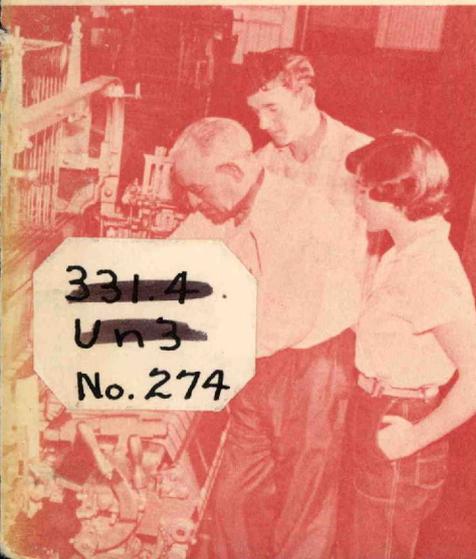
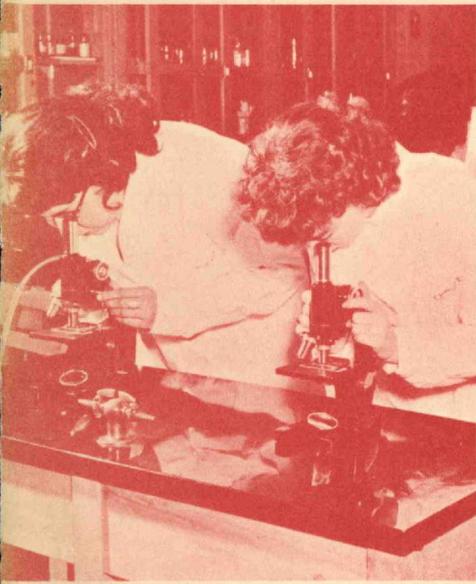
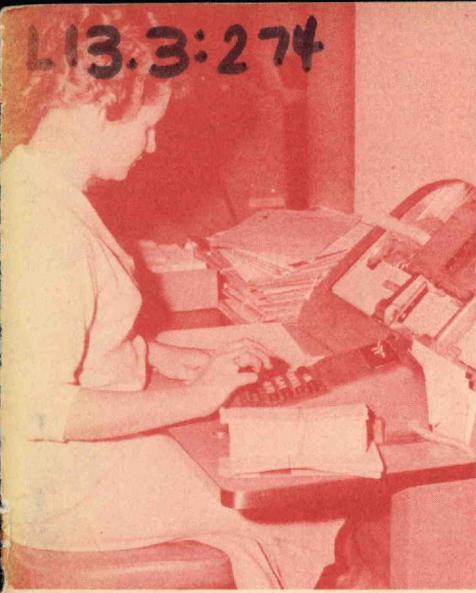


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# TRAINING OPPORTUNITIES

for

# Women and Girls

U.S. DEPARTMENT OF LABOR

James P. Mitchell, *Secretary*

WOMEN'S BUREAU

Mrs. Alice K. Leopold, *Director*

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Wells, Jean Alice.

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# TRAINING OPPORTUNITIES

for

# Women and Girls

Preemployment Courses  
Initial Training Programs

U.S. DEPARTMENT OF LABOR

James P. Mitchell, *Secretary*

WOMEN'S BUREAU

Mrs. Alice K. Leopold, *Director*

WOMEN'S BUREAU BULLETIN 274

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## Foreword

In this age of dynamic technological change which has already created many new opportunities for women, and has been characterized by an ever increasing diversity of occupations, it is imperative for women as well as men to develop their skills and abilities to the fullest if they are to meet the needs of the future and take the greatest advantage of opportunities which lie ahead.

More women will be entering new fields of work in the decade of the sixties. The variety of technical work which has emerged in the growing engineering, scientific, health and medical fields; new and changed office occupations resulting from the introduction and use of electronic data processing systems and other business machines; continually rising skill levels in industrial work—these and other developments portend the need for more education and training.

In planning for their vocational futures, women need to know what training is available and where they can obtain it. It is with this in mind that the Women's Bureau has prepared this bulletin. It describes the types of training facilities currently available and suggests where to get additional information.

If more women and girls are stimulated to seek formal job preparation and more employers and vocational educators to increase training opportunities in fields where women trainees are still scarce, this report will have achieved its purpose. But the ultimate rewards can be much greater. Education and training geared to future job requirements may be the pathway to greater advancement for women, as well as the means to a larger supply of highly skilled and trained workers for our growing Nation.

Alice K. Leopold,  
*Director, Women's Bureau.*

## *Acknowledgments*

The Women's Bureau wishes to acknowledge with sincere appreciation the many organizations and individuals who supplied information on which this report is based. Special appreciation is extended to James H. Pearson, Assistant Commissioner for Vocational Education, and staff of the Division of Vocational Education, Office of Education, U.S. Department of Health, Education, and Welfare, for review of the draft and valuable comments.

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The report was prepared by Jean A. Wells in the Division of Program Planning, Analysis, and Reports, of which Stella P. Manor is Chief.

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**THIS REPORT PROVIDES . . .**

*A glimpse at the variety of occupations for which women and girls can obtain formal training. Excluded are professional occupations requiring a college degree.*

*A guide to the principal types of preemployment or initial training available in the major occupational fields—with a few specific examples.*

*Sources of additional information, including lists of State education offices and employment offices.*

# 1.

## Growing Importance of Job Training

A review of some of the initial and preemployment training programs and courses currently offered in the United States indicates that numerous training opportunities are available to women and girls seeking employment, although the amount and accessibility of some types of training are still quite inadequate. Training facilities to prepare a woman as a stenographer, practical nurse, or beauty operator are located in virtually all cities and most towns and can be found fairly easily by those seeking their services. On the other hand, training for such occupations as laboratory assistant, factory production worker, electronic and auxiliary equipment operator, or institutional housekeeper are much less prevalent and often overlooked even in those localities where they do exist.

Reasons for the wide differences in the extent of training opportunities for women are varied but relate primarily to the pattern of women's employment. In the fairly small number of occupations with large numbers of women workers, formal training facilities have generally been provided—either by public or private facilities or both. But in the wide array of occupations with relatively low percentages of women, training opportunities open to women tend to be rather scarce and sometimes available only upon occasion.

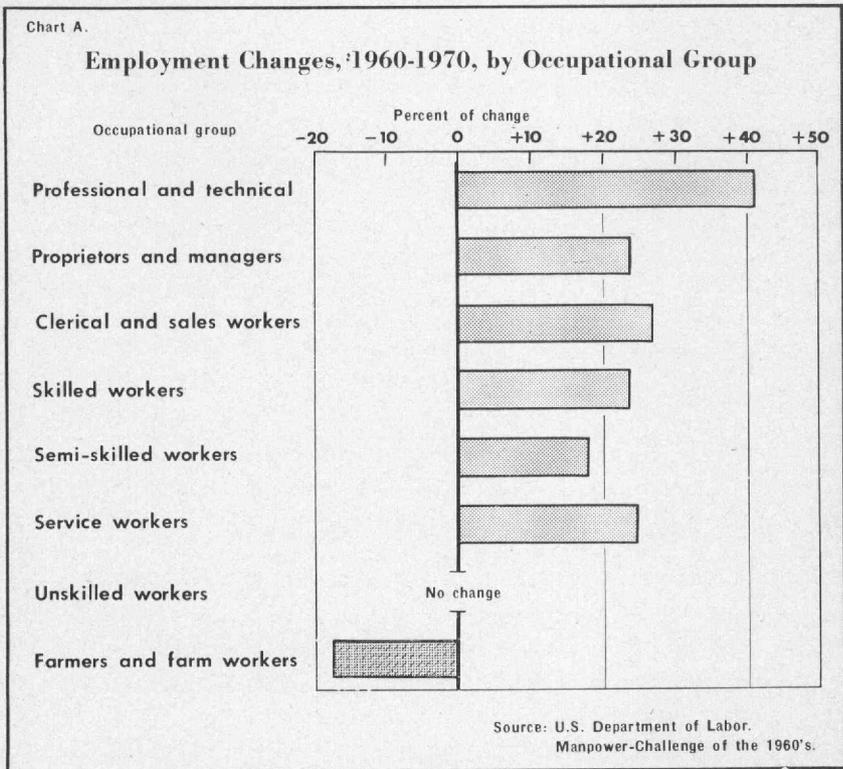
In presenting examples of various types of formal training courses and programs found in a brief review during the winter of 1959-60, this report provides a picture of the principal types of initial and preemployment training opportunities open to women and girls. In addition, it emphasizes the growing importance of such training not only to women and girls themselves but also to the Nation's employers and our economy as a whole.

### THE NEED FOR MORE TRAINING

The need for formal job training has been intensified in the past several decades. Earlier, when our economy was less developed and less mechanized, there were relatively more repetitive and unskilled occupations than now exist. Then it was much easier for workers to learn each task when needed and to become productive after just a

brief period on the job. As business and industry have grown more complex and as technological and scientific improvements have transformed industrial processes and equipment, the need for more skilled and better trained workers has spread. Forecasts for the 1960's indicate that this trend will continue, not only requiring more extensive training and education for new jobs being created but also raising the general skill level of all jobs in the economy.

By 1970, our labor force is estimated to reach 87 million workers—an increase of 13.5 million, or almost 20 percent more than in 1960. There will probably be 30 million women workers in the 1970 labor force, about 6 million more than at present.



The greatest percentage expansion within the total force will occur in professional and technical jobs, which as a group is expected to rise by more than 40 percent. In addition, it is anticipated that the numbers of clerical and sales workers will increase by over 25 percent; skilled workers, by almost 25 percent; and semiskilled workers by almost 20 percent (chart A). As these are all occupational fields which require the most education and training, new entrants into the labor force will need to be properly prepared if they hope to qualify for these expanding job opportunities.

The ages of the workers in the expanding work force of the 1960's also are expected to have considerable influence on future manpower needs. Especially significant is the fact that the number of male workers 25 to 45 years of age (low because of the comparatively small number of persons born during the depression of the 1930's) will remain fairly stationary, particularly during the first half of the 1960's. As these are the workers who normally constitute the central core of the experienced work force, their relatively short supply will be keenly felt and will result in greater demand for younger workers and adult women. Most of the workers in these latter two groups will have had little or no previous job experience. It becomes additionally important, therefore, that sufficient training opportunities be made available for them.

Since there will be a tremendous rise in the numbers of young persons (14 to 25 years of age) entering the labor market, individual job seekers can anticipate considerable competition from other inexperienced new workers. There is little doubt that the best trained and educated among them will be in position to obtain the better jobs.

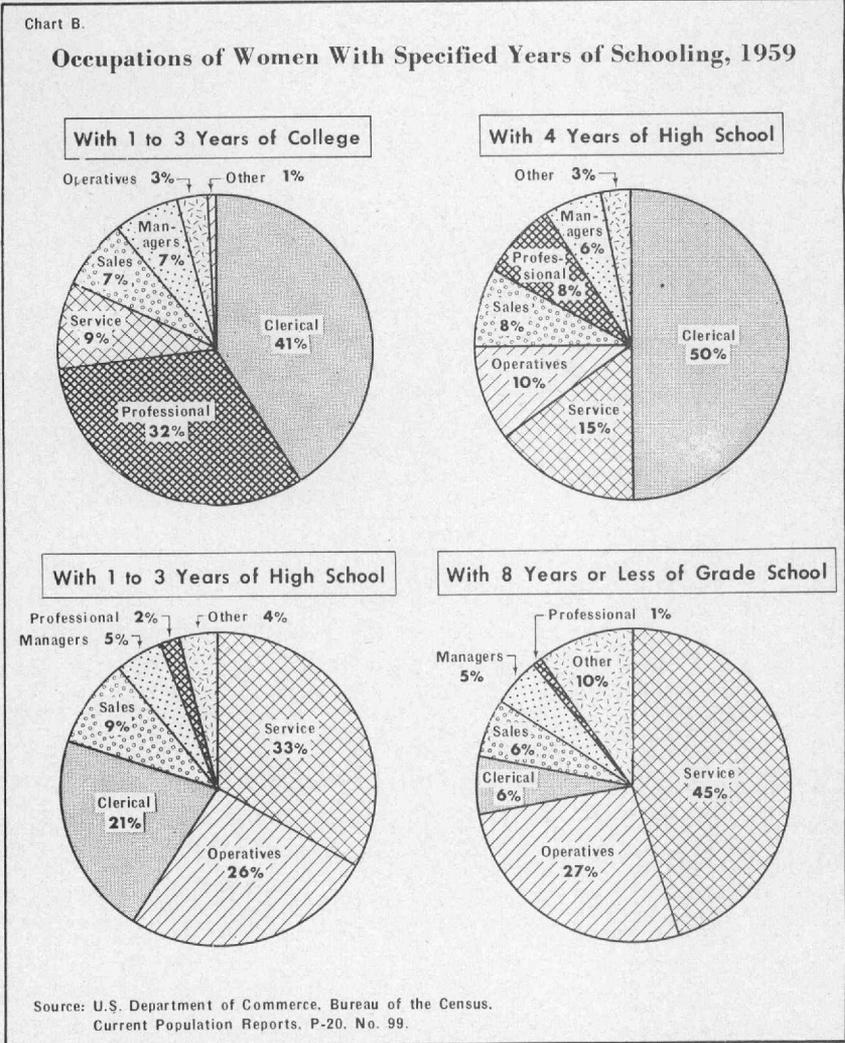
With respect to women workers, a major social change is also contributing to the need for expanded training facilities. The earlier age at which women are now marrying and having children results in their having less time to attain job experience in their youth. Then, when they reenter the labor market as mature women after their family responsibilities have decreased, as many of them are doing, they usually want and need training so that their talents may be utilized adequately.

## **EMPLOYMENT ADVANTAGES OF TRAINING**

The strong relationship between employment and training or education has been demonstrated in many instances. It is well known that the likelihood that a woman will have a job increases directly with the amount of formal education she has received. Her previous education is also an important determinant of the type of job that she can obtain. For example, in 1959, half of the women workers who had finished high school but had not attended college had clerical jobs, while most of those who had received from 1 to 3 years of high school training were employed primarily as service workers, factory operatives, and clerical workers (chart B).

Income is also strongly affected by the amount of education one has obtained. Among women who received some income in 1958, the high school graduates with no college training had a median income of \$2,036—more than twice as much as elementary-school graduates (\$909) and almost three times as much as women without an elementary-school diploma (\$711).

The advantages to be gained from formal training can be expected to resemble those derived from formal education. Persons with the best qualifications will be in a position to obtain the more skilled, in-



teresting, and better paying jobs. Women and girls both will need to be well trained if they hope to share in the employment opportunities of our complex and rapidly changing economy.

### TRAINING FOR WHAT?

Before describing some of the training opportunities now available to women and girls, it should be noted that the initial and preemploy-

ment training programs and courses covered in this study are those which prepare women for occupations not requiring a college degree. The types of training programs included were selected on the basis of the method of training, the length of training time, and the types of jobs for which training is given.

In general, the study covers *formal training for paid employment*. Only such training courses or programs in which women or girls are participating currently or have participated recently are included. For the most part, the training described is open to women regardless of age. However, age preferences in hiring for certain jobs undoubtedly affect the selection for or enrollment in such training. In general, where women are accepted for employment in an occupation, they are also accepted for training.

The word "formal" indicates that the instruction is carried on in an orderly systematic manner in accordance with a scheduled plan. The phrase "for paid employment" places emphasis on initial job training—that is, preparation for entry into a specific occupation. This means that the training courses described consist of more than just orientation to an establishment or work situation. Also, morale-building courses which provide general information about how to get and hold a job in today's labor market are excluded unless they also teach basic job skills.

Most of the training discussed consists primarily of either preemployment courses conducted by schools and other groups, or initial training programs carried on by private companies and government agencies for their new employees. While it is recognized that there are many other types of training also available, the programs and courses listed here are those which provide women and girls with the work skills and knowledge needed to *enter* a specific occupational field. They do not include the many on-the-job training programs conducted or supported by industry for their *employees* to improve their skills or develop new skills. However, retraining programs for workers who face job displacement because of technological changes are also included, as well as refresher courses for those who may have lost some of their previous skills or need to learn the latest techniques and developments.

Because private companies do have many other training opportunities available to employees once they are on the payroll, women and girls need to take this fact into consideration in planning for their occupational future—especially in those occupations or locations where preemployment training is not available. Information about these opportunities can be obtained directly from the companies and may also be available to job applicants at the local public employment office.

## TRAINING FOR HOW LONG?

Great differences exist, of course, in the length of formal training period required to produce a satisfactory degree of skill or proficiency—with variations both by occupation and by school or establishment. This report includes information on formal preemployment or initial training courses of at least 1 week's duration at the lower end of the scale, although, in a few instances, shorter courses are also described. At the other end of the time range, the training periods under review stop short of the time required to obtain a baccalaureate degree. Thus, the report excludes the training and education which college graduates obtain to qualify for professional positions.

Many kinds of training programs are currently available aside from those covered in this bulletin. For example, there are the many supervisory, managerial, and executive training programs conducted by private industry and government, as well as the training programs designed to help workers qualify for advancement to other types of jobs. These programs are not included here because of the fact that they do not cover initial training for a specific occupational skill, and because their great number and variety would necessitate a separate study for adequate consideration.

While some of the training courses included in this study are part of the well-rounded, vocational-education program of "preparation for work and life," most of the training described centers around skills and knowledge relating to a specific occupation. As presented in part 3, these occupations are grouped under the following categories: Office work, office jobs with public contacts, sales work, technicians and craftswomen, industrial work, nursing and health services, housekeeping and food services, and miscellaneous services. In each case, only a few examples of current training programs are described in this report.

## 2.

# Major Types of Training Facilities

Just how many women and girls are now participating in formal training courses or programs is not known, but the number probably equals several millions. The largest group, totaling about 1.8 million women and girls during the school year 1958-59, consists of those enrolled in federally aided vocational courses. Most of these women and girls attend public trade or high schools but some are enrolled in public junior colleges or in the extension courses of public universities. Included in the latter group are probably most of the 20,849 women reported by institutions of higher education as 1956-57 graduates of "organized occupational curriculums" lasting at least 1 year but less than 4 years.

Private trade schools and business colleges outside the "regular school system" had an enrollment of about 591,000 women and girls in October 1959. These students were taking primarily business subjects, art, fashion design, photography, and cosmetology.

No reliable estimates are available of how many women receive formal job instruction through either in-service programs conducted by private industry and government agencies, apprenticeship programs, or correspondence courses.

## **PUBLIC TRADE AND HIGH SCHOOLS**

Of the 25,000 public secondary schools in the Nation, about 14,000 offer some kind of vocational education. In addition to their availability in most cities and large towns, vocational courses of public trade schools and comprehensive high schools have several other advantages of interest to women and girls. Of major importance is that they are free or, as in the case of adult education courses, quite inexpensive. They also cover numerous occupations, although the range of skill choice varies considerably from school to school.<sup>1</sup>

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<sup>1</sup> A list of vocational courses offered by specific public schools during the school year 1958-59 is contained in Trade and Industrial Education for Girls and Women, A Directory of Training Programs. U.S. Department of Health, Education, and Welfare Publication No. OE-84002.

The current trend toward consolidation of local schools into district schools is stimulating the establishment of additional vocational education courses. As a result, vocational training is being made available to many more persons living in outlying areas.

Public vocational courses are undoubtedly the best developed and most widely standardized of all the training resources available to women and girls in this country. As originally provided in the Smith-Hughes Act of 1917 and later expanded in the George-Barden Act of 1946, Federal funds are provided for vocational education courses which meet Federal and State standards. These include the requirements that education must be of less than college grade and directed toward "useful employment."

Today most vocational schools are coeducational but there are still some separate schools for girls and boys. Of course, girls are not eligible for the courses given in boys' schools and are sometimes excluded from courses in coeducational schools. Reasons given for the limitations on girls' enrollment are that some training leads to jobs which are physically difficult for women or to jobs which are traditionally considered men's work and generally not available to women workers. Many jobs, however, once considered not appropriate for women have been opened to them in recent years, in some cases because technological advances have decreased the physical requirements of a job and in others because manpower shortages have compelled employers to hire women.

Day-school students (who for federally aided courses must be at least 14 years old) are required in most schools to take a complete program of vocational education leading to a high school diploma. As a result, the typical day-school student is of high school age. In some of the large cities with daytime schools for adults, however, there are no restrictions on the number or type of courses which may be taken.

Of particular interest to young students is the cooperative program offered in many public trade and high schools. Under this plan, students spend half time in school continuing their high school education and half time at paid employment receiving school credits for related instruction and on-the-job training. Most girls who participate in cooperative programs are enrolled in distributive education or business education courses.

Part-time and evening students must be at least 16 years of age and employed to satisfy Federal-aid requirements. Most students attending school part time are enrolled in cooperative programs and, therefore, are largely under 20 years of age. The evening students are typically an older group. Courses given in the evening are often shorter and more intensive than regular-term courses.

In addition to offering preparatory training leading to entrance into useful employment, many public schools have long-range programs for employed adults. These programs often consist of a series of courses which can help improve the employees' chances for job advancement.

Table 1.—Women Enrolled in Vocational Trades and Industries Classes, by Occupation, 1958-59

Occupation	Women enrolled	
	Number	Per- cent
All occupations.....	95, 041	100
Artist (commercial).....	2, 970	3
Beauty operator.....	18, 351	19
Building trades worker.....	368	( <sup>1</sup> )
Domestic worker.....	3, 079	3
Draftsman.....	654	1
Dressmaker, machine operator (needle trades).....	24, 135	25
Driver, commercial vehicle.....	1, 360	1
Fishery worker.....	321	( <sup>1</sup> )
Food trades worker (commercial).....	9, 623	10
Foreman, supervisor, manager.....	4, 384	5
Hospital aide or attendant.....	4, 939	5
Janitor.....	834	1
Jeweler or watchmaker.....	188	( <sup>1</sup> )
Launderer, drycleaner, presser.....	298	( <sup>1</sup> )
Machinist.....	393	( <sup>1</sup> )
Mechanic or repairman.....	3, 198	3
Nurse (practical).....	7, 472	8
Photographer.....	439	( <sup>1</sup> )
Policewoman.....	818	1
Printer, stereotyper, lithographer, photoengraver.....	455	( <sup>1</sup> )
Technician:		
Dental.....	2, 077	2
Design.....	408	( <sup>1</sup> )
Electrical.....	248	( <sup>1</sup> )
Electronics.....	1, 212	1
Laboratory.....	294	( <sup>1</sup> )
Medical.....	1, 093	1
Other.....	1, 162	1
Textile worker.....	2, 508	3
Upholsterer.....	193	( <sup>1</sup> )
Miscellaneous.....	1, 567	2

<sup>1</sup> Less than 1 percent.

Source: U.S. Department of Health, Education, and Welfare, Office of Education, Division of Vocational Education.

Local job demands are taken into consideration by public education administrators in establishing vocational courses in their area. Through the use of local advisory committees, both labor and management representatives participate in determining what specific types of training and kinds of instruction and equipment would be most useful

in their locality. Some public vocational schools provide placement services for those who complete their courses, but since this service is optional, the amount of time spent helping graduates find jobs varies by school.

Principal fields for which vocational education is offered on a cooperative Federal-State basis and the numbers of women and girls enrolled during the 1958-59 school year were, as follows:

<i>Field</i>	<i>Number of women students</i>
Home economics.....	1, 542, 512
Distributive education.....	152, 836
Trade and industrial:	
Trades and industries classes.....	95, 041
General continuation.....	10, 363
Practical nursing.....	30, 306

Some of the major occupations for which women and girls receive trades and industrial training in public vocational schools are the so-called traditional women's fields: practical nursing, needle trades, cosmetology, food trades, and dental and medical assisting (table 1). However, increasing numbers of women are reported to be preparing also for such occupations as mechanic or repairman, electronics technician, textile worker, policewoman, and commercial driver.

The distributive education program covers not only general basic courses in distribution but also specialized courses in retailing, wholesaling, service businesses, insurance, real estate, and investments. The training provided in these fields leads to a wide diversity of occupations, including saleswoman, cashier, buyer's assistant, stock worker, real estate agent, insurance agent, and investment counselor, as well as proprietor and manager.

It should be noted that "commercial courses" are not included among the fields of training for which the Federal law provides the use of Federal funds when paying teachers' salaries and certain related expenses. These courses, generally the most popular among high school girls, are financed from regular funds of the local school system. Commercial subjects usually offered in public schools include typing, shorthand, bookkeeping, operation of office machines, business English, business arithmetic, and business law.

## **JUNIOR AND COMMUNITY COLLEGES**

Most junior colleges and nearly all public "community colleges"—the 2-year schools becoming so popular these days—offer vocational courses in addition to the academic subjects usually studied by freshmen and sophomores. These colleges—which now total about 675—were established primarily to provide 2 years of post-high school

education. However, mature adults also find these schools valuable because classes are typically held during both the day and evening, and students may enroll on a part-time basis.

Course requirements in most 2-year colleges depend on the interests of individual students. Those working toward an associate degree must take certain academic subjects along with courses of their own choice. Those wishing trade or industrial training leading to a certificate may not be required to study other subjects. In some schools, it is also possible to enroll just in individual evening courses.

States with the largest numbers of public 2-year colleges are California, Texas, New York, Illinois, and Mississippi. In California, for example, the junior college is reported to have taken the place of the private technical institute, still popular in the East and Midwest.

Since 2-year colleges include both public and private schools, there is considerable variation in tuition and other costs. Most public community colleges, which seldom provide housing facilities, have very low tuition. However, among junior colleges are a few private girls' schools which are both fashionable and expensive.

Vocational courses most popular with women students in 2-year colleges are secretarial studies, nursing, dental hygiene, medical laboratory technology, and dental or medical assisting. Other vocational courses with small but significant numbers of women students include commercial art and advertising, fashion design, accounting, practical nursing, sales and distribution, and food-service administration. Although technical courses relating to engineering are found in many 2-year colleges, they have fairly few women students. The relative popularity among women of various occupational fields is shown in table 2 for both 2-year colleges and for those 4-year colleges and universities which also offer programs of technical education at less than baccalaureate level.

In some 2-year colleges, as in some high schools, cooperative programs have been established to enable students to obtain job instruction and job experience at the same time they are pursuing a general education.

## **PRIVATE BUSINESS, TRADE, AND TECHNICAL SCHOOLS**

As most private business, trade, and technical schools specialize in training for employment, they usually offer short-term, intensive and practical courses. These are often held both day and evening and on either a full-time or part-time basis to accommodate individual students. Most students in private vocational schools are older than those in public vocational schools and frequently are employed.

Table 2.—Women Graduates of Organized Occupational Curriculums Lasting at Least 1 Year But Less Than 4 Years, Institutions of Higher Education, United States, 1956-57

Organized occupational curriculum	Women graduates	
	Number	As per cent of men and women graduates
All organized occupational curriculums.....	20, 849	44
Technician level.....	20, 474	46
Engineering related.....	170	1
Aeronautical.....	3	(1)
Architectural and civil.....	15	1
Chemical.....	49	23
Electrical.....	6	(1)
General engineering technology.....	74	13
Industrial.....	5	1
Mechanical.....	6	(1)
Metallurgical.....	3	3
Miscellaneous.....	9	1
Nonengineering related.....	20, 304	65
Agriculture and forestry.....	37	3
Applied and graphic arts.....	632	45
Business and commerce.....	9, 029	57
Education.....	5, 538	83
Health service.....	4, 080	94
Home economics.....	508	84
Miscellaneous.....	436	38
Other.....	44	27
Craftsman-clerical level.....	375	18
Engineering.....	14	1
Nonengineering.....	361	55

<sup>1</sup> Less than 1 percent.

Source: U.S. Department of Health, Education, and Welfare, Office of Education: Organized Occupational Curriculums, Enrollments and Graduates, 1957. Circular No. 568.

Tuition at private vocational schools may range from very modest to relatively high fees, depending largely on the type of training and the amount of equipment necessary for practice work. Also, many private schools give graduates considerable assistance in obtaining employment, since job placement is often viewed by students as a major service of these schools.

Regulations covering such items as standards of instruction and advertising statements are in effect in some States for some types of schools. By and large, however, it is necessary for prospective students to inquire locally about the reputation and past performance of the private school they might attend.

The largest number of private vocational schools are business or secretarial schools. Most of these offer a wide variety of business

subjects, including stenography, typing, executive secretarial study, office machine operation, and bookkeeping. Other separate schools usually specialize in teaching such skills as speedwriting, comptometer operation, stenotyping, switchboard operation, or keypunch operation.

Among other types of private trade schools, probably the most numerous are beauty culture schools. In addition, private schools of interest to women wishing to learn a trade offer courses in such fields as practical nursing, sales training, drafting, clothes designing, commercial art, photography, fashion art, real estate, insurance, millinery, power-machine sewing, airline hostessing, or hotel training.

Most technical schools are open to women and girls. Numerous women students have entered technical schools offering courses in medical, dental, and other laboratory techniques; mathematical computations; or drafting. However, few women prepare themselves for technical work in engineering and the physical sciences. Their low enrollments in these classes may be related primarily to custom and tradition, which have influenced the attitudes and interests of both employers and potential students.

Students in a fashion trades high school practice sketching.



## IN-SERVICE TRAINING

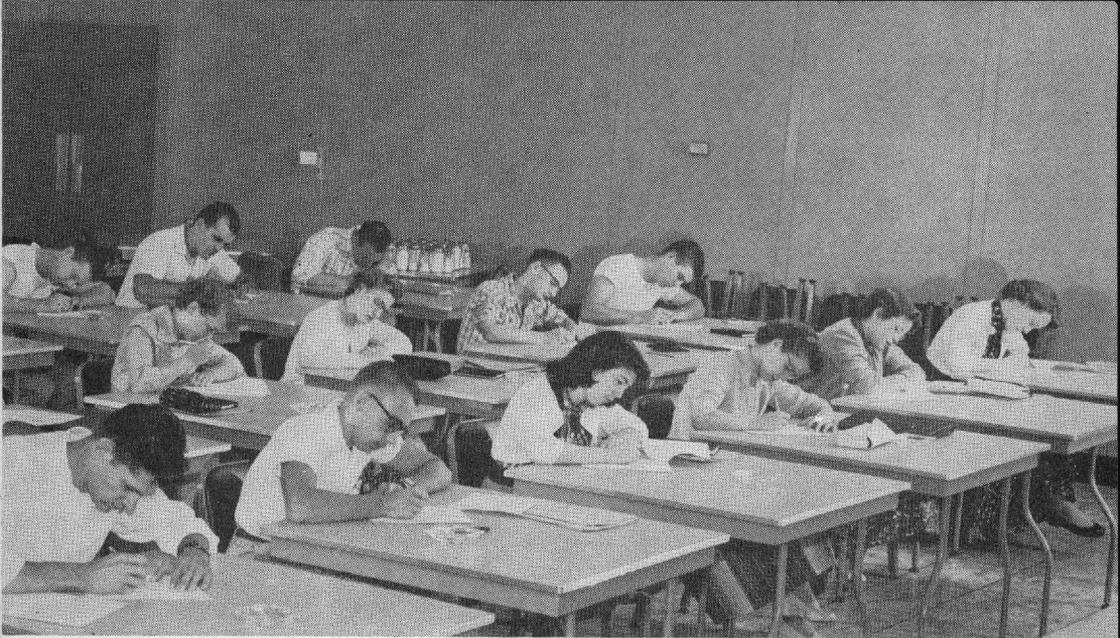
A comprehensive picture of training operations conducted by private and public establishments is difficult to obtain for several reasons. The large number and variety of situations existing in different areas, industries, and organizations would require a lengthy and intensive study. Even more formidable, however, is the fact that the picture is constantly changing. Training activity is greatest when large numbers of workers are needed to fill new jobs. Such a need usually occurs during wartime, postwar reconversion, or immediately following major technological changes. Once job demands are met and new workers trained, hiring is curtailed and so usually is training. During periods of relative stability, there is also a considerable amount of change as employers adopt and then discontinue certain training programs to meet their immediate needs.

Many training activities are, of course, carried on regularly by industry and government. Probably the most extensive type of training in existence is informal, on-the-job training, by which a worker is taught each new duty at the time that it is needed in the work process. Also widespread throughout industry is orientation training to acquaint new workers with company routines and regulations. Many organizations, particularly the large ones, also conduct in-service or extension training programs to help their employees advance—either to more skilled jobs or to supervisory or managerial positions. Some companies, hoping to encourage their employees to get “more schooling,” pay full or part of the tuition of employees who enroll in courses given by approved educational institutions.

When companies offer initial training on a formal basis, employees are generally paid the hiring rate for their job. The training is sometimes held in the classroom, sometimes in a specially designated area of the plant or office (called “vestibule training”), and often at the regular workplace. In the latter case, only such instruction as is given in a systematic and planned manner is included in this study as formal training. In most training programs arranged by employers, work skills are acquired along with the technical knowledge needed.

Some private companies maintain preemployment training schools in which work skills needed for their operations are taught. At such schools, interested persons who pass required tests are usually admitted without charge and also without pay.

Most formal training programs in private industry are conducted independently by individual companies, but upon occasion arrangements are made for instruction to be provided by the local vocational



In-service training programs in private industry are preparing more women for technical jobs.

school—either in the school or on company property. The training objective in these cases is generally the typical industry objective—to provide the specific skills and knowledge needed for a certain job.

In the Federal Government, training programs have been established primarily to help improve the work performance of employees in jobs for which they have already qualified. As a result, most Federal training programs consist either of orientation, special procedures or technique courses, supervisory training, or management development. However, initial training courses, of the type under study here, are provided when necessary for certain kinds of Government work.

### **APPRENTICESHIP SYSTEM**

Through apprenticeship programs, workers may learn a recognized skilled trade by means of a formal procedure combining work experience of at least 2 years' duration with 144 hours per year of related instruction. To meet standards recommended by the Federal Government, the program adopted must contain provisions concerning the content of instruction, scheduling of progressive work assignments, amount of classroom study, supervision, hours, wages, and conditions of employment.

Although formal programs for the employment and training of apprentices have been established in about 300 skilled occupations, very few women are registered apprentices. The principal reason

is that few women are employed in the trades recognized as "apprenticeable" in this country, either because of the physical requirements of the occupation or because of the length of apprenticeship required. Most women apprentices are learning bookbinding or cosmetology. Small numbers of women are also found in apprenticeship programs for dressmakers, dental technicians, fur finishers, fabric cutters, tailoresses, and printers.

One of the major advantages of apprenticeship training is that the apprentice becomes a part of the work force immediately, receiving wages as she learns her trade. Then, as training progresses her rate of pay is advanced. Those women and girls interested in obtaining detailed information about apprenticeship programs and requirements should contact the apprenticeship agency in their State. Such agencies are usually part of the State's department of labor or industrial commission. A few States have an independent Apprenticeship Council. In States without any apprenticeship agency, information may be obtained from the nearest office of the U.S. Department of Labor's Bureau of Apprenticeship and Training. Other sources of information on apprenticeship openings in a particular area are the public employment service and the unions or employers in the industry under consideration.

## **CORRESPONDENCE SCHOOLS**

Home study courses provide another method by which women and girls may learn vocational skills. Such courses cover, of course, a multiplicity of subject matter, with the majority furnishing basic job information. Most home study courses are prepared by private correspondence schools and some by such public institutions as State universities and the Armed Forces. The cost depends principally on the type and length of each course, as well as the amount of practice materials and services provided students. Home study courses purchased by private companies as part of their in-service training seldom require any payment by employees.

There are several advantages connected with home study courses. For one, they offer opportunities to learn skills not taught locally. This is particularly beneficial to persons living in small towns and rural areas. In addition, correspondence courses allow students to exercise their own initiative in the learning process and to progress at their own rate of speed. The primary emphasis, of course, is on the completion of a course rather than on the time period of study.

Examples of correspondence courses with vocational content of particular interest to women students are those in shorthand, typing, bookkeeping, accounting, tailoring, clothes designing, drafting, photography, hotel training, and real estate.

As not all States have laws or regulations covering correspondence schools, it is important that prospective students check with local employers concerning the claims and merits of a specific home study course if they hope to qualify for a particular type of job after its completion.

## **MISCELLANEOUS**

Although most formal training programs are conducted independently by a single organization, a few are sponsored on a cooperative basis. The sponsors may include two or more of the following: A private company, an industry association, a public vocational school, a labor union, or the public employment office. Frequently, in a cooperatively sponsored program, the public employment office is the agency which first notes the need for the program, seeks assistance from other community groups, and then continues to act as program coordinator. However, any of the organizations listed above may be the one which initiates a cooperative training program.

In addition to the participation by many union organizations in national apprenticeship programs, some union members and officials upon occasion have set up a single-time training course to teach the basic skills in their work area. In a few situations with a continuing shortage of trained workers, a local union has conducted a job course regularly and thereby established another permanent training resource.

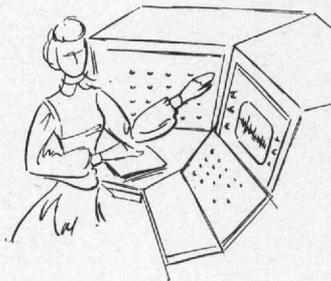
Similarly, some industry associations have seen the need for job training in their field of operation and have independently established a training program, sometimes on a permanent basis.

### 3.

## Training Opportunities in Specific Fields

### OFFICE WORK

As clerical or kindred jobs are held by over 6 million women—almost one-third of all women workers in the country—training opportunities available for various types of office work are of interest to large numbers of women and girls. Especially interesting at the present time is information about training for jobs stemming from the automation of office operations with



modern business machines. These include a variety of new types of accounting, calculating, computing, and auxiliary machines— all described by the general term of automatic data processing equipment.

Important also, of course, are the many formal courses leading to employment in long established office jobs. These include the jobs of typist, stenographer, and secretary—in which there are more than 2 million women—as well as the jobs of bookkeeper, telephone operator, and office-machine operator. All cover relatively large numbers of women workers and are essential to the operation of most offices.

The number of programmers and operators of electronic computers and auxiliary equipment is still rather small but rising fast and, as predicted by one private surveyor, will approximate 170,000 by 1965. Most of the jobs in this field are fairly new and are attracting numerous women. There are relatively more women, however, among the operators than among the programmers.

#### *Electronic and Auxiliary Equipment Operators*

The usual way to learn how to operate electronic computer and auxiliary equipment is through employment with one of the equip-

ment manufacturers or with an establishment using their equipment. Most of the manufacturers maintain training centers in the large cities or, when feasible, send instructors to their customers' offices. This training service is provided to the employees of customers who have purchased or rented their equipment. Customers are, of course, mainly large corporations, universities, or government agencies. The training period varies in length, depending on the complexity of the machines. Auxiliary equipment to electronic computers include punchers, sorters, calculators, tabulators, reproducers, and printers.

A description of the type of training service offered by a manufacturer follows:

- ▶ One large producer of electronic equipment maintains permanent training centers in 21 major cities and conducts courses when necessary in the other branch offices of the company. Trainees are primarily company or customer employees, although a few outsiders are admitted without charge in some towns. Courses include card-punch operation, machine operation, and control-panel wiring—each course lasting about 15 to 30 hours.

Some large establishments, both private and public, have their own training programs for operators of electronic computing and auxiliary equipment. They may accept the services of an instructor provided by the equipment manufacturer or may utilize just training or instructional materials prepared by the manufacturer, as indicated in the following instances:

- ▶ When the Social Security Administration, a large-scale user of electrical accounting and card-punch machines, encounters a shortage of persons with machine experience, it trains selected employees during office hours. Meeting 2 hours a day for several weeks, classes in machine operation last 40 hours and in wiring, 60 hours. The machine course is attended by employees in machine jobs and "interested clerks" upon the approval of their supervisors. Those who complete this course and show aptitude for the work may take the wiring course also. The agency has its own instructors but utilizes training materials of the equipment manufacturer.
- ▶ At an Air Force base in the West, courses offered in machine wiring and operation consist of a combination of classroom instruction and on-the-job practice. The wiring class lasts over 50 hours and the machine operation course from 50 to 60 hours, depending on the type of machine. Instructors are furnished by equipment manufacturers.

In recent years, special schools have been established to provide preemployment training in machine operation for a fee. Generally, these are private schools with experienced instructors and modern equipment. Most offer both day and evening classes and operate a free placement service. Training time varies—usually from 1 to 8 weeks—depending on the number and types of operations studied.

Courses in key punch operation are generally more numerous than those for other machine operators, as many private business schools have added a key punch course to their curriculums.

Some equipment manufacturers also conduct preemployment courses which the public may attend for a fee.

- ▶ At one manufacturer's school, a course in Logical Operation (of an electronic computer) consists of 4 hours of lecture and 4 hours of supervised study per day and lasts for 6 weeks. The tuition fee is \$500.

Only a very few public trade or high schools offer low-cost or free instruction in the operation of electronic data processing equipment. However, additional public schools are considering adding such a course to their curriculums in response to public demand.

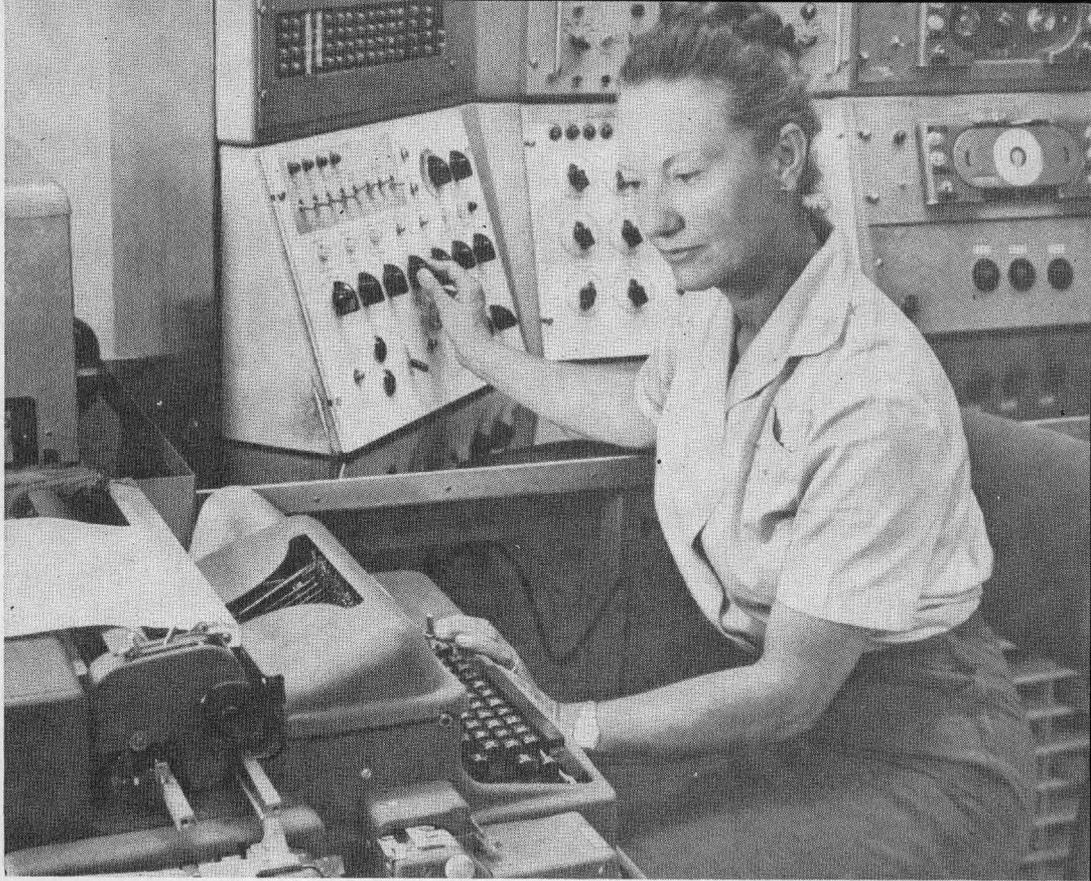
- ▶ The adult education school in Denver (Emily Griffith Opportunity School) conducts on school premises a 60-hour course (both daytime and evening) in operating card punch equipment and a 102-hour course in tabulator equipment. The modern machines on which the students practice are rented from the equipment manufacturer. Over half the students in these free courses are women.

Junior and community colleges in particular, as well as a few universities and engineering schools, are beginning to add courses in office machine operation to their business education curriculum. While such courses are considered, in some schools, as part of a broad program of business administration, they may often be taken singly by those interested in employment as machine operators.

### **Programmers**

Training courses for programmers are provided in most of the facilities described for electronic equipment operators. Thus, at present, most programmers are trained in courses conducted by manufacturers of electronic computing equipment. Instruction is usually provided by the manufacturer as a customer service, and the trainee is paid a beginner's salary by the employer. Formal training time for programmers is longer, of course, than for machine operators and varies with the complexity of the programming assignment and the level of responsibility involved. Some companies prefer college graduates for programming work but most are willing to hire and train qualified persons—qualified, that is, on the basis of aptitude tests or previous work experience. Examples of courses conducted by equipment producers follow:

- ▶ One large computer manufacturer offers up to 30 days of formal training in computer programming to company and customer employees. Following this classroom training, additional on-the-job training is provided.
- ▶ Another large manufacturer of computer equipment has an 18-month training program for its own employees. Training consists of a scheduled pro-



This console operator has one of the new jobs which emerged with the use of electronic computers.

gram for classroom work in the local office, on-the-job training, and instruction at a company Career School. Trainees learn a wide range of activities, including machine operation, technical assistance relating to machine installation, programming and system analysis, and customer relations.

- ▶ At a special school operated in New York by one of the computer manufacturers and open to the public, courses in Programming I and II are each scheduled to last 6 weeks and cost \$400 and \$500, respectively.

Numerous large establishments which employ programmers have developed their own training programs. In some instances, a company program has been established just prior to the installation of computer equipment as a means of obtaining an initial staff of trained personnel. In others, the formal program is utilized whenever necessary to satisfy staff requirements. Consisting of a combination of classroom lectures, demonstrations, and on-the-job practice under close supervision, the formal training period may vary from a few weeks to several months. The following are illustrative of training programs conducted by employers for programmers:

- ▶ The Social Security Administration trains "carefully selected personnel" as programmers in a 6-week course (240 hours) given during office time. Trainees spend about 4 hours each day at lectures and discussions. The balance of their training time is devoted to practice problems and supervised study.
- ▶ An airplane manufacturer on the west coast conducts a 5-week (200 hours) course for digital computer programmers who have completed appropriate college work. In 1959, there were 7 women among the 15 persons who completed the combination of classroom work, lectures, and supervised study.
- ▶ A large insurance company hires college men and women for programmer training of unstated duration. It includes formal classroom work, devising practice programs, and testing such programs on the computer.

Courses in electronic data processing are being offered by a rising number of universities and colleges, particularly 2-year colleges. About 15 colleges and universities now have computing centers and offer such basic courses as the general logic of programming, coding for computers, and the mechanics of computers.

A few public high schools are also starting to offer courses in the programming of data processing equipment. For example:

- ▶ An introductory course in digital computing was given during the 1960 spring semester at the Northwood High School in Silver Spring, Md. Offered without credit, the course was held every Saturday for 3 hours and required an additional 8 hours of homework per week. Teacher and organizer of the course was a data processing expert from the Navy Bureau of Supplies and Accounts, where a new computer was expected to be installed. Class members consisted of 20 juniors and seniors, of whom 4 were girls. The students were selected, from a group twice as large, on the basis of a preliminary test. Upon completion of the course, arrangements were made for most of the students to work in summer jobs as programmer trainees.

### **Bookkeepers**

As more and more offices utilize modern business machines, knowledge of the new types of bookkeeping machines has become increasingly more useful than learning hand bookkeeping or the operation of standard bookkeeping machines. The latter were once the usual tools of bookkeepers, the second largest group of women office workers. Of course, bookkeeping principles and practices as taught in most public and private business courses continue to be important, but graduates of these courses are generally thought to need further training. Most employers follow the practice of hiring such graduates for entry bookkeeping positions and providing them with informal, on-the-job training in bookkeeping operations. However, formal training in bookkeeping machine operation is also offered upon occasion, as for example:

- ▶ One large manufacturer of modern bookkeeping machines maintains training centers for operators in several large cities over the country. These schools, run primarily as a customer service, admit customer employees, independent applicants, and high school students (contacted through their schools and recommended by their instructors). Classes, which are offered fairly continuously, last from 2 to 3 weeks. There is no charge for the instruction or the placement service.
- ▶ At a New York City bank which operates a training center for various types of bank jobs, bookkeepers may receive 3 weeks of formal training. Trainees are usually selected from among current employees but, if necessary, are also recruited from outside. They are required to have a high school diploma and pass an intelligence test.
- ▶ A large Wisconsin bank has conducted a training program for machine operators since 1947, when it arranged to hire housewives and students on a part-time basis to alleviate a shortage of clerical workers. While assigned to the training department, trainees are paid the regular starting salary for their job. Formal training time lasts 75 hours for proof machine operators and 50 hours for bookkeeping machine operators.
- ▶ In a major banking organization on the west coast, new employees assigned to bookkeeping-machine operation spend their first 3 days learning basic job duties and practicing on a standard bank adding machine keyboard. Most of the remaining 3-week training period is devoted to posting under supervision and studying the bookkeeper's manual, with a review and test on the final day.

The operation of some modern bookkeeping machines is taught by a few private business schools, public high schools, and junior colleges. Generally, however, not many schools of this type are able to purchase many of the complex and costly business machines recently invented.

#### **Office-Machine Operators (Miscellaneous)**

Training in the operation of other office machines—such as comptometers, billing machines, duplicating machines, and cash registers—is provided in many public and private business courses. Of course, comptometer or calculating machines and billing machines take considerably more time to learn how to operate than do cash registers and various types of duplicating machines.

As mentioned in relation to bookkeeping-machine operators, operation of the traditional and less expensive types of miscellaneous office machines is taught in many more schools than is the operation of fairly expensive modern machines. Again, the latter type of training is provided principally by the machine manufacturers—generally without charge to customer employees but with a fee for the general public.

- ▶ A manufacturer of modern office machines advertises courses which are open to the public at tuition fees ranging from \$110 to \$150 for "a few

short weeks of intensive training" in the operation of its billing, book-keeping, or calculating machines.

Women and girls who wish to become teletype operators have numerous training facilities from which to choose. Formal training in teletype operation is offered without charge by some employers and some public vocational schools.

▶ An organization employing large numbers of teletype operators provides numerous training opportunities for inexperienced persons. Offices in many large cities conduct training classes lasting from 10 to 13 weeks. Training covers not only teletype operation but also how to handle sales, dispatch messages, make reports, and read perforator tape. For those hired in its smalltown offices, the company maintains a central telegraph school in New Jersey. Teletype operator trainees, who attend the school for 8 weeks, receive free transportation and a small salary to defray meal and lodging expenses. The average class of 15 persons includes 6 women.

▶ Since the General Services Administration maintains a large telecommunication center for the Federal Government, it provides Teletype Operator Training for its own employees and those of agencies utilizing the GSA Teletypewriter System. Generally, 1 week is spent in classroom training and 1 month on the job, sending and receiving messages under close supervision. Over half the teletype operators in the Federal Government are women.

▶ A free course in teletype operation is offered by the adult education school in Denver. Located on school premises, the course is given 10 hours a week for 2 weeks.

A few private schools throughout the country, sometimes called personnel training schools, offer courses in teletype operating which usually last several months.

▶ At a personnel school in the Midwest, a 3-month training program costing \$445 provides 85 hours of instruction in teletypewriting operation and 45 hours of teletypewriting procedure and tape reading along with other courses in typing, business administration, business spelling, airline reservations, telephone technique, and personality development. Only girls and women who are high school graduates between 17½ and 35 years of age and who successfully pass an aptitude test are admitted to the school.

### ***Typists, Stenographers, and Secretaries***

Since typists, stenographers, and secretaries comprise the largest single occupational group of women workers, it is to be expected that initial training in typing, shorthand, and office practices and procedures is available in most public high schools throughout the country. Completion of these courses and graduation from high school are generally considered to be the minimum requirements for employment in these three office jobs. However, further training in business skills is sometimes desired by employers.

Both initial and advanced training in business skills is usually available at private secretarial and business schools, which number

about 1,400. For a fee, these schools offer short, practical courses in basic typing and shorthand skills, as well as supplementary and advanced courses in such subjects as principles of business operation, office methods, secretarial accounting, business English, business correspondence, elementary bookkeeping, use of standard business machines, and various other skills which a secretary needs.

Private companies do not generally provide initial training in typing or shorthand. However, many organizations, particularly large ones, hire graduates of public or private business courses with the idea of providing additional training at company expense. This training often includes speed drills in typing and shorthand, secretarial duties, office forms and filing, correspondence, special company practices and procedures, and attitudes and etiquette. The following illustrate this type of training:

- ▶ A rubber manufacturer in the Midwest annually contacts local high schools shortly before spring graduation and recruits about 15 girls for a 4 weeks' course (40 hours per week) for stenographers, typists, transcribers, and secretaries.
- ▶ An insurance firm in New England gives 2 weeks of special classroom instruction to newly employed stenographers, typists, transcriptionists, and secretaries. In addition, typists receive 3 weeks of training in the typing unit, and stenographers received 2 hours of special instruction a day.
- ▶ A paper manufacturer in the Midwest recently conducted an 80-hour clerical training program for 30 women employed at production jobs in the plant. About half the time was devoted to typing and the remainder to skills required in miscellaneous office work.
- ▶ A utility company in New York holds 15 typing sessions of 2½ hours each for newly hired typists and stenographers.
- ▶ Since 1942, the U.S. Navy has conducted refresher Secretarial Training in the Washington, D.C., metropolitan area for civilian stenographers, typists, and secretaries who are recommended by their supervisors. During 1½ hours a day for 15 days, the trainees practice to attain speed and accuracy and to learn proper office procedures. Recently, the program has been expanded to include a secretarial skills course, which covers the basic duties and responsibilities of a personal secretary.
- ▶ The Army installation at Fort Monmouth, N.J., conducts a broad training program during office hours. Attendance at a 10-hour course in military correspondence, forms, and practices is recommended for new typists and stenographers within 3 months of their employment.

Training in special secretarial skills leading to such positions as medical, legal, or engineering secretary can be obtained in many junior colleges and some private business schools. Courses, which may last from 1 to 3 years, usually cover special terminology as well as background subjects in the field of specialization.

With the rising number of mature women interested in entering or reentering the business world, some schools and other groups are

offering courses specially oriented to their needs. Some of these courses provide information on ways to find and hold a job, in addition to teaching specific job skills. The preparation and training received in these courses have enabled many women with little or no work experience to become productive and satisfactory employees. Their emotional maturity, responsible attitudes, and steady work habits are definite assets, increasing their work contributions not only to individual employers but to our expanding economy.

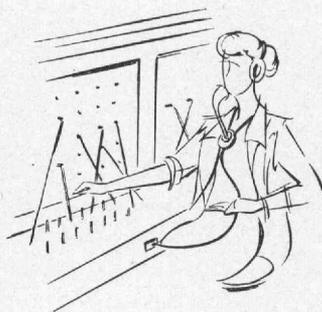
A description of one course tailored to help mature women prepare for office employment follows:

- ▶ The Boston Y.W.C.A., in cooperation with a local secretarial institute, offers a "personalized" course in Business Skills, which is aimed at mature women. One class meets in the morning and another in the evening. Both are scheduled to last 2 hours a day twice a week for 12 weeks. Subjects taught include typing, filing, general clerical procedures, business English, and vocabulary building. The course fee is \$33.

It should be noted that training programs specifically directed toward mature women are not the only ones in which mature women are enrolled as trainees. Many of the programs and courses described in this bulletin represent good training opportunities for women of all ages.

## OFFICE JOBS WITH PUBLIC CONTACTS

In certain office jobs, an important part of the work is the ability to handle contacts with the public efficiently and graciously. To teach women and girls the information, techniques, and skills required in some jobs of this type, formal training programs have been developed for such occupations as those of telephone operators, service representatives, bank tellers, and library assistants.



### Telephone Operators

Telephone operating, numerically the third largest office job for women, is frequently taught in a formalized manner. The major telephone communications system, which employs almost half of all telephone or switchboard operators, has substantially the same training procedures for employees of all its numerous affiliates. Illustrative of these training procedures is the following:

- ▶ One telephone system affiliate prefers to hire girls who are high school graduates and at least 18 years of age to operate its switchboards. Applicants must also pass dexterity and intelligence tests as well as a physical examination. With the help of an instructor, two girls are trained at a time at the switchboard where they will be regularly assigned. Initial training generally takes from 2 to 3 weeks. Further training is given to meet unusual operating conditions as they are encountered.

In addition to training their own operators, affiliates of the major telephone system frequently arrange to train telephone operators employed by their customers. Some large private and public establishments, however, maintain their own telephone training school, as for example:

- ▶ In the District of Columbia, the General Services Administration conducts a Telephone Operating course for its new telephone operators. The training, which usually extends over 40 to 56 hours, consists of group lectures and individual switchboard instruction.

Upon occasion, a public vocational school conducts a course in switchboard operation when there is local demand for it.

- ▶ The Miami, Fla., public vocational school which specializes in hotel training offers two types of courses for switchboard operators. A 3-week course, open to high school graduates with a good voice, provides basic theory and practical knowledge in the operation of a commercial switchboard. A longer course, extending 6 weeks for daytime classes and 8 weeks (24 hours) for evening classes, includes special information needed for operating a hotel switchboard. In addition to basic knowledge about switchboard operation, students learn such duties as filing guests' names, paging, handling emergency calls, and computing taxes and services charges. For the commercial course, a \$3 materials fee is charged and for the hotel telephone service course, \$5. In addition, all must pay a \$2 registration fee and nonresidents a \$50 State tuition fee.

### **Service Representatives**

To provide customers with information and assistance when they make inquiries by telephone, some companies—particularly those specializing in providing services—have employees called service representatives. As this type of customer-liaison job generally requires detailed knowledge of many company services and operations, large establishments often give intensive systematic training to these employees.

- ▶ One of the major telephone system affiliates recruits service representative trainees from both inside and outside the company, accepting high school graduates but preferring those with some college training. Initially, three or four trainees receive 5 weeks of classroom instruction combined with practice in answering inquiries. This period is followed by 1 month of on-the-job coaching. Further instruction in handling less common inquiries is given during the remainder of the first year.

- ▶ A large utility company on the east coast has formal training classes for telephone-service clerks. A class of six to eight persons engages in practice work for 3 weeks, learning how to answer customer requests and responding to prearranged calls.

### **Bank Tellers**

Bank tellers, who continue to include more and more women among their numbers, have in the past usually been promoted from within the bank and given informal on-the-job training in their new positions. While this procedure still prevails generally, a few banks do operate a training school of their own or cooperate with local schools to train students on a part-time basis, as for example:

- ▶ One New York bank provides a 3-week training course for tellers, who are selected from both inside and outside the bank. Lectures and classroom discussions held during the first week cover job duties, bank terminology, and related information. The second week is spent working with currency in the money department, and the third week reviewing job procedures and security measures. Afterward, only a short period of window practice under close supervision is needed.
- ▶ Another large New York bank conducts its own training school, where up to 3 weeks of training is provided to tellers. While the bank prefers to promote from within for this job, it will hire trainees from outside when necessary.
- ▶ A large banking corporation on the west coast has a 3-week training program for new employees assigned to the position of teller. The basic duties and procedures of teller work are studied with the aid of a detailed teller's guide developed by the company. In addition, supervised practice at the teller window is combined with practice in related banking work.

### **Library Assistants**

Assistants to professional librarians can be utilized very advantageously in performing such tasks as working at the record desk with outgoing and incoming books, checking files and sending notices for overdue books, cataloging books, and sorting books and magazines according to classification. In order that library assistants can attain a broad understanding of overall library operations as well as techniques essential to library service, some public vocational schools, junior colleges, and private schools offer courses in this type of work.

- ▶ The Boston Y.W.C.A. offers a course in Librarianship which covers the Dewey Decimal System, reference tools, poster making and layouts, book mending, and special types of literature. A 1½-hour session is given once a week for 10 weeks. The course, taught by a librarian from the public library, costs \$11.
- ▶ The Library Assistant curriculum at East Los Angeles Junior College covers two semesters of study. In addition to an introductory course in

library science, classes are offered in the processing of library materials (including reference materials), and in book ordering procedures. Other subjects studied include secretarial science, English, history, art, political science, and psychology.

When large libraries find it difficult to hire trained assistants, they sometimes conduct a formal training course for inexperienced persons.

## **SALES WORK**

The essential skills and qualifications needed in sales work are rooted in such personal characteristics as poise, emotional maturity, resourcefulness, initiative, a pleasing personality, good grooming, ability to meet the public, and a marked interest in selling. For persons with these essential characteristics, training programs provide information on sales techniques and



procedures and also stress the importance of interpersonal relations in their contacts with the public. As a result, many of the 1½ million women engaged in sales work have participated in some type of formalized training program.

Specialized courses in salesmanship and retail selling procedures are offered by many schools and community organizations—both public and private. Such courses provide basic information about job duties, techniques, and requirements, as well as a good opportunity for women and girls to determine their suitability for sales work.

Many in-service training programs are conducted by retail employers. These programs encompass training not only for sales work but also for related occupations in merchandising (such as buyer or department head, assistant buyer, and head of stock) and for executive and supervisory positions. Successful sales experience is frequently the criterion used in the selection of trainees for the more intensive programs.

### ***Retail Saleswomen***

Many private employers provide a limited amount of training to newly hired salespeople. In addition, numerous schools offer retail sales training. These schools include public vocational schools, private business schools, junior colleges, and universities and colleges.

Almost all universities and colleges offer at least one course in retailing or marketing. Some maintain a school of retailing or a department of retailing in their school of business administration. In these programs, students learn all phases of retailing as preparation for work in merchandising, sales promotion, personnel administration, or store operation. Their 4-year period of study exceeds the general level of training covered in this report and includes academic work leading to a bachelor's degree.

Retailing programs of 2-year colleges are also fairly comprehensive in their program of study. Intended to make students familiar with a wide range of retail store operations, they often include courses in merchandising, buying, advertising, recordkeeping, and supervision.

Particularly valuable training for salesworkers is the public vocational program of "distributive education," in which students combine classroom study with at least 15 hours of store work per week. In the classroom, students usually are taught basic facts about distribution and marketing which may be applied to a wide range of situations. Their study may cover the kinds of organizations performing distributive functions; various marketing operations such as buying, selling, and pricing; and other related activities such as advertising, market research, and customer services. Some time may also be devoted to personality, grooming, work habits, and attitudes. Sales courses offered by many private business schools also typically emphasize the basic principles of salesmanship and personality development.

The in-service training offered by most department and other large stores consists of a combination of classroom instruction and on-the-job training. Classroom instruction, which varies in length in different stores, is usually presented by a training director or assistant. The time is spent largely in learning basic selling procedures, the types and characteristics of stock to be sold, and also store practices and rules. Subsequent training is generally given through direct assistance by the immediate supervisor. The total training time is usually of fairly short duration since it is concentrated mainly on sales work. However, sales experience is regarded as basic for many other occupations in the retail industry, and provides the foundation for more comprehensive in-service training for a great variety of specialized and executive positions.

When the public employment office in one State encountered continued shortages of trained and experienced sales personnel, the following short-term sales course was developed in cooperation with other community groups:

▶ In Arkansas, the Employment Security Division, the Department of Education, and the Retail Merchants Association have developed a sales course which may be given to a minimum of 10 trainees anywhere in the State. The instructor and classroom facilities are provided by the local school system. The course, which usually lasts 18 to 20 hours, is generally given in 2-hour sessions twice a week.

### **Florist Assistants**

Courses for florist assistants are offered by some public vocational schools and 2-year colleges. In the short courses which have been developed, students are usually taught how to care for flowers and plants in florist shops and greenhouses, how to make corsages, how to wait on customers, and how to make arrangements for delivering or telegraphing orders. The study of floriculture available in some 2-year colleges is, of course, more extensive and may include such subjects as nursery, landscaping, and plant protection technology. Graduates from these programs are qualified for positions as assistants in nurseries and greenhouses as well as florist shops and often plan to open their own shops.

An example of a course available at a public vocational school follows:

▶ Faced by a shortage of trained workers, the Florists Association in Little Rock, Ark., requested the Employment Security Division to help set up a course for florist assistants and agreed to furnish training supplies and pay for additional expenses. Classes, held in the vocational school, are scheduled five evenings a week for 2 hours each evening and extend over a 3-month period. The number of students is limited to 15.

### **Real Estate Agents**

Real estate agents or salesmen must be licensed to make real estate transactions in the District of Columbia and all States except Rhode Island and New Hampshire. Since the examination set by the licensing board in each State generally includes questions on pertinent State laws and regulations as well as basic real estate procedures, most prospective agents find it very helpful to take one or more courses in this field.

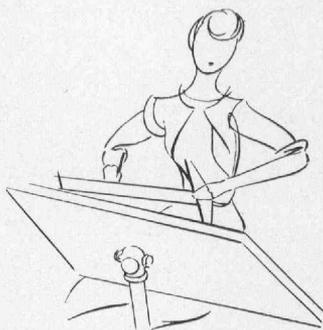
Real estate courses are frequently sponsored by local real estate boards, which are members of the National Association of Real Estate Boards, and taught by practicing real estate experts. Some private business schools, colleges, and universities also offer courses in real estate usually in the evening. Subject matter covered in most courses includes real estate appraisal, law, financing, principles, practices, and insurance.

Many women are finding real estate work to be both interesting and rewarding and are proving that women can be very successful

in this field. Their satisfactory job experiences are encouraging other interested women to obtain the necessary educational preparation for this type of work.

## **TECHNICIANS AND CRAFTSWOMEN**

Technical jobs, currently expanding at a fast rate in the scientific and engineering fields, merit special interest in terms of available training facilities. Although relatively few women have engaged in technical work in the past, the numerous new job opportunities, the growing interest in technical jobs on the part of more women and girls,



and the greater complexity of the Nation's defense needs—all combine to increase the significance of this field of training for women.

Technicians assist professional engineers and scientists in a wide variety of jobs. The kind of technical work now being done by women (excluding those in the medical and dental fields) is principally as industrial laboratory technicians, chemical aides, routine analysts, engineering assistants, and draftswomen. Technicians who work in the medical and dental fields are discussed in the section on Nursing and Health Services (pp. 41-47).

Craft workers, who traditionally learn their trade through a formal training program, include significant numbers of women in some fields. Foremost among these is cosmetology, where virtually all the workers are women. Although fewer women are employed at photography, commercial art, and bindery work, there are sufficient numbers to indicate women's interest.

### ***Industrial and Research Laboratory Technicians***

Technical education can be obtained primarily in technical institutes, junior and community colleges, public vocational schools, and some universities and colleges with a 2-year technical program. Offering a variety of courses in applied science, applied mathematics, and applied engineering, these schools place emphasis on laboratory and drafting work in order to familiarize students with techniques and equipment used in industry.

Technical high schools also offer a broad range of technical subjects and some public vocational schools and correspondence schools have such courses as drafting, mechanical drawing, and blueprint reading—

basic skills used in some types of technical jobs. In addition, since the nature of technical assignments varies widely among industries and establishments, some employers provide formal training in their own type of technical work.

- ▶ The industrial research and development center of a private company in Pennsylvania annually recruits about 15 high school graduates who have studied chemistry or physics to participate in a 2½-month training program. Instruction covers such subjects as general laboratory techniques, handling of equipment and precision instruments, principles of testing, and technical information about company processes and products. About one-fourth of the trainees to date have been women.

### **Engineering Assistants**

In order to assist professional engineers with calculations and related engineering duties of a subprofessional nature, interested persons may enroll in the same types of schools mentioned in connection with laboratory technicians, that is, technical institutes, junior and community colleges, some universities, area vocational schools, and technical high schools. Also, some employers have found it advantageous to set up a formal training program to teach persons with an aptitude for mathematics the elemental and repetitive calculations and duties previously performed by graduate engineers. The following programs illustrate training of this type:

- ▶ A utility company in Michigan has established an engineering-clerk program to which girl clerks are assigned when additional engineering assistance is needed. During the first 3 weeks, trainees become familiar with electrical terms, charts, maps, and records used by the engineers as well as a variety of voltage, circuit, and other computations. The amount of subsequent training, received largely through job performance, varies with each individual but generally requires at least 1 year before all the numerous tasks have been learned.
- ▶ A research and engineering company in New Jersey conducts a course for mathematics clerks as the need arises. The participants are women employees selected to assist professional engineers by doing standard mathematical calculations. Classes, held during working hours, are given several hours a week and generally total from 20 to 30 hours.

### **Draftswomen**

Instruction in drafting is available through a number of sources. Some public vocational or technical high schools, particularly in large industrial cities, offer one- or two-semester courses in mechanical or architectural drafting. These courses—plus others in such specialties as electrical or structural drafting—are given also by many technical institutes, junior and community colleges, universities, private trade schools, and correspondence schools. In addition, some employers have made arrangements for 3- or 4-year apprenticeships,

on-the-job training combined with part-time schooling, or formal in-service training programs.

▶ In the aircraft division of a large electrical company, a drafting training program has been arranged to extend over 2 years. Following "vestibule training" in a designated part of the office—where trainees learn the fundamentals of drafting—each trainee receives individual instruction and experience through typical on-the-job assignments. Supplementary classroom instruction on company time covers 60 hours of mathematics, 30 hours of physics, and 60 hours of factory processes and materials. A small number of women have benefited from this program for which trainees must be high school graduates and pass tests in verbal reasoning, numerical ability, and mechanical comprehension.

### **Photographers**

The majority of photographers learn their trade through several years of on-the-job training. However, photography courses are offered by some public vocational schools and private schools. Many of the latter are commercial art schools but some are special schools of photography. Although some photographers' assignments—such as carrying heavy equipment or working unusual hours for prolonged periods—are not attractive to women, there are numerous women employed as portrait photographers or in retouching or coloring work. Some studios employ photographer apprentices, who work and study for 3 years under a journeyman photographer, with pay which advances at regular and stated intervals. Not many women, however, participate in this type of program.

### **Commercial Artists**

Commercial artists typically receive their training in art schools or institutes which specialize in teaching commercial and applied art. Many others learn their trade through practical experience on the job.

Students who enroll in art schools are usually required to be high school graduates and frequently must submit work samples which show they have artistic ability. Courses of study in most art schools extend over 2 or 3 years, but some are longer. In the first year, art students usually study such fundamentals as perspective, design, color harmony, composition, and the use of various mediums such as crayon, pencil, pen, and ink. Among the more advanced courses they study are advertising layout, lettering, typography, illustration, drawing from life, and specialized courses of individual interest.

Some public vocational schools offer commercial art courses which are generally less extensive than the programs of private art schools.

### **Beauty Operators**

Over 1,000 private beauty culture schools and a large number of public vocational schools provide formal training to beauty opera-

tors—a numerically important service job giving employment to almost a quarter of a million women. As a license is required for employment as a beauty operator in all States except Delaware and Virginia, most women interested in this type of work seek formal training in cosmetology.

Applicants for a beauty operator license usually must be at least 16 or 18 years of age, have at least 8 or 10 years of formal schooling, complete an approved cosmetology course, and then pass a State examination in both the theory and practice of cosmetology. In half the States, apprenticeship training in a beauty shop—generally a 1- to 2-year program—qualifies an applicant to take an examination for licensure.

Most cosmetology courses consist of 1,000 to 1,500 hours of instruction and classroom practice. In private schools and adult education schools, the period of training most often takes 6 to 9 months. However, public trade schools generally incorporate the cosmetology courses into their 4-year curriculum leading to a vocational high school diploma. Public vocational school students who satisfy State board requirements in cosmetology may in some States obtain a license to practice while still attending school.

Cosmetology is one of the most popular courses offered by public vocational schools.



## Bindery Workers

Women who wish to learn how to perform the numerous hand and machine operations involved in binding a book, magazine, or pamphlet may do so by enrolling in a formal apprenticeship program. The only other way to learn this trade is through informal on-the-job training.

The work done by women bindery workers covers a diversity of binding operations as, for example, banding, tipping, stripping, interleaving, gumming, and the operation of punching, sewing, round cornering, stapling, and perforating machines. Some large employers therefore, prefer to train each bindery woman in only a few operations and, thereby, limit the training period to a few months or more.

In union shops, however, women apprentices receive all-round training in all phases of the work in accordance with a formally scheduled program. Classroom instruction and on-the-job training are combined throughout the apprenticeship period, which usually lasts 2 years.

## INDUSTRIAL WORK

Of the approximately 3 million women engaged in factory production work, large numbers are employed in the apparel, textile, electrical machinery, and transportation equipment industries. It is not surprising, therefore, that the majority of industrial training classes located during the study were found to be preparing women for production work in these industries.



Preemployment courses leading to industrial work are offered by some public vocational and trade schools. Generally, these industrial classes are established in response to local job needs and community interests. For example, courses in textile operations have been set up by some public vocational schools in New England and the South, and courses in airplane production and petroleum processing by some vocational schools in California.

Most private employers are motivated to establish formal training procedures for newly hired women production workers only in times of emergency. When this is nationwide, as during wartime, initial

training programs are established by many employers. But if the shortage of women workers exists just in certain jobs and certain localities, relatively small numbers of training programs of the type under study are conducted in private industry.

### *Needle Trades and Textiles*

Women's employment in apparel and textile establishments covers a large number of occupations but centers around sewing-machine operators in apparel shops and spinners and weavers in textile plants. Although many women learn these operations informally on the job, formal training procedures have long been developed for these trades. Courses leading to employment in all three occupations are offered in some public schools.

Among all trades and industrial classes in public vocational schools throughout the country, the largest enrollment of women—about 24,000 in 1958-59—was in classes for dressmakers and sewing-machine operators. In the case of many publicly operated courses for sewing-machine operators, the initial request came from a community group outside the school, such as a union, an employer's association, or the public employment office. Following are descriptions of several community training projects operated under joint sponsorship.

▶ In Philadelphia, a 4- to 6-week course for sewing-machine operators was jointly established in 1954. Initial cost of the sewing machines used in training was shared by the union and employer associations. Instruction and classroom facilities are provided by the public school system. Testing and selection of applicants are done by the public employment service, which also works with the union and employers in the final placement of graduates. The course is offered continuously except when the school is closed in summer. It is estimated that 75 percent of the women entering the course stay to finish and that 90 percent of the graduates are placed in jobs.

▶ A shortage of sewing-machine operators in Denver in 1951 prompted local employers to ask the adult education school to reinstate a course given during World War II. The school agreed to provide instruction and classroom facilities. The employers offered to lend the school modern sewing machines and also to make arrangements for publicizing the course. In classes held daily for 6 to 8 weeks, trainees are allowed to progress at their own individual pace.

▶ When a shortage of sewing-machine operators persisted in Troy, N.Y., the public employment office developed a training course in 1956 in cooperation with the board of education, the chamber of commerce, local garment manufacturers, and garment unions. A local businessman (engaged in repairing and selling sewing machines) offered the necessary space and equipment and agreed to be course instructor. Applicants were referred to the course by the employment service and the local school. A total of 170 women received training on 2 evenings a week for 10 weeks—until the

course was discontinued in the fall of 1958 because of a lack of interested trainees. Since the demand for operators continues, the course may be resumed in the future.

In addition to the industrial classes for weavers and spinners available in a few public vocational schools, private employers upon occasion also offer formal training for this work, as shown in the following example:

- ▶ A textile manufacturer in the South maintains a weaver learners school at which attendance is free to the public. The school has facilities for about 14 to 16 weaver learners at a time, and instruction is given continuously throughout the year on an individual basis. After 3 weeks (120 hours) of instruction and practice, women and men with suitable aptitudes and skills are hired by the textile manufacturer. It is estimated that women comprise 16 percent of the trainees and that 90 percent of them finish their training and are offered jobs.

### ***Electronic and Electrical Equipment***

With more women employees than any other industry manufacturing durable goods, the electronics and electrical equipment industry frequently offers formal training to its inexperienced women workers. This is particularly true when large numbers of women are hired for production-line operations. However, many electrical companies report that when sufficient numbers of experienced employees are on hand, they need to hire only occasionally a few women without experience. These women are usually given individual on-the-job instruction of short duration in simple operations such as assembling small parts, wiring, soldering, testing, inspecting, or operating light machines.

Following are reports of a few programs offering a formal period of instruction for production-line work on electrical equipment.

- ▶ At one Ohio plant of a large electronics company, a 3-day program of vestibule training in assembly skills is given to groups of 25 women. A full-time training instructor demonstrates the proper methods of crimping and soldering and then lets the women practice on a moving belt in a special part of the plant. During 1959, about 225 women were formally trained in the vestibule school.
- ▶ The radio division of an eastern aviation company has established a 3-day training program which is utilized when necessary to teach women how to wire and solder. Groups of 10 to 30 women, who receive instruction in a special training area of the plant, are paid the regular wage for beginning assemblers and wiremen.
- ▶ In 1957, a Baltimore local of the International Brotherhood of Electrical Workers, AFL-CIO, presented a 10-week course to 2 groups of union members employed at the local plant of a large manufacturer of electrical equipment. Each group of 40 men and women attended class 2 hours a week and received information about wiring and assembly manufacturing methods and pro-

cedures. After passing a comprehensive final examination, 50 members—including 33 women—received certificates of graduation.

▶ The electrical equipment division of an automobile firm in Michigan conducts a basic inspection course for bench inspectors as needed. From 10 to 20 women employees meet for 9 sessions of 1½ hours each to learn about instruments used in precision measurements, plant engineering processes, basic arithmetic calculations, and inspection procedures.

▶ With the movement of electronics-assembly plants into the Denver area, the adult education school in that city arranged a 60-hour course to train production-line workers in cabling, wiring, and soldering techniques. When the course was conducted in 1959, over 60 women took it and were placed in jobs. As hiring for this type of work then became slow, the course was not offered the next year but can be reinstated when needed.

### ***Airplane Manufacturing***

While on-the-job training prevails extensively in airplane manufacturing companies as elsewhere in industry, probably a greater number of formal in-plant training programs are conducted in this industry than any other. The rapid expansion which took place in the aircraft manufacturing industry in the past decade created a widespread demand for new workers—largely in jobs with special skill requirements. As few experienced workers were available, airplane manufacturers established their own training facilities—frequently on a formal basis. While many of their training programs were opened to both men and women, the numbers of women trainees have been highest in courses covering subassembly work, riveting, wiring, sealing, and inspecting.

Formal courses in airplane production work are offered by some public vocational schools—principally in areas where there are numerous aircraft plants—as well as by many aircraft manufacturers themselves. However, as the amount of initial training offered by employers varies with their number of new hires, there is relatively little training of this type during periods when numerous aircraft workers are on layoff status and most hiring is actually rehiring.

Descriptions of a few programs reported by airplane manufacturers illustrate the kind of training available to women workers in this industry:

▶ For the past 8 years, an aircraft manufacturer in California has offered a 2-week (80 hours) course for electronic assemblers. Entrance tests are given for finger dexterity and general ability. Women who pass receive a combination of classroom instruction and practice at special assembly stations set aside for the training school. Basic assembly skills taught include the use of tools, mechanical assembly, wire preparation, wrapping of wires and component leads, soldering, and harness assembly.

▶ Another major aircraft plant on the west coast offers employees a broad range of formal training courses. Those providing women with at least 80 hours' instruction include courses for electronics assemblers, aircraft sealers,

riveters, and inspectors. Although the number of women trained in 1959 was small compared with some previous years, each course is utilized whenever necessary.

- ▶ A Maryland aircraft manufacturer has women trainees in many of the formal courses offered on company time. Of particular interest to women are the 80-hour course in tank sealing and the 160-hour course in manufacturing inspection.
- ▶ A Connecticut aircraft corporation enrolled women employees in an aircraft electrical wiring course offered in 1958. Instruction, which covered fundamentals of electricity, soldering, wiring, and assembly work, was given during 1½-hour sessions once a week for 12 weeks. The course will be offered again if necessary.
- ▶ An aviation company in New York State reported that during a recent 4-month period it trained 80 women workers in a special course on soldering miniature aircraft connectors. Work techniques included the use of conventional soldering irons and soldering through induction heating.



A company instructor shows trainees how to assemble an electrical wiring panel for an airplane.

## NURSING AND HEALTH SERVICES



With the current shortages of health workers, women and girls interested in nursing and health services are being offered many opportunities to prepare for the numerous occupations in this field. Traditionally attractive to women, nursing and health occupations are now estimated to provide jobs for over a million women workers. The strong

demand for additional workers is expected to continue with our population growth and with the widespread public interest in good health and the prevention of illness.

Formal training is well-established for such health workers as registered nurses, dental hygienists, and X-ray technicians but is fairly new for practical nurses and not very widely developed for medical laboratory workers or medical and dental assistants. Most nursing aides and other auxiliary nursing workers still receive their training on the job in an informal manner. Nevertheless, developments in the past few decades indicate that the trend in the health field is toward more formalized training and the requirement of a license for employment in many occupations.

### *Professional Nurses*

Those wishing to practice professional nursing within a State must obtain a State nursing license. In order to be licensed, a nurse must have graduated from a school approved by the State board of nursing and must pass a State board examination.

Some colleges and universities have nursing programs which require 4 years of study and lead to a baccalaureate degree. This type of program prepares nurses for administration, supervision, teaching, and for public health work, as well as for bedside nursing. Since the period of formal education is longer and on a higher academic level than the other training covered by this study, the baccalaureate-degree program is not discussed further in this report.

Most nursing schools are operated by hospitals. These schools offer a 3-year training program and grant a diploma at graduation.<sup>2</sup>

<sup>2</sup>Names and addresses of the more than 1,000 State-approved schools of professional nursing may be obtained from the Committee on Careers, National League for Nursing, 10 Columbus Circle, New York 19, N.Y.

Another and newer way to prepare for professional nursing is to enroll in an associate-degree nursing program offered by some junior and community colleges and lasting approximately 2 years. Along with general education subjects, these shorter programs have consolidated nursing courses and have a minimum of repetitive nursing practice.

All nursing schools require applicants to be high school graduates and some specify courses in high school science and mathematics. Usually the minimum age for entrance is 17 years and the maximum is 35 years, but the latter is sometimes waived.

Nursing preparation offered both by hospital schools and 2-year colleges includes classroom study and actual nursing practice. In the classroom sessions, usually held during the first few months of training, nursing students learn the fundamentals of such subjects as anatomy, physiology, microbiology, nutrition, psychology, and basic nursing care. During the subsequent period of practice training, students are assigned to various hospital services to learn how to take care of different types of patients.

Training costs are generally moderate for nursing students. In many hospital schools, the nursing services performed during practice training compensate for part of the training costs. At junior and community colleges maintained by public taxes, tuition fees are usually nominal.

#### ***Refresher Training for Graduate Nurses***

When graduate nurses return to active practice after not working at their profession for several years, they generally find it necessary to refresh their skills and to be brought up to date regarding new drugs and current nursing practices. Many hospitals retrain these nurses informally on the job. Others, however, consider this procedure hard both on their busy staff and on incoming nurses and prefer to set up a formal refresher course.

▶ At one Maryland hospital, a nurse refresher course has been offered to the public since 1954. Tuition is free; students must be graduate nurses. Five classes are offered a year, with a maximum of eight students per class. Training is given 6 hours a day on 3 days a week for 6 weeks. Lunch and laundering of uniforms are provided without charge. Students are not required to work at the hospital upon completion of the course but are expected to return to nursing.

Some universities and colleges have included a refresher course for graduate nurses in their curriculum. Illustrative of these are the following:

▶ The University of Washington in Seattle has offered a refresher course in nursing twice a year since 1957. Lasting for 4 weeks, the course is given 3

days a week and consists of 2 hours of classroom work and 4 hours of practice work per day. Practice work is performed at one of six cooperating hospitals in the area. From 15 to 20 women are enrolled in each class. The course, which has a \$15 fee, is open to graduate nurses eligible for licensure in the State of Washington.

▶ The East Los Angeles Junior College offers a refresher course on Current Trends and Practices in Nursing in cooperation with the Los Angeles County General Hospital. The course is given 10 hours a week for 18 weeks. The first 3 weeks consist of classroom study; the next 6 weeks, of lectures and demonstrations; and the last 9 weeks, of practice in bedside care. Open to registered nurses, the course has a \$6.50 registration fee.

### **Practical Nurses**

To obtain a job as a practical nurse today, it is usually necessary to have completed a formal course in practical nursing. This requirement, developed largely in the last few decades, is a definite improvement over the informal instruction previously received by practical nurses, as they are now prepared for a wide variety of nursing services.

Of approximately 580 practical nurse training programs currently accredited by State boards of nursing, over half are operated by public-school systems, usually as part of a vocational school or adult education program. Most of the remaining courses in practical nursing are under the auspices of hospitals, health agencies, junior colleges and universities, or community organizations.<sup>3</sup> At those private schools which charge a tuition fee, the amount is usually about \$50 to \$100 a year.

Applicants to practical nursing courses are generally required to have completed at least 2 years of high school or the equivalent if they are under 25 years of age or to have graduated from grammar school if they are 25 years of age or over. Those between the ages of 18 and 50 years are usually preferred.

Most practical nursing courses are 1 year in duration but training periods range from 9 to 18 months. Training includes both classroom study of basic skills and supervised practice in applying these skills in a hospital. After completing a training program approved by a State board of nursing and passing a State examination, practical nurses may obtain a State license. At present, every State and the District of Columbia provides for the licensing of practical nurses.

Although persons employed as nurse aides are generally given informal on-the-job training, some courses have been developed for this group of workers. A description of one formal training program for nurse aides follows:

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<sup>3</sup> Information about State-approved practical nursing courses is available from the Committee on Careers, National League for Nursing, 10 Columbus Circle, New York 19, N.Y.

▶ The Welfare Rehabilitation Service of the Cook County (Ill.) Department of Welfare has developed several programs to prepare for employment persons who are receiving public assistance. Requirements for those enrolled in the Hospital Training Program are that they be between 18 and 50 years of age, in good health, have some high school education, and pass an aptitude test. The first week of the 4-week course is an orientation period with discussions of job duties, attitudes, and ethics. During the second week, students take the regular Red Cross course for nurse aides and hospital attendants. The last 2 weeks are spent in a cooperating hospital or health agency working under close supervision. On the average, 15 nurse aids are trained every 6 weeks.

### ***Medical and Dental Assistants***

In order to teach the skills and related information needed by assistants in doctors' or dentists' offices and in laboratories or other departments of hospitals, some schools and employers are now establishing formal training courses or programs. Not long ago, virtually all training for this type of work was gained through job experience. Now, courses for medical assistants and dental assistants have been added to the curriculum of a number of public vocational schools, junior colleges, and university dental schools. Indicative of the demand for trained health assistants is the fact that at least one public vocational school is now planning a program to train assistants for occupational therapists.

To help increase the supply of trained dental assistants, the Committee on Education of the American Dental Assistants Association has developed an extension study course which can be given by its local chapters with dentists acting as instructors. The course, planned for 2-hour sessions to be held once or twice a week, covers a minimum of 104 hours. Study course outlines and an instructor's bulletin have been prepared by the Association and cover such subjects as laboratory and chair assistance, patient education, dental anatomy and physiology, office management, and recordkeeping.<sup>4</sup>

As the demand for trained health workers continues to grow, additional new programs are expected to be organized in the future. Examples of two current programs for health assistants follow:

▶ In Springfield, Mass., a medical-assistants course given by the public trade school since 1949 was recently expanded with the cooperation of a private hospital to become a "hospital-externship program." In the 1-year post-high school course, the first 5 months are spent in classwork at the trade school, studying medical techniques plus such courses as anatomy, chemistry,

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<sup>4</sup> Information about the extension study courses as well as about approved 1- and 2-year courses can be obtained from the American Dental Assistants Association at 410 First National Bank Building, La Porte, Ind.

nutrition, medical terminology, and office procedures. During the remaining time, the class (maximum of 25 girls) divides in half and alternates 2 weeks of hospital practice work with 2 weeks of classroom study. The nurse instructor employed by the trade school also coordinates and supervises hospital assignments.

▶ At the request of the local dental society, the vocational adult evening school in Fort Wayne, Ind., 2 years ago established a course for dental assistants. Open to all high school graduates, the course begins in September and is held for 2 hours an evening twice a week during the school year (36 weeks). Instruction is divided among three local dentists and a dental assistant. The \$75 registration fee covers textbooks and supplementary materials.

### ***Dental Hygienists***

Graduation from a dental hygiene school is required before taking a licensing examination in all of the States except two (Alabama and Georgia). A license to practice as a dental hygienist is needed in each State.

Training is available in 34 schools accredited by the Council on Dental Education of the American Dental Association.<sup>5</sup> Of these schools, 25 are associated with dental programs of universities and the other 9 are affiliated with institutes, colleges, or universities which do not have a dental school.

Women only are admitted to accredited schools of dental hygiene. They must be high school graduates and must usually have studied certain subjects, such as mathematics, biology, and chemistry. Age requirements for entry are flexible but usually range from a minimum of 17 to 21 years to a maximum of about 35 years.

Most dental hygiene schools offer a 2-year course leading to a diploma or certificate. About a third of the schools have a 4-year program, from which graduates receive a bachelor's degree with a major in dental hygiene. Tuition fees and other school costs (excluding living costs) were recently estimated to average about \$1,200 for a 2-year course. To help pay these fees, a number of scholarships and loans are available from schools, Government, and private organizations.

### ***Medical Laboratory Workers***

Many technical institutes, junior colleges, and universities offer the kinds of technical courses needed by those who perform many tests, blood counts, and related tasks in assisting medical scientists, technologists, and physicians in their work. Examples of such technical

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<sup>5</sup> Names of the schools may be obtained from their office at 222 East Superior St., Chicago 11, Ill.

subjects are biochemistry, bacteriology, hematology (blood analysis), histologic technic (tissue preparation), urinalysis, and basal metabolism. Usually medical laboratory work requires at least 1 or 2 years of technical training in addition to the completion of a high school education.

Job duties and training requirements are changing in the field of medical laboratory work. At the present time, a registered medical technologist is required to have 2 years of approved college courses and 1 year in an accredited school of medical technology. Beginning in January 1962, the period of college study will be raised to 3 years. In cancer detection work, requirements for the certificate in Exfoliative Cytology (offered by the American Society of Clinical Pathologists) were recently raised to 2 years of college work, including a specified number of courses in biology and chemistry, plus 6 months of study in cytology and 6 months of specialized training in an approved laboratory.

Advances in medical knowledge and practice are increasing the use of laboratory tests in the diagnosis and treatment of disease. The resulting demand for trained laboratory workers is increasing the need for additional training facilities and programs. In addition to the types of schools previously mentioned, some training programs for medical laboratory assistants and technicians have been established in private industry and government. Illustrative of these is the following:

- ▶ In the Maryland State Department of Health, the Bureau of Laboratories conducts an in-service training program for new technical employees. The length of training varies with each employee's previous training and experience but averages about 3 months for some bacteriological and chemical assistants and from 6 to 8 months for others in higher skilled jobs. About half the technical staff are women.

### **X-Ray Technicians**

Training programs for X-ray technicians are offered by more than 600 medical and hospital schools approved by the Council on Medical Education and Hospitals of the American Medical Association.<sup>6</sup> These schools combine classroom instruction and practical experience under qualified radiological and technical supervision.

To enter any of the approved schools, students must be at least a high school graduate. In a few schools, as much as 2 years of college training or registered nurse status is required as a prerequisite. Applicants must generally be between 18 and 35 years of age.

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<sup>6</sup>Information about approved schools may be obtained from the above council at 535 North Dearborn St., Chicago 10, Ill., or from the American Society of X-Ray Technicians, 16 Fourteenth St., Fond du Lac, Wis.

The majority of approved courses in X-ray technology last 2 years; others vary from 1-year courses to 4-year degree-granting programs. Very recently, the requirements for taking the examination prior to becoming a registered X-ray technician were changed. Now the 2 years of training and experience required must all be under the direction of a professional radiologist, and no credit will be given for experience under a nonradiologist.

Most approved hospital schools do not have a tuition fee but rather provide a stipend to students for services performed during their period of practice training. Schools which do charge tuition usually set modest fees ranging up to \$150 for the complete program. However, college-affiliated schools granting degrees generally require the payment of regular tuition fees.

## HOUSEKEEPING AND FOOD SERVICES

In the industries which provide housekeeping and food services to the public, large numbers of women are employed in a wide range of occupations and skill levels. Some of these occupations, such as institutional housekeeping and commercial cooking, require a considerable amount of skill, responsibility, and, consequently, training. On the other hand, jobs such as hotel maid and kitchen helper are at the lower end of the skill range and do not require extensive training.



In the past, training received by almost all housekeeping and food-service workers has, with few exceptions, consisted of informal instruction or experience on the job. The value of preemployment training is now becoming fairly well recognized in the case of those occupations requiring a considerable amount of skill. Many other service jobs, however, also have skills which can be advantageously developed by formalized instruction.

As the public-housekeeping and food-service industries continue to expand, the desirability of having a well-trained work force is being realized more keenly. To help provide the trained workers needed, numerous schools, employer associations, employers, and community organizations are being stimulated to set up formal training programs for such positions as institutional housekeeper, hotel maid, waitress, food-trades worker, and commercial cook.

## *Institutional Housekeepers*

Although there are still limited numbers of training facilities available to prepare women to become institutional housekeepers, more are expected along with increasing public awareness that this field offers women, particularly mature women, an interesting and rewarding career. The scope of duties and level of responsibility required of an institutional housekeeper are reflected in the subject matter covered in most training programs. Courses usually provide instruction in housekeeping procedures, bulk purchases, budgeting, interior decorating, the use and care of equipment and fabrics, sanitation, employee training, and supervision. As hospital housekeepers are given responsibilities for many of the housekeeping duties formerly handled by nurses, there is additional realization of the importance of this type of work and the need for more training facilities.

Comprehensive programs in institutional housekeeping and household management are offered by some 2-year colleges and private schools. Graduates of these programs are usually qualified for such fairly responsible positions as assistant housekeepers or managers of institutions or residences.

Some public school systems also have courses in institutional housekeeping. Many of these courses are fairly short and are presented largely to stimulate interest in this field of employment and to acquaint students with the various types of work assignments and skills required. Women who complete these courses often become linen-room attendants or motel operators. A few have been selected for a housekeeping internship in a hospital or hotel.

Examples of some preemployment programs and courses in institutional housekeeping follow:

- ▶ In Washington, D.C., the Hannah Harrison School, a privately endowed organization administered by the local Y.W.C.A., has offered a course in institutional housekeeping every September since the school opened in 1950. Designed to prepare students for professional housekeeping positions, the program lasts 9 months and includes 1 month of internship in a local hospital. The school does not charge for tuition, room, or board. Women between the ages of 25 and 55 who have at least 2 years of high school education or its equivalent are qualified to take the entrance tests.
- ▶ At the Emily Griffith Opportunity School in Denver, special facilities equipped with furniture, fixtures, and supplies associated with hotel and hospital cleaning have been provided for courses taught by executives of local hotels and hospitals. A short course, called Basic Housekeeping, is given for 8 weeks in 2-hour sessions one evening a week and provides instruction and practice in the techniques of institutional housecleaning. Only those considered qualified to train for executive housekeeping positions in hotels or hospitals are admitted to the Executive Housekeeping course, which is held 2 hours an evening twice weekly and lasts two semesters. A third course

in Office Management and Front Office Training is open to those interested in hotel work.

▶ A private trade school in Washington, D.C., offers a 4-month course in hotel training. Courses, divided into three parts, cover "front of house," "back of house," and "management and executive work." The \$350 tuition fee includes instruction, textbooks, demonstration materials, and placement service. Many women graduates obtain employment as hotel housekeepers or front-office clerks.

Upon occasion, experienced housekeepers are instrumental in setting up courses in public housekeeping. As these courses are usually quite short, they also emphasize primarily the scope and variety of interesting positions in the housekeeping field. Illustrative of these courses are the following:

▶ The local Altrusa Club in Lansing, Mich., cooperates with the board of education in conducting a course for executive housekeepers. Classes meet for 3 hours once a week in the high school and at various area institutions. The class coordinator, a member of the local club, is also the executive housekeeper at the State university.

▶ The Department of Agriculture Graduate School in the District of Columbia has an evening course in institutional housekeeping. The 2-hour classes are held once a week for 16 weeks. Basic information in hotel and hospital housekeeping is provided by two members of the National Executive Housekeepers' Association.

Internships in housekeeping positions have been established in several hotels and hospitals around the country. A fairly new intern program for housekeeping and executive management positions is sponsored by the Statler Foundation. A financial award of \$1,000 is provided for an internship in a cooperating hotel to a girl or boy graduating from each of certain approved vocational high schools. Those eligible must have studied home economics, business management, and other courses of value to the hotel industry.<sup>7</sup> An example of a hospital internship in housekeeping work follows:

▶ In Paterson, N.J., a course in hospital housekeeping is sponsored by the local board of education and the Passaic County Hospital Administrators Association. During the first semester (17 weeks), 2-hour classes are held 2 nights a week. Following this, a student spends full time for 6 months as a housekeeping intern in an approved hospital at a salary. There is a \$5 registration fee for the course. Although preference is given to local residents, all high school graduates at least 25 years of age are eligible to apply for training.

Indicative of the rising interest in formalized training for institutional housekeeping are courses now being offered by some colleges and universities. In some cases, these are short courses given primarily for persons already in the field. But a few universities, such as the Uni-

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<sup>7</sup> Information about the intern program may be obtained from the American Hotel Association, 221 West 57th St., New York 19, N.Y.

versity of Washington, now grant a bachelor's degree with a major in institutional housekeeping.

### **Hotel Maids and Other Workers**

Public vocational schools in or near resort areas with recurring demand for large numbers of hotel workers are most likely to offer special courses in hotel work. These courses may provide training for such jobs as hotel maid, linen-room attendant, houseman, switchboard operator, front-office clerk, or operator of hotel posting and auditing machines.

- ▶ In Miami, Fla., the Lindsey Hopkins Vocational School operates a hotel in conjunction with the school for training purposes. Instruction includes both classroom work and actual practice. Courses last 4 weeks each for hotel maids and linen-room attendants and 8 weeks for women front-office clerks. In addition to nominal materials fees and a \$2 registration fee required of all, nonresidents must pay a \$50 State tuition fee.

Training provided by a private trade school in Washington, D.C., as described under institutional housekeeping, is similar for all students, whether interested in hotel housekeeping or other types of hotel work.

### **Waitresses**

The largest service occupation for women outside of private households is that of waitress. Most of the estimated 750,000 waitresses have received their instruction on the job but some have participated in the fairly new training courses being offered in various parts of the country. Particularly noteworthy is the fact that for many of these courses extensive training manuals are being developed and are available to others interested in developing waitress-training programs.

Waitress training is usually provided through instruction, demonstration, and practice. The duties and subject matter covered include setting up tables, studying menu items, taking orders, writing checks, making change, stacking trays, giving attention to appearance, and establishing good customer relations.

A few public vocational schools have developed courses for waitresses, usually because of a local shortage of trained workers. Description of a situation of this type follows:

- ▶ In Denver, courses in waitress, cashier, and hostess training were developed at the adult-education school in response to requests from restaurant owners. The women trainees all receive 8 weeks of waitress training and those who wish may also enroll for 4 weeks of cashier training and 4 weeks of hostess training. Classes are held for 5 hours a day, 5 days a week. Each day, for 1 hour, there is lecture and discussion, and then for 4 hours practice training in the school dining room, serving lunch to faculty and students. Course applicants must be at least 16 years old and must have a personal interview to determine their suitability.

In a few States, the department of education cooperates with the restaurant association to provide a Statewide program of waitress training. Mostly, these are "extension" training programs for employees already in the occupation. An example of preemployment training offered by a State restaurant association follows:

▶ In Boston, two separate classes are started each February for college and high school girls planning to wait on tables during the summer. Each class, with a maximum of 35 girls, is held 1 evening (1½ hours) a week for 10 weeks. The cost of the course is \$10 and includes assistance in writing to resort employers for jobs. The Massachusetts Restaurant Association has sole responsibility for the program, which was originally started with the Massachusetts Department of Education. The Association is hoping to set up a course in Springfield in the future.

A combined training program for waitresses, hostesses, and cashiers is jointly sponsored in Washington, D.C.

▶ The Washington Restaurant Association and the Board of Education conduct a training course which has been offered continuously since 1940. About 9 to 10 free courses, held both in the morning and the evening, are conducted each year. Trainees attend for 2 hours a day, 5 days a week, during a 4-week period. The training consists of 2 weeks of instruction related to waiting on tables; 1 week, to hostessing; and 1 week, to cashiering. The Association selects the trainees, tries to find jobs for them, and also provides the training facilities; the Board of Education develops the course of study and pays the instructor's salary.

Waitress training provided by individual restaurant or hotel employers is generally on-the-job training. In some instances, however, a large establishment may conduct a formal program, such as the following:

▶ A company which operates restaurants in several large cities has a 2-week training program for all newly hired waitresses. During the first week, trainees receive classroom instruction and assist in clearing tables. The second week includes class work plus waitress service for two small tables.

### **Food-trades Workers**

The term "food-trades workers," as used primarily by vocational educators, refers to workers engaged in food preparation and service. Women trained as food-trades workers are the fourth largest group in trade and industrial classes of public vocational schools in the country. Many of these schools, as well as some junior colleges and private technical institutes, have a well-rounded program of food-trades instruction lasting 2 years.<sup>8</sup>

<sup>8</sup> Names of public and private trade schools offering training in the quantity food field may be obtained from the National Council on Hotel and Restaurant Education, 777 14th St. NW., Washington 5, D.C.



Students in food-service courses learn serving duties and procedures for cafeteria work.

Classes in food preparation generally cover large scale preparation and cooking of a variety of foods, such as soups, meats, poultry, fish, vegetables, salads, breads, pastries, and desserts. Also studied are the arrangement and care of equipment in commercial or institutional kitchens, serving rooms, and dining rooms. In addition, trainees learn standard serving practices as well as such related subjects as business procedures, arithmetic, and ethics. Usually a major portion of the training for food-trades workers is spent in practice work.

Vocational schools are required to work closely with a local advisory committee of labor and management representatives from the food service industry to assure that the training provided is useful for local employment. Illustrative of a public vocational course in food trades is the following :

- ▶ A three-semester program of study in Food Preparation and Service is open to boys and girls at the Central Dauphin High School in Harrisburg, Pa. The Restaurant and Cafeteria Course, which lasts 2 semesters, provides 405 hours of instruction in preparing basic foods sold in restaurants and cafeterias and includes information on equipment, labor laws, and business practices. The 1-semester Soda and Luncheonette Course includes 202 hours in the study and preparation of such soda fountain items as beverages, sandwiches, salads, and desserts.

Food-service courses are offered upon occasion by other groups such as a public welfare department, as described below :

- ▶ As part of its training program for public-assistance recipients, the Cook County (Ill.) Department of Welfare conducts a 4-week Food Service Pro-

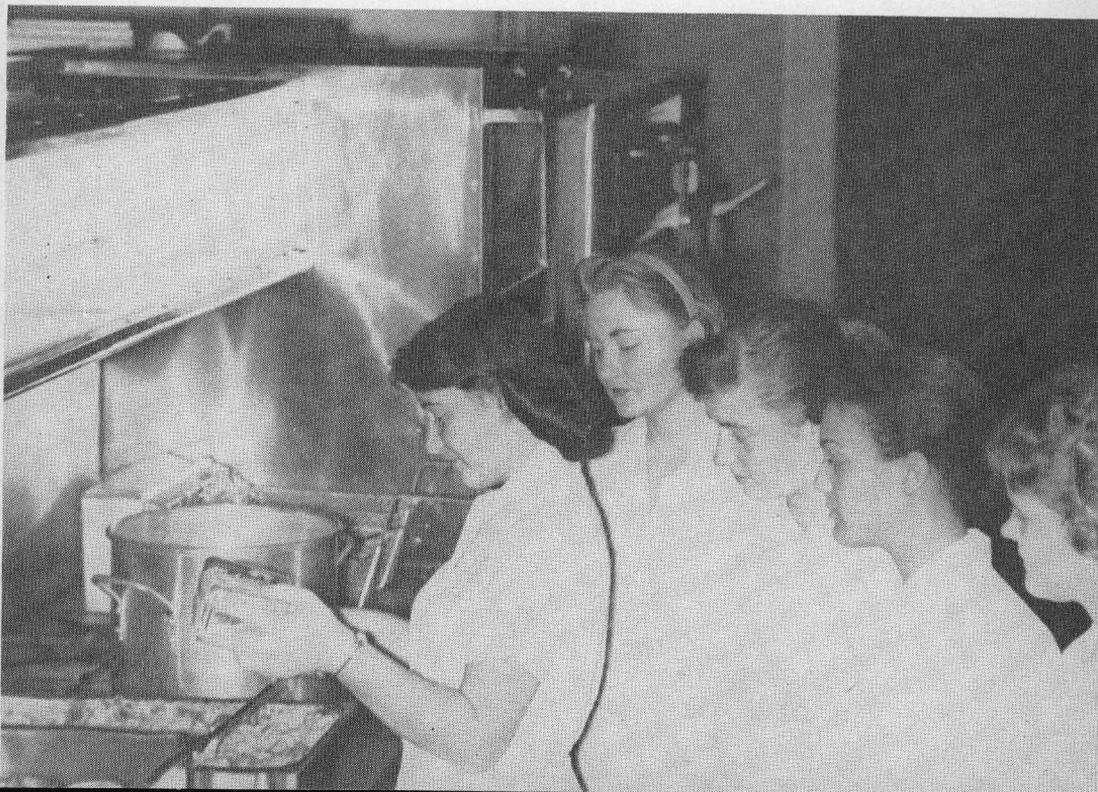
gram. Men and women between the ages of 18 and 50 and in good health are trained for work as general helpers in cafeterias and restaurants. During the first week of training, they are oriented regarding job duties, attitudes, and ethics. The second week they receive training from a cafeteria manager in such duties as preparing salads and simple desserts, cleaning vegetables, and serving from steam tables. The remaining time is spent on the job working under close supervision in a cooperating cafeteria.

### **Commercial Cooks**

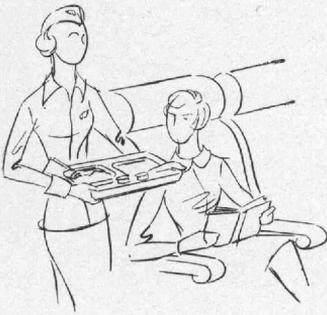
Numerous public vocational schools offer courses in commercial cooking. Both girls and boys are enrolled in these courses. A few private trade schools also provide training for commercial cooks, usually lasting from 1 to 2 years. In addition, some food-service employers and employer associations have developed formal training for cooks. A report on one association program follows:

- ▶ The Massachusetts Restaurant Association, in response to local requests, has conducted evening courses in basic commercial cooking in Boston, Worcester, and Springfield. The 10-week demonstration course is held 1 night a week for 2½ hours. The students are principally men and women employees of member companies, but outsiders are also admitted. A 30-hour advanced course in commercial baking and cooking has also been given in Boston and is expected to be held elsewhere in the State.

Students learn the fundamentals of quantity food preparation.



## MISCELLANEOUS SERVICES



In addition to health, public-housekeeping, and food-service activities, there are many other service occupations in which women are employed. These include such occupations as airline stewardess, nursery assistant, home companion, private-household worker, and cleaner and presser. Altogether in service occupations, there are approximately 5 million women, of

whom 3 million are employed outside private households.

Only a relatively small number of women service workers—aside from those mentioned in previous sections—typically receive formalized training to prepare them for paid employment. The major exception among service workers not discussed earlier is the airline stewardess. For other miscellaneous service occupations, a few courses and programs are offered by some schools, public agencies, and women's organizations.

### Stewardesses

Formal training is required of all girls who wish to become airline stewardesses. Most large airlines operate a central training school, which is free to those who satisfy fairly strict specifications and are selected for employment. These specifications generally require that applicants for stewardess positions be attractive, poised, and resourceful; 20 to 27 years of age; unmarried; and at least a high school graduate. Some airlines also require 2 years of college study or equivalent business experience and, in the case of those lines flying outside the country, fluency in an appropriate foreign language.

Training time in the stewardess schools operated by airline companies typically lasts from 3 to 5½ weeks. Students receive not only free training but usually free transportation to and from the school, room, board, and a small expense allowance. Subjects studied at the training center cover airline operations, flight duties, aircraft service equipment, geography, customer relations, and good grooming. Practice work is carried on in classrooms which resemble airplane cabins and galleys, as well as in practice flights taken near the end of the training period. Illustrative of the type of training offered by private airlines is the following:

▶ One large airline maintains its own Stewardess College, which continually has three overlapping classes of no more than 50 trainees each. The company pays all of the trainees' expenses: tuition, room, meals, and transportation. Training, which covers all the basic information needed by stewardesses, lasts 5½ weeks. Requirements for applicants are: single, 20 to 26 years old, height between 5 feet 3 inches and 5 feet 8 inches, weight in proportion to height with 135 pounds maximum, 20/50 vision or better without glasses, a high school graduate, in good health, and attractive.

Several private schools specialize in offering training to stewardesses and other airline personnel. The tuition fees of these schools approximate \$225 to \$300 and include the cost of training materials and field trips. Day courses usually last 6 to 8 weeks, and night courses 12 to 30 weeks. Instruction generally covers the same subject matter provided in company-operated schools.

Private schools cannot guarantee employment after graduation but do assist students in obtaining interviews with airlines. Although most private schools have entrance requirements for stewardesses which resemble those set by airlines, it is important that prospective students check airline requirements for themselves before enrolling in a private school.

#### **Homemakers or Companions**

Training courses are offered in some localities to mature women who are interested in assisting families in which there is a working mother, a widower, or an invalid who does not require the services of a practical nurse. Sometimes, homemakers visit several families a few hours each day; often arrangements are made for home companions to reside with the family who employs them.

A few local school systems include a course for home companions or home managers in their curriculum. In some areas, the course is sponsored by several community organizations. Interest in this type of training is often stimulated by the local chapter of a women's organization or the public employment office—as a service both to mature women seeking employment and to families in need of trained assistance.

Following is an example of community training courses in home-maker service:

▶ To prepare mature women as homemakers in families disrupted by illness, a 20-hour course was given by the Visiting Nurse Association of Peoria, Ill., in 1956 and may be resumed in the fall of 1960. Classes were held in various community buildings and addressed by several types of professional workers, including a nutritionist, home economist, social worker, public health nurse, and physician. In a series of 10 sessions, each lasting 2 hours, community homemakers, as nonnursing members of a home-care team, were instructed

about such duties as routine light housekeeping, planning and preparing balanced meals, marketing, reading to the patient, and writing letters.

Another community course, tailored to help older workers without specialized skills or training, is described below:

- ▶ A home companion course was established in Arkansas in 1957 through the combined efforts of the Business and Professional Women's Club, the Employment Security Division, the State department of education, and the Chamber of Commerce. The 20-hour course can be given in any town and at any time that a minimum of 10 students are available. A home economics teacher from the public school system coordinates the course, inviting guest speakers and arranging for some classes to meet at local institutions. Training is given in such duties as preparing formulas and diets, arranging meal trays, making beds, and reading stories to children.



A student nursery assistant learns how to arrange a program of activities for young children.

## **Nursery Assistants**

Courses to prepare girls for work as nursery assistants in public and private day nurseries, children's homes, and other child-service centers are offered by some public high or trade schools and 2-year colleges. Classroom study covers such subjects as child care, child psychology, family and social relationships, nutrition, and children's literature. These courses are supplemented with practical experience in working with young children.

Most schools with a nursery-assistant course maintain a nursery center where trainees can observe the methods used by skillful teachers, practice what they have seen and studied, and then help plan daily programs for preschool children. In general, such programs usually include group stories and games, exercises, creative play, and lunch. Additional experience may be obtained through scheduled practice work in cooperating nurseries in the area.

## **Private Household Workers**

Training programs are established from time to time to prepare women as service workers in private households. In addition to their usual purpose of providing training—mostly to mature women—these courses frequently are aimed at raising the performance standards of domestic employment and improving the attractiveness of this type of work.

Usually a public agency is the major sponsor of a training program for private household workers and it cooperates with other public or private groups. Joint sponsors may include the local employment office, the local board of education, the local branch of a women's organization, or the local welfare department. In the case of public welfare agencies, the goal is generally to reduce relief rolls as well as to help employable persons receiving public assistance obtain a job. During the school year 1958-59, there was a marked increase in the number of women enrolled in domestic work classes in public vocational schools.

Household-service courses which have been established in recent years vary considerably in duration, depending on the number and type of household activities studied. Short courses may cover methods of cleaning, use and care of household equipment and appliances, table serving, personal hygiene, appearance, and manners. In addition to these duties, longer courses may also provide training in laundering and ironing, nutrition, simple meal preparation, table setting, operation of sewing machines, and care of children. Normally, practice work in local homes or institutions is included as part of the training. Examples of two short courses in this field are:

▶ Because Chicago offices of the Illinois State Employment Service encountered a growing demand for household-service workers and a substantial increase in unskilled female job applicants, steps were taken with the Chicago Board of Education to establish a course called Vocational Training in the Homemaking Arts. The Cook County Department of Welfare also assists by referring employable applicants for training. The course, held for 3 hours on one evening a week for 8 weeks, is offered in two different public schools and taught by public school teachers. In less than one year (1959), 300 persons completed the course and 260 obtained jobs.

▶ In Arkansas, a 20-hour training course for household-service workers has been developed by the Employment Security Division, in cooperation with the State Department of Education and the Arkansas Federation of Business and Professional Women's Clubs. When a minimum of 10 trainees are available, the course may be given in any town or city in the State. The instructor, provided by the department of education, teaches the trainees how to clean a room properly, how to use appliances, how to follow recipes, how to set a table, and how to act in the home of an employer.

### ***Cleaners and Pressers***

Training courses to prepare women for drycleaning, dyeing, and pressing jobs are being established as more communities encounter shortages of workers for these jobs and as more women are being employed in all but the most heavy and hot cleaning operations. Such courses are offered mainly by public vocational schools and sometimes by other community groups.

Students are taught proper methods of drycleaning and dyeing, analysis of fabric weights and colors, spotting, finishing, pressing, and maintenance of equipment. Depending on the number of operations and the amount of theoretical subjects (like chemistry or textiles) which are taught, courses may extend from 80 to 1,000 hours. Examples of two very different courses are given below:

▶ Following a shortage of cleaning and pressing workers in Little Rock, Ark., the Employment Security Division helped organize a course to provide free preemployment training for work in this industry. The division recruits the trainees and the Department of Education provides instruction and supervision. Members of the local drycleaning association have contributed additional equipment for classes held in facilities of the Goodwill Industries. Classes are held 2 hours a day for 5 days a week during an 8-week period, but individuals who qualify for employment before the end of this period are placed in jobs by the employment division.

▶ The Margaret Murray Washington Vocational High School in the District of Columbia offers a 3-year program in drycleaning and dyeing during the daytime and a supplemental course for beginners or "refreshers" in the evening. The daytime program covers all types of work handled by a regular cleaning shop. Evening students may choose any aspect of the work they wish to learn and continue in the class until they have studied all operations.

## 4.

# Conclusion

From this review of formal training programs and courses, it is evident that many women and girls are receiving helpful preparation for entry into the world of work. Nevertheless, the numbers of current training facilities and range of jobs for which training is available are both still far from adequate. In job fields which traditionally attract many women and also require specialized skills, formalized job training for women can be found most frequently. Even in these fields, however, variations in training opportunities exist from locality to locality as well as from job to job and there is little room for complacency. As might be expected, the greatest lack of training opportunities is in job fields where relatively few women have been employed in the past.

The urgent need to expand and improve training opportunities in which women and girls may participate stems from several basic factors. Of immediate concern, of course, are the occupational areas with current shortages of trained workers. But those who consider the social and economic changes which will affect our national life in the next decade emphasize the increasingly greater training needs of the future.

With 26 million young men and women entering the labor market in the 1960's, expanded and strengthened training facilities are required if these young people are to receive adequate employment preparation. Similarly, with the continued entry and reentry of mature women into the labor force, sufficient and appropriate training opportunities need to be made available to this group if their job talents are to be utilized to the extent required by our expanding economy. In addition to social changes, there is also the marked influence of technological changes in the coming years. As the jobs of many experienced workers are made obsolete by automation, retraining is necessary to enable them to perform the new jobs created.

In the light of these expected developments, it becomes important for each community to review its training facilities and needs—both present and anticipated. Following are some of the questions which

community representatives might ask in making an appraisal of the situation in their own area :

1. Are there current shortages of trained workers?
2. Is training available for shortage fields?
3. Do job opportunities exist in fields where training is now offered?
4. Is the type of training given being geared to the needs of local employers?
5. Do labor and management representatives participate in setting up training programs?
6. Are entrance requirements for each type of training similar to those of employers who do the hiring?
7. Is an effort being made to make training as inexpensive as possible for qualified persons?
8. Are training facilities open to women?
9. Are women encouraged to obtain training in all fields in which they have ability and interest?
10. Is comprehensive vocational training available to young people who want it?
11. Are accelerated job-oriented training courses available for mature workers?
12. Have estimates been made of local manpower needs in the next 5 or 10 years?
13. Are plans being made to provide training for the expected jobs?

Education and training may well be the key to our future. For individual men and women seeking paid employment, good occupational preparation can lead to jobs which allow for full expression of personal talents and interests. For our Nation, an adequate supply of trained workers is necessary for economic development toward the goal of a fuller and richer life for all.

## Appendix A—List of State Offices

### For More Information About Training Opportunities in Your State—

- Visit the local office of your public school system and your public employment office. Their addresses are listed in your telephone directory. If you are unable to contact them directly, then—
- Write to the State offices listed below.

<i>State and City</i>	<i>State Director of Vocational Education</i>	<i>State Employment Service Director</i>
Alabama, Montgomery----	State Department of Education.	State Office Bldg.
Alaska, Juneau-----	P.O. Box 1841-----	P.O. Box 2661.
Arizona, Phoenix-----	400 Arizona State Bldg----	1720 West Madison St.
Arkansas, Little Rock-----	State Education Bldg-----	P.O. Box 2981.
California, Sacramento-----	721 Capital Ave-----	800 Capital Ave.
Colorado, Denver-----	State Office Bldg-----	1210 Sherman St.
Connecticut, Hartford-----	P.O. Box 2219-----	92 Farmington Ave.
Delaware:		
Dover-----	313 South State St.	
Wilmington-----		601 Shipley St.
District of Columbia-----	Franklin Administration Bldg.	1724 F St. NW.
Florida, Tallahassee-----	Capitol Bldg-----	Caldwell Bldg.
Georgia, Atlanta-----	State Office Bldg-----	State Labor Bldg.
Hawaii, Honolulu-----	P.O. Box 2360-----	P.O. Box 3680.
Idaho, Boise-----	610 Main St-----	P.O. Box 520.
Illinois:		
Springfield-----	415 Centennial Bldg.	
Chicago-----		165 North Canal St.
Indiana, Indianapolis-----	215 State House-----	141 South Meridian St.
Iowa, Des Moines-----	State Office Bldg-----	112 Eleventh St.
Kansas, Topeka-----	State Office Bldg-----	401 Topeka Blvd.
Kentucky, Frankfort-----	State Department of Education.	Capitol Office Bldg.
Louisiana, Baton Rouge---	State Department of Education.	P.O. Box 4094.
Maine, Augusta-----	State Department of Education.	331 Water St.
Maryland, Baltimore-----	301 West Preston St-----	1100 North Eutaw St.
Massachusetts, Boston-----	200 Newbury St-----	881 Commonwealth Ave.

## List of State Offices—Continued

<i>State and City</i>	<i>State Director of Vocational Education</i>	<i>State Employment Service Director</i>
Michigan:		
Lansing.....	P.O. Box 928	
Detroit.....		7310 Woodward Ave.
Minnesota, St. Paul.....	658 Cedar St.....	369 Cedar St.
Mississippi, Jackson.....	P.O. Box 771.....	P.O. Box 1699.
Missouri, Jefferson City....	State Department of Edu- cation.	421 East Dunklin St.
Montana, Helena.....	State Capitol.....	P.O. Box 1728.
Nebraska, Lincoln.....	State Capitol.....	P.O. Box 1033.
Nevada, Carson City.....	State Department of Edu- cation.	P.O. Box 602.
New Hampshire, Concord....	State House Annex.....	34 South Main St.
New Jersey, Trenton.....	175 West State St.....	28 West State St.
New Mexico:		
Santa Fe.....	State Department of Edu- cation.	
Albuquerque.....		P.O. Box 1799.
New York:		
Albany.....	State Department of Edu- cation.	
New York.....		500 Eighth Ave.
North Carolina, Raleigh....	State Department of Edu- cation.	P.O. Box 589.
North Dakota, Bismarek....	State Department of Edu- cation.	P.O. Box 568.
Ohio, Columbus.....	220 South Parsons Ave....	427 Cleveland Ave.
Oklahoma:		
Stillwater.....	1515 West 6th Ave	
Oklahoma City.....		American National Bldg.
Oregon, Salem.....	105 State Library Bldg....	513 Public Service Bldg.
Pennsylvania, Harrisburg....	P.O. Box 911.....	Seventh and Forster Sts.
Rhode Island, Providence....	Roger Williams Bldg.....	24 Mason St.
South Carolina, Columbia....	State Department of Educa- tion.	P.O. Box 995.
South Dakota:		
Pierre.....	State Department of Edu- cation.	
Aberdeen.....		310 Lincoln St.
Tennessee, Nashville.....	Cordell Hull State Office Bldg.	Cordell Hull State Office Bldg.
Texas, Austin.....	Texas Education Agency..	TEC Bldg.
Utah, Salt Lake City.....	State Department of Edu- cation.	P.O. Box 2100.
Vermont, Montpelier.....	State Office Bldg.....	P.O. Box 435.
Virginia, Richmond.....	State Department of Edu- cation.	Broad-Grace Arcade.
Washington, Olympia.....	P.O. Box 250.....	P.O. Box 367.

## List of State Offices—Continued

<i>State and City</i>	<i>State Director of Vocational Education</i>	<i>State Employment Service Director</i>
West Virginia, Charleston..	State Department of Education.	State Office Bldg.
Wisconsin, Madison.....	14 North Carroll St.....	105 South Blair St
Wyoming:		
Cheyenne.....	State Department of Education.	
Casper.....	.....	P.O. Box 760.

## Appendix B

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