must secure these credits in order to obtain a teaching certificate.

The teaching of philosophy of education is, of course, tempered by a philosophy of life, where, if the individual is to progress, it must be through his own values and efforts.

Karl E. Hart — Ricks College, Rexburg, Idaho

Through our honorary fraternity we stress the need of keeping abreast of current practices and techniques in the teaching field. We have visiting lecturers; we use films and also panels to provide opportunities for discussions. These discussion groups point up the place of Industrial Arts in education; the means of integrating our work with other areas; and the fact that all areas are educating the same boy or girl. The visiting lecturers are drawn from areas other than our own.

Raymond H. Larson — State Teachers College, St. Cloud, Minnesota

401. Specific efforts are made to have students develop an understanding of democratic principles and processes and to carry through to their implications for public education.

Miami University provides numerous experiences in which students participate cooperatively in University affairs. Students hold membership, through group and campus wide elections, on the Student-Faculty Council, student traffic court, athletic board of control, and various other class, dormitory, and fraternal governmental and policy making committees. Each student's education program is cooperatively planned in an attempt to provide opportunity for each student to develop his individual abilities.

Class attendance is rigidly controlled only immediately prior to and directly following a university holiday. This is a Student-Faculty Council regulation.

The department helps the student interpret the democratic way of life through the class and laboratory policies and practices.

More than one-half of the credit hours required for a major are electives, individual and group projects are cooperatively selected, student personnel organizations are for the most part student administered and field trips and other instructional aids and learning experiences are cooperatively selected and organized.

The Industrial Arts education staff is agreed that we must provide experiences through which the students can develop their concepts and their understandings of democracy.

W. D. Stoner — Miami University, Oxford, Ohio

The administrative organization of the college is based upon democratic principles and procedures. This objective is achieved through student membership on policy-forming committees and through active participation with faculty members in performing the duties of these committees.

All students in the Industrial Arts department have an opportunity and responsibility to participate in course planning and development, organization and management of shops and laboratories, and cooperative presentation of instructional materials.

Rufus C. Johnson, Jr. — State Teachers College, Cheyney, Pennsylvania

Every effort is made to help the students participate in the Industrial Arts club; however, it is purely voluntary. The business is conducted by the students with the faculty members acting as advisers. Parliamentary procedures are used during the meetings and the student officers with the members plan the meetings. The club undertakes activities to promote a better understanding of Industrial Arts by conducting open house for the city and surrounding area in the Industrial Arts Department, sponsors a booth at the State Fair, participates in the all-college functions such as Visitor's Day and High School Day.

Students are invited to join the State Industrial Arts Association for a minimum fee, and many of them have availed themselves of this opportunity and attend the conferences. We have noticed that those students active as students in the State organization also remain active when they become full-fledged Industrial Arts teachers within the State.

The Industrial Arts courses are taught democratically by the staff, and the students participate in the development of some of the courses.

Marshall L. Schmitt — North Carolina State College, Raleigh, North Carolina

402. Students study the growth and development of education, particularly public education in the United States, and come to know current conditions in our education enterprise.

No response pertinent to this item.

403. Specific experiences are directed toward developing an understanding of the social contribution of formal education, and, more specifically, the social contribution of the public school.

No response to this item.

404. Specific experiences are directed toward developing an understanding of the secondary school (or elementary school or both).

Our majors, as all such groups within the College, are required to spend two quarters (10 quarter credits) in a course entitled *Introduction to Secondary School Teaching*. This course involves three lectures per week and four hours additional per week in discussion sessions, which may include observation or experience with youth groups in some way, on or off campus. Later, in our own methods course, an attempt is made to build a good sense of the nature of junior and senior high schools. (There are comparable courses and experiences for elementary schools, but our majors rarely choose these.)

One of the three quarters (12 weeks) of required student teaching is done in the Minneapolis Public Schools, two hours daily, in a junior or senior high school and, in a few cases in the Vocational High School and Technical Institute. The other two quarters, usually the first and third, are done in University High School.

Homer J. Smith — University of Minnesota, Minneapolis, Minnesota

The junior and senior Colorado A. & M. Industrial Arts students are aided in developing an understanding of the secondary school and its problems in the following ways:

1. General understanding through education and psychology courses required of all Industrial Arts majors.
2. Understanding of the place of Industrial Arts in general education through "Methods of Teaching Industrial Arts and Problems of the Industrial Arts Teacher"; both 5 quarter-hour courses.
3. Sponsored visits to junior and senior high schools observing teaching, shop management, problems of organization and management, etcetera.
4. Encouraging students to visit other schools on an individual basis.
5. Encouraging students to take an active part in local recreation, Boy Scout, and other organized programs.
6. Class work in Industrial Arts courses is aimed at giving the student an understanding of how that subject as a part of the Industrial Arts program is a part of the overall education of youth.

7. All the above is possible because the Industrial Arts faculty members who teach junior and senior subjects have an average of over 11 years experience in public school teaching.

O. C. Hejkal — Colorado A & M. College, Fort Collins, Colorado

The nature and conduct of student teaching is such that specific experiences are directed toward developing an understanding of both the elementary and secondary school. Student teaching is supplemented by a seminar course, taken in the same semester, which tends to broaden the prospective teacher's concept of his specialization in terms of the whole school.

R. R. Schmitz — University of Alabama, University, Alabama

405. Various professional courses are integrated in the sense that they support common objectives with the several courses providing differing emphases.

Three major factors have contributed to the integration of various professional courses in the interest of the realization of common objectives, with each course providing unique and specific emphases. During the past several years the members of the staff of the College of Education have been revising and coordinating the required undergraduate courses in education with this goal in mind. This revision started with a description of the competencies which characterize the good teacher. Detailed analyses were made to: identify and eliminate from the total course offering the irrelevant material and unnecessary duplication; to provide for necessary and purposeful repetition; and to point up the unique contributions which each course should make to the major competencies deemed desirable. A second contributing factor is the utilization and extension in professional courses in Industrial Education the competencies acquired while pursuing the general courses in education. The third factor is the inauguration of a professional semester (in the senior year) in which a period of full-time student teaching is integrated with a specialized methods course and a series of conferences conducted before, during, and after the student teaching experience.

M. Ray Karnes — University of Illinois, Urbana, Illinois

The department has an integrated series of three professional courses at the upper division level which are required of all teacher candidates and coordinated with student teaching.

First in the series is a study of teaching procedures with the general emphasis upon the "how." Second is an orientation of the materials used for teaching including the physical facilities — the "what." Finally the third course in the group deals with curriculum development and course of study construction — the "when" as it is determined by the previous two.

Each course is taught by a different staff member, and though coordinated, offers the opportunity for different points of view.

Rolph K. Nair — University of California at Santa Barbara, Santa Barbara, California

The professional teacher education courses in this department are all planned with the major objective of giving the prospective Industrial Arts teacher a thorough and adequate training in the teaching profession. Before taking the professional courses students are well grounded in the basic shop and drawing courses and courses of a general educational nature.

The first professional course which students take is entitled "Principles and Objectives of Industrial Education." This course lays a foundation in the basic philosophy of education, the place of Industrial Education together with the objectives of the program. Along with this course they take one called "Course of Study Building" which teaches them how to organize subject matter material into teaching form in line with the philosophy of the work. Following this they are given a course entitled, "Methods of Teaching Industrial Subjects" which has as its main purpose, how to teach the material which they have organized in "Course of Study Building." Also, they are given a course in "Shop Organization and Management" which helps them in planning, organizing, and managing their shop so that it will function properly and they will have time to do good teaching.

Students also take a class in "Instructional Aids" which helps them in enriching and supplementing the material they desire to teach so that it will have a greater appeal to their students, thus resulting in better learning. Following this work, they do their student teaching wherein they have an opportunity to put into actual practice the things which they have learned in the previous courses. There is one other course entitled, "Curriculum Problems in Industrial Arts" in which the students help plan and actually work through several courses including projects and informational topics. These may be used as sample courses in their teaching program.

W. E. Mortimer — Utah State Agricultural College, Logan, Utah

406. Students participate in on-campus professional seminars following the student teaching period.

Our cadet teachers meet once each week for a two-hour period for a professional seminar on the problems of cadet teaching. This period is broken up into sections; the first hour devoted to general topics which would be of interest to all cadet teachers in all areas; the second period is devoted entirely to the problems of the student teachers in the Industrial Arts area. In this way the student teachers are kept informed of the various general problems as well as the specific problems that the various students are having in their cadet teaching. We find this is a very worthwhile experience for both cadet teachers and the supervisors.

Athol R. Baily — University of Washington, Seattle, Washington

Industrial Education 450 — "Seminar in Industrial Education" is a required course in the Industrial Education curriculum. It includes a reconstruction of practical experiences derived during their quarter of off-campus practice teaching. Professional diagnoses and considerations re-

lating to programs and current problems confronting the Industrial Arts and trade shop teachers are emphasized.

Withro McEngle — Tuskegee Institute, Tuskegee, Alabama

407. Students are encouraged to develop their own professional libraries.

Each summer session an exhibit of shop and professional books is planned in connection with our upper division work. These books are furnished by the various publishing houses and students are given the regular school discount. During the exhibit the books are evaluated by classes as to their content, author, and adaptation to certain classes. Through the use of the exhibit, students are motivated to start a professional library through the purchase of books on display. The *Industrial Arts and Vocational Education* magazine is also purchased at student rates. Reading assignments are made in these magazines, advertisers and advertisements are studied and through this way students become interested in the magazine. All juniors and seniors are affiliate members of the American Industrial Arts Association and receive the *Industrial Arts Teacher*. Each junior and senior is sent complimentary the *Power Tool Instructor* and it is used for related work shop planning and other courses. By the time a student graduates he has a good start on his professional library and appreciates the use of it.

W. H. Lewis — Tennessee Polytechnic Institute, Cookeville, Tennessee

Students are encouraged, from the first orientation contact in Industrial Arts, through their senior year to build up bibliographies of books, periodical materials, and teaching aids. Each course provides for a recognized helpful text and choice references. Students are encouraged to build these into their personal libraries. Sale of used texts is discouraged.

A membership-subscription drive is conducted each fall for Industrial Arts professional organization memberships in both state and national organizations and for subscriptions to professional Industrial Arts magazines.

A course in "Industrial Arts Teaching Aids" provides opportunity for the development of more elaborate teaching helps for students' personal libraries.

Fred J. Schmidt, Jr. — Ball State Teachers College, Muncie, Indiana

408. Students have opportunities to work with peer groups on their common professional problems.

No response pertinent to this item. It should be noted, however, that frequent reference is made to Industrial Arts clubs.

409. Specific experiences are directed toward understanding what resources are available to teachers and how these resources (people, publications, films) should be used.

We try to cover as much of this as possible in our courses in materials and methods. We catalog the resources and materials of the communities from which the students come. They use these in the formulation of an Industrial Arts course or courses for that particular community. We first

determine the need of such a course, the community resources that can be used as material for instruction, all other sources of available materials of that nature outside of the community — how they may be obtained and used as teaching aids.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

Beginning with the freshman year and continuing throughout the student's undergraduate career, we concentrate on having the student know the leaders in Industrial Education, the leading technical magazines in his specialty area and the leading professional magazines in Industrial Education.

As a part of our professional requirement, we have a course, "Instructional Materials," which is planned to develop skill in making and using instructional aids. Emphasis is placed on having the student know the source of all types of materials which will aid in enriching a program of study.

George W. Davis — Virginia State College, Petersburg, Virginia

Our students have available the latest in modern equipment in visual education facilities. The students are taught the use of equipment and are required to make various devices to illustrate industrial processes or equipment, such as slides, film strips, pictures and mock ups. Our students have an opportunity to hear outstanding men in industry who visit our campus to speak to our Industrial Education group.

Menzo H. Stark — Wilmington College, Wilmington, Ohio

410. Students have experiences in planning school shops in terms of programs and in specifying equipment for these shops.

One of the special problems completed by each Industrial Arts student during his 18 weeks of student teaching, is the development of a floor plan for a comprehensive general shop. The plan is to represent a model layout with a floor area limited to 2400 square feet. The instruction areas to be included are general wood, general metal, graphic arts, transportation, textiles, ceramics, electricity, and crafts. Auxiliary rooms may include units for storage, finishing, planning library, assembly area and a dark room. Data are gathered from readings and from visits made to many schools having desirable Industrial Arts facilities. From these data the student prepares a proposal of a shop in sketch form drawn to scale. The sketch is reviewed in a conference between the student teacher and his college supervisor. Following the review of the original draft, the student refines his plan and prepares an inked drawing of the layout and a tracing of the utilities to be provided. To accompany the shop plan the student writes directions concerning the specifications for major equipment, types of flooring, lighting and power, heating, ventilation, acoustical treatment, blackboards, display areas, color schemes, and other special features.

Students are encouraged to develop new ideas and incorporate them into their model plan that would represent improvements over facilities normally observed. The final plan and specifications are carefully reviewed

between the student and the college supervisor at the termination of the student teaching period. This experience insures that each Industrial Arts major has the opportunity to develop a modern shop plan under the careful guidance of a qualified Industrial Arts teacher educator.

Paul T. Hiser — New York State College for Teachers, Oswego, New York

Individually or in groups, each undergraduate makes a two dimensional (infrequently three dimensional) plan of a school shop. Preference is given to a shop planning problem for which the local school executive wants suggestions. School situations where improvements come as a result of the work of previous classes and the plans from other classes, serve as teaching aids. Salesmen and catalogs are consulted concerning specifications for equipment.

The student has had an opportunity, prior to taking the course in which shop planning takes place, through pre-requisite courses such as "Methods in Industrial Arts" and several education courses, to develop (1) a philosophy of education and of Industrial Arts as a part of general education, (2) a set of Industrial Arts objectives and desirable student behavior changes and (3) concepts of a good Industrial Arts program.

E. W. Tischendorf -- Kent State University, Kent, Ohio

411. Students participate in college activities which have professional purposes (e. g. spring conference, open house, freshman orientation week).

Industrial Arts students have an opportunity to attend at least five professional conferences during the year and everyone is urged strongly to take advantage of the opportunity.

All students participate in the freshman orientation week, the Parents' Day Program, or in Career Day. The latter activity consists of a campus visit by juniors and seniors of the public schools in the surrounding areas.

Students are urged to attend the various conferences during the year, such as the Principals' Institute, teachers' conventions, music festivals, and related organizational meetings. If it is necessary for them to leave the campus or their classes to attend these meetings, they may do so.

Alan R. Pawelek — Western Washington College of Education, Bellingham, Washington

Each spring all high school seniors in the service area of our college are invited to our campus for the purpose of seeing the physical plant and participating in guidance conferences in areas in which they are interested. (example: teaching, law, medicine, engineering.) In these conferences specialists and individuals who know something of the requirements and opportunities lead the discussions and answer questions. We usually have 1500 or more present. To facilitate the movement of the program, junior and senior students on our campus serve in the following capacities: hosts to certain schools, guides, demonstrators in various classes or departments showing something of the work, information booth attendants, and servers at lunch.

During freshman orientation week, juniors and seniors are assigned to groups of freshmen as sponsors aiding them any way possible. They also

serve in various office duties recording test grades, assisting faculty advisors in routines, plan and execute evening entertainment programs such as parties, square dances, and theatre parties.

Each spring the members of Mu Delta Kappa, an organization of Industrial Arts majors and minors, sponsors open house in our Industrial Arts building. They do all the planning, preparing the building, setting up displays, performing demonstrations, serving as guides, and serving refreshments.

L. D. Wallis — East Tennessee State College, Johnson City, Tennessee

The student organization club (Industrial Technical Association) does a great part in organizing and putting into operation the yearly "Open House." The activities that are carried on in the various shops are planned largely by them. They act as guides and explain the various activities during the tour. The upper classmen act as guides during the "Senior Day" for the local high school and also during "Freshman Week" at the University.

C. R. Brown — University of New Mexico, Albuquerque, New Mexico

412. Students work as participants in college-operated services such as the reading clinic, the speech clinic, the instructional-aids laboratory, etc.

No response to this item.

413. Students are assisted in obtaining work as counselors in summer camps.

Our church sponsors a rather complete summer time camp and activity program for all local youth, but particularly for youth of the church. Industrial Arts majors are in demand as counselors in this program, especially those who are skilled in crafts and those who have a physical education background.

Richard E. Fisher — Pacific Union College, Angwin, California

414. Students work with professors in gathering case study materials and in interpreting the data.

No response to this item.

415. There are planned and supervised observations of elementary and/or secondary school programs.

All Industrial Arts students in their junior year are required to take a course: "Field Work in Secondary Education" which carries three quarter hours credit. During the first three weeks, basic problems of teachers are discussed. For the remainder of the term, the students devote two hours or more in observing elementary and secondary school programs in Raleigh and schools in other communities. Each student is given a specific assignment in observation each week. Each observation is written up and handed in before the weekly conference with the class where these observations are discussed.

In addition to the observation of the local Industrial Arts and other elementary and secondary school programs, two field trips to observe some

of the best Industrial Arts programs in the State are made. Our students consider these experiences extremely valuable.

Ivan Hostetler — North Carolina State College, Raleigh, North Carolina

As a part of the two education courses taken prior to apprentice teaching, ("Curriculum Planning" and "Teaching Procedures") the University demonstration school and the local high school are visited for planned and supervised observations relative to the various topics of the two courses. This follow-up of the observations made during the freshman and sophomore years also serves to better orient the student to his obligations as a student teacher.

John Pollock — University of Georgia, Athens, Georgia

416. Specific experiences are directed toward an understanding of selected principles of learning. (e. g. place of pupil purpose in learning.)

No response to this item.

417. Specific experiences are directed toward understanding adolescents who live in our culture: their physical growth, their social and emotional development, their developmental tasks.

The student is provided opportunities to see films aimed at affording vivid, sensory experiences in understanding the skeletal, neurological structures of the adolescent, biological and physiological functioning of the adolescent as well as psychosocial determinants of behavior and personality. Persons in the area of Industrial Arts teacher education are helped to recognize the value of these factors as they relate to their work. Provisions are made for interested students to observe, first hand, the academic, social, recreational, and emotional behavior of students and of the behavior of people in the community who may not be enrolled in an institution. Our students have the opportunity to help in the planning for conferences held on the campus by providing physical necessities in the way of guides and markers, and also through the supervision of various youth groups after their arrival on the campus.

In addition to the experiences named above, students enrich their understanding of the adolescent by participating in student forums and in other campus organizations.

We feel also that to have a keener appreciation of the normal adolescent in our culture, some effort must be made to acquaint the student with the adolescent deviate. Opportunity, therefore, is provided for guided field trips and clinics which are held annually at institutions for the mentally ill and the mentally deficient.

A. S. Escoffery — Virginia State College, Petersburg, Virginia

Students majoring in Industrial Education obtain numerous experiences directed toward the development of understanding and appreciation of adolescents. An integrated pattern of courses in psychology, educational psychology, social foundations and educational sociology, and educational methods provides a core of knowledge which tends to give meaning to the direct experience gained with adolescents. Directed observations of in- and

out-of-school youth groups are included as a part of the work of this sequence of courses. Each student is encouraged (and the majority respond) to work directly for an extended period of time with an organized youth group, preferably out-of-school.

The full-time practice-teaching experience has as one of its major objectives the understanding of adolescents. Aside from the close contacts with youth in the shops and laboratories, each student teacher gets further experience with adolescents by working with a home-room teacher, the school counselor, and with the school psychologist if the services of such a person are available to the school in which he does practice-teaching.

M. Ray Karnes — University of Illinois, Urbana, Illinois

418. Students observe and practice a variety of teaching-learning procedures (e. g. group planning, developing an assignment, testing, group evaluation).

No response to this item.

419. Students are given experiences in using standardized tests, scales and inventories and are given assistance in understanding the results.

All of our Industrial Education majors take a course in vocational guidance, a part of which deals with the individual inventory. In this connection they actually take, give, score, and interpret, intelligence tests, vocational and personality inventories, clerical and mechanical aptitude tests, and general achievement tests. In a course of principles of trade and industrial teaching they make a study of available subject-matter tests in the field and work out an objective test of their own covering a course of study previously prepared.

H. H. London — University of Missouri, Columbia, Missouri

All students are required to take certain courses in the field of professional education, including the use of standard tests and in addition, the Industrial Arts students are required to pursue courses in Methods of Teaching Industrial Arts, also Tests and Measurements in Industrial Arts where they are provided experience in making these tests, administering them, and evaluating the results.

E. A. Miller -- Langston University, Langston, Oklahoma

420. Students develop a variety of instructional aids.

As a part of a course in instructional devices and aids, students prepare many teaching aids. These consist of slides, posters, displays, jigs and fixtures and any other device of a pictorial or mechanical nature which will aid in teaching Industrial Arts subjects. These devices are expected to be a part of an organized course of study and have a sequential arrangement rather than a random collection of unrelated items.

Students are encouraged to make teaching aids as a part of all of their courses in the Industrial Arts shops and these are brought in for criticism and study in the specific course on instructional aids.

Fred O. Armstrong — New Jersey State Teachers College, Trenton, New Jersey

At Colorado A. & M. considerable emphasis in undergraduate preparation is given to the use, sources of, and construction of many kinds of teaching aids and devices. A five-hour course in instruction aids is required in which the future teachers become acquainted with and have opportunity to make use of a great variety of teaching aids. As an additional activity in the instruction aids course, the student is required to design and to construct one or more teaching aids for his own future use or for use in the college classes. Instructors at Colorado A. & M. are constantly adding to our teaching aids and devices and are convinced that the audio-visual and other types of instruction aids are of special benefit in teaching Industrial Arts subjects.

L. L. Gibbons — Colorado A. & M. College, Fort Collins, Colorado

421. Students develop one or more instructional units.

Students preview units developed by others and participate in the development of a resource unit as a part of their course in "Principles and Practices of Industrial Arts." During practice teaching each student is required to develop at least one unit which serves as the basis of a given course and may participate in conducting a unit developed by someone else. During the course and at the conclusion of the unit the student teacher and his supervisor evaluate the unit. Students customarily duplicate and exchange these units as guides for future reference. In a post teaching seminar, problems of the unit method which the students feel still need clarification are analyzed and discussed.

James J. Hammond — State Teachers College, Fitchburg, Massachusetts

In both directed teaching and each of our methods courses our students prepare complete instructional units. One is for laboratory work and class demonstrations and is presented to the other members of the class who in turn rate the student's accomplishment. In directed teaching each student prepares and actually uses in his teaching, work prepared for short instructional units. The other is a written instructional unit of the nature of a work book covering a semester's work in a specific field.

L. T. Smith — Western Kentucky State Teachers College, Bowling Green, Kentucky

In the "Curriculum Problems" class students actually plan and work through several instructional units. For example, they may plan all of the project work and information topics for a beginning course in general metals and construct a group of suggestive projects for such a course. This same thing is done in the areas of woodwork, drawing, electricity, and craft work.

When a student begins his teaching career he actually has several courses available with which he can start his teaching. It is not intended that these courses should be rigid or stereotyped in any way, but they serve only as samples of what might be used. They have proved to be of great value in getting new teachers off to a good start.

W. E. Mortimer — Utah State Agricultural College, Logan, Utah

422. Students participate in community studies to determine educational resources and educational needs.

As a part of a course in sociology and social problems each student makes a survey of the community in which he will do his student teaching the following year. This survey is the most important activity of the course and consists of a thorough study of the population, industry, and physical resources of the community. Maps and graphs are made to indicate concentrations of social groups, population trends, civic growth, and educational needs.

Fred O. Armstrong — New Jersey State Teachers College, Trenton, New Jersey

423. Outstanding educators and other resource people are brought to the campus to conduct lecture or lecture-discussion sessions for the students.

During the year 1952-53, a total of 38 special consultants and speakers were brought to this campus to conduct lectures and discussions. Nine of these outstanding persons were brought to the campus especially for all-school convocations, and some of them were available afterward for round table discussions. Three were experts in a given field, and served as consultants in the departments in which they were prepared. The remainder served as consultants in conferences and workshops, some of which were of general interest and others of departmental interest.

E. L. Barnhart — Kansas State Teachers College, Emporia, Kansas

Two occasions recur annually in Oklahoma which bring out-of-state leaders in Industrial Arts to Oklahoma. The first is the annual convention of the Oklahoma Industrial Arts Association in Oklahoma City, which is held in conjunction with the Oklahoma Education Association. Each year an out-of-state Industrial Arts specialist is invited to speak at the dinner meeting and at the annual business meeting session of the O.I.A.A. An effort is always made to persuade this specialist to visit Oklahoma A. & M. College. If this effort is successful, this individual meets and speaks to Industrial Arts majors. In a similar manner, the annual Oklahoma State Industrial Arts Clinic is scheduled late in May of each year with an out-of-state leader. These men almost always visit this institution and meet some of our students.

DeWitt Hunt — Oklahoma A. & M. College, Stillwater, Oklahoma

424. Students are urged to participate in community activities which involve children and youth (e. g. Scouts, Boy's Club, recreational programs, etcetera).

No response pertinent to this item.

425. Students learn about state certification procedures and requirements.

When the student indicates an interest in completing a major in Industrial Arts, he is counseled by the chairman of the department and assigned to a member of the departmental staff who will be his personal adviser. Tentative plans are then made out by the student and adviser for completing the requirements for a Bachelor of Science degree. If the

student wishes to prepare for teaching, the degree plan will be for a Bachelor of Science in Education. It is then explained how this plan will fit into the requirements for a standard certificate to teach Industrial Arts.

At the time that the student does his student teaching he also takes a course in the "Methods of Teaching Industrial Arts." One unit of this course takes up "Certification and Securing a Job."

Marion E. Franklin — Northeastern State College, Tahlequah, Oklahoma

In the various educational courses the student takes he is apprised of the requirements for teaching his or her subject matter in the high school.

In the Industrial Education course the students are provided with various material from the state explaining in detail the requirements for teaching.

W. L. Olsen — James Millikin University, Decatur, Illinois

426. Students read selected professional periodicals including Industrial Arts professional journals.

The Industrial Arts department has its own separate library and reading room and subscribes to all such journals as the department selects.

C. O. Newlun — Wisconsin State College, Platteville, Wisconsin

All majors in Industrial Arts are urged to subscribe to the *Industrial Arts and Vocational Education* magazine, which they do in practically every case. *School Shop* is available for them in the department files at all times and many reading assignments are made in it. Our college library carries a complete file of *Industrial Arts and Vocational Education* in addition to many professional education periodicals. Attention of students is called to pertinent articles in all of the professional magazines by various faculty members. In addition to the above, Industrial Arts students are urged to contribute to our professional shop magazines and each acceptance of an article stimulates the interest of the whole group.

D. M. Burkhiser — Nebraska State Teachers College, Chadron, Nebraska

Current issues of professional journals are made available to students in a departmental library of some 500 volumes which is made up primarily of books and magazines contributed by members of the teaching staff. Professional magazines are kept in bound form over a period of years. They may be found in the general as well as the departmental library.

Students in professional courses use these current issues and bound volumes as reference, both for required and optional reading, as well as for sources for classified lists of projects, tests, and other resource material.

N. B. Grinstead — Central Missouri State College, Warrensburg, Missouri

427. Students attend local, state, and national professional conferences or conventions.

Our Industrial Arts club is due most of the credit here. We as faculty members stress the importance of professional conferences and conventions

and try to attend as many as possible. Our students seem to acquire this feeling and they start talking and planning each year the ones they would like to attend.

In 1952 we had 18 students attend our national convention in Chicago; one participated on a program. In 1953, 13 attended the national convention in Detroit and two of our students participated on a program.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

Our Industrial Arts club has projects during the year to raise money so that they may attend the annual convention of the Michigan Industrial Education Society at Grand Rapids. We annually take about 40 majors to the convention to see the extensive displays and attend professional meetings as well as attend our annual alumni meeting. In addition the Industrial Arts men take at least one industrial trip to visit varied industries. During the spring semester the seniors visit a number of schools as part of their shop organization class. Our students also take part in regional Industrial Arts meetings during the year.

George F. DePuy — Central Michigan College of Education, Mount Pleasant, Michigan

A district meeting of the State Teachers Association is held in Athens on the last Friday in October of each year. Classes are dismissed, and the students are required to attend the sectional meetings.

The meeting of the State Industrial Arts Association is held in Columbus in March of each year. Classes are dismissed, and the students are urged to attend these meetings and see the exhibits. Car pools are organized to carry the students at a minimum of expense so that they can attend these meetings.

Charles R. Kinison — Ohio University, Athens, Ohio

428. Students are urged to hold memberships in national professional organizations through group membership efforts of the college.

The Industrial Arts Club at this college has been an affiliate of the American Industrial Arts Association for many years, and each year we have a near 100 percent membership in the parent organization. The bulletin of the Association has furnished the group with considerable information and inspiration to carry on its professional activities.

This same group played an important part in the first organizational meeting of Washington Industrial Arts Association. The students managed the registration, ushering, printing of signs and programs, and the coffee-hour preceding the morning sessions. A stimulated professional interest has been an immediate result of such club activities.

George L. Sogge — Central Washington College of Education, Ellensburg, Washington

The importance of participation in professional organizations is stressed by the entire staff. The Industrial Arts Club, an affiliate of the American Industrial Arts Association, conducts a drive for membership periodically.

Dues for the first semester include those required for group A.I.A.A. membership on a student basis.

Through cooperative efforts of the staff and Epsilon Pi Tau opportunity is available for students to participate in at least one sectional Texas State Teachers Association meeting per year.

Victor L. Bowers — Southwest Texas State Teachers College, San Marcos, Texas

The Industrial Arts Club serves as a professional organization for all Industrial Arts students and has developed an interest (national) in the American Industrial Arts Association. A rather large share of the students have held student memberships.

Harold G. Palmer — Iowa State Teachers College, Cedar Falls, Iowa

429. There are professionally oriented clubs and fraternities sponsored by the department or college, to which Industrial Arts students belong.

The Industrial Education and Art Department sponsors the Industrial Arts Club, a chapter of Epsilon Pi Tau and a chapter of Kappa Pi. All department majors are eligible to become members in the club by payment of very small dues. The upper 20 percent of juniors and seniors are subject to invitation for membership in Epsilon Pi Tau. Art majors may join Kappa Pi. Monthly meetings are held by these organizations. Once each year a joint social meeting is held by them. This is known as the Christmas Party. The fraternities sponsor speakers, exhibits, demonstrations, and other professional activities including scholarships. Departmental majors may also join other clubs and fraternities present on the campus.

O. A. Hankammer — Kansas State Teachers College, Pittsburg, Kansas

All students in the Department of Industrial Education are encouraged to become members of the Industrial Education Club and the greater majority join. The objectives of the club are both social and professional.

Throughout the year, the club sponsors a number of group activities, such as representing the department on the student council and acts as a clearing house for suggestions pertaining to bringing about improvements in the administration of the department where students are concerned. The club is responsible for exhibits and displays of student projects for the purpose of promoting public interest in Industrial Arts. Also, each year, as a group activity, toys are collected and repaired for distribution to needy children at Christmas.

Nelson A. Hauer — Louisiana State University and A. & M. College, Baton Rouge, Louisiana

On May 14, 1949 the American Industrial Arts Association issued a Certificate of Affiliation to the Tuskegee Industrial Arts Club. This professional organization has been quite active on both a local and national basis. Its membership is composed of all juniors and seniors enrolled in the Industrial Education curriculum.

Withro McEnge — Tuskegee Institute, Tuskegee, Alabama

430. Specific effort is made toward developing a code of ethics for the professional educator.

During the junior and senior years in methods courses and student teaching, attempts are made to help the student develop a sound code of ethics. This is done through studying codes which are already in existence, discussions, panels, and seminars. In many instances personal interviews are used. Every attempt is made to place the student under a well qualified teacher for his student teaching. Above all, it seems very important that the teacher educators themselves should have and live by a code acceptable to the profession.

Lowell L. Carver — Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa

Seminar programs are conducted periodically on the subject of professional ethics. A major portion of the course, "Problems in Industrial Education," is devoted to case studies involving actions of educators under certain circumstances. These are discussed in the light of ethical and moral procedures.

Alvin I. Thomas — Prairie View A. & M. College, Prairie View, Texas

In a series of meetings for prospective teachers and in several education courses effort is made to create a code of ethics applying to the teaching field. Points considered are those such as safeguarding confidential information given to a teacher, duties of a teacher beyond those implied in the contract, and proper ways of applying for or leaving a teaching job.

Neil L. Munson — University of Nebraska, Lincoln, Nebraska

Student Teaching

Point of View Statement¹

The value of student teaching in the preparation of teachers has seldom been questioned, even by the most severe critics of professional education. This has not been altogether healthy. We have Biblical authority for the saying that one should beware when all men speak well of you. Until recent years, and even now in some institutions, student teaching was administered as an experience that somehow achieved its own purposes by some inner quality accruing from the mere doing of the act. True, it was recognized that the prospective student teacher — or practice teacher — should observe a little and participate a little before taking the cold plunge. But, if this could not be arranged, the student teacher could get along quite well, anyhow.

Of recent years student teaching has been the subject of serious study and fruitful experimentation. Some of the changes in thinking about it are significant.

The most obvious emphasis today is upon scheduling student teaching as a full-time experience. For whatever time the college allots to this requirement, the student is being freed of all other academic obligations during the weeks or quarter or semester in which this experience occurs. He lives, during this period, a teacher's normal day, even participating in after-school or evening school responsibilities.

This policy makes possible another emphasis. The student teacher is expected to have a responsible experience with many, if not most, of the many and varied duties that are fulfilled by a regular instructor. He no longer teaches merely his subject. He has experience with the administrative duties of a teacher; he may sponsor a club, help prepare assembly programs; take

¹ Prepared by Allen D. Patterson, Secretary-Treasurer, The Association for Student Teaching. Dr. Patterson is also the Director of Teacher Education and Teacher Placement, State Teachers College, Loch Haven, Pennsylvania.

part in P.T.A. and other community activities of a professional nature. He becomes in fact a teacher, a learner who needs guidance, of course, but yet a learner who takes an active part in what goes on in the total program of the school.

With these varied experiences, the student teacher is being challenged to a level of creative and independent responsibility that helps him to acquire a degree of self-confidence impossible in older programs. The "supervisor" or "cooperating teacher" most respected by student teachers today is the one who gives the beginner a chance to develop and use his own ideas. With the passing of the concept of "critic" teaching a new relationship, one of cooperative planning and sympathetic guidance, has developed between the experienced teacher and the less experienced beginner. Wise supervisors are helping student teachers acquire status in the eyes of the children and parents, and acceptance in the community; they seek to build a sense of security and self-respect that grows with the development of confidence in one's own effectiveness in meeting situations.

Furthermore, the student teachers are learning not merely to teach their grade or their subjects, but to teach boys and girls. In part, this reflects the emphasis upon individual differences which is today so stressed in the courses of the professional curriculum. Student teachers are encouraged to learn to know their pupils, to play with them, to visit their homes, to study the cumulative records, to confer with the specialist in counseling if such a person is a member of the school staff. Moreover, student teachers are advised to seek opportunities prior to the student teaching experience by serving as summer camp counselors, as youth group leaders, and as workers in industry so that they can share widely in the environment which helps to make children and youth the kinds of persons they are in the homeroom, in the classroom, and in the school shop.

Most significantly of all, the student teaching experience has as its major concern the task of helping prospective teachers become students of teaching. This starts early in the professional program, when the problems raised by experiences in observing schools or in fulfilling limited responsibilities in a school program are made the basis for study and discussion in professional courses. The practice of carrying on a professional seminar parallel with the full-time experience in student teaching serves to intellectualize the experiences of the week-day tasks and lifts them to higher levels of understood theory. Colleges which pro-

vide a seminar or some type of post-student-teaching experience with children do so for the same end: to develop deeper and richer meanings which will become the organized concepts or principles that permeate the later work of the new member of the profession.

Student teaching has been rescued from the doldrums wherein it rested some years ago. It is today the integrating experience of carefully planned professional education programs, and so becomes the beginning of a more sophisticated, intelligent service to the children and youth and to our way of life.

Overview of Reported Practices

Collectively considered, the Industrial Arts teacher-education institutions which have contributed to this Yearbook report practices sanctioned in Doctor Patterson's introductory statement.

Many Industrial Arts curriculums make student teaching a full-time responsibility and do not permit other academic requirements to detract from the experience. Off-campus centers have come to supplant college "demonstration" schools except for observation purposes and for a limited part of the student teaching period, at the most. It should be noted, too, that many of the schools used by student teachers are at some distance from the college making it necessary for the student teacher to room and board in a community strange to him. He is also out of range of the social activities of the college.

A number of consecutive weeks in a school on a full-time basis permits the student teacher to work himself into positions of greater responsibility not only as regards instruction in the shop but also in the over-all operation of the school. This block of uninterrupted time also provides the student teacher with opportunities to know the community and to use the resources of the school in a systematic study of the boys and girls whom he instructs. From the data received it would appear that these opportunities outdistance the uses made of them.

Data in this chapter report on cooperation between the staffs of teacher education institutions and elementary-secondary school officials. Matters of student teaching policies, the selection of "master" or supervising teachers, and the evaluation of the effectiveness of the program have been considered by these cooperating representatives.

Regard is shown for the need of a nucleus of strong master teachers; several schools report their selection procedures to include desirable personality traits, high rating as a teacher, a required number of years in teaching, and graduate work.

There is an apparent trend toward having an Industrial Arts staff member involved in the supervision of Industrial Arts student teachers. A general supervisor or director of student teaching may share this responsibility. There are instances where the supervision of student teaching remains exclusively a departmental function.

The nature and extent of the teaching responsibility which the student teacher assumes vary. Selected schools report that their people have at some time, during the student teaching period, direct responsibility for the day-by-day instruction of one or more classes. Optimally the elapsed time is sufficiently long to permit the student teacher to initiate, and carry through to evaluation, a unit of instruction.

Experiences in several types of shops or laboratories and contacts with different grade levels are provided by placing the student in different shops within a school or by dividing the student teaching period and having the student work at two different centers. Effort is made to have the student participate in the total life of the school including faculty meetings, P.T.A. activities, extracurricular activities, faculty social events, and professional functions.

Weekly meetings usually at the college, plus weekly reports, assist in the coordination of the program and in the evaluation of the student teacher's development. Scheduled visits by college representatives also operate within this pattern.

A preliminary student-teaching experience in the junior year followed by a more responsible period in the senior year is a unique practice indicated by one of the schools. Formal application by the student for student teaching and a thorough investigation of the personal and academic characteristics of the individual are used as techniques in improved student-teacher placement.

It was made manifest through the reports from the respondents that many schools are abreast in "frontier practices" as regards student teaching. On the other hand there appear to be areas where little forward advance has been made. The use of cumulative records to better understand pupils, and the study

of school data relevant to holding power, recreational facilities, educational resources in the community and the like are examples. Other gaps will become apparent to the reader as he peruses the pages which follow.

Terms which are basic in referring to student teaching are varied. Intern, student teacher, and cadet teacher are used interchangeably. Master teacher, supervising teacher, cooperating teacher, directing teacher, and resident teacher may likewise refer to the same person although supervising teacher may also be the college staff member who visits a number of student teachers. "Practice teacher" and "critic teacher" — terms so commonly used only a short time ago — were used very rarely by the respondents.

Reports on Superior Practices

500. The college faculty and public school people work cooperatively in the development of student teaching policies and procedures.

The coordinator of secondary teacher training works with the assistant superintendent of instruction and the school principals in setting general student teaching policy. Supervision of student teachers is done by the Industrial Arts department which carries out the policies agreed upon by the coordinator, the public school personnel and the subject-area supervisors. A faculty member is assigned the responsibility for overall coordination within certain schools and meets with the school principal and supervising teacher to organize the student teaching program within the school.

Master teachers are selected by consultation with the local supervisor of Industrial Arts, the assistant superintendent of instruction, and the principal of the school in which a student teacher is to be placed. All parties concerned must be in accord with the matter before a student teacher will be placed within the school.

A two-fold plan is in operation and covers those experiences in extra-duty assignments and specific classroom details that the student teacher is expected to complete. These have been developed through consultation with the public school people and the college faculty and include such items as counseling, homeroom, faculty meetings, school attendance, school library and other areas within the school. It is an endeavor to provide the student with a background of experiences based upon items that the public school people feel are essential to every teacher.

Each year a meeting is held with all the school principals and the college faculty concerned with student teaching to review the overall policy. Such cooperation has resulted in a very fine student teaching policy which is understood by both the public school and the college personnel.

C. Thomas Dean — Long Beach State College, Long Beach, California

A. Each year, at the Industrial Arts Spring Conference, there is a scheduled meeting for all cooperating teachers, the Chairman of the Industrial Arts department and all Industrial Arts college supervisors. During this meeting a review of existing policies and procedures is held and modifications of present policies and the consideration of new policies are made as needed.

B. On each supervisory visit to a cooperating school, the college supervisor solicits a conference with the principal, director of Industrial Arts and the superintendent, for the purpose of obtaining advice regarding any modification of policy which might be desirable. The master teacher is always consulted in such matters.

C. Each cooperating center is furnished with a copy of "Student Teaching Bulletins Numbers I and II" and is invited to suggest changes in policy or procedure which do not appear consistent with the particular situation. In all instances, the college is willing to modify its student teaching policies so that no conflict exists with those of the cooperating center.

John A. Storm — New York State College for Teachers, Oswego, New York

Our college faculty and public school representative cooperate in the development of student teaching policies in the following manner:

1. Student teachers are taken on planned observational tours in the surrounding territories.
2. Neighboring schools cooperate in accepting students to do their student teaching in public schools off campus.
3. Through conferences the public school representatives offer constructive suggestions relative to student teaching policies and practices.
4. Public school people employing our graduates cooperate in offering suggestions relative to certain aspects of student teaching which they feel should receive greater emphasis.

Hugh L. Oakley, Murray State College, Murray, Kentucky

501. The contribution of student teaching to the student's professional preparation and the range of experiences to be provided by the student teaching centers have been stated in written form.

We have prepared a syllabus for use in student teaching comprising some 80 pages of material. This manual is placed in the hands of the critic teacher, the school principal, and the student teacher. This manual outlines the range of experiences he should receive, forms for recording these experiences and an evaluation sheet for same. The table of contents for this syllabus is as follows: Off-campus Teaching in Industrial Arts; Student-Teachers Report; Self-Rating Scale for Student Teachers; Progress Report for Student Teachers; Rating Based on Supervised Student Teaching; Code of Ethics in the Teaching Profession; The Characteristics of an Efficient Teacher; What's your P. Q.?; Sample Course of Study; Sample Lesson Plan; Examples of Written Instructions; Examples of New Type Tests; Study Assignments for Student Teacher.

Walter A. Klehm — Eastern Illinois State College, Charleston, Illinois

Our student teachers are assigned to off-campus centers for eight weeks on a full-time basis. For each of the eight weeks a "schedule" has been prepared. The student teachers are provided with these schedules; the master teachers are thoroughly familiar with the schedules because of their previous work with them.

The schedules indicate the range of activities in which the student teacher should engage week by week. For example, the first week is devoted primarily to an overall orientation of the school and to initial contacts with the community. The second week emphasizes a more detailed understanding of the shop or drawing room in which the teacher is placed and a broader community understanding. Direct teaching responsibilities are assumed in the third week.

All student teachers are called together on Friday afternoons. At this time the weekly schedules are used as a basis for a part of the discussion period.

R. Lee Hornbake — University of Maryland, College Park, Maryland

502. The college cooperates with public-school officials in developing high-quality student teaching centers.

In recent years the Industrial Education department has selected certain schools throughout the state where Industrial Arts students may go to do their practice teaching. During this time an effort has been made to select schools where high quality work is done in the Industrial Arts program. By working with the school administrators and the Industrial Arts teachers, some of the schools have worked out some excellent programs in which student teaching may be done.

Schools have been selected throughout the entire state and, as a result, the college has been able to build up a fine spirit of cooperation with the schools. The public school teachers have come to look forward to the assignment of the student teachers to them, and a high morale exists.

It is common for the teachers in these centers to ask for suggestions for improvement and, although the College has no administrative authority whatever, it is possible through their cooperative attitude to help in the improvement of the Industrial Arts program and in the student teaching program.

W. E. Mortimer — Utah State Agricultural College, Logan, Utah

In the over-all student teaching program, 41 cooperating schools are involved, in addition to the Laboratory School. There are approximately 140 supervising teachers. The Industrial Arts department was the first department in this institution to inaugurate the all-day student teaching program and approximately 40 percent of Industrial Arts student teachers teach on an all-day basis in various schools located in Dallas and Fort Worth, Texas. Selection of the schools and supervising teachers is a joint responsibility shared by the supervisor of student teachers for Industrial Arts and the supervisors of the school systems involved. The administrative officers and supervising teachers in the school systems serving as cooperating schools have always exhibited a high degree of interest in the student teaching program and have cooperated in every way to implement

the overall program. Meetings involving student teachers, supervising teachers, supervisors, and administrative staff of the cooperating schools are held for the purpose of evaluating the program and to study ways and means of further improving it.

E. B. Blanton — North Texas State College, Denton, Texas

503. There is a program aimed at developing a staff of teachers to serve as continuing teachers in these centers and to function as "master" teachers.

Directing or "master" teachers are carefully selected by the off-campus school administration in cooperation with those individuals of the college staff who are charged with the supervision of the internship program.

A total of 12 hours of graduate work is offered in supervision of student teaching and internship. The teacher must complete six hours of this work before being approved as a directing teacher.

The directing teacher must have a minimum of three years of successful teaching experience and must be highly recommended by his own administration.

Roy F. Bergengren, Jr. — University of Florida, Gainesville, Florida

Only one student teacher is assigned to a supervising teacher. Supervising teachers are carefully selected. Through regular visitations of staff members of the department of Industrial Education during the practice teaching period superior teachers are assisted to become master teachers. A group of superior master teachers is available for service in the department's program of student teaching.

S. Lewis Land — Pennsylvania State University, State College, Pennsylvania

504. Students are placed in these centers upon the basis of specific student needs.

Prior to the practice teaching period, students are given an opportunity to observe several centers in an effort to give them an overall view of different situations. The College supervisor of Industrial Arts makes periodic visits to the various centers prior to placement for the purpose of discussing with the critic teacher the following factors:

1. The Industrial Arts program of the school
2. The specific units to be handled by the cadet teacher
3. The nature and interests of the cadet teacher
4. The strengths and weaknesses of the cadet teacher

This information is discussed with the cadet teacher and subsequent placements are made in the best interest of the students and the critic teacher.

Charles O. Stout — Maryland State College, Princess Anne, Maryland

The shop and academic records of future teachers are examined before their placement in a school or in a particular area of shopwork. Decision for placement is not made until consultation with the college shop instructor of that subject. Two factors are present: the student teacher wishes to teach in areas of his interest or strength; the college wishes him to be

successful but, at the same time, become competent in all areas. The problem, then, is to place the student for satisfaction in the experience and still avoid undue "specialization."

A. R. Spillman — City College of New York, New York, New York

Our off-campus plan for student-teaching makes use of (potentially) all the schools in the state.

Our campus training school is used for both demonstration and student teaching. Most of our student teachers, however, are assigned to various schools in the state which have been very carefully selected. Every possible effort is made to place each student teacher in a school where the program, the community, the school, and the teacher will together provide a profitable experience. The student teacher in this way participates in a full-time teaching program and thus has an opportunity to experience and to observe the realities of teaching for several weeks. Supervision is provided by one of the Directors of Laboratory Experiences on the secondary level, and a member of the staff in Industrial Arts. The methods course is offered on a very intensive basis before the student teacher reports to his school for his teaching assignment.

Sylvan A. Yager — Indiana State Teachers College, Terre Haute, Indiana

505. Provision is made for the "master" teacher to understand the student teacher in terms of his needs, capabilities, personal qualities, and background.

No response to this item.

506. Scheduled supervision of the student teacher by designated college faculty members is provided.

During the three weeks immediately prior to the ten weeks of off-campus student teaching, each intern works on a regular schedule with a general education supervisor and an Industrial Arts supervisor from the college staff.

Each of the supervisors visits the intern at least four times during the ten-week period of full-time student teaching. Discussion sessions are held with interns and directing teachers and administrators at the off-campus school.

Informal visits are made by other staff members, both from the Industrial Arts department and from the college as a whole, as well as by the college director of internship.

Roy F. Bergengren, Jr. — University of Florida, Gainesville, Florida

The State Teachers College, California, Pennsylvania provides a full-time supervisor for Industrial Arts student teachers.

The supervisor is an Industrial Arts graduate, with junior-senior high school experience, as well as experience as a directing teacher, while employed in the public schools.

Student teaching is done off the campus in a five county area. Each student teacher is visited by the supervisor once each ten days, during the 18 week full-time assignment.

Professional practicum classes are held each week on the campus for two and one-half hours. Here various problems and different experiences are brought together for mutual discussion. This phase of the student teaching program is also under the direction of the Industrial Arts supervisor of student teachers.

Irvin J. Shutsy — State Teachers College, California, Pennsylvania

The student teachers in this department are placed in schools located from 25 to 50 miles from the college. The college supervisor visits each student four times per quarter, and spends the entire day with him. Thus, it is possible to see him teach at least two full classes each visit, and also have ample time for conferences with the student teacher and supervising teacher. Under this procedure the student quickly comes to feel that both the college supervisor and the supervising teacher are eager to help him, and he goes about his teaching with confidence and with the assurance that he can get help when he needs it.

Kenneth L. Bing — East Carolina College, Greenville, North Carolina

507. There is a period of orientation for the new student teacher during which time he learns specific things about the shop, the school, and the community.

Student teaching experience at this college extends over the last semester of the senior year, a period of 18 weeks. During the first two weeks of student teaching the student observes the total program of the secondary public school. This includes meetings with school officials, observation of activity in record rooms, cafeteria, playground, P. T. A., and a study of community resources. Then he selects the shop area in which he will begin his practice experiences. A shop rotation schedule for student teachers is developed through the combined judgment of the student teacher, cooperative teacher, and college supervisor.

Rufus C. Johnson, Jr. — State Teachers College, Cheney, Pennsylvania

Student teaching is intentionally a "stress" period — a try out for the student in a typical teaching situation. Every new teaching position will also be a stress period to him even when he becomes an experienced teacher. Hence the intent of the orientation period is not only to assist the beginner in approaching his initial teaching assignment but also to learn a way of "moving in" on any teaching position. {

Our week-by-week schedule for student teachers is a gradual initiation into full responsibility for one or more classes of pupils. The schedules also provide for mutual understanding between the student teacher and the master teacher in so far as responsibility is concerned.

R. Lee Hornbake — University of Maryland, College Park, Maryland

508. There is a gradual induction into the duties of teaching after the student teacher reaches the school where he is to do his teaching.

The student teacher is gradually given more and more responsibility in the classroom and other-areas of school life. He begins as an assistant to the cooperative teacher and after several weeks, on the basis of his

demonstrated ability, he is given major responsibility for a definite teaching unit and specific groups of pupils.

Rufus C. Johnson, Jr. — State Teachers College, Cheney, Pennsylvania

Our student teachers are inducted gradually into the teaching activity. The first week they observe Industrial Arts classes and to some extent those in other departments of the school. When they are familiar with the school and the department routines, they are given some duties such as checking the roll, checking ventilation and lights, getting out materials, and the like. The pupils begin to come to them for help on their projects, and in a short time a student teacher is actually in charge.

Kenneth L. Bing — East Carolina College, Greenville, North Carolina

509. The student teacher is provided with the full responsibility for a class group or series of class groups during the latter part of the student teaching period.

Our student teachers do a full quarter of 12 weeks in student teaching in a regular organized public junior or senior high school. We have long since eliminated a campus school. While there are advantages to a campus or laboratory school, it is our feeling that the disadvantages outweigh the advantages. Consequently all of our student teaching is done in off-campus schools in order that pseudo situations will be eliminated.

For the first three or four weeks the student acts as an assistant to the resident teacher and spends most of his time as an observer. After this probationary period he is given full responsibility for a class under the guidance and direction of a resident teacher and a college supervisor from the college Industrial Arts department.

1. For the first two or three weeks the student is an observer, then is *gradually* given the responsibilities of teaching the class until by the fifth or sixth week he has full charge of the class.

2. Student teachers work in two separate areas of Industrial Arts under two different resident teachers. Hence, they receive experience in the tools, procedures, etc., of two areas, and the approach and method of two resident teachers.

H. A. Sotzin — San Jose State College, San Jose, California

The beginning part of the student teaching is spent in observation of the regular teacher and his work. When the directing teacher feels that the student teacher is ready to assume some responsibility, he assigns him certain duties, such as assisting in teaching some of the lesson and in checking the students. As the student teacher progresses, he is assigned more and more responsibility for carrying the full load of teaching and running the shop.

The Industrial Education department has worked with the directing teachers over a period of years in developing this type of practice so that each student teacher can take responsibility just as fast as he is able to carry it, but always with the idea in mind that he will be carrying the full responsibility for at least a week and preferably longer.

W. E. Mortimer — Utah State Agricultural College, Logan, Utah

All Industrial Arts interns are placed in off-campus schools where a definite program of orientation and gradual assumption of responsibilities is carried out.

During the first week, the intern becomes familiar with the administration and the staff of the school and visits other schools in the county. During the second week, he begins to assume routine duties in Industrial Arts instruction under the supervision of the directing teacher.

In succeeding weeks, the intern carries an increasing percentage of the class load until, in the final week, he is teaching all classes of the directing teacher, providing his progress has been satisfactory.

Roy F. Bergengren, Jr. — University of Florida, Gainesville, Florida

510. The student teacher is provided with teaching experiences involving a variety of instructional techniques and media. (e. g. films, field trips, guest speakers, group projects, mass-production units, experimentation, etc.)

The undergraduate student in Industrial Arts has experience with most known instructional techniques. Films, slides, and movies are fairly widely used; mock-ups, cutaways, and other teaching aids are developed by the students. Committee projects and mass production units are featured in four or five separate shop courses. Experimentation is encouraged in several courses and required in one. Guest speakers, demonstrations, and expositions are provided periodically. Displays and exhibits of the work of college students, of faculty, of public school youth, and of industry are a regular feature. In one senior course a weekly visit is made to industries and shops related to six basic areas of Industrial Arts.

Student teachers are encouraged to and they do draw upon the above curriculum materials of the department. They construct teaching aids for their own courses and usually provide an appropriate movie and a field trip at least twice during a semester. In certain courses group projects and mass production are carried on.

James J. Hammond — State Teachers College, Fitchburg, Massachusetts

Our student teachers are provided these experiences in the following manner:

1. Each student teacher receives experience in teaching in a general shop involving at least four fields of industry.
2. Student teachers are required to employ a wide variety of accepted methods and techniques in their teaching, including the use of films, models, mock-ups, demonstrations, etc.
3. Field trips to surrounding industrial plants are employed as a part of their instructional program.
4. Guest speakers, special reports, and group projects are utilized whenever appropriate.
5. Mass production techniques and experimental procedures are covered in certain areas of the program.

Hugh L. Oakley — Murray State College, Murray, Kentucky

Each student teacher is provided with varied teaching experiences. The student teaching semester is divided into three periods of six weeks

each. Hence, each student has the opportunity of working in three different shops under the directing teachers. If the student teacher is especially interested in graphic arts or any other special field his schedule includes teaching in his specialty.

Mass production units in student teaching centers range from sample wood projects for distribution at an open-house to making drill presses, wood lathes, air compressors, etc., for each individual student in a class.

Field trips and guest speakers form important teaching experiences as industry in the area supplies a vast reservoir of material.

The student teacher has an assigned group in which he controls the entire program. Here he can draw on his own initiative to develop classroom programs. In preparation for this, he is required to write a course outline.

Irvin J. Shutsy — State Teachers College, California, Pennsylvania

Our graduating seniors have 24 weeks of student teaching before entering the field. The first 12 week period consists of teaching one-half day at some elementary school. During the second 12 week period he teaches a full day in his major field. His supervisors, one of whom is in the building with him, the other, his major adviser, give him mimeographed materials concerning professional procedures, books, techniques, observations, and audio-visual aids. The student supposedly uses them at all times during his experience. His major department stands ready to lend him any teaching materials which he would care to use. He is also provided with a list of guest speakers, available displays, and demonstrations. He may call upon the department at any time for their use.

Each student teacher has been required beforehand to have taken an audio-visual course, and to know the operation of the many audio-visual machines.

Alan R. Pawelek — Western Washington College of Education, Bellingham, Washington

511. The student teacher plans a unit of instruction and carries through with a class (or classes) from the group-planning stage to a final group evaluation.

The student teaching program is arranged so the student teacher is assigned to at least one class for a full semester. The arrangement provides an opportunity for the student teacher to gain the experience of starting a new class, teaching through a full semester, measuring progress and development, and finally closing the class at the end of the semester.

Part of the teacher's responsibilities is to prepare a unit of instruction, instructional materials and aids of all kinds, including a student group project.

Two factors are considered in selecting a group of students for the student teacher:

1. The size of the group with relation to the work involved in the group project. There should be work for everyone.
2. Group membership should be voluntary and without personality conflicts. Depending upon the size of the project, three or four students make a good team when they are required to work together

for several weeks or more. Larger groups of ten or fifteen students work well together on projects that may be completed in a relatively short time. Typical group projects for small groups have been: department project display cases, bookcases for the student lounge, furnishings for the student club rooms. Larger projects requiring the work of ten or more students include a department float for the Rally Day Parade; a Christmas exhibit of a snow scene, village with all the fixtures for public display; props for the dramatics department and school plays.

Nelson A. Hauer — Louisiana State University and A. & M. College, Baton Rouge, Louisiana

As soon as the student teacher becomes established in the school and community he assumes the responsibility of planning and presenting units of instruction. In each case he assumes full responsibility for the class for a period of at least one week and in most cases he assumes full responsibility for a small group of students for a period of three or four weeks. The objective of this procedure is to have student teachers experience every phase of teaching while under the guidance of the master teacher and the college field director of student teaching.

Donald F. Hackett — Georgia Teachers College, Collegeboro, Georgia

512. The student teacher is either provided with or has an opportunity to obtain aids and devices to be used in connection with instructional needs during the student teaching period.

Students are given several opportunities to obtain teaching aids and devices to be used in connection with their needs during the student teaching period.

The department of Industrial Teacher Education provides a teaching aids library both for teachers in the field and undergraduate students. Teachers and students may examine and try out the many teaching aids displayed in this library. Also provided for use is a "mimeoscope," a fluid-process hectograph machine, a 35 mm. camera (with all necessary equipment), a slide film projector and screen, a large number of slides, an "ozalid" process printing machine, and a wire recorder-radio-phonograph.

Another source for students is provided by the John Herman Trybom Memorial Library, housed in the department of Industrial Education, and maintained by the department and the Detroit Public Schools. Students may inspect and study the latest literature in the field of Industrial Education. Twenty-five hundred volumes are available and the library is one of the most complete technical libraries in the United States.

Still another opportunity for students to obtain teaching devices is provided by a formal course "Teaching Aids and Devices." The course provides students with the opportunity to study, collect, and construct various aids and devices to be used in their teaching.

Another opportunity is given by the supervising teacher during the student teaching period when teachers provide the time and direction for

student teachers to design and build aids and devices appropriate for their particular teaching assignment.

Paul E. Powell — Wayne University, Detroit, Michigan

The State Teachers College, California, Pennsylvania provides two sources of teaching aids and devices. The first is the free use of all the films of the visual aid film distribution service. This film library is valued at approximately \$75,000, the bulk of the titles pertain to Industrial Arts.

The second source is the Industrial Arts visual aids department and teaching devices under the direction of the Industrial Arts supervisor of student teachers.

This department has been built up by each student teacher contributing his most outstanding visual aid or teaching device created by him during his 18 weeks in the field. These consist largely of three-D teaching aids rather than the ordinary charts and other printed matter.

The students discuss the main advantages and disadvantages of any teaching device that is used by them. All suggestions toward improvement of the device are noted and taken into account so that the device does the maximum amount of teaching. Blueprints of all teaching devices are furnished free to all student teachers.

In addition each college instructor supplies duplicates of teaching charts, etc., for use during and after student teaching.

Irvin J. Shutsy — State Teachers College, California, Pennsylvania

While enrolled in course planning, each student is required to include a list of aids and devices in his course of study. Students enrolled in the general shop course select, write for, and evaluate free and low-cost materials. During the student teaching experience students are required to secure additional aids and devices for use in their instructional activities.

Staff members check each edition of professional and technical journals for listed aids and devices and secure materials for class distribution.

B. S. Proctor — Hampton Institute, Hampton, Virginia

513. The student teacher has experience in more than one type of shop or school (general shop, unit shop, unit general, urban, rural consolidated, etc.).

In the junior and senior year a visiting program is set up which allows students to observe Industrial Arts instruction in several different localities and under varying conditions of school size and facilities. It is our practice to assign students to teaching situations where they will have participating experience in at least two kinds of shops plus a general shop if possible. While doing their student teaching, students are brought together several times to discuss and share problems that have arisen in their varying situations thereby gaining experience in recognizing and handling problems that arise in many different shops and schools.

L. L. Gibbons — Colorado A. & M. College, Fort Collins, Colorado

All student teachers are required to teach at least one junior high class, usually a general shop, and a senior high class which may be either a general shop, general unit shop, or a unit shop.

Off-campus student teaching centers are selected with the individual student's major in mind and may be any one of three types of shops.

John A. Jarvis — The Stout Institute, Menomonie, Wisconsin

The student teacher spends the entire day for one quarter in teaching and in related activities. This may be done off-campus or in the campus shops.

Those on the campus get experience teaching an eleventh grade group in the composite general shop of four or five areas; in a unit shop of either woodwork or metalwork; and with a group of seventh and eighth grade pupils in crafts. All classes contain mixed groups, some 40 percent of the students being girls. Student teachers also sponsor a Crafts Club.

N. B. Grinstead — Central Missouri State College, Warrensburg, Missouri

514. The student teacher has experiences involving pupil analysis and assistance in cooperation with other school-staff personnel and departments.

No response to this item.

515. The student teacher has an opportunity to obtain and use the cumulative record of a pupil (or pupils) in helping the student teacher to resolve some difficulty which has developed within the teaching-learning situation.

No response to this item.

516. The student teacher reviews studies made of the school or of the school community such as "drop-out" or holding-power studies, placement of graduates, ethnic influences, recreational facilities, educational resources, etc.

No response to this item.

517. The student teacher participates in whole-school activities such as home-room responsibilities, faculty meetings, P. T. A. meetings, extracurricular activities, record keeping, etc.

Before a new student reports to an off-campus center for student teaching, a member of the college Industrial Arts teaching staff visits the center and with the aid of the principal, master teacher, and local director of instruction or special supervisor, plans and develops a schedule of desirable experiences. These experiences include observations and visitations to non-Industrial Arts classrooms for the purpose of observing teaching methods, classroom management procedures, and techniques of handling problems in the area of human relations. Also included are home-room assignments, monitorial work, faculty committee activity and a study of the general organization and administration of the school. This last experience calls for the preparation of a report which acquaints the student teacher with the school system's flow of authority, the guidance and testing program, the record system, the organizations within the school system, and the policies which control such items as smoking, fees, home-work, absences, faculty meetings, and the like. Other experiences include working in the main office in the assigned school, and attending meetings called by the administrative staff and by parent-teacher groups. It is through

cooperative planning that student teachers develop a general understanding of the total school program.

Joseph A. Schad — Virginia Polytechnic Institute, Blacksburg, Virginia

Student teaching is done in one semester of the senior year. A student's teaching experience is scheduled as follows:

1. Three weeks of concentrated course work and observations on the campus. This includes special methods in the major field.
2. Eleven weeks of student teaching with assignments made in co-operating schools in Bowling Green and outlying cities. The student is expected to be on the job full time with the same responsibilities to the pupils as an employed teacher. In addition to this the student meets one evening each week with his college supervisor for special methods.
3. Three weeks of off-campus, full-time teaching in another location.
4. The last week the student teachers return to the campus for special problems in teaching, reviews, and tests.

R. M. Torgerson — Bowling Green State University, Bowling Green, Ohio

Our student teachers participate in all of the activities generally expected of a regular teacher. They attend faculty meetings, P.T.A. meetings, carry on the activities of the homeroom, help with the extracurricular activities, such as Boy Scouts and school clubs, act as "ticket takers" at athletic contests, do some coaching of junior teams, and the like. They also participate in all of the usual record keeping activities.

These young men are expected to live in the community during the teaching period and are encouraged to get acquainted with the townspeople and to take part in community activities.

Kenneth L. Bing — East Carolina College, Greenville, North Carolina

518. There are planned experiences through which the student teacher becomes acquainted with the functions of the principal's office, the guidance office, the health clinic, remedial services, testing bureau, and other such school facilities.

No direct response to this item. Some of these experiences are included in responses to other items.

519. A student teacher lives in the school community and participates in community activities for the duration of his teaching assignment.

The student teaching period for Industrial Arts students at this college is 12 weeks, full-time, off-campus teaching. The student teacher lives in the school community and participates in community activities for the duration of his teaching assignment. The community activities are usually those concerned with the school or schools in which the student teaching is carried on. P.T.A. meetings and programs, athletic events, dramatic and musical productions, and "Open House" programs are some of these community activities. The student teacher has a part in these activities in cooperation with the regular full-time faculty.

Milo T. Oakland — Northern Illinois State Teachers College, DeKalb, Illinois

Students who do their practice teaching off-campus in Industrial Arts, do so for a period of 12 weeks (one quarter) and receive 16 quarter hours of credit in teaching. They live in the community during this time and engage in the regular school activities as other teachers. In addition to their teaching assignment, they conduct study hall, attend faculty meetings, receive committee assignments, attend all school functions, and assist in special club work.

Walter A. Klehm — Eastern Illinois State College, Charleston, Illinois

The last half of the fall semester of the senior year is devoted exclusively to student teaching. Students live in the community where they are assigned for student teaching, becoming a part of the community and participating in community and school activities.

S. Lewis Land — Pennsylvania State University, State College, Pennsylvania

A student teacher is assigned to a school within a 150 mile radius of the campus at Florida Southern College. While serving in the school for a period of 12 to 13 weeks he is required to attend all school functions (football, basketbaall, baseball, P.T.A., school plays, all faculty meetings, local C.T.A. and F.E.A. meetings). He is also required to make a town survey in accordance with a plan provided and is expected to know as many people connected with these activities as possible. He is required to attend the church of his choice and, if possible, to join in whatever activities they have available. The intern of course must find himself a place to live and board in the community.

J. Gordon Ogden, Jr. — Florida Southern College, Lakeland, Florida

520. The student teacher has experiences through which he becomes acquainted with the nature and operation of the local school administrative unit.

No response to this item. Other responses such as 517 provide some data.

521. There are on-campus or off-campus student teaching seminars and consultation periods during the student teaching period.

Our student teachers devote 12 weeks to full-time off-campus student teaching. At the end of the first six weeks, the students return to the campus for a two-day seminar during which time problems they submitted earlier are presented and discussed. Different students are selected by the group to lead the discussions. These presentations and discussions of mutual problems give them help and renewed confidence in tackling these problems during the remainder of the term. A similar seminar is again held at the end of the 12-week period.

The student teachers are also visited each week by an Industrial Arts staff member from the college. At the close of the school day, there are consultation periods with the student teachers and the supervising teachers.

Ivan Hostetler — North Carolina State College, Raleigh, North Carolina

All student teachers are required to have five conferences with their supervising teachers. Each supervising teacher makes four visits to each

student teacher on the job during the semester. At each visit, the student teacher, the supervisor, and the cooperating teacher discuss the progress made by the student teacher. This is a total of nine conferences per semester.

In addition to the above, the School of Education has several general meetings for all student teachers from all departments. Each year the School of Education has an afternoon tea for all student teachers, supervisors, cooperating teachers, and principals.

R. L. Thompson -- New York University, New York, New York

Student teachers on or off campus have daily individual conferences with their critic teachers and supervisors for joint planning, counsel, and evaluation. In addition, a weekly seminar is held on campus which is compulsory for all student teachers of Industrial Arts. A list of topics has been prepared for this seminar, some of them dealing directly with teaching, some with participating in extracurricular activities, homerooms, guidance, and the like. The listing is as follows:

1. Shop organization
 - a. Before school begins
 - b. Meeting the first class
 - c. Closing shop
2. Records
 - a. Budgets
 - b. Inventories
 - c. Requisitions
 - d. Pupil progress and marking
 - e. School register
3. School law
 - a. Teacher's Oath
 - b. Pupil safety (fire-drills, machinery, conduct, passing)
 - c. Corporal punishment
 - d. Rules and regulations of School Committee
4. Visual Aids
 - a. Use of chalk board and bulletin board
 - b. Use of various projectors
 - c. Use of duplicators
 - d. Availability of films
 - e. Field trips
 - f. Teaching aids (instruction sheets, models, cut-aways, and mock-ups)
 - g. Photographs
5. Guidance programs
 - a. Homerooms
 - b. Assembly programs
 - c. Student councils
 - d. Extracurricular activities
 - e. Parent-Teacher Associations
 - f. Conventions and institutes

- g. Psychiatrist (3 meetings)
- 6. Teaching techniques (shop kinks)
- 7. Professional ethics
- 8. Placement
 - a. Interviews
 - b. Teacher agencies
 - c. Teacher examinations
 - d. Teacher certification
 - e. Contracts
- 9. Observations concerning other shops and classrooms visited.

James J. Hammond — State Teachers College, Fitchburg, Massachusetts

522. The student teacher submits periodic reports and analyses of his activities and experiences.

Each student teacher is required to file with his college supervisor a weekly report of his time in his teaching center and the specific activities in which he engaged. In addition, a monthly report is submitted to the central college office.

These reports are used in conferences with the students to control, as far as possible, percentages of time spent in different activities. The student is also questioned regarding the value he received from each activity.

Student-teachers in the "methods" courses present actual classroom and shop situations as they have experienced them in practice teaching. Suggestions for solution or improvement of the situations are given.

A. R. Spillman — City College of New York, New York, New York

The student teachers in this college come to the campus each Saturday morning for a class entitled: "Classroom Organization and Control" which is conducted by a member of the Education Department.

Later in the morning, they have a conference with the college supervisor to discuss their problems and to make general plans for the ensuing weeks. At this conference, each student teacher turns in a log of his daily activities which contains information on the units he taught the preceding week, the problems he encountered, and how he solved them. This log provides topics for the next Saturday's conference. Often a student teacher may help solve the problem encountered by one of the other teachers. We have found this method to be very helpful.

Kenneth L. Bing — East Carolina College, Greenville, North Carolina

523. The "master" teacher submits periodic reports and analyses of the student teacher's progress.

Reports are made at regular intervals by the "master" teacher to the supervisor of the student teaching program. These reports form the basis for individual and group conferences with the supervisor.

Richard E. Fisher — Pacific Union College, Angwin, California

Each "master" teacher submits a report of the student teacher's activities and progress at the end of the first three weeks and again at the close of the student teaching period.

Emerson Neuthardt — New York State College for Teachers, Buffalo, New York

524. Satisfactory criteria and techniques for the evaluation of the student teaching experience have been developed.

The student teacher's progress is reported three times a semester to the placement office by the supervising teacher. This report assists the director of training to counsel and advise the cadet during his teaching experience. Brief and specific statements are written which are directly related to teaching success. Generalizations are avoided. The supervising teacher gives such ratings of the students appearance, character, health, scholarship, and professional attitude as if he were employing the teacher.

These reports are then followed with a rather discriminating evaluation of the student teacher. Early in the first semester of cadet teaching, the student teacher is given a colored copy of the "Student Teaching Record." The characteristics listed on that form are those which rank very high in various studies which have been made to determine factors in teaching success. The students are told they will be rated on the same form at the end of their period of student teaching. The students rate themselves on this record after they have been introduced to the guide and scale for rating the student teacher. Periodic checks and references to evidences of improvement on any particular should be substantial stimuli to further improvement.

As the guide to the record states, a critical analysis of a teacher and his teaching serves two purposes. 1. It is a guide and stimulus to further growth. Most students are interested in the traits which characterize good teachers. 2. It provides a description of desirable characteristics to prospective employers.

K. A. Waktera — Northern Michigan College of Education, Marquette, Michigan

A score sheet for the evaluation of student teaching has been developed through the cooperative efforts of all departments of the college. The students in Industrial Arts are evaluated in the same manner as students doing practice teaching in any other field.

This same score sheet is used in our follow-up program of graduate teachers.

Fred O. Armstrong — New Jersey State Teachers College, Trenton, New Jersey

525. The student teacher has a period of time on campus for further development following the student teaching experience.

The student teacher is off-campus during the first twelve weeks of the fall semester of the senior year. During this period, the staff and supervising teachers observe his work and offer constructive criticism.

Concentrated courses are offered after the student teaching period for six weeks. One is in "Instructional Aids and Devices" in which the student actually constructs teaching aids. In addition, the student can elect an area of specialization in his technical work and this concentrated course makes it possible to schedule the class for a period of three or four hours a day.

The advanced General Shop is offered during the final spring semester. This course serves to round out the student's experiences during his four years here at the college, to get some practical experiences in methods, and to develop curriculum content for a general shop.

One of the outstanding courses the senior takes in the spring semester is that of "School Shop Planning and Equipment Selection." Some of the students have already selected their teaching positions by this time and the course provides prospective teachers the opportunity to plan their own shops, prepare equipment, and supply lists. This procedure, of course, meets with the approval of the school systems in which the students propose to teach.

Marshall L. Schmitt — North Carolina State College, Raleigh, North Carolina

At the close of the ten-week period of full-time student teaching at an off-campus school, the interns return for a three-week series of daily seminars on the campus.

Each intern is assigned to a general education section which meets for two hours each morning under the guidance of a selected faculty member. Industrial Arts interns meet for a like period each afternoon with a member of the Industrial Arts staff. All members of the departmental staff work with the intern group as their services are needed.

Ideas and experiences are exchanged and problems and solutions discussed at the seminars. The period is also used to point up needs of students in their future studies.

Roy F. Bergengren, Jr. — University of Florida, Gainesville, Florida

After the student teacher has returned from the 12-13 weeks in the field he meets with his entire group and a professor in a seminar class that meets 3½ hours per day for 10 to 15 days. During this time his whole experience is evaluated in conference and with his fellow student teachers. Weaknesses are pointed out and each one is given an opportunity to start remedial measures if necessary.

J. Gordon Ogden, Jr. — Florida Southern College, Lakeland, Florida

526. Write in item: Placement of Student Teachers.

The placement of student teachers in the various secondary schools is the responsibility of the Director of Professional Education. In the case of Industrial Arts students the procedure is as follows:

- a. Students make written application to the Director of Professional Education.
- b. Director of Professional Education checks eligibility requirements for student teaching. These eligibility requirements are: 1. acceptance

- into the professional program for teacher education by the Committee on Admissions and Student Standing; 2. approval by the English department for proficiency in English; 3. approval for assignment by the chairmen of departments in which they are specializing; and 4. the completion of a required group of professional courses.
- c. The Director of Professional Education then delegates the responsibilities of assignment to a school to the Supervisor of Secondary Student Teaching. He consults with the departmental supervisor as to the specific school assignment to be given to each student. In this manner he utilizes the Industrial Arts supervisor's knowledge in his special field, his close acquaintanceship with each laboratory teacher and also his more intimate knowledge of the personality, character traits, and subject matter skills of each prospective student teacher in order that the assignment is given every chance of success from the viewpoint of the student teacher, the laboratory teacher, and the Industrial Arts college supervisor.
 - d. The supervisor of Secondary Student Teaching consults with the superintendent, the school principal, and with their approval approaches the previously selected laboratory teacher where final student placement is made in individual schools. By this method the active cooperation of all is assured.

William F. Riley — Teachers College of Connecticut, New Britain, Connecticut.

The Technical Background of Industrial Arts Teachers

This chapter reports on two sections of the study. The first pertains to the technical education of Industrial Arts teachers emphasizing shopwork and drafting. The second pertains to those technical phases of preparation which are usually embodied in mathematics and the physical sciences.

Point of View Statement¹

The obvious is seldom overlooked, but that which creates and supports the obvious may often be neglected. The preparation of Industrial Arts teachers is no exception. The skillful handling of tools, the proper operation of machines, a working knowledge of materials and the "know how" to process them have received our major attention. These are the tools of learning with which the Industrial Arts teacher works. The need for them is obvious, but how to use them intelligently for teaching and learning has been less apparent.

Tools, machines, and materials provide the opportunity to learn. Planning, designing, identifying, calculating, investigating, and evaluating are processes through which learning comes about. These are the activities which make school shops educational and therefore should be the major concern of every Industrial Arts teacher. These are the less obvious, but most important factors, in effective Industrial Arts education.

It follows that if planning, designing, investigating, evaluating, and the like demand more from an Industrial Arts teacher than the possession of manual skill and factual knowledge, then, his background must be more technical. More emphasis must be placed on the value of experience and understanding in the fields

¹ Prepared by Elroy Bollinger. Dr. Bollinger is Professor of Industrial Education, State Education Department, Division of Vocational Education, New York.

of science particularly with reference to light, heat, electricity, mechanics, metallurgy, inorganic chemistry, mathematics, and, of course, industry's language of drawing and design. More importance must be placed on the teacher's ability to analyze, diagnose, deduce, relate, and comprehend technical situations, more ingenuity developed in conceiving, devising, planning, designing, associating and constructing.

We are living not only in a marvelous industrial age but in an even more marvelous technical age. Our simple machines have become highly technical machines; our mechanical environment a highly technical environment. The modern automobile engine can no longer be serviced with a few hand tools and a little brawn. Keeping an oil burner in operating condition is quite different than stoking the family stove. Servicing a color TV set calls for a different person than the one who repairs the home radio. And did you ever take a look at the mechanism in an automatic washing machine? Yet, these complicated devices within our homes are but mere toys compared to the intricate machines now common in business and industry. Today, it is technical understanding and competency, as well as mechanical ability, that is essential for intelligent use of equipment available to us. Today, everyone, in a sense, must be a technician, with an increasing need for technical understanding pressing upon us.

Thus, the Industrial Arts profession may well examine its entire approach to the needs of today's young people, take stock of what we are actually doing and what we could do once we sense our opportunity. Perhaps we have been slow in catching the changing picture about us. Perhaps we are so much a part of this change that we are unaware of the process. Perhaps, because of this, we have continued to stress construction, tools, machines, and processes rather than utilizing them as devices for motivation and application.

The practice of Industrial Arts education will change only as its teachers change and teachers teach much in the way they were taught. This places a large responsibility for progress directly upon those concerned with teacher preparation. We are rapidly moving into a highly technical society, a society built on the applications of science and mathematics to human needs and everyday living. To help interpret this world to young America, Industrial Arts teachers have to be good technicians as well as able craftsmen.

Overview of Reported Practices

The professional evaluation implied in Doctor Bollinger's statement is supported by the materials which the respondents have submitted. Reports on superior practices in shopwork and drawing were numerous whereas nearly half of the items in the science and mathematics area were not cited as being practised in a superior manner.

Schools, generally, report a rather extensive amount of shopwork and drafting as a basic requirement in the curriculum with considerable emphasis upon a diversity of experiences (woods, metals, automotives, electricity and electronics, etcetera). In addition, a degree of specialization in one or two areas of shopwork is likewise common. Several schools report making it a point to correlate drawing with ongoing shop activities. Courses in industrial design are commonly reported.

Student participation in job planning is emphasized according to the reports. Similarly, the student is engaged in course planning, in the development of instructional aids, and in the operation of the shop throughout the period of his professional preparation.

The selection and purchase of tools, machines, and materials and the care of physical facilities receive direct attention in courses bearing titles such as "Shop Maintenance," "School Shop Planning," "Shop Organization and Management," and "Industrial Arts Organization."

Safety programs are reported extensively and range from multiple courses in safety to the inclusion of safety as a normal part of day-by-day instruction. Field trips to industries and visual aids are mentioned in this connection also.

Out-of-school work experience yielding college credit is reported in this area. Schools which grant credit for work in industry have established the range of activities the students are expected to experience and a college representative is assigned to visit the student at his place of work.

Schools report the use of a variety of teaching methods in shop and drawing courses. In a sense this may be construed as an endeavor to professionalize technical courses as well as to make teaching and learning more effective.

The implication is sometimes made that students become aware of industrial methods and manufacturing processes by participating in similarly named school shops. That is, the stu-

dent in his metalworking shops learns about basic metal fabricating, processing, and assembling procedures. This is, at the best, an assumption and whether the relationship exists is dependent upon the instruction; understanding industrial processes does not necessarily accrue from the construction of projects in a school shop. Similarly, shop and drawing activities lend themselves well to the study of occupations but, again, the correlation can be achieved only through conscious effort.

Of the 19 items in the "700 series" ("Technical Education Exclusive of Shopwork and Drafting") eight received no response and three others received one response each. Courses in mathematics, physics, and chemistry seem to be almost universal in Industrial Arts teacher education and some schools make an effort to "tailor" these courses to the profession.

The omitted items seem to fall into a pattern; the pattern may be characterized as a neglect to intellectualize science and mathematics. That is, items which refer to the understanding of significant developments in the field of science, to the development of facility in applying scientific principles to diverse situations, to an understanding of the impact on modern industry of increased amounts of energy, to an understanding of conservation of natural resources are items on which no superior practices were reported.

Industrial Arts clubs are widespread. These clubs are reported to assume responsibility for organizing many of the field trips and for bringing to the campus speakers from business and industry.

Reports on Superior Practices

Technical Education: Shopwork and Drafting

600. Experiences are provided for the student to develop proficiency in the basic shop and drawing skills necessary for teaching Industrial Arts at the public school level.

The student spends two full half-days of four hours each in eight different shop courses in the Industrial Arts curriculum. The shops are also open on Saturday for any student who wishes to work extra time. Five of the shops are required and three are elective. There is the unusual range of 25 elective shops offered.

Each shop has the latest equipment available for the type of work carried on. The equipment is renewed on a regular schedule much like the schedule carried out in industry.

The drawing courses are unusually functional because each is taught by the same person who teaches the shop which is directly related to it.

For example, during the semester that beginning woodwork is taught the same teacher teaches blueprint reading, sketching, and the elements of mechanical drawing to the same group or groups. Likewise, graphic arts design runs concurrently with the graphic arts shop, and both are taught by the same instructor. There is a closely related drawing and design course for each of the five required shops.

S. L. Coover — State Teachers College, California, Pennsylvania

Regardless of the specific area of Industrial Arts in which the student plans to teach, experiences are provided in additional basic work so that the student's Industrial Arts education will be built upon a broad foundation.

All students are required to participate in a common Industrial Arts core as well as a large general education core. The Industrial Arts core consists of a minimum of three semester units in each field of electricity, metal, graphic arts, transportation, and wood. The basic drawing requirement is seven semester units. Certification for teaching one of these specific activities calls for the completion of from six to 14 semester units depending upon the area. Thus the Industrial Arts teacher candidate has a broad Industrial Arts experience and adequate proficiency in the sphere of his special credential.

Ralph K. Nair — University of California, Santa Barbara, California

The Industrial Arts education curriculum at Miami University offers a minor of 30 hours, a major of 45 hours, and a double major of 56 hours. Prescribed courses in each of these programs include a three-hour course in each of the following areas: arts and crafts, drafting, electricity, graphic arts, metalworking, and woodworking. A three-hour special methods course is also required in the three programs. Additional hours to complete the program are planned by the student and his adviser in light of the student's background and his demonstrated abilities. A three-credit course requires six hours of classroom and laboratory work.

W. D. Stoner — Miami University, Oxford, Ohio

Industrial Education graduates are required to complete eight basic shop and drawing courses. These are machine shop, freehand drawing, mechanical drawing, hand woodworking, machine woodworking, sheet metal, and printing. The total of 16 semester hours granted by completing the above courses is earned at the rate of 45 clock hours per credit. An Industrial Arts major must earn a total of 42 shop and drawing credits.

John A. Jarvis — The Stout Institute, Menomonie, Wisconsin

We begin by identifying and listing the various operations which the shop teacher should be able to perform in the different areas, such as woods, metals, electricity, etcetera. Then we assign "case" projects at the beginning of each course which involve these operations. We make these basic operations a "must"; we teach them "on purpose." Second level, or limited elective, projects include more advanced and less frequently occurring operations. Third level, or free elective projects, provide for cre-

ative expression and the combination and perfection of skills previously performed.

H. H. London — University of Missouri, Columbia, Missouri

601. Specific efforts are made to apprise the student of the unique function of shopwork and drafting in the modern educational program.

All Industrial Arts majors and minors are required, at the beginning of their course, to take "Introduction to Industrial Arts." The description in the college catalog is as follows: "The chief aim of this course is to give students a clear conception of Industrial Arts work in its various phases and the part it plays in the general scheme of education so they may proceed with their work more intelligently. Discussions are held on the work being given in various school systems and possible future developments. The duties of Industrial Arts teachers are considered and discussions are held on some of the practical problems confronting the Industrial Arts teacher."

George A. Willoughby — Michigan State Normal College, Ypsilanti, Michigan

The secondary school subjects are analyzed to ascertain their contributions to the objectives of education. The objectives of education are also analyzed in light of present day needs and interests. The resultant pattern of needs, interests, and contributions graphically illustrates the unique function of Industrial Arts education in the modern educational program.

Donald F. Hackett — Georgia Teachers College, Collegeboro, Georgia

602. Specific efforts are made to have the student develop a considerable degree of skill and understanding in one or two areas of shopwork (e. g. metals, wood, electricity, graphic arts).

To secure a major in Industrial Arts, the student must complete at least 40 semester hours of technical work. This includes both a major and a minor. All students must take basic courses in woods, metals, drawing, electricity, and graphic arts. They then select one area in which they must secure a minor.

Every student must complete a 15 semester hour minor in some specific area such as metals, woods, etc. A typical minor in metals, for example, would include unit courses in general metal, machine shop, welding, sheet metal, art metal, jewelry, and hot metals. Under this plan, every graduating senior is qualified to teach in some unit shop or general shop in which he has minored.

John L. Feirer — Western Michigan College of Education, Kalamazoo, Michigan

A total of 12 semester hours of work may be taken in each of our major shop units such as wood, graphic arts, machine, electric, and the like. It requires three semesters to complete the 12 hours. Upon completion of 12 semester hours the person is certificated to teach the shop in question on a unit shop basis.

The least amount of credit offered in any major shop is four semester hours plus two hours of related drawing. The student is certificated to teach, on a general shop basis, all shops for which he has earned four credits.

Perhaps the most important method of developing exceptional skill is through the type of projects employed. No practice exercises are used in any shop. All projects are real and useful. For example, in the machine shop the student makes for himself such machines as grinders, six-inch circular saws, and the like.

S. L. Coover — State Teachers College, California, Pennsylvania

Students may major in an area or two or may elect to take a program of shops and professional courses so that their major may be general shop. Majors in a single shop or drawing area must complete 16 to 18 semester credits to be termed a major. These credits are earned at the rate of 45 clock hours per credit. Eighteen (18) shops are available for this type of instruction.

John A. Jarvis — The Stout Institute, Menomonie, Wisconsin

603. Experiences are provided for the student to develop an understanding of the basic manufacturing and fabrication processes in several industries.

Each shop area attempts to point out the breadth of its field in the corresponding industrial materials or processes. In addition, considerable time is spent in the curriculum course in making analyses, through student committees, of the basic processes of production in the areas we treat in our shops, and as many others as time permits. These are duplicated by the students and exchanged, so each one has received some record of intensive study of many kinds of production. I should make clear that these analyses are not operations or trade analyses, but the process by which a material is formed, e. g., melting a metal into a liquid and pouring or forcing it into a mould to form a product. That process is performed in many operations and trades. We try to break these down into hand, power tool, and machine processes.

Burl N. Osburn — State Teachers College, Millersville, Pennsylvania

All instructors in the Industrial Arts department have at one time worked in industry in their respective subject areas. Consequently an undertone of production processes is evident. In general metals and machine shop, maximum use is made of jigs and fixtures for the proper holding of materials for rapid and accurate work. In the auto shop, a complete assortment of the testing and analyzing equipment is put to use. The print shop makes maximum use of its equipment from the platen press through the linotype and intertype to the stitcher and folding machines in producing all of the presswork for the college. In the woodworking laboratory, emphasis is placed upon the simultaneous processing of duplicate parts, where feasible. In drafting, instructional emphasis is placed upon freehand sketchwork, speed, accuracy, and completeness, rather than upon lettering, inking, and the copying of plates.

Emphasis along production lines is introduced after the elementary shop courses have been completed.

Lawrence M. Frederick — New Mexico Western College, Silver City, New Mexico

604. Through planned experiences the student develops an appreciation of the value of drafting and planning in the construction of useful items.

All students are required to take at least five hours of drawing and planning, after which they must enroll in a course in industrial design. In this advanced course, students design projects in metal, wood, and other media. These designs are then used as plans for constructing the projects.

John L. Feirer — Western Michigan College of Education, Kalamazoo, Michigan

Our undergraduate majors (we have no minors) take all but two of their shop courses in shops controlled and operated entirely by the department. Project planning is made an essential and functioning part of all of these courses. In fact, no project is ever done in our shops which has not first been carefully planned. The student's project plan includes a working drawing, the necessary details, a bill of material, a plan of procedure, an estimate of the time required to do the job, and the cost. In addition, our students as seniors, take a course in Industrial Arts design taught by a member of our staff.

H. H. London — University of Missouri, Columbia, Missouri

In all Industrial Arts classes in which any sort of construction takes place, the student is required to make a working drawing or sketch, plan of procedure, and a bill of material. In selecting the item for construction, every aid toward choosing a project of usefulness is given. There are very few exercises given purely for the experience of doing and acquiring skills. We teach on the theory that one can acquire experience and skills by constructing a useful item as well if not better than by merely doing an exercise. We do encourage practice on scrap stock before attempting a difficult task which the student has never attempted before.

L. D. Wallis — East Tennessee State College, Johnson City, Tennessee

605. Special effort is made toward having the student develop considerable background in the principles of applied design.

First, as a sophomore requirement, each student completes nine hours (three subjects of three credit hours each) in an applied drawing design sequence taught by the art department as a special sequence for Industrial Arts majors. The first term is designed to develop facility in freehand drawing and is applied to typical Industrial Arts projects of recognized aesthetic value. The second term requires the development of individual designs and is again applied to typical Industrial Arts projects in wood, metal, ceramics, plastics, etc. The third term of sequence, titled "Applied Design," gives further opportunity for instruction in basic principles of design and is applied specifically to the creation of contemporary designs in the various media and construction areas of the Industrial Arts field.

In addition to this basic sequence of drawing and design, there are also two separate courses concerned with design, taught by our own department, applied specifically to "furniture" on the one hand and "machines" on the other. In the latter category, most designs are concerned with small machines and/or tools, teaching aids, and related devices useful in both the home shop and the small school shop.

In the various craft areas — metalcraft and spinning, plastics, recreational handicrafts — each student is further required to develop original designs appropriate alike to the materials used and to the best of contemporary design in the applications indicated.

Not all students respond to the highest order of perfection, but even those with less aptitude than others, under these combined exposures to the principles and specific requirements of applied design, develop abilities beyond the average Industrial Arts graduates with lesser requirements.

George B. Cox — Oregon State College, Corvallis, Oregon

Industrial Arts majors during the freshman year are required to take a course of four quarter hours in the Department of Art in which the work is in freehand drawing and design. This course is restricted to Industrial Arts majors and minors. All work is geared to the media used by Industrial Arts students. During the junior and senior year, another course is taken in Industrial Arts design. Here principles of design are studied and then applied to problems in design. This is further followed by a course in design and construction in Industrial Arts on the graduate level.

Walter A. Klehm — Eastern Illinois State College, Charleston, Illinois

In many courses each student is required to design and fabricate a project (compatible with the course content) suitable for use in junior high school Industrial Arts courses. This involves the drawing of preliminary construction, final plans, final construction, and a plan of procedure. This experience permits students to realistically face the problems of design and solve a problem confronting most Industrial Arts teachers — the improved design of suitable Industrial Arts projects.

Ira H. Johnson — State Teachers College, Mankato, Minnesota

606. Through planned experiences the student develops an understanding of the principles of good construction.

An understanding of the principles of good construction is obtained by having a student make a careful analysis of his problem. This includes the study of good illustrative material, drawing up his designs, having them approved, and executing the work under good supervision. At all stages checks, comparisons, and changes, if necessary, are made. Criticisms of the completed work are rendered. Often the work is evaluated by instructors not connected with the class. In developing certain projects, use is made of the library, field trips, and the suggestions of craftsmen.

O. A. Hankammer — Kansas State Teachers College, Pittsburg, Kansas

The student who comes into the department of Industrial Education is given opportunities from the very beginning to study the principles of

good construction. He is given assignments which he is expected to construct and by doing so he is experiencing the principles of good construction. After a certain amount of work has been completed we permit our students to do their own designing and thus apply the principles they have learned about good construction. Principles of good construction are employed constantly in all the work the student is permitted to do in the shop throughout his four college years.

Otto C. Olsen — Nebraska State Teachers College, Kearney, Nebraska

607. Experiences are provided to enable the student to develop an understanding of the factors and procedures involved in the purchase of shop materials (wood, metal, plastics, paper, lubricants, supplies).

Specific attention is given to specifications, and to procedures required in the ordering of materials for Industrial Arts classes, in three separate phases of our program for Industrial Arts teacher-education. These are in connection with 1. "School Shop Planning," a senior or graduate level course requiring concentrated attention to these and related items; 2. "Industrial Arts Organization," a senior requirement coincident with or immediately preceding supervised teaching, in which attention is given to the problems of organization, pupil personnel, development of teaching materials other than daily lesson plans, the ordering and procurement of materials to carry out the teaching program, and the administrative responsibility of the teacher to the principal, superintendent, supervisor, and other members of the staff; 3. final application in the matter of ordering supplies is also a responsibility of the senior, under the immediate supervision of the supervising teacher (the latter a secondary school staff member under whom the college senior works), in connection with his term of supervised teaching experience.

George B. Cox — Oregon State College, Corvallis, Oregon

Industrial Arts students are required to take classes in organization and management of the school shop. Whenever possible the students work on an actual problem of organizing a new shop or reorganizing an existing shop that is expanding. These projects are usually worked in cooperation with local school officials. These projects involve the planning of program, facilities, and the procurement of supplies. A definite effort is made to provide a list of local supply houses, as well as national suppliers, to the graduating student.

Karl E. Hart — Ricks College, Rexburg, Idaho

"Program and Shop Planning" is a required subject in the Industrial Education curriculum. It embraces learning experiences in the purchasing, storing, and care of tools and equipment, shop programs, and procedures used by shop instructors. Each student is also required to design a unit shop, small general shop, and a comprehensive general shop. These floor plans indicate the arrangement of related areas of the general shop, and the arrangement of shop equipment.

Withro McEnge — Tuskegee Institute, Tuskegee, Alabama

608. Through planned experiences the student develops an appreciation of the dignity of work.

The whole situation at Berry is planned around the dignity of work since it is through productive work that each student is enabled to gain an education which in many cases would be impossible for the student without the work scholarship program. Everyone works who attends classes and many of the faculty have foremanship duties; this lends a sense of dignity to practical work over and beyond that which might be inculcated in the purely academic situation. The work assignments are directly connected with classwork wherever possible. Students who are taking or have taken machine shop courses are most often assigned to work in the machine shop. Learning in this situation anticipates future work to some extent. The work which is anticipated is not considered as beneath the dignity of the student as an academically educated individual but is considered as an opportunity to develop the skills which will be useful as a teacher or as a foreman in industry.

Talmage B. Young — Berry College, Rome, Georgia

Appreciation, like cooperative attitudes and safety habits, are very difficult to teach as a "unit" in the class. These attributes are personality traits that permeate throughout the full day of each individual. All the daily experiences of the student must be of such a nature that he can develop these desirable traits.

In order to foster an enthusiastic appreciation of the dignity of work, we must accept a craftsman of manipulative work on a par with the craftsman of professional work. For instance, we accept a person who can arrange the sounding of tones in a pleasing way on a piano as a professional artist. It seems important in addition to this we must recognize the skill and work that has gone into the construction of that fine instrument. Without the fine instrument, the professional artist would not have the tool wherein he is able to express himself.

Our students are encouraged to develop the philosophy that each type of activity he is engaged in, in our world of work, is necessary for the advancement of each other. That we as individuals cannot progress indefinitely without the progression of the society as a whole.

Karl E. Hart — Ricks College, Rexburg, Idaho

Our Industrial Education majors are required to assist with live projects on the campus after they have learned the basic fundamentals of shop courses in the shops. These live projects may be the construction and repair of campus buildings, repairing school automobiles or building a piece of furniture for university use. By assisting with these projects our students experience real working conditions of industry because they are working with hired professional workers on projects.

Clyde W. Hall — Tennessee Agricultural and Industrial University, Nashville, Tennessee

Each student majoring in Industrial Arts is required to do a minimum of 1000 clock hours of work performed in a commercial establishment.

This is only a part of his work experience inasmuch as most of the majors find it desirable to defray a portion of their expenses by regular work in one of the college operated industries.

Richard E. Fisher — Pacific Union College, Angwin, California

609. Special effort is made to have the student understand the contribution of the various crafts in providing the daily needs of mankind.

No response pertinent to this item.

610. The student develops an understanding of the skill requirements, conditions of work, tools, and other occupational information pertaining to the various crafts.

No response pertinent to this item.

611. There is a planned program of safety in each shop course.

We operate on the theory that safety is part of every shop course and that teaching the correct use of tools and machines, proper conduct in the shop, and having a good shop personnel organization is better than thinking of safety as a separate item. Students develop safety materials in connection with machines and tools, sometimes in the form of tests, study guides, or general information as part of their work with machines. Students discuss and plan the general safety program which the class will follow in regard to class organization, working in free hours, shop clean-up, etcetera, and then the class follows the program.

In most of our teacher education classes considerable emphasis is placed on the problems relating to safety which the student will be confronted with when he begins teaching.

George F. DePuy — Central Michigan College of Education, Mount Pleasant, Michigan

A planned program of safety is considered as important as the knowledge of tools, skills, techniques, and procedures. Specific safety instruction and demonstrations are given and stressed in each shop course. The use of safety bulletin boards, posters, and audio-visual materials are used in classes. Field trips offer students the opportunity to see the stress given to safety by industry.

All students taking a major or minor in Industrial Arts are required to take a course in safety education. It is necessary that Industrial Arts teachers have a knowledge of the importance and trends of safety education in order to develop the proper safety attitudes and behavior patterns with their students.

C. Thomas Dean — Long Beach State College, Long Beach, California

It is understood by the staff that the greatest contribution that the instructor can make to safety is to keep his machines sharp and in good running condition and second, to teach proper work habits in the use of those machines. No one in the class, or out, is authorized to use any machine unless he has had instruction in its use in *our* shops.

This has been our policy for 40 years and in that time no student has ever lost even a single joint of a finger, in class work.

Edward Davis — Fort Hays Kansas State College, Hays, Kansas.

Safe shop practice is a unit stressed near the beginning of each shop course. The customary audio-visual aids are made use of at this time. Also in several courses safety foremen are used to illustrate their use in high school classes as well as for the group at hand.

The above sounds good and does have value but far more important are the following:

1. The teacher demonstrates and consistently uses safe methods.
2. The teacher stays on the job and observes the students at work and insists that each uses safe methods.
3. If a student is to use a machine for a new operation, he must first report and have his setup checked by the teacher.
4. A student doing an operation in an unsafe manner is stopped at the first opportunity and the safe method demonstrated, which he is then to use.
5. Students and others are required to observe the above simple rules or are denied the use of the shop.

Marion E. Franklin — Northeastern State College, Tahlequah, Oklahoma

Our safety program is the starting point for all conduct in our laboratory. The students plan their own rules in relation to a safe shop. Our student personnel system carries out the enforcing of the rules through a safety engineer. Every operation or job is analyzed for safety.

Our chief stress is on the human element since approximately 90 percent of all accidents are due to human failure. It is needless to say that all of our equipment has been thoroughly checked by us for guards and general safe physical conditions.

Menzo H. Stark — Wilmington College, Wilmington, Ohio

612. Special effort is made to have the student experience a variety of teaching methods appropriate to shopwork and drawing.

Students are given experiences in various methods of teaching such as the individual projects, group projects, group planning, and production techniques, in which the class is divided into committees in order to function effectively. We have been stressing the group project idea as we feel that the individual project has been accentuated entirely too much. Through group planning and group projects Industrial Arts has an opportunity to teach democracy, democratic living, and cooperation in a functional manner.

Heber A. Sotzin — San Jose State College, San Jose, California

Methods are introduced through *general*-group courses where our majors are mixed with all others of the college. Our *special methods* course follows and is specific for our field. Naturally, some methods and techniques "rub-off" as they are taught shopwork and drawing by excellent instructors.

During a year of practice teaching they see good methods and are aided not only in University High School, but under selected teachers in the Minneapolis Public Schools.

We build consciousness of method as well as of content, and have facilities for illustrating the best and the new. Our seniors sense that there is a *how* as well as a *what* to be considered for each course, unit, or lesson.

Homer J. Smith — University of Minnesota, Minneapolis, Minnesota

A variety of teaching methods is used in the various Industrial Arts courses. They are the first contacts made by the student with teaching methods most appropriate to shopwork. The various teaching methods, as such, are studied and practiced in a course previous to actual student teaching. As student teachers, the student is given as wide a variety of Industrial Arts units to teach as is practical in order to include opportunities to use a wide selection of methods.

Neil L. Munson — University of Nebraska, Lincoln, Nebraska

The student during his four years at the College experiences a large variety of methods which he can observe, evaluate, and select the one he can do best.

One of the first courses taken by a beginning student in Industrial Arts is called "Laboratory of Industries." Special effort has been made to use several teaching methods applicable to public school teaching insofar as practical with college students. In this course, a project is selected by the teacher and each student is required to make that project. The students are allowed to choose within reason their next project, in any one of the six major areas conducted in the general shop. Multiple type demonstrations are given to the group to create interest and show the possibilities open in these different areas. Cultivating student interest, work habits, and exploration rather than the development of skills is predominant in this course. A workbook is also required along with assignments and reports.

The metals course, along with the other skill courses, is taught with limited selection of projects within restricted areas. These are the skill courses where certain operations and processes must be experienced by the student. In the design course, the students do freehand sketching on the board.

Each student acts as assistant in an adult recreational course sponsored by the Industrial Arts department. Here the student observes and participates in a non-prepared course where most of the instruction is on an individual basis. The student is paid a nominal fee during this period and every student has participated at least once.

Ivan Hostetler — North Carolina State College, Raleigh, North Carolina

Each shop and drawing class is taught by more than one teaching method. Different techniques of starting, organizing, and administering the various classes are also practiced. The objective of these variations is the development of understanding through experience with a variety of methods and techniques suitable for use in secondary school Industrial Arts teaching.

All classes are taught by methods involving lectures, discussions, readings, visual aids, written reports, tests, and the like. Some classes are organized to function in composite general shops, some in unit shops, and others in general shops in major areas. In the various shop classes students elect projects from prescribed areas of work, are assigned projects, or choose projects limited by materials, equipment, and time only. Several shop classes employ a combination of two or more of these techniques.

Drafting classes are planned to utilize the interests of the student in reaching the objectives of the course. The principles of drafting are taught through real, interesting, and understandable problems rather than through the usual mutilated blocks or obscure machine parts.

Donald F. Hackett — Georgia Teachers College, Collegeboro, Georgia

613. Special effort is made to have the student experience shop and drawing activities based upon the type of activities found in the public school shops.

In each shop and drawing course taught in the department students are encouraged to select problems and design projects which vary over a wide range with respect to difficulty, complexity, degree of skill involved, and amount of time required to complete them. Activities are evaluated from the standpoint of the age and ability levels for which they might be appropriate in elementary, secondary, and adult classes, and in introductory and advanced classes.

Some of the activities are of the type which are feasible and appropriate in shops of limited facilities, while others require more extensive equipment.

To go further in acquainting students with activities, appropriate for public school shops, reference and textual materials of two general types are utilized. The student uses and studies instructional materials appropriate for the various grade levels in which he might be employed upon graduation. He also makes use of the more advanced reference and textual materials selected to equip him with more than the minimum essentials which he might be expected to teach to his pupils.

M. Ray Karnes — University of Illinois, Urbana, Illinois

All shop courses have been designed to be general in content in order to cover as many different instructional areas as possible. Emphasis, especially in introductory courses, is on hand tool and small power equipment work. Projects recommended for construction in these courses would be adaptable to the small-budget, secondary school shop, gradually working into the advanced and more complicated.

Lawrence M. Frederick — New Mexico Western College, Silver City, New Mexico

614. There are shop and drawing activities in connection with mass production, experimentation, and group projects.

All students in our woodwork and metalwork classes experience mass production projects. In some cases the students elect the project to be produced and in others the project is assigned and the problems of production are then worked out.

A project used in our beginning metal class is typical of this area of instruction. A sheetmetal waste basket was designed and drawings made of the parts. The mass-produced waste basket provided an opportunity to study the organization of industry, employment practices, and some of the economics of modern mass production.

Donald F. Hackett — Georgia Teachers College, Collegeboro, Georgia

615. Special effort is made to have the student experience a wide variety of shop and drafting areas (e. g. woods, metals, graphic arts, electricity, plastics, leather, textiles, machine drafting, architectural drafting, etc.).

Required courses lead students into fields of wood, metals, graphic arts, photography, leather, plastics, drafting and design, electricity, and electronics. Wood experiences involve both hand and machine activities; metals courses introduce a minimum of the allied fields of metalwork. Gas, arc, and other kinds of welding are studied. A basic experience in letterpress printing and offset printing is afforded. A satisfactory photographic experience is furnished in addition to teaching photography relative to offset printing. Equal hours of instruction are accorded mechanical drafting and design. Architectural interests are developed through a study of contemporary residential housing. Opportunity is available for the investigation of several craft materials. Electives may also include an experience in elementary Industrial Arts from a teaching point of view.

Victor L. Bowers — Southwest Texas State Teachers College, San Marcos, Texas

A wide variety of experiences are provided for students in the Industrial Arts curriculum. Each student takes five semester hours of work in woods, metals, and general laboratory. He also takes five semester hours in each of five of the following areas: electricity and radio, transportation, textiles, ceramics, graphic arts, and elementary school Industrial Arts.

Industrial Arts laboratories are intended to provide a background of information, skills, and appreciations necessary for specialized Industrial Arts teaching. Programs and laboratories are organized to illustrate good instructional practices and physical setting. Procedures designed to encourage the development of a cooperative spirit through the solution of group problems are included.

In this experimental environment the student has the opportunity to express himself with the materials, tools, and techniques of modern industrial society and to develop a working technical vocabulary. Under a democratically evolved personnel system, students organize and regulate laboratory government and management.

Gordon O. Wilber — New York State College for Teachers, Oswego, New York

In this college special effort is made to have the student experience a wide variety of shop and drafting areas.

This is done through the offering of a group of courses covering diverse phases of woodwork, electricity, plastics, leather, machine drafting, and architectural drafting.

Basic courses in all of these areas are required of all students who major in Industrial Arts. The students are also encouraged to avail themselves of further study in each area through the choice of elective courses that are made available to them.

In setting up the program of courses for those who wish to major in the department, we are very careful to include a reasonable balance of the basic courses of instruction in all areas. The student has no choice except to be thoroughly exposed to all of the areas. He does, however, have a choice as to what extent he wishes to go beyond the basic courses. This is accomplished through the choice of elective courses in various areas of our shop program.

R. A. Schreiner — Nebraska State Teachers College, Wayne, Nebraska

The following general requirements must be met by all students who major in the Industrial Arts:

1. A completion of minimum of 54 quarter hour credits in the Industrial Arts area.

2. All students must present the following:

- a. 18 quarter hours in drawing (specific courses prescribed)
- b. 12 quarter hours in woodworking (" " ")
- c. 12 quarter hours in electricity (" " ")

And a choice of:

- a. 12 quarter hours in machine shop (" " ")
- b. 12 quarter hours in metal work (" " ")

We offer crafts, plastic, radio, and welding for a student to choose as electives. All shop and drawing classes are on a two-hour laboratory basis.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

616. The student experiences shop and drafting activities which reflect practices and methods used in industry.

We offer four years of drawing in our Industrial Arts program, general, mechanical, machine, sheetmetal and pattern layout, architectural, architectural details, perspective, sketching, topographic, furniture design, and building materials. Students visit architect's offices and also observe drawing room practices in engineering plants. They are taught how to use blueprint and "ozalid" machines, how to operate, clean, and do simple repair on such machines.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

617. Provision is made for the student to participate with the instructor in the planning of shop and drawing units of instruction (i. e. cooperative teacher-student planning at the college level).

Except for the very early experiences in beginning laboratory courses, students in all laboratories are required to enter into the planning of such experiences with the entire class and with the instructor. Whenever feasible, laboratories and instructors other than the one to which the student happens to be assigned, work with the student in both the planning

and execution of his project. Every effort is made to utilize as many different instructors and laboratories as possible.

Fred J. Schmidt, Jr. — Ball State Teachers College, Muncie, Indiana

Student participation with the instructor in the planning of shop and drawing units is a part of an over-all program designed to obtain the optimum value from shop and drawing courses from the standpoint of both technical and shop competence and the achievement of professional competence on the part of prospective teachers. In other words, the instructor of the shop course remains cognizant of the fact that the shop courses he teaches have the primary function of preparing teachers. A definite effort is made to employ the teaching techniques which are recommended in the "methods" courses and to make of the total Industrial Education curriculum a unified program of teacher preparation. In each shop class taught by Industrial Education staff, students plan within broad limitations the units to be covered, participate in the selection and acquisition of instructional and resource materials, design and plan the project and laboratory work that they will perform, devote some time to the design and constructions of training aids and other instructional materials, give some of the elementary demonstrations, and in general engage in a variety of the activities which characterize the work of the teacher of the shop subject in which he enrolls. The professional activities increase in importance and student participation in them is increased proportionately as the student advances in the teacher-education curriculum.

M. Ray Karnes — University of Illinois, Urbana, Illinois

618. Provision is made for the student to participate in the evaluation of his experiences in shop and drawing courses.

Industrial Arts students at Northern have an opportunity to evaluate their work in shop courses in two ways. In evaluating project work two practices are used by different instructors. In the first method projects are rated according to a standard time for each specific project. This standard time is arrived at by class discussion prior to shop work actually beginning. The product of this time and the mark on the project (in numbers) gives a total in points. The mark given is an average of the student's own estimate and the grades given by the pupil personnel foreman, and the instructor. Specific instructions on the job planning sheet read as follows: "Job evaluation. These marks will aid the instructor to evaluate your work. First, indicate your opinion of the quality of your workmanship. Second, have a foreman indicate his opinion of your workmanship. Third, have the foreman give you a mark in cooperation and planning. Be sure the foreman signs his name in the correct place."

The other approach, similar in idea, gives points (1 is low, 4 is high) both for workmanship and planning. Factors considered for which points are given are: finish, construction, assembly, and use of tools. As to planning, the factors considered are as follows: Is the job planning sheet neatly prepared? Does the sketch meet drafting room standards? Are bills of materials and procedure completely prepared? Clearly written? Understandable? The points of these factors are given by some student in

the class upon completion of the job. The student also grades his own project and planning sheet.

Students also participate in the presentation of a unit of instruction. On this unit they are evaluated by the rest of the class and instructor, all grades being equally weighted for the final average. Evaluation is done on a sliding scale of values such as very little to excellent in three major areas: preparation, presentation, and summarization. Each area, of course, is sub-divided into pertinent questions.

Near the end of many courses the students fill out an evaluation sheet in which they can point out weakness and strengths of the courses, values received, and suggestions for improvement. Criticism must be constructive.

K. A. Wahtera — Northern Michigan College of Education, Marquette, Michigan

619. Opportunity is provided for the student to do some supervised teaching in shop and drawing classes in which he is enrolled.

The last course our majors take with us is an advanced general shop course in which each student prepares a teaching unit, presents it to the class, and is then criticized by the class and the instructor on a rating sheet.

This teaching unit is prepared by the student with the instructor's help as needed. In this unit the student is to provide an overview of some industrial activity presenting information concerning tools, materials, processes, products, opportunities, requirements, and working conditions. Some process or operation must be demonstrated, an instructional aid must be made and utilized, and a film or film strip must be correlated with the instruction. After the presentation of the unit the student administers and scores an objective test covering the unit.

In other courses, students who have had previous experience in a particular unit of instruction are frequently utilized in presenting demonstrations.

Donald F. Hackett — Georgia Teachers College, Collegeboro, Georgia

620. The student experiences shop activities having emphasis on shop maintenance and repair.

Here at Newark State Teachers College we require all of our majors to demonstrate the use of tools, machines, and materials in every laboratory course. The majors choose machines which they maintain during that semester. They sharpen the knives, change blades when dull, clean, oil, and adjust the machines. We believe that this responsibility has educational value and at the same time makes the student conscious of the maintenance of machinery. All college instructors give assistance and check the machines at regular intervals.

Carl Frankson — New Jersey State Teachers College, Newark, New Jersey

The course in machine and tool maintenance as taught at Colorado A. & M. College places emphasis upon the care, repair, and maintenance of Industrial Arts shops.

Instruction in this area is divided into four phases: Phase one, "Power Transmission," includes work with the various devices such as gears, belts, and chains which are used for the transmission of power. Phase two, "Tool Maintenance," deals with the sharpening and care of edged tools. This includes saws of various types, and abrasive wheels and stones. Phase three, "Machine Maintenance," consists of instruction in the proper lubrication of machines, types of bearings, machine adjustment and color dynamics for machine tools. Phase four, deals with shop safety, and includes instruction in safe shop practice and the use of safety devices. Color dynamics for the school shop is brought into this area in its relation to safety. School shop design, construction, and arrangement also play an important part in this phase of the course.

J. C. Dodge — Colorado Agricultural and Mechanical College, Fort Collins, Colorado

During the past several years, this Industrial Arts department has provided activities having emphasis on shop maintenance and repair principally through the requirement that each student who majors or minors in Industrial Arts must complete satisfactorily, the course entitled, "Care and Management of Shop Equipment."

This course deals with the use and care of equipment commonly found in Industrial Arts shops and a study of the various sharpening devices; practices in conditioning of saws, bits, and other shop tools and equipment. A study is made of the machines used in the various shops involving the maintenance, adjustments, and safety of operation.

Each student is required to condition all of the tools commonly found in the average Industrial Arts shop. He is also assigned two specific jobs of conditioning equipment found in the local shop.

Upon satisfactory completion of these activities the student has a background of knowledge of the maintenance and repair of shop equipment which enables him to do a good job in his own high school shop when he starts his teaching career.

R. A. Schreiner — Nebraska State Teachers College, Wayne, Nebraska

Our department of Industrial Arts offers a course in "Machine and Tool Maintenance" in which the student not only learns the fundamentals of caring for tools, such as reconditioning and sharpening, but machine maintenance as well. He is often called upon to revamp or set up a new machine, so that he knows its make-up and capabilities. Manufacturer's specifications and operation manuals were obtained and are studied for all of the common shop machines. Placement in the shop, as well as adjustment for proper and safe use, is an important part of this course. Each student becomes a rather efficient trouble shooter before the end of the course.

D. M. Burkhiser — Nebraska State Teachers College, Chadron, Nebraska

621. Provision is made for the student to experience shop and drawing activities in connection with the design and construction of teaching aids and instructional devices.

No response specifically pertinent to this item. Recurrent reference is made to it elsewhere.

Technical Education, Exclusive of Shop and Drawing

700. The student develops competence in the area of mathematics in relation to the needs of an Industrial Arts teacher.

Industrial Arts students take nine semester hours in mathematics relating directly to the needs of the Industrial Arts teacher. The construction of graphs and their use in illustrating technical data as applied to electricity, radio, and stress analysis in machines and buildings are included in these courses. The footings, framing, and support members of the houses designed in the architectural drawing course are calculated in a mathematics course. Each student designs a machine in the technical drawing course and makes a complete stress analysis of it in the applied mathematics course. These machines are built in the metalworking course the following semester.

Each Industrial Arts student takes a three semester hour course in field mathematics where field data obtained with surveying instruments are used in constructing maps, measuring inaccessible objects, and in measuring deflection and inclination.

Fred O. Armstrong — New Jersey State Teachers College, Trenton, New Jersey

Our college majors take two courses in Industrial Arts mathematics. Each instructor works closely with the professor who teaches this course. Integration is possible because our course of study provides for this feature.

Carl Frankson — New Jersey State Teachers College, Newark, New Jersey

The degree requirements for the Industrial Arts major include six semester hours of a mathematics survey course, offered in two parts, or college algebra and trigonometry. In addition, a two semester hour course in applied mathematics, an Industrial Arts professional course, is required. It is assumed that satisfactory completion of the above courses constitutes competence in the area of mathematics in relation to the needs of the Industrial Arts teacher.

Harlan Clark — University of Alabama, University, Alabama

701. The student comes to understand the significant developments in the field of physical science.

No response pertinent to this item.

702. The student comes to understand the contributions and importance of science to man's cultural developments (e. g. industrial progress, housing, health and sanitation, transportation, and communication).

Three courses at our college widen the scope of the student's interest in all things technical. One course is a survey of man's physical world which examines the wealth of content found in chemistry, physics, and electronics. The second course is based on anthropology and deals with invention and technology.

A third course is a prerequisite to the major program and surveys the role of education in our industrial and technological society. The emphasis is placed on individual studies of our major industries.

In each of the courses all students discover issues and topics for further investigation.

D. W. Nichols — San Francisco State College, San Francisco, California

703. The student comes to understand the application of science and scientific principles to the solution of everyday problems. (This may be considered to include the scientific method.)

Students are urged to apply their knowledge of physics, mathematics, and chemistry in each of their activities. In designing an object, the student will utilize principles of applied design and knowledge of geometry through mechanical drawing. As materials are studied and utilized tests may be made to determine such things as reaction to heat and chemicals.

Students are urged to make observations, collect and classify facts, arrive at tentative conclusions, and make predictions as to future events based on known evidence.

William L. Deck — Southwest Texas State Teachers College, San Marcos, Texas

Students in our Industrial Arts curriculum get six semester hours of applied chemistry and six semester hours of physics.

The chemistry is applied directly to Industrial Arts and deals with the chemistry of metals, glues, casting materials, paints, plastics, and solvents. Much of the laboratory time is used in making usable products for the shop such as casehardening compounds, soldering fluxes, and cleaners. Metal etching, electro plating, anodizing, and many other chemical processes are practiced.

The physics course deals with sound, heat, and light and applies directly to photography, lighting, heat treatment of steel, shrink fits, sound proofing, and many other aspects of school shop work.

Fred O. Armstrong — New Jersey State Teachers College, Trenton, New Jersey

704. The student comes in contact with a variety of basic scientific principles.

There are two aspects emphasized in teaching the basic sciences and mathematics to students in the School of Industries; namely, (1) the general education aspect and (2) the aspect of the service that relates to the student's major interests.

Basic mathematics emphasizes the role of mathematics for any citizen in a democracy while at the same time, formulas, graphs, and problems taken from the basic industrial interests of the students form the background of the classroom work. Field work in uses of measuring instruments such as the use of the transit forms a part of the course. Especially significant are the laboratory courses in physics which do not require the same experiments for all students; instead, the experiments done by any student are selected so as to give application of the principles of physics to his major interests.

In chemistry, for general education purposes, the language concepts and general points of view are stressed. However, illustrations of the principles are taken largely from the students' major interests. As examples, heat of reaction is illustrated with heat of combustion of fuels and heat of setting concrete; the significance of endothermic compounds may be illustrated by reference to acetylene and its use in welding.

George W. Davis — Virginia State College, Petersburg, Virginia

All majors in Industrial Arts at our college are required to take ten semester hours of physics or chemistry in the same classes in which pre-engineers take their basic science. We advise the taking of physics but, sometimes due to scheduling conflicts, chemistry is permitted. Also, if possible in the student's program, we advise ten semester hours of college mathematics. A course given in the Physics Department in A. C. "currents and radio" may be taken for Industrial Arts credit.

D. M. Burkhiser — Nebraska State Teachers College, Chadron, Nebraska

705. The student develops greater facility in the application of scientific principles to diverse situations.

No response pertinent to this item.

706. The student comes in contact with a wide variety of scientific and technical materials, equipment, and literature.

During his four years of work toward the baccalaureate degree the Industrial Arts student encounters many carefully planned experiences in all laboratory courses which keep him informed of new scientific and industrial developments. He builds a background of knowledge related to materials, equipment, and products. This is accomplished through displays of new materials, new products, and the results of research, particularly those which will influence his teaching of Industrial Arts.

A course on "Modern Industries" makes a concerted effort to coordinate this large body of information through many industrial tours, the study of industrial research, industrial demonstrations, and the worker and his environment in the production of products.

Fred J. Schmidt, Jr. — Ball State Teachers College, Muncie, Indiana

Our undergraduate Industrial Arts club has a committee that furnishes a wide variety of industrial brochures to members of the club. Industrial field trips are taken by the club and many people from industry have spoken at various meetings of the club.

The Department also has several members who furnish industrial brochures to the students. A permanent file is maintained and all students have access to the file. A spring conference is held each year, sponsored by the club, and many industrial exhibits and demonstrations are in evidence.

All shops have a study center. Every instructor has abundant published materials on display every month. This material is then sent to the Departmental library for permanent filing.

R. I. Thompson — New York University, New York, New York

We use the following methods in view of the fact that our college is located in a great industrial area:

1. Part time work in industry
2. Extensive field trips to a variety of industries on the Niagara frontier.
3. Movies and slides
4. We have one of the most comprehensive technical libraries in the state.

Emerson Neuhardt — New York State College for Teachers, Buffalo, New York

707. The student develops a greater interest in scientific and technical issues and topics.

No response pertinent to this item.

708. The student develops a broad understanding of the nature and operation of modern industry.

Our students get an unusually broad understanding of the nature and operation of modern industry. The work experience gained either before they enroll or during their college career is almost entirely industrial. This is due to the availability of such employment in this area and to the counseling given them by the departmental staff. It is felt that industrial experience is essential to understanding.

During his four years in college a student will go on approximately 20 organized field trips to industries. He is required to take one course called "Industries" in which he studies and visits typical industries in and beyond Ohio.

The student can elect as many as 12 quarter hours credit in cooperative training programs sponsored by the university with several major industries in and beyond Ohio.

E. W. Tischendorf — Kent State University, Kent, Ohio

Wayne University is advantageously located to pursue this objective, for industrial Detroit offers many opportunities to gain a broad perspective of the industrial world at work.

It is the intention of the Industrial Education department that all Industrial Education students should have a high degree of industrial literacy; therefore, those students without previous industrial work experience are scheduled in cooperative work-study programs or suitable summer and part-time jobs. The industrial experiences of each student are provided in terms of his needs and objectives. Students are not merely "put on a job" with the hope that it might prove beneficial.

To develop broad concepts, various types of work experiences are provided and students are encouraged to gain a wide variety of understandings and appreciations rather than a specialization in a small area. Students are supervised on the job by a coordinator from this department and experiences are directed by the coordinator.

Paul E. Powell — Wayne University, Detroit, Michigan

Douglas Sherman — Wayne University, Detroit, Michigan

709. The student develops an understanding of industrial growth and problems related to such growth.

No response pertinent to this item.

710. The student develops an insight into those phases of industry dealing with research and invention, production planning, quality control, material handling, and production techniques.

The Industrial Education Department of the University of Miami maintains a program devoted to the production of laboratory equipment, special devices, research equipment, job printing, and other repair and mass production jobs for the university. Production planning, quality control, material handling, production techniques, and cost accounting are all inherent in the operation of this program. Industrial Arts upper-class majors are employed during off-hours and participate in all phases of the program. Participation is not mandatory but is encouraged through good hourly wages. The shops are used for production during periods not devoted to class instruction.

The entire program is separate and beyond the regular instruction in each of the shop laboratories. Basic and advanced instruction are given in the regular curriculum.

J. R. McElheny — University of Miami, Coral Gables, Florida

711. The student develops an understanding of the impact of increased amounts of energy (electrical, molecular, atomic) on modern industry.

No response pertinent to this item.

712. The student develops an understanding of the programs for conservation of natural resources.

No response pertinent to this item.

713. The student develops an understanding of the operation and importance of power and communication in the development of modern civilization.

No response pertinent to this item.

714. The student participates in organized and supervised work periods in industry.

Wayne University offers cooperative work-study for Industrial Arts undergraduate and graduate students, auto mechanics and welding teachers, and those in other technical curricula.

Work experience is recommended for Industrial Arts students who have not had industrial experience. It is scheduled after the student completes one semester. During the semesters employed, the student enrolls for a reduced academic program. The department helps secure employment. Pay is that established for cooperating students but may be more depending upon the nature of the work. The money received usually covers expenses for the following semester.

The Industrial Arts Cooperative Work-Study Curriculum combines 108 semester hours of college work and 16 semester hours of work experience, which is equivalent to two years of industrial experience. Students who desire to do so can complete requirements for a teacher's certificate and a bachelor's degree in four years.

Learning experiences are coordinated by a university staff member. The students are placed on the job to achieve functional competencies, not simply to earn money.

Paul E. Powell — Wayne University, Detroit, Michigan

Our students work every other day in industry. This serves as a means of earning sufficient money to attend college, and to supplement experiences in our laboratory of industries. In four years, the student may earn a B. S. in Education and have two years of work experience in industry.

Menzo H. Stark — Wilmington College, Wilmington, Ohio

(See also 608)

715. The student participates in a program of summer employment in industry.

"Industrial Internship" 380 is required of all students enrolled in the Industrial Education curriculum. During the summer quarter, between the junior and senior years, each student is assigned to an off-campus industrial organization to work at his or her trade major.

The place of internship is secured by the Institute. However, a student may submit the name of a particular industrial establishment, but such is not approved until a thorough investigation has been made by the Institute.

Withro McEngle — Tuskegee Institute, Tuskegee, Alabama.

Here at Purdue, we urge and practically require each student to be employed one or more summers in a summer work experience program. The student or the department locates the job. A training schedule must be prepared by the industry, usually with our assistance. The student does not enroll in summer school but must secure 320 hours minimum of employment in keeping with his training schedule. This training must fit into his teaching major. The student makes weekly reports, a summary report, and the employer makes a final report. If all conditions are properly met, three credit hours are recorded in the registrar's office. This program also makes it possible for students to enter industry as employees for the first time in their lives. We feel this is an excellent program. The students are able to make application of much of the theory they have learned in their course work.

Harry S. Belman — Purdue University, Lafayette, Indiana

716. The student undertakes minor research problems pertaining to science or industry.

An Industrial Arts student of junior or senior classification is permitted and encouraged to select a practical problem of Industrial Arts significance that lends itself to experimental study. The student works in an individual manner with guidance from the instructor. The selected problem is first outlined, the experimental work completed, the material written up, and in many instances sent to professional magazines for publication.

Ira H. Johnson — State Teachers College, Mankato, Minnesota

717. The student participates in an organized program of field trips, guest speakers, film showings, and conferences aimed at a greater technical understanding on the part of the student.

We are fortunate to be located in the heart of a great industrial area. Each semester the students in Industrial Arts make several field trips. These are generally planned to correlate closely with the shop activity. A sample list of fields covered on these trips are:

Iron foundry	Air terminal
Brass foundry	Printing plant
Glass manufacturing	Gypsum mining
Automotive factory	Plaster board plant
Boat works	Electronic equipment plant

During each year we have a number of guest speakers from industry. They are generally sponsored by the Industrial Arts club. Several industrial exhibitors display and demonstrate their equipment. Examples of these demonstrations are:

- Photographic and projection equipment
- Gas and arc welding
- Woodworking machinery
- Spraying and finishing equipment
- Automotive equipment

R. M. Torgerson — Bowling Green State University, Bowling Green, Ohio

The department organizes regular field trips to major industrial plants. All students enrolled in the Industrial Arts classes are taken for a full day by chartered buses to visit industries in one of two large cities within reach of the college. Students are given an orientation before leaving in order to observe more intelligently and a discussion period is held when they return. The average student will visit from 16 to 20 major industries during the four years, in addition to smaller ones located near the college. Films are used to better interpret industry to the student. A vocational conference is held each year at which time consultants from industry and teaching are brought to the campus. They are selected on the basis of their competency to inform students and answer their questions regarding vocational opportunities and requirements for success.

Ralph W. Whalin — Eastern Kentucky State College, Richmond, Kentucky

A rather extensive program of field trips, guest speakers, and film showings is provided all students in the department. These events are not limited to any one class but are so planned that most can receive benefit.

Four field trips are scheduled each quarter to such places as steel foundries, refineries, rubber factories, locomotive works, and others.

Films are scheduled once each week covering many topics related to the Industrial Arts field. Students are encouraged to suggest films and topics of value.

Guest speakers are arranged for whenever possible. Again the students render much assistance in organizing and executing this portion of the program.

It is believed that the more the individual students can be brought to assist in the organization and execution of these events the more vital they become for them.

D. R. Lowman — Ohio Northern University, Ada, Ohio

Every student in the Department of Industrial Arts is eligible for membership in the Industrial Arts Club. The program of the Industrial Arts Club includes field trips to various industrial plants in Athens and the neighboring communities. Speakers from key industries are asked to speak before the Club. Other programs include showings of industrial films, conferences, picnics, and parties. All students are invited to these functions even though they are not dues-paying members.

Charles Kinison — Ohio University, Athens, Ohio

718. The student uses the college science facilities on occasion to work on technical problems which develop in a shop situation.

No response pertinent to this item.

Program Evaluation

Point of View Statement¹

The items included in this chapter of the Yearbook imply a substantial change from the evaluative practices that were predominant 20 to 30 years ago. At this earlier date, whenever it became apparent that a program was in need of critical reconsideration, it was the custom to employ one or more visiting experts to examine the curriculum, inspect facilities, confer with heads of departments, assemble various statistics, and submit a report with recommendations for improvement. Since the experts usually charged a hundred dollars a day, plus travel expenses, for their services, the school or college under survey generally managed to limit their visit to an incredibly brief period — often not more than three days.

This “once-over” had the advantage of a fresh point of view, untrammelled by campus traditions, prejudices, and vested interests. It also had the advantage that the visitors had usually surveyed many similar institutions in other locations and could thus bring to the attention of the surveyed institution the best practices that they had found elsewhere. Since the experts were, for the most part, realistic and practical men, they were usually loath to recommend a policy or practice unless they had seen it in operation somewhere and could describe in detail how it might be put into effect, and what difficulties and dangers would have to be surmounted. In addition, since their recommendations carried authority, they often enabled a faculty or its administration to “put over” changes that the faculty and administration knew beforehand were badly needed, but which inertia or complacency had blocked.

¹ Prepared by Paul B. Diederich. Doctor Diederich is Research Associate of the Educational Testing Service, Princeton, New Jersey.

Since these advantages are real and important, this practice is still represented as item 807 in this section of the Yearbook. What is significant, however, is that it is now accompanied by 14 other practices designed to keep a program continuously up to scratch. Furthermore, these practices are becoming increasingly prevalent in American education. While no single institution could utilize all of them simultaneously, they turn now to one, now to another, as means of gaining insight into the effectiveness or the shortcomings of their programs. They represent an advance over the sporadic survey procedure in several ways.

Modern evaluation procedures tend to make the process of evaluation more continuous, more systematic, more comprehensive. The tour of inspection of the visiting experts was necessarily superficial and occurred only at long intervals. Those who remain on campus and carry on the program are in a much better position to observe its shortcomings and to do something about them. They need occasions to do so, however; otherwise they will let things go on as they are and confine their criticisms to faculty-room gripe-sessions. The practices listed in this section of the report represent such occasions — occasions for reflection, criticism, discussion, and action. If they are carried on as busy-work, in deference to the administration or to prevailing fads in education, and without creative imagination, the only possible result will be boredom and frustration. But if they are taken as opportunities and as deadlines for creative inquiry into what the program is accomplishing and what it is not, they can both improve the program and enhance one's interest in it.

Teaching can become deadly dull when it becomes mere routine and when we lose sight of the question, "How did it all come out in the end?" It becomes a great adventure whenever that question assumes vital importance for us. Then we teach with definite purposes in mind; we try this, we try that; we come home some days discouraged and ready to quit; other days we feel that we ought to be brought home on the shoulders of our students, in triumph. When we finally gather together the evidence of what they have learned, or failed to learn, we can hardly wait to get at it. It represents our own personal failure or triumph; it also represents the failure or triumph of the cooperative efforts of the whole faculty. How can people continue teaching over a period of years without knowing how it came out in the end? It is like reading a novel without ever

getting to see the last chapter. At best, it is like the first football game to which I took a friend of mine who had been bedridden all through boyhood and had no acquaintance with any form of sport. He became infected with the enthusiasm of his fellow spectators and yelled himself hoarse. I was astonished, therefore, when after the game, he said to me, "That was splendid! But tell me one thing: who won?"

That is the question I should like to leave in your minds as you examine the items in this section of the report. Who wins? Do you, or does the crowded and confused program of studies, the horrible teaching load, the miserable facilities? Do you, or does inertia, complacency, getting into a rut, traditions, prejudices, and vested interests?

A series of occasions for evaluation, using first one kind of evidence, then another, can give at least partial and suggestive answers to questions like these. Do not stall because the answers can never be final and unassailable; the total effects of the program upon the whole lives of all students. If teaching is successful, students will be changed in certain ways, and some of these should certainly show up by the end of the course if they are ever to show up at all. Suppose there are ten ways in which they ought to change, and it is possible to get evidence of only two or three of these changes. Should the evaluation be postponed? By no means. Get that evidence. Even Einstein has never obtained empirical evidence to substantiate all aspects of the theory of relativity. But it was shown that, in at least one crucial case, it worked. If we can show as much for our teaching, we can have confidence that at least we taught the students something, and if we did well on that point, perhaps we did as well on some others.

Overview of Reported Practices

Of the eight major divisions in the Yearbook, the section on program evaluation received the fewest responses. Three of 15 items received no response at all and six others had one response each.

It may have been reasoned that program evaluation, like student personnel practices, would be stimulated by institution-wide activity and therefore would have been extensive. This condition appears not to prevail. There are, to be sure, other places in this report where evaluation practices are stated or implied, particularly in the sections covering student personnel

practices and student teaching. Despite these attenuating circumstances program evaluation would appear to be an area of relative professional neglect.

Evaluation is a positive approach to program improvement. It need not await budget increases inasmuch as all of the essential elements of program evaluation — program, students, faculty, employing officials, social-cultural data — are ever present. Continuous evaluation is an element which can be common to all Industrial Arts programs — large and small, old and new, elaborate and modest.

There prevails within Industrial Arts teacher education institutions such desirable program evaluation features as the following:

1. A statement of desired learning outcomes or competencies to be developed in the student.
2. Systematic and recurrent contacts with elementary and secondary school officials, including administrative officers and teachers, for the specific purpose of appraising the program in terms of current needs and conditions. In some instances the people assemble on the college campus; in other instances the college representatives go to off-campus locations. This condition corroborates the data presented in reports on student teaching in Chapter V.
3. Effort on the part of the Industrial Arts staff to consider and reconsider its purposes and plans as well as the content of courses, to use formal evaluation instruments in appraising the program, and to develop special evaluation instruments.
4. The employment of a variety of evidence gathering devices including student reaction inventories, reactions of former graduates, the follow-up of graduates on their jobs, and the reactions of visiting evaluation teams.

Despite the good efforts to date there is probably no aspect of Industrial Arts teacher education where greater progress can be made than in the area of program evaluation: (1) by developing additional evaluation instruments and procedures, (2) by applying, more extensively, currently available superior practices, and (3) by making evaluation an integral part of the total program rather than a periodic assessment of segments of the program.

Reports on Superior Practices

800. There is a written statement clearly defining competencies to be developed in the student, competencies which involve all phases of the program: general education, technical, and professional.

Excerpts from School Policy Approved by Faculty:

The statements of policy herein set forth pertain to: 1. general education; 2. subject matter specialization; 3. professional education; and, 4. other services which a teacher education program should stress.

A. General education shall emphasize and consider

1. Social, physical, emotional, and intellectual needs to broaden development of natural capacities.
2. Experiences which shall improve daily living with regard to health, human relations, and enrichment of life through the arts and crafts. The understanding of human and natural environment and the formation of a philosophy of life.

B. Subject matter specialization: each teacher shall be thoroughly prepared in the specific areas in which he will teach.

1. His preparation shall in all cases be as broad as needed for effective teaching.
2. Each teacher must be prepared to participate in a fully integrated program in the public schools.
3. Each teacher should be able to modify his subject matter as needed to meet the situation in the area in which he is teaching so that its meaning and interpretation will contribute to the improvement and betterment of the community.

C. Professional education

1. This shall be given to those who qualify according to tests, aptitudes for teaching, wholesome personality, sound moral standards, and at least average intellectual ability.
2. The total experience shall be to develop the student, physically, emotionally, intellectually, and ethically.
3. Courses shall be given concerning professional organizations, community resources, parent-teacher relations, and other problems of professional interest.

D. Other services

These pertain to guidance, counseling, continued professional growth, and placement.

L. D. Wallis — East Tennessee State College, Johnson City, Tennessee

A consensus has been reached by the faculty of the College of Education on teacher competencies. We expect to develop these competencies, 12 in number, in all teachers regardless of their major field of professional interest. For example, number seven reads: "The ability to plan for, select, and prepare instructional materials including resource units, curriculum guides, visual aids and evaluation devices." The technical competencies which are considered unique to the Industrial Arts curriculum are stated separately.

Donald Maley — University of Maryland, College Park, Maryland

801. There are periodic reviews made of changing emphases in Industrial Arts teaching at the elementary and secondary school levels.

An attempt to review the changing emphases in Industrial Arts is made by means of individual visits to various schools in the area served by the college and by an annual meeting sponsored by the college called a "Congress of Classroom Teachers." Elementary and secondary schools are included in the visits and teachers representing both levels are participants in the Congress. The annual meetings seem to show considerable promise as a profitable experience in providing periodic reviews of the changing emphases in Industrial Arts teaching at the elementary and secondary school levels.

Milo T. Oakland — Northern Illinois State Teachers College, DeKalb, Illinois

Regular conferences are held between the public school "master" teachers, the director of the school of education, and Industrial Arts department members concerning emphases in Industrial Arts and their evaluation at the local public school level. A survey has been made recently by this department concerning trends in Industrial Arts in the public schools of Tennessee. The results of this survey have been studied and recommendations have been made for local practices and changes.

W. H. Lewis — Tennessee Polytechnic Institute, Cookeville, Tennessee

It is impossible for any teacher education institution to provide a good professional program without keeping in close touch with the schools of the state. The Industrial Arts staff at Indiana State has made a continuous effort to do this with two ideas in mind. First, to know from first hand contact not only what kind of program is being carried on, but also to learn more about the important and significant problems that are found in this area in our public schools. This close contact thus makes it possible to keep our teacher education program "in tune" with the schools of the state.

Another important aspect of our efforts is the fact that we are in a most favorable position to assist teachers of Industrial Arts and school administrators with important problems on which they need assistance.

Sylvan A. Yager — Indiana State Teachers College, Terre Haute, Indiana

802. There are periodic meetings of former graduates for the purpose of discussing the Industrial Arts teacher-education program.

Our seniors are automatically members of the Central Minnesota Industrial Arts Club. They meet with this group and since it is a club in this area, the major portion of the members are graduates of this institution. The campus club also has an annual affair at which time all of the past members are invited back to the campus. The club also makes it a point to visit the shops of former members.

Raymond H. Larson — State Teachers College, St. Cloud, Minnesota

803. Provision is made for college staff visitation of former graduates.

An effort is made to visit our graduates who work in the state as early in the beginning of their first year of teaching as possible. We believe this to be helpful to the teacher as well as to us because the problems he has are brought back to the college and discussed and studied by our students. Some one of our staff makes several visits during the year to these schools.

Norman W. Bedwell — Mississippi Southern College, Hattiesburg, Mississippi

804. Provision is made for a joint faculty, student, public school committee to study and evaluate the Industrial Arts teacher education program.

No response to this item.

805. There is a faculty committee for the purpose of continuous program evaluation.

The faculty committee for continuous evaluation of the program was formulated in the fall of 1952. Since that time it has met at intervals for discussion of problems concerning the curriculum. It has made minor changes in catalog descriptions and has changed some offerings in order to provide better experiences for students. It has consulted students and staff regarding their opinions about course offerings. It considers such matters as course outlines and content. This committee is a necessity in our department.

W. H. Hinely — Florida State University, Tallahassee, Florida

An instructional study committee consisting of all the college department heads functions on the campus. It is the policy of this committee to study and evaluate the instructional program of the college in light of the satisfaction of student needs, efficiency of instruction, and state requirements. All departmental course offerings and departmental changes, revisions, deletions, and additions must be approved by this committee.

Lawrence M. Frederick — New Mexico Western College, Silver City, New Mexico

Each year the program is re-examined by the dean and the department chairman for purposes of additions or deletions from the curriculum.

Key Industrial Arts instructors in Dade County are consulted each semester for suggestions resulting from the current student teaching experiences. Along with these key instructors, past graduates, also in Dade County, are consulted for suggestions.

J. R. McElheny — University of Miami, Coral Gables, Florida

806. Periodic reports are requested of school administrators who employ Industrial Arts graduates.

The Industrial Arts department obtains periodic written reports from school administrators regarding the success of its graduates. The administrator is requested to evaluate the teacher's effectiveness on the basis

of broad factors generally accepted as contributing to success, and to include a statement summarizing the more significant aspects of his teaching.

The reports are analyzed by the staff and the results discussed with a view toward the improvement of any indicated weaknesses in the teacher education program.

Ralph W. Whalin — Eastern Kentucky State College, Richmond, Kentucky

807. Provision is made for visiting evaluation teams or consultants at periodic intervals.

As the department of Industrial Arts was recently organized it was most essential that some guidance be obtained to help in the formative period and to secure a sound development. An "Informal Panel of Consultants" was organized. The members were leaders of Industrial Arts education from southern California and the surrounding area. They carried on a continuous program of evaluation for the department. New ideas were always discussed with the committee before being put into action. Course content was analyzed and weighed. The program organization, the physical setting, and the policy to be established were examined by the group. Each year the group has two meetings, one on the campus where observations can be made and one at a centrally located point. Periodic reports are also mailed to the group as significant things occur.

The panel has contributed a great deal to the department. This constant evaluation is most helpful and acts as a guide to assure correlation between the teacher-education program and the needs in the field. It further provides an opportunity to evaluate ideas before they become policy.

Kenneth Phillips — San Diego State College, San Diego, California

We urge all Industrial Arts faculty members to participate in two or three high school evaluations each year. This helps us to keep up to date on what is going on in the high schools of our state. We also invite college and high school teachers to visit our department in groups of 10 or 12 to observe us teach, study our physical plant, look over our objectives and our means of obtaining them, and counsel with us as a group and offer suggestions.

O. L. Freeman — Middle Tennessee State College, Murfreesboro, Tennessee

808. Use is made of standardized tests to determine student attainment at various intervals.

No response to this item.

809. Supplementary instruments are developed as needed for purposes of program evaluation.

There are many phases in a teacher-education program; hence to have available at all times evaluation instruments for every phase is almost an impossibility. When we deem it necessary to evaluate a phase of our program, an instrument is developed to do the job. Much of this can be done by graduate students, through special problems or through theses. Recently we had occasion to evaluate our student teaching program. One

of our graduate students who was also one of our better supervising teachers chose this problem as his thesis topic. It was well done and everyone benefited. This same student then went ahead and cooperated in developing a handbook for student teachers.

Lowell L. Carver — Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa

810. Opportunity is provided for using the cumulative records of students to determine specific student needs and the effectiveness of instruction.

Our director of student personnel has instituted a college-wide testing service. Test scores are available to all instructors, as well as other information on each student such as his high school record, anecdotal records, and statements of students' interests, ambitions, etcetera. Time is made available for instructor, student personnel director, and student to confer jointly on student problems. We feel that we are quite guidance minded at this institution. Presently there are two members of the staff with doctorates in the field of counseling.

Kenneth E. Harris — Northern Montana College, Havre, Montana

811. Provision is made for maintaining a continuous evaluation program in which the total faculty participates.

The members of the Industrial Arts department feel that it is most important that good communication be maintained among the staff members. A weekly department meeting is held and department problems are discussed. Reports are also made concerning course development and plans. Sometimes the group moves into an area to see some of the work that is in progress. New projects are examined, ideas for shop reorganization are explained and discussed, tool and equipment needs are highlighted, and then points of interest are introduced. As this happens in each area the total staff is kept aware of progress and plans in the department. Suggestions are exchanged and an informal form of evaluation is inherent in the process. No one feels that his physical setting, his course content, and the student activities are complete or finished. They can be improved and the total staff is interested in contributing to that improvement. The total faculty participates in this form of evaluation and, incidentally, they rather enjoy it.

Kenneth Phillips — San Diego State College, San Diego, California

The department maintains a program of continuous evaluation participated in by all staff members through (1) informal activities initiated by the department staff and (2) formal evaluations. In connection with the latter, two formal evaluations are mentioned, one of which is school-wide and the other college-wide. A school-wide evaluation was recently conducted by an inter-visitation committee of the American Association of Colleges for Teacher Education. Preparations are now underway for a college-wide evaluation to be undertaken by the Middle States Association.

S. Lewis Land — Pennsylvania State University, State College, Pennsylvania

812. Evaluation procedures include surveying student reaction to the program or phases of the program.

We have the feeling that students, if given an opportunity, can be very helpful in evaluating various phases of a program. At periodic intervals we have had curriculum committees made up of students whose purpose was to discuss and recommend changes. In many instances student opinion has been asked and received and in a majority of cases it has been beneficial. However, the staff must be open minded about this matter and be willing to listen and then, when possible, do something about the suggestions. We feel that the administration should be willing to listen to a student any time. Sometimes the students are wrong but many times they have good ideas which can be used.

Lowell L. Carver — Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa

Each semester each staff member of the department uses a student inventory reaction sheet. This reaction sheet is used on a college-wide basis and was most carefully prepared by the psychology department. It is a form of evaluation which gives the students an opportunity to express themselves and they can do so anonymously. The staff members may use the form if they wish; however, it is entirely a matter of choice. The Industrial Arts staff has decided to use this tool as a method of gaining student opinion. It has worked most effectively.

Another activity which helps in a survey of student reaction is the use of a personnel system where the shop superintendent has real responsibility and is interested in improvement. The superintendent encourages students to present criticism and ideas and uses them as the basis for his evaluative report. Many fine suggestions for department growth have developed from student reaction. The physical setting and the program have both been helped in this manner.

Kenneth Phillips — San Diego State College, San Diego, California

813. Evaluation procedures draw upon a wide variety of sources for evidence.

No response to this item.

814. The system of evaluation leads toward a continuous improvement of the Industrial Arts teacher education program.

(a) A practice of follow-up on all graduates by the Placement Bureau (and organized for the Industrial Arts department use), by predictive ratings (pre-public school teaching), and the actual ratings by school administrators.

Replies and reports include information on subject matter abilities, organization, understanding and performance, teaching practices, and community relations.

(b) Program of visitation and consultation by a staff member on extension department work each quarter. Reports on the program of the Industrial Arts teachers. Results are used to alter the college program to fit the needs of the schools, most particularly the one-teacher programs of Industrial Arts.

Harold G. Palmer -- Iowa State Teachers College, Cedar Falls, Iowa

In Retrospect

Yearbook IV was designed to locate and to report upon superior concepts and practices in Industrial Arts teacher education at the undergraduate level. The Inventory described in Chapter I was the instrument developed to locate superior practices and Chapters II through VII perform a communication function. The Inventory reached out into the nearly 200 colleges and universities where Industrial Arts teachers are prepared; the percentage of response was most gratifying.

The locating and reporting purposes have been accomplished only in part. No instrument has been devised to probe into all of the significant aspects of so comprehensive an operation as teacher education. Reporting, too, was handicapped by the brevity of treatment coupled with the difficulty of capturing important details and interrelationships in words. Interpretations, of course, depend as much upon the experiences and the values of the reader as they do upon the competence and motives of the writer.

Many of the items in the Inventory are searching in their nature and were designed to ferret out practices that are essentially a departure from the traditional program. Such items were incorporated in the instrument to determine the awareness of the profession to the demands of a highly technical democracy. Similarly other items were intended to obtain an indication of the concepts of learning and of the educational philosophies which undergird our teacher-education programs.

The study has revealed points of strength and weakness among present practices. Each of the chapters has an obvious absence of pertinent responses to one or more items. These items, it will be conceded, are new departures in many respects but their performance or pursuit is decidedly in keeping with advocated practices and Industrial Arts teacher needs.

In defense of the absence of replies to many significant items, it is probable that schools are experimenting with and developing promising practices, but are not yet willing to indicate high level achievement in these areas. Furthermore some items lacking response are less tangible than many of the "standardized" phases of the program. Perhaps these conditions are a part of the ever-present educational lag between need and practice. Consequently, as an added function, this Yearbook may assist in reducing the elapsed time for a desirable practice to become widely accepted.

The Yearbook has served another service in its communication efforts. It has given every school an opportunity to describe its elements of strength. It has given a voice to many schools which have been relatively quiet in professional circles. It has been the intent of the Yearbook to present superior practices wherever they occur, regardless of size, location, or renown of the school.

Finally, the Yearbook should serve as a resource publication for teacher educators. Through this volume the educator can locate institutions and programs that have met with success in various aspects of teacher preparation. In this respect the book becomes an annotated cross reference of superior practices. The reader may then contact the original source of the descriptive statement and obtain further information if he so desires. Instead of a cross reference to books, magazines, and digests the Yearbook may be regarded as a curriculum reference with the resources being scores of colleges and universities scattered throughout the United States.

APPENDIX A

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¹ The names of the colleges and universities were checked against the 1953-1954 edition of the *Education Directory, Higher Education*, U. S. Department of Health, Education, and Welfare, Office of Education. The person's location at the time he submitted materials is carried in the Yearbook.

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APPENDIX B

The Inventory

Form (A)

AMERICAN COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION

An

INVENTORY

Preparatory to

The Fourth Yearbook of the Council

Superior Practices in Industrial Arts Teacher Education

This inventory is being sent to all colleges and universities where Industrial Arts teacher education programs are known to occur. The inventory is an initial step in identifying superior practices in Industrial Arts teacher education.

Directions:

The following pages present a series of items which describe practices in Industrial Arts teacher education. You are asked to respond to each item in terms of your own institution and to do so by using this coding:

- S — Practiced or achieved in a superior manner
- L — Practiced or achieved to a limited extent
- A — Absent as a practice or of minor significance

N.B. Respond only in terms of your Industrial Arts *undergraduate* program.

A practice may, of course, apply to other departments in your college.

Important: On the last page you are asked to indicate ten practices which your institution performs in an outstanding manner.

I. STUDENT PERSONNEL PRACTICES

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
- L — Practiced or achieved to a limited extent
- A — Absent as a practice or of minor significance

Recruitment

100. S....L....A....The Industrial Arts department and the alumni of the department have developed cooperatively a recruitment program. (1 response)
101. S....L....A....Industrial Arts teacher organizations in the district or state assist the college recruitment program. (2 responses)
102. S....L....A....There is a planned program of visitation by the college faculty to the public schools for the purpose of recruiting Industrial Arts teachers. (4 responses)
103. S....L....A....Recruitment is assisted through services rendered by faculty members of the Industrial Arts department to public schools. (2 responses)
104. S....L....A....The college is the sponsor of professional organizations of counselors, principals and superintendents and these organizations have recruitment as part of their programs. (1 response)
105. S....L....A....Specific efforts are made to keep the high school principals, counselors, and student advisers informed regarding Industrial Arts teacher supply and demand. (2 responses)
106. S....L....A....The college has an extensive scholarship program in which the Industrial Arts department shares. (5 responses)
107. S....L....A...."Future Teachers" and similar organizations in the high schools are aided by or organized by the college. (4 responses)
108. S....L....A....The college sponsors activities which bring secondary school pupils to the campus (e.g. open house, conferences, sports day, senior day). (40 responses)
109. S....L....A....The Industrial Arts department produces publications which are directed toward high school graduates. (5 responses)
110. S....L....A....The Industrial Arts department has moving pictures or still pictures which explain Industrial Arts teaching as a profession. (2 responses)
111. S....L....A....Mass media (press, radio, television) are used extensively in the recruitment program. (4 responses)
112. S....L....A....An information service is provided for students already enrolled in college but who desire further information before making a definite career decision. (5 responses)
113. S....L....A....An on-campus counseling service is available to persons who desire assistance in making decisions about college entrance. (21 responses)

114. Other (please explain) (3 responses)
115. Other (please explain) (1 response)

Selection

116. S....L....A....Student selection procedures operate prior to the student's admittance to the campus (i.e. prior to his acceptance by any college or department). (2 responses)
117. S....L....A....Students are accepted by the college or the university on the basis of an overall policy but the Industrial Arts department may accept or reject those admitted to the campus. (0 responses)
118. S....L....A....Students participate in a program common to all curriculums during the freshman and sophomore years and are accepted or rejected by the department at the junior level. (5 responses)
119. S....L....A....Student selection procedures are operative throughout the four year college period. (6 responses)
120. S....L....A....Selection procedures involve interviews in which department representatives participate. (0 responses)
121. S....L....A....Selection procedures involve an established testing program. (3 responses)
122. S....L....A....Selection procedures involve the high school and/or college scholastic record of the student. (2 responses)
123. S....L....A....Selection procedures involve a "tryout" period, at least for some students. (2 responses)
124. S....L....A....The criteria which serve as the basis for selection have been stated and the types of data which they require have been anticipated. (0 responses)
125. S....L....A....These criteria (item 124) are continually evaluated through the subsequent performance of graduates. (0 responses)
126. S....L....A....Specific efforts are made to determine the physical and mental health of the applicants. (8 responses)
127. S....L....A....An on-campus counseling service is maintained to help a student in his choice of a college career. (18 responses)
128. Other (please describe) (0 responses)
129. Other (please describe) (0 responses)

Orientation (i.e. orientation to the college or university)

130. S....L....A....Provisions are made for a pre-school orientation period to assist the beginning student. (18 responses)
131. S....L....A....The beginning student is assigned a faculty adviser to assist in his orientation. (22 responses)

132. S....L....A....There is a planned program of meetings, social events, and discussions for the purpose of orientating the beginning student. (21 responses)
133. S....L....A....Provision is made for an upper-classman to assist a beginning student in his orientation ("big-brother" idea). (3 responses)
134. S....L....A....Specific effort is made in the orientation program to provide for the transition from high school to college with respect to such factors as personal responsibilities, quality and quantity of work, nature of the work, rights and privileges. (14 responses)
135. S....L....A....Special effort is made through handbooks, bulletins, and other publications to assist in the orientation of the student. (7 responses)
136. S....L....A....Effort is made to provide orientation procedures that are flexible and based upon the needs of the current student body. (3 responses)
137. S....L....A....Specific efforts are made toward developing rapport between students and the faculty. (17 responses)
138. S....L....A....Specific experiences are provided the student for the purpose of better personal adjustment and optimal academic achievements. (3 responses)
139. S....L....A....Provisions are made for remedial clinics and remedial classes (e.g. reading, grammar, mathematics, and speech). (13 responses)
140. Other (please explain) (2 responses)
141. Other (please explain) (1 response)

Student Records

142. S....L....A....Records kept of student achievement include data pertaining to all of the objectives of the teacher-education program. (5 responses)
143. S....L....A....All teachers contribute data to the cumulative record of the student, in addition to providing a course grade. (5 responses)
144. S....L....A....Student records are kept up-to-date by professional staff members who are capable of interpreting the records to faculty members. (10 responses)
145. S....L....A....The student's record, while confidential, is available to faculty members. (10 responses)
146. Other (please explain) (1 response)
147. Other (please explain) (0 responses)

Placement and Follow-Up

148. S....L....A....There is an Industrial Arts teacher placement service supervised by the Industrial Arts Department. (4 responses)

149. S....L....A....The Department maintains active contacts with employing officials in the district, state, or even wider area. (9 responses)
150. S....L....A....Placement publications, listing graduates and their qualifications, are published regularly and are available to employing officials. (2 responses)
151. S....L....A....The placement office prepares summarizing statements about job opportunities, salaries and salary schedules, and teacher turnover. (4 responses)
152. S....L....A....Special effort is made to furnish the student with personal materials such as letters of recommendation, statements of outstanding achievements, grades, special competencies, and personal qualities that would assist him in applying for a position. (14 responses)
153. S....L....A....The placement office assists the student in contacting employers and in making arrangements for interviews. (10 responses)
154. S....L....A....Special effort is made to place a student in accordance with his interests, abilities, and other factors contributing to success. (9 responses)
155. S....L....A....The placement office has detailed data about positions and schools so that the student may be advised of his meeting the job expectations. (5 responses)
156. S....L....A....The data which the placement office has relevant to a student are sufficiently descriptive to permit an intelligent decision by the employing official. (1 response)
157. S....L....A....Special effort is made to eliminate the factor of favoritism and prejudice in the reporting of openings to prospective teachers. (5 responses)
158. S....L....A....There is a planned program of placement conferences with the college faculty, students, and public school people participating. (2 responses)
159. S....L....A....There are provisions for placement and follow-up liaison between the college and the public schools. (3 responses)
160. S....L....A....Graduates with experience (teaching experience and work experience) are informed about positions where greater maturity is needed. (5 responses)
161. S....L....A....There is a planned program of faculty visitation for follow-up purposes. (0 responses)
162. S....L....A....Provision is made in the allocation of time for college faculty members to conduct follow-up visitations. (0 responses)
163. S....L....A....There is a planned program of student follow-up involving periodic reports by the graduate back to the college. (1 response)
164. S....L....A....There is a planned program of meetings and conferences between the college staff and public school people for follow-up purposes. (0 responses)

165. S....L....A....There is a planned series of reports and evaluations made regularly by public school administrators as a part of the follow-up activities. (3 responses)
166. S....L....A....Follow-up activities are carried on by having a series of back-to-school meetings of former graduates. (3 responses)
167. S....L....A....There is a systematic plan for using the follow-up reports in the improvement of the program. (2 responses)
168. Other (please explain) (2 responses)
169. Other (please explain) (0 responses)

II. GENERAL EDUCATION

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

S — Practiced or achieved in a superior manner

L — Practiced or achieved to a limited extent

A — Absent as a practice or of minor significance

200. S....L....A....Specific effort is made to have the student develop or refine a point of view or philosophy of life. (26 responses)
201. S....L....A....Experiences are provided for the student to develop an understanding of his cultural heritage. (6 responses)
202. S....L....A....Specific experiences are provided so that the student may understand and appreciate democracy as a way-of-life. (9 responses)
203. S....L....A....A study is made of the basic social institutions (e. g. home and family, constitutional government, church, education). (1 response)
204. S....L....A....Emphasis is placed upon having the student develop some understanding of and appreciation for contemporary cultures. (1 response)
205. S....L....A....Significant social-economic conditions and trends are studied. (0 responses)
206. S....L....A....The organizational patterns of business and industry are studied. (2 responses)
207. S....L....A....There are opportunities for developing an understanding of the social impact of industry (e. g. urbanization, specialization, dependence upon the job of work, need for old-age security, etc.). (3 responses)
208. S....L....A....The student studies the policies and programs of groups representing special interests such as agriculture, business, labor, health, etc. (0 responses)
209. S....L....A....Emphasis is placed upon effective study techniques and work habits. (6 responses)

210. S....L....A....Assistance is given the student to improve upon his basic skills of reading, writing, speaking, listening, computing. (4 responses)
211. S....L....A....The student is provided with experiences through which he may develop or improve his systematic thinking procedures and mature his judgment. (6 responses)
212. S....L....A....The student is given opportunities to develop greater competence in his ability to communicate with others. (This implies not only skills and techniques of communication but also those values and attitudes which make interchange of ideas possible). (5 responses)
213. S....L....A....Outlets of communication through the expressional arts are encouraged (e. g. music, dramatics, painting, writing). (5 responses)
214. S....L....A....The student comes in contact with the basic disciplines of science and mathematics, humanities and social studies and understands their contributions to his own education. (10 responses)
215. S....L....A....The student studies man in relation to his natural environment. (1 response)
216. S....L....A....The student studies the biological and social development of man. (1 response)
217. S....L....A....The student is provided with opportunities to discover his unique talents and special abilities. (3 responses)
218. S....L....A....Activities are sponsored wherein the student may develop leadership abilities. (14 responses)
219. S....L....A....The student is assisted in developing greater social and civic competence. (2 responses)
220. S....L....A....The student is assisted in developing or intensifying his intellectual interests. (1 response)
221. S....L....A....The student is assisted in developing greater social adeptness with his peer group. (1 response)
222. S....L....A....The student is aided in identifying and resolving most of the personal problems which beset him. (1 response)
223. S....L....A....The student develops and/or maintains good health — both physical and mental. (1 response)
224. S....L....A....The student is assisted in developing wholesome and socially acceptable out-of-school interests and activities. (3 responses)
225. S....L....A....The student is assisted in developing a background for understanding the social function of his chosen occupation. (4 responses)
226. Other (please explain) (1 response)
227. Other (please explain) (1 response)

III. EARLY PROFESSIONAL EXPERIENCES

(Freshman and Sophomore years)

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
- L — Practiced or achieved to a limited extent
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300. S....L....A.....The student is encouraged to formulate a positive attitude toward the teaching profession or to reject teaching as an occupation. (19 responses)
301. S....L....A.....Specific efforts are made to apprise the student of the duties, responsibilities, and importance of the Industrial Arts teacher. (17 responses)
302. S....L....A.....Experiences are provided for the formulation of initial insights into the principles and factors of human development and learning. (1 response)
303. S....L....A.....Specific efforts are made to show a relationship between education and man's material, spiritual, and social well being. (5 responses)
304. S....L....A.....Contacts are provided with children and youth in structured situations so that the student may learn how he reacts to them and they, in turn, to him. (1 response)
305. S....L....A.....Experiences are provided for understanding the unique contributions of Industrial Arts education to a democracy which has a predominately industrial economy. (10 responses)
306. S....L....A.....Through planned experiences the student comes in contact with professional literature, publications, and reports. (8 responses)
307. S....L....A.....There are planned and supervised visits to elementary and secondary schools. (6 responses)
308. S....L....A.....There are planned and supervised visits to places such as detention homes and state homes for abnormal children. (1 response)
309. S....L....A.....Opportunity is provided for the observation and study of pupils as they participate in classroom, laboratory, and school shop activities. (0 responses)
310. S....L....A.....Opportunity is provided for observation and study of boys and girls as they participate in *out-of-class* activities (e. g. school playgrounds, hobby clubs, games). (3 responses)
311. S....L....A.....Opportunity is provided for observation and study of boys and girls as they participate in *out-of-school* activities (e. g. playgrounds, hobby clubs, Scout activities, Boy's Clubs). (1 response)
312. S....L....A.....There is a professional orientation course during the first part of the freshman year. (17 responses)

313. S....L....A....There are opportunities for the teaching of others (either classmates or younger-age groups). (4 responses)
314. S....L....A....There are opportunities for the student to participate in determining course purposes and in planning instructional materials for shop, drawing, and general classes. (9 responses)
315. S....L....A....There is an initial, short-time participatory experience in an elementary or secondary school (i. e. engaged in a teaching situation but not as a student teacher). (1 response)
316. S....L....A....There is an initial, short-time student teaching assignment during the freshman, or sophomore years. (1 response)
317. S....L....A....Opportunity is provided for students to attend local, county, regional, or state meetings of a professional nature. (4 responses)
318. S....L....A....Students participate in organizations of a professional nature (Industrial Arts Club, Future Teachers of America, Industrial Education Association). (25 responses)
319. S....L....A....Opportunity is provided for students to attend faculty meetings: secondary school, college, or both. (1 response)
320. S....L....A....Students are urged to hold memberships in national professional organizations through group membership efforts of the college. (6 responses)
321. S....L....A....Students are apprised of working conditions in teaching, of teacher supply and demand, of tenure, of retirement, etc. (4 responses)
322. Other (please explain) (0 responses)
323. Other (please explain) (0 responses)

IV. LATER PROFESSIONAL EXPERIENCES

(Junior-Senior Years, Exclusive of Student Teaching)

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
 L — Practiced or achieved to a limited extent
 A — Absent as a practice or of minor significance

400. S....L....A....Specific efforts are made toward assisting the students in developing a philosophy of education. (21 responses)
401. S....L....A....Specific efforts are made to have students develop an understanding of democratic principles and processes and to carry through their implications for public education. (6 responses)

402. S....L....A....Students study the growth and development of education, particularly public education in the United States, and come to know current conditions in our education enterprise. (3 responses)
403. S....L....A....Specific experiences are directed toward developing an understanding of the social contribution of the public school. (1 response)
404. S....L....A....Specific experiences are directed toward developing an understanding of the secondary school (or elementary school or both). (4 responses)
405. S....L....A....Various professional courses are integrated in the sense that they support common objectives with the several courses providing differing emphases. (6 responses)
406. S....L....A....Students participate in on-campus professional seminars following the student teaching period. (3 responses)
407. S....L....A....Students are encouraged to develop their own professional libraries. (5 responses)
408. S....L....A....Students have opportunities to work with peer groups on their common professional problems. (1 response)
409. S....L....A....Specific experiences are directed toward understanding what resources are available to teachers and how these resources (people, publications, films) should be used. (4 responses)
410. S....L....A....Students have experiences in planning school shops in terms of programs and in specifying equipment for these shops. (27 responses)
411. S....L....A....Students participate in college activities which have professional purposes (e. g. spring conference, open house, freshman orientation week). (15 responses)
412. S....L....A....Students work as participants in college-operated services such as the reading clinic, the speech clinic, the instructional-aids laboratory, etc. (0 responses)
413. S....L....A....Students are assisted in obtaining work as counselors in summer camps. (1 response)
414. S....L....A....Students work with professors in gathering case study materials and in interpreting the data. (0 responses)
415. S....L....A....There are planned and supervised observations of elementary and/or secondary school programs. (4 responses)
416. S....L....A....Specific experiences are directed toward an understanding of selected principles of learning (e. g. place of pupil purpose in learning). (2 responses)
417. S....L....A....Specific experiences are directed toward understanding adolescents who live in our culture: their physical growth, their social and emotional development, their developmental tasks. (4 responses)
418. S....L....A....Students observe and practice a variety of teaching-learning procedures (e. g. group planning, developing an assignment, testing, group evaluation). (0 responses)

419. S....L....A....Students are given experiences in using standardized tests, scales and inventories, and are given assistance in understanding the results. (2 responses)
420. S....L....A....Students develop a variety of instructional *aids*. (12 responses)
421. S....L....A....Students develop one or more instructional *units*. (8 responses)
422. S....L....A....Students participate in community studies to determine educational resources and educational needs. (1 response)
423. S....L....A....Outstanding educators and other resource people are brought to the campus to conduct lecture or lecture-discussion sessions for the students. (4 responses)
424. S....L....A....Students are urged to participate in community activities which involve children and youth (e. g. Scouts, Boy's Club, recreational programs, etc.). (6 responses)
425. S....L....A....Students learn about state certification procedures and requirements. (5 responses)
426. S....L....A....Students read selected professional periodicals including Industrial Arts professional journals. (8 responses)
427. S....L....A....Students attend local, state, and national professional conferences or conventions. (3 responses)
428. S....L....A....Students are urged to hold memberships in national professional organizations through group membership efforts of the college. (10 responses)
429. S....L....A....There are professionally oriented clubs and fraternities sponsored by the department or college, to which Industrial Arts students belong. (10 responses)
430. S....L....A....Specific effort is made toward developing a code of ethics for the professional educator. (9 responses)
431. Other (please explain) (0 responses)
432. Other (please explain) (0 responses)

V. STUDENT TEACHING

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
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500. S....L....A....The college faculty and public school people work cooperatively in the development of student teaching policies and procedures. (18 responses)
501. S....L....A....The contribution of student teaching to the student's professional preparation and the range of experiences to be provided by the student teaching centers have been stated in written form. (5 responses)

502. S....L....A....The college cooperates with public-school officials in developing high quality student teaching centers. (7 responses)
503. S....L....A....There is a program aimed at developing a staff of teachers to serve as continuing teachers in these centers and to function as "master" teachers. (3 responses)
504. S....L....A....Students are placed in these centers upon the basis of specific student needs. (4 responses)
505. S....L....A....Provision is made for the "master" teacher to understand the student teacher in terms of his needs, capabilities, personal qualities, and background. (2 responses)
506. S....L....A....Scheduled supervision of the student teacher by designated college faculty members is provided. (23 responses)
507. S....L....A....There is a period of orientation for the new student teacher during which time he learns specific things about the shop, the school, and the community. (4 responses)
508. S....L....A....There is a gradual induction into the duties of teaching after the student teacher reaches the school where he is to do his teaching. (3 responses)
509. S....L....A....The student teacher is provided with the full responsibility for a class group or series of class groups during the latter part of the student teaching period. (13 responses)
510. S....L....A....The student teacher is provided with teaching experiences involving a variety of instructional techniques and media (e. g. films, field trips, guest speakers, group projects, mass-production units, experimentation, etc.). (9 responses)
511. S....L....A....The student teacher plans a unit of instruction and carries through with a class (or classes) from the group-planning stage to a final group evaluation. (6 responses)
512. S....L....A....The student teacher is either provided with or has an opportunity to obtain aids and devices to be used in connection with instructional needs during the student teaching period. (4 responses)
513. S....L....A....The student teacher has experiences in more than one type of shop or school (general shop, unit shop, unit general, urban, rural consolidated, etc.). (7 responses)
514. S....L....A....The student teacher has experiences involving pupil analysis and assistance in cooperation with other school-staff personnel and departments. (0 responses)
515. S....L....A....The student teacher has an opportunity to obtain and use the cumulative record of a pupil (or pupils) in helping the student teacher to resolve some difficulty which has developed within the teaching-learning situation. (0 responses)
516. S....L....A....The student teacher reviews studies made of the school or of the school community such as "drop-out" or holding-power studies, placement of graduates, ethnic influences, recreational facilities, educational resources, etc. (0 responses)

517. S....L....A....The student teacher participates in whole-school activities such as home room responsibilities, faculty meetings, P.T.A. meetings, extracurricular activities, record keeping, etc. (4 responses)
518. S....L....A....There are planned experiences through which the student teacher becomes acquainted with the functions of the principal's office, the guidance office, the health clinic, remedial services, testing bureau, and other such school facilities. (0 responses)
519. S....L....A....A student teacher lives in the school community and participates in community activities for the duration of his teaching assignment. (7 responses)
520. S....L....A....The student teacher has experiences through which he becomes acquainted with the nature and operation of the local school administrative unit. (0 responses)
521. S....L....A....There are on-campus or off-campus student teaching seminars and consultation periods *during* the student teaching period. (6 responses)
522. S....L....A....The student teacher submits periodic reports and analyses of his activities and experiences. (3 responses)
523. S....L....A....The "master" teacher submits periodic reports and analyses of the student teacher's progress. (4 responses)
524. S....L....A....Satisfactory criteria and techniques for the evaluation of the student teaching experience have been developed. (4 responses)
525. S....L....A....The student teacher has a period of time on campus for further development *following* the student teaching experience. (5 responses)
526. Other (please explain) (6 responses)
527. Other (please explain) (1 response)

VI. TECHNICAL EDUCATION

(Shopwork and Drafting)

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
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600. S....L....A....Experiences are provided for the student to develop proficiency in the basic shop and drawing skills necessary for teaching Industrial Arts at the public school level. (54 responses)

601. S....L....A....Specific efforts are made to apprise the student of the unique function of shopwork and drafting in the modern educational program. (13 responses)
602. S....L....A....Specific efforts are made to have the student develop a considerable degree of skill and understanding in one or two areas of shopwork (e. g. metals, wood, electricity, graphic arts). (29 responses)
603. S....L....A....Experiences are provided for the student to develop an understanding of the basic manufacturing and fabrication processes in several industries. (4 responses)
604. S....L....A....Through planned experiences the student develops an appreciation of the value of drafting and planning in the construction of useful items. (9 responses)
605. S....L....A....Special effort is made toward having the student develop considerable background in the principles of applied design. (8 responses)
606. S....L....A....Through planned experiences the student develops an understanding of the principles of good construction. (7 responses)
607. S....L....A....Experiences are provided to enable the student to develop an understanding of the factors and procedures involved in the purchase of shop materials (wood, metal, plastics, paper, lubricants, supplies). (8 responses)
608. S....L....A....Through planned experiences the student develops an appreciation of the dignity of work. (5 responses)
609. S....L....A....Special effort is made to have the student understand the contributions of the various crafts in providing the daily needs of mankind. (2 responses)
610. S....L....A....The student develops an understanding of the skill requirements, conditions of work, tools, and other occupational information pertaining to the various crafts. (4 responses)
611. S....L....A....There is a planned program of safety in each shop course. (10 responses)
612. S....L....A....Special effort is made to have the student experience a variety of teaching methods appropriate to shopwork and drawing. (12 responses)
613. S....L....A....Special effort is made to have the student experience shop and drawing activities based upon the type of activities found in the public school shops. (14 responses)
614. S....L....A....There are shop and drawing activities in connection with mass production, experimentation, and group projects. (2 responses)
615. S....L....A....Special effort is made to have the student experience a wide variety of shop and drafting areas (e. g. woods, metals, graphic arts, electricity, plastics, leather, textiles, machine drafting, architectural drafting, etc.). (45 responses)

616. S....L....A....The student experiences shop and drafting activities which reflect practices and methods used in industry. (7 responses)
617. S....L....A....Provision is made for the student to participate with the instructor in the planning of shop and drawing units of instruction (i. e. cooperative teacher-student planning at the college level). (4 responses)
618. S....L....A....Provision is made for the student to participate in the evaluation of his experiences in shop and drawing courses. (4 responses)
619. S....L....A....Opportunity is provided for the student to do some supervised teaching in shop and drawing classes in which he is enrolled. (1 response)
620. S....L....A....The student experiences shop activities having emphasis on shop maintenance and repair. (13 responses)
621. S....L....A....Provision is made for the student to experience shop and drawing activities in connection with the design and construction of teaching aids and instructional devices. (4 responses)
622. Other (please explain) (2 responses)
623. Other (please explain) (1 response)

VII. TECHNICAL EDUCATION

(Exclusive of Shop and Drawing)

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

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700. S....L....A....The student develops competence in the area of mathematics in relation to the needs of an Industrial Arts teacher. (4 responses)
701. S....L....A....The student comes to understand the significant developments in the field of physical science. (1 response)
702. S....L....A....The student comes to understand the contributions and importance of science to man's cultural developments (e. g. industrial progress, housing, health and sanitation, transportation and communication). (2 responses)
703. S....L....A....The student comes to understand the application of science and scientific principles to the solution of everyday problems. (This may be considered to include the scientific method.) (1 response)
704. S....L....A....The student comes in contact with a variety of basic scientific principles. (2 responses)

705. S....L....A....The student develops greater facility in the application of scientific principles to diverse situations. (2 responses)
706. S....L....A....The student comes in contact with a wide variety of scientific and technical materials, equipment, and literature. (5 responses)
707. S....L....A....The student develops a greater interest in scientific and technical issues and topics. (1 response)
708. S....L....A....The student develops a broad understanding of the nature and operation of modern industry. (6 responses)
709. S....L....A....The student develops an understanding of industrial growth and problems related to such growth. (1 response)
710. S....L....A....The student develops an insight into those phases of industry dealing with research and invention, production planning, quality control, material handling and production techniques. (2 responses)
711. S....L....A....The student develops an understanding of the impact of increased amounts of energy (electrical, molecular, atomic) on modern industry. (0 responses)
712. S....L....A....The student develops an understanding of the programs for conservation of natural resources. (1 response)
713. S....L....A....The student develops an understanding of the operation and importance of power and communication in the development of modern civilization. (0 responses)
714. S....L....A....The student participates in organized and supervised work periods in industry. (2 responses)
715. S....L....A....The student participates in a program of summer employment in industry. (2 responses)
716. S....L....A....The student undertakes minor research problems pertaining to science or industry. (1 response)
717. S....L....A....The student participates in an organized program of field trips, guest speakers, film showings and conferences aimed at a greater technical understanding on the part of the student. (11 responses)
718. S....L....A....The student uses the college science facilities on occasion to work on technical problems which develop in a shop situation. (0 responses)
719. Other (please explain) (1 response)
720. Other (please explain) (0 responses)

VIII. PROGRAM EVALUATION

Check the following statements in terms of your Industrial Arts *undergraduate* program. Use this coding:

- S — Practiced or achieved in a superior manner
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- 800. S....L....A.....There is a written statement clearly defining competencies to be developed in the student, competencies which involve all phases of the program: general education, technical, and professional. (4 responses)
- 801. S....L....A.....There are periodic reviews made of changing emphases in Industrial Arts teaching at the elementary and secondary school levels. (6 responses)
- 802. S....L....A.....There are periodic meetings of former graduates for the purpose of discussing the Industrial Arts teacher-education program. (2 responses)
- 803. S....L....A.....Provision is made for college staff visitation of former graduates. (1 response)
- 804. S....L....A.....Provision is made for a joint faculty, student, public school committee to study and evaluate the Industrial Arts teacher education program. (1 response)
- 805. S....L....A.....There is a faculty committee for the purpose of continuous program evaluation. (4 responses)
- 806. S....L....A.....Periodic reports are requested of school administrators who employ Industrial Arts graduates. (2 responses)
- 807. S....L....A.....Provision is made for visiting evaluation teams or consultants at periodic intervals. (1 response)
- 808. S....L....A.....Use is made of standardized tests to determine student attainment at various intervals. (0 responses)
- 809. S....L....A.....Supplementary instruments are developed as needed for purposes of program evaluation. (1 response)
- 810. S....L....A.....Opportunity is provided for using the cumulative records of students to determine specific student needs and the effectiveness of instruction. (3 responses)
- 811. S....L....A.....Provision is made for maintaining a continuous evaluation program in which the total faculty participates. (4 responses)
- 812. S....L....A.....Evaluation procedures include surveying student reaction to the program or phases of the program. (1 response)
- 813. S....L....A.....Evaluation procedures draw upon a wide variety of sources for evidence. (0 responses)
- 814. S....L....A.....The system of evaluation leads toward a continuous improvement of the Industrial Arts teacher education program. (4 responses)
- 815. Other (please explain) (0 responses)
- 816. Other (please explain) (0 responses)

I M P O R T A N T

Select from the total inventory ten practices which your institution performs in an outstanding manner. Indicate by using the number of the item.

- | | |
|--------|---------|
| 1..... | 6..... |
| 2..... | 7..... |
| 3..... | 8..... |
| 4..... | 9..... |
| 5..... | 10..... |

Name of person submitting report

Title Date

Name of institution