

are now in progress, women in business with home economics training, women in department stores, women in banks, and women in dentistry. Each is being made in cooperation with one or more professional organizations. These studies have as their purposes:

To obtain concrete, specific information on the work being done by women in the field by means of personal interviews with a representative number.

To discover what the work requires in the way of personal equipment, general educational background, specific professional training and experience.

To determine which colleges are offering such preparation, or, if none is being offered, to develop curriculum suggestions.

In other words, these studies are to supply specific information of use to the student, to the college, and to the employer.

In every case a study of an occupation has been started only after the cooperation of the professional organization has been obtained and the organization has appointed an advisory committee to assist in planning the study. As far as funds have permitted, data have been gathered by a field worker rather than by mail. For example, in the department store study the field worker was given a desk in certain of the stores and spent as long as two weeks in one store gathering information and interviewing women in various types of positions as their time permitted.

The program for the future contains studies of other specific occupations. Then all the data collected for the studies, together with the data on some several thousand women from the Land Grant College Survey which have been made available to the Institute by the Office of Education, and from other studies, will be brought together in a general report on the work, earnings, and preparation of college women.

The Institute is also collecting material for an adjustment or orientation course for college women. This material will be tested at the North Carolina College for Women in 1931-32.

To provide news items of interest to college students and to the personnel offices, the Institute publishes four times a year *Women's Work and Education*. This contains, in addition to the news items, lists of current books, pamphlets, magazine articles, and mimeographed reports and original material like Miss McCurley's five-year follow-up of the class of 1922 of Goucher, or a group of articles on some one occupation, administrative women in education and nursing, for example, having been covered in two recent numbers.

Briefly, the occupational study program of the Institute consists of specific analyses of given occupations in a form practical for use in counseling the college student, and in contributing something to the planning of curriculum and the development of a functional education for women.

The Place of Research in a Guidance Program¹

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The importance of research has been stressed in recent years in many and varied places. Industries like the great automotive corporations and the Bell Telephone Company pride themselves on the extent and the variety of their research work. A large endowment was given to the University of Michigan last year for research in law. The annual

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meetings of the American Medical Association are devoted very largely to the presentations of research. At the White House Conference for Child Health and Protection held at Washington last November, the most frequently reiterated statement was, "We need more research on this particular problem."

It is not necessary in a group of this type to argue for the inclusion of research in a guidance program. Research as a method of basing action on facts is taken for granted. I do wish, however, to point out several types or levels of research and to discuss each with reference to its application to programs of guidance and placement.

Levels of research. Three types of research constitute the usual classification. The first or lowest level is descriptive research, the product of which is objective information regarding the items described. The second level is comparative research, the outcome of which is a choice of the better of two or more means to some desired end. The third level may be called associational research. Here the purpose is to discover relationship among sets of data, to perceive the unity in apparently diverse situations. The term associational is used rather than causal because of the extreme difficulty in demonstrating which is cause and which is effect in many cases where association seems certain. The product of associational research is law in its scientific sense. Research on all three of these levels is now in progress in guidance and should be encouraged.

Descriptive research in guidance. Assuredly descriptive research has a large place, if guidance is assumed to mean aiding children to adjust in the best possible way to the total situation in which they find themselves.

In the first place, guidance workers need extensive and objective information about the boy or girl or man or woman whom they are to counsel. Before they can give wise guidance to a child, they must know the child's abilities, his interests, his special aptitudes, and his characteristics of all types. The standard tests of mentality and achievement which have developed so rapidly during the past twenty years are exceedingly useful as research aids in this field. More recently, thanks to such workers as Hartshorne and May, tests have been developed which measure various phases of the social behavior of the child, also. Guidance programs of 1931 are far ahead of those of 1911 in the richness and accuracy of the information available about the children and youth who are receiving counsel. There is need, of course, for improved ways of commensurating the data secured about any one child in order that they may be expressed in the same terms and thereby may be understood and used readily by the counselor or placement officer. Further, there is need for measuring instruments which will cover more comprehensively and yet more selectively than ever before those items of information which are most significant for guidance.

A second place where descriptive research enters the guidance program is in the securing of information regarding the child's immediate situation—his home, his parents, his leisure occupations, his friends outside of school, and so on. All those who work with individual cases are impressed with the importance of knowing the whole background of a particular child. The point of view of the psychiatric social worker is influencing more now than ever before the thinking and action of school counselors as they endeavor to help the

child adjust. We need to utilize to the utmost the methods of the skilled case worker in studying the individual child.

Third, descriptive research is a fruitful method in the field of occupations. Indeed, occupational research is of longer standing than perhaps is research in any other phase of guidance. Exact information has been obtained and kept up to date about most of the very common occupations and about many of the less common ones. These data have been assembled and written up in various forms, sometimes for the specialist in occupations, sometimes for the counselor, sometimes for the regular class teacher, and in other cases for the children themselves. The resulting descriptions of vocations have made possible a large part of the modern program in guidance.

Fourth, descriptive research is useful in the field of educational opportunities. Commonly, we do not regard as research the careful analysis and report of facilities for education and training; yet we need clear-cut, precise descriptions of the offerings of the cosmopolitan high school, the various colleges, the specialized trade schools, evening schools, correspondence schools, and other accessible institutions. Assuredly, exact objective information in proper order is quite as important here as in the field of occupational opportunities. And is not the assembling of relevant facts about educational offerings as truly research as is the collection of pertinent data about occupations?

Fifth, descriptive research is desirable regarding all other elements in the life of the child, knowledge about which would facilitate satisfactory guidance. Not only does the counselor need as accurate information as possible about the child, about the occupations and

educational opportunities which are open to him, about his immediate environment, but also he needs an inclusive and objective description of the remainder of life beyond the narrowly vocational and educational. Research into civic responsibilities seems desirable, as well as into occupational duties, into the avocations of life as well as into the vocations. Only to the degree that the counselor is equipped with facts regarding the whole of life can he hope to supply to youth the complete program of educational, vocational, and personal guidance which we all desire to see in effect.

Perhaps my use of the term 'research' seems unwarranted in these five kinds of description which are useful in guidance. To me, descriptive research means no more and no less than the effort to describe truthfully, comprehensively, and objectively those characteristics which we need to know. A good guidance program must be based on facts—facts about children, about conditions which make them what they are, and about the life which lies before them. The discovery and organization of such facts properly is designated as research.

Comparative research. The second type mentioned was comparative research, by which is meant the study of the relative merits of two or more means to a desired end. One instance would be the effort to discover which of several possible courses in the social studies develops best the characteristics necessary for success in an occupation such as the practice of medicine. Does the physician gain more for his work from a year of English history or from a year of practical sociology? Another instance would be the attempt to discover at a certain grade level the optimum distribution of the counselor's

time between individual and group counseling. Other things being equal, will ninth-grade children about to leave the junior high school gain more from two parts of individual counseling to one part of group counseling or vice versa?

These two instances are both examples of comparative research rather than of descriptive research. Yet certainly they differ between themselves. The comparison of the two possible courses for the prospective physician illustrates the evaluation of various factors which influence the lives of youth. It is a study which might be made not only by counselors but also by high school principals, by teachers of the social studies, or by professors in the medical school. It is a valuable type of investigation, but is not a problem of counseling alone. Other instances would be studies in the prediction of school and college success on the basis of school marks or intelligence ratings, and investigations of the home conditions which are most likely to result in 'problem' children. Such studies of the relative effects of several factors in child development are of considerable value in determining programs of guidance. Many such studies have been made in small sectors of the field, and knowledge on such matters is increasing.

On the other hand, the study of the optimum distribution of the counselor's time illustrates evaluation of the guidance activity itself. It is research upon the machinery of the guidance program, upon the work assigned specifically to the counselor himself. Such appraisal of guidance procedures by guidance workers is very rare, yet it seems important for us all to examine into the relative merits of different programs of guidance which have been proposed and

are in use in various places. An observer who goes to different cities to see the guidance programs is impressed by the wide variation. For example, in one city all counselors operate in the schools from a central guidance department and owe their primary allegiance to that department; in other cities guidance workers, who may perform practically the same function in the schools but are assigned administratively to those particular schools, are only indirectly under the supervision of the central department. Which of these two plans of organization is more effective? Is not the answer to this question to be found through research into the relative effectiveness of these two programs? Similarly research is needed into the comparative value of contrasting procedures along every line of activity of counselors and placement workers. Relatively little of this type of work has been done thus far. It is to be hoped that, along with the program of direct service to children to which guidance workers are committed, they will set aside some time for comparative research upon certain of their own activities in order to be able to make them increasingly effective.

Associational research. The highest level is associational or pure research, whose goal is the formulation of law. Pure research aims at the discovery of relationship and at the expression of that relationship in the form of a generalization. The quest is ever for laws or generalizations which are more and more inclusive. The classical instance is the series of scientific work by Tycho Brahe, Kepler, and Newton. Over a long period of years Tycho Brahe made and recorded a large number of observations of the location of the planets in the heavens. Kepler took these un-

related bits of data, studied them intensively, discovered the relationship among them, and expressed it in the three laws of planetary motion which bear his name. These three laws in turn grew through the scientific work of Newton into a single, broad generalization, the Law of Gravitation.

Such a sequence may be pointed to in several instances in the history of the physical and biological sciences; examples are much rarer in the social sciences, among them education. We have some beginnings of law in our educational psychology, in such expressions as "Knowledge of success breeds further success." The law of biological growth as expressed by Courtis is another attempt to find a relationship among a large number of facts. As far as I know, there are very few such attempts in the field of education or in the field of guidance. The mere mention of such research in counseling may seem visionary to many. Yet the study of problems of guidance will advance toward a true science to the degree that

workers in the field go beyond merely descriptive and comparative research into the sphere of research in relationship and the quest for law.

It may appear impossible to carry on anything like the amount and variety of research suggested here. Counselors and placement workers are proverbially busy people. As yet, there are no foundations which are willing to sponsor and finance great programs of research in guidance. Consequently, the task will be done, if it is done at all, by the voluntary efforts of a host of individual counselors, placement workers, and students of occupations. If everyone interested in the work of the National Vocational Guidance Association will have sufficient professional pride and interest to take some small piece of the whole field, plan a program of research on this section, and carry it through to its fruition, an almost unbelievable amount of progress can be accomplished in the years to come, and the work of guidance can be placed on a secure scientific foundation.

Occupational Studies Recently Published or in Process of Preparation ¹

<i>Name of Study</i>	<i>Organization Preparing It</i>	<i>Date Published</i>
OCCUPATIONAL THERAPY	Chicago, Ill., Vocational Guidance Bureau	May 1, 1931
THE CHICAGO FIRE DEPARTMENT GARAGE, FILLING STATION, and TIRE REPAIR WORK	" " " "	Sept. 1, 1931
PHARMACY	" " " "	Sept. 1, 1931
STORE AND OFFICE OCCUPATIONS IN CLEVELAND	Cleveland, Ohio, Board of Education	June 1, 1931
INDUSTRIAL AND COMMERCIAL OCCUPATIONS IN THE FIELD OF ART ADVERTISING	" " " " "	Aug. 1, 1931
PHYSICAL EDUCATION (Revised study)	Minneapolis, Minn., Woman's Occupational Bureau	April, 1931
	" " " "	May, 1931

¹ Only pamphlets which are available for distribution, usually those in printed form, are included. Other cities are preparing studies in mimeographed and typed form which are not included above. For a complete list of occupational studies, see bibliography of occupational studies to be published as a part of the White House Conference Report.