

## LEARNING CAPACITY—AN IMPORTANT FACTOR IN EMPLOYMENT ADJUSTMENT

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We have heard much of late concerning the "human factor" in industry and in commerce. We have been concerned about the "square peg" in a "round hole" and the "round peg" in a "square hole" and faulty reasoning has sometimes led us to accept conclusions not well founded in fact. It is well known that jobs do shape themselves to the interest, capacity and peculiarities of individuals filling them, and it is also recognized that individuals do adjust themselves to the requirements of their jobs. Difficulty has arisen from the fact that these adjustments have not always gone forward with desired rapidity or because they have not been carried to the desired level of accomplishment.

If one were to follow a new employe from employment induction through the early stages of advancement to positions of more and more responsibility he would find, if both employe and job opportunity were of a high order, almost constant demands for adjustment along the following lines:

The employe finds certain things to do which require more or less skill, tasks which can be done well and quickly only after motor controls have been established. Some of these adjustments are very simple, others involve periods of practice before the necessary controls are perfected. The manipulation of office or plant machines and the skillful handling of materials ordinarily require such capacity. The constant shift in present-day plant and office practice necessitates a modicum of such development on the job as well as through preparatory training if the worker is to be employed regularly.

There is a second type of adjustment which necessitates the accumulation of information. This involves the learning of codes, the memorizing of routes or schedules, the details of manufacturing processes or the bringing together of information along any one of many lines. In any event the employe finds it necessary to

read, to observe, to discuss, and to take on information from many sources. The speed of acquisition and the facility shown in reproduction for use become important factors in determining the value of an employe in particular positions.

While it is important that workers generally possess capacity for taking on skills and for making motor adjustments, and while it is important that in certain positions they respond quickly to demands for related information, it is even more important in the most responsible positions that occupants use such skill and information in new and unusual combinations. Capacity for and habits of independent action become a fundamental consideration in the advancement of workers to positions of major responsibility. Planning industrial or business development, planning a sales or publicity campaign, readjusting a production schedule, all of these activities are in large part dependent upon power of independent thinking. Without such ability so-called planning becomes mere copy work, resultant from or dependent upon precedent be it good or bad. Herein lies the distinction between the so-called routine worker and the worker who makes possible progressive and constructive development through the creation of improved devices and through the suggestion of improved practices. Facility shown for achievement in this field is one of the requisites for success in many of our sales, organization, and research fields. Coupled with other abilities, this capacity is fundamental for all responsible administrative positions.

There is still another capacity or ability, which connects itself so closely with ability to learn that it should be classified with the above learning levels or capacities. I refer to the ability to make personal adjustments; adjustments to one's work, to one's surroundings, and to one's associates. This has to do with the worker's attitude toward the task to which he is assigned and the facility shown in meeting new and disturbing situations. It also involves that combination of factors which enter not only into association with other individuals but the management of individuals and groups of

individuals. It is this ability which enters into real leadership as contrasted with mere management. The successful leader makes his personal adjustments readily and shows capacity for fair but effective dealing with his associates. While this ability is desirable for all workers, it becomes fundamental for foremen, managers and others who have to do with groups of workers. It is just as fundamental for successful practice in any position which requires contact with the public such as is necessary in secretarial or sales work.

If we accept the general thesis that learning capacity along the lines indicated is an important factor in employment adjustment, are we not justified in assuming that information concerning such capacity would be valuable at the point of employment or even more valuable at the point of special vocational training? If valuable in this connection, how may such information be secured? There are at least two major approaches which promise helpful returns, school ratings and psychological tests.

There are opportunities for rating in connection with the regular school activities which have in the past been utilized only in part. Is it too much to expect that every young man or young woman who comes to employment after the completion of our public elementary, secondary, or college courses will bring as a by-product something approaching a complete appraisal of learning capacities and learning habits? Is it not also desirable that school contact through curricular and through extra-curricular activities result in corresponding appraisal of personal qualities which are of importance in employment? The following records which have been supplied from the files of the University High School indicate the kind of information to which I refer:

A. A problem case—

"Has difficulty in working for any period of time without direction. Cannot organize his work and finds trouble working through a problem when once it has been analyzed and organized in cooperation with the instructor.



"Does not read with any high degree of understanding. A great deal of his reading is cursory and needs to be interpreted for him by another.

"He is easily discouraged in the face of any situation which obliges him to think, but works well in a situation where the work is routine and goes smoothly with a minimum of thought. Is very fond of talking but seldom has much to say. Is noticeably backward in discussing problems of vital importance in connection with his work."

B. A high grade student—

"A quiet, conscientious worker of a deliberative and investigative turn of mind. Has the ability and the initiative to think a problem through independently.

"He is economical in the use of his time and seldom is obliged to revamp poor work; that is, he seldom has poor work to revise. He is a very consistent performer. He is going along in the same quiet efficient way at this time that he was last October.

"His ability is respected by the boys with whom he comes in contact and he is not without influence among them. He seems to possess all the elements which enter into the making of a serious minded, effective citizen."

Cumulative statements such as these mean a great deal more than do grades of "A", "B", or "C" in shopwork, drawing, mathematics or history. They are significant especially in the employment of young workers who have before them an extended period for adjustment.

In addition to such a statement we should be interested in bringing together a more complete measure of specific abilities such as speed and accuracy in typewriting, rate and comprehension in reading, and corresponding scores for accomplishment in other subjects where standard measures are available. Such factual evidence could be interpreted in terms of promise in lines of work requiring corresponding ability.

In addition to any measures of capacity in terms of accomplishment in the regular school subjects and in extra curricular activities there should be ratings from psychological tests which would cover as completely as possible the learning abilities indicated above. Such re-

turns should be combined with measures of capacity in school subjects to give a rather complete picture of the students' learning capacity and learning habits. This would mean a rearrangement and supplementation of such tests as the National, Otis, Turman, and other standard units now in general use.

While it is assumed that established correlation of abilities relieves the necessity for testing in minute detail, it is hazardous to expect that a mere index number, I. Q., mental age, or other similar device will ever take the place of the picture which is presented through a more complete analytical record.

The making of anything approaching a satisfactory record of learning and personal qualities would necessitate the administration of a number of special abilities tests either during the preliminary training period or at the point of employment. As a matter of fact such supplementary testing may be carried forward most effectively just prior to and during the period of early employment, especially in the case of employes inducted through a well organized vestibule or other corporation school. Such schools closely approximate conditions under which work is to be performed and make possible pointed measurement and effective observation.

As employers become more and more interested in the individual workers as a factor in the reduction of unit costs of production, we come to be aware more keenly of the specific factors which make for or against satisfactory accomplishment. If jobs were few and well defined the necessary analyses might be made promptly and effectively. That the actual problem of analysis is a difficult one is indicated by reference to the Federal Census which catalogs occupations under 572 main headings with some 12,000 subheadings. This widely distributed employment field, complicated as it is by the lack of uniform terminology or classification, has led many employers and some psychologists to despair of helpful classification of job and corresponding employee requirements and possibilities. Does effective employment service call for a complete catalog of these thousands of jobs coupled with a corresponding catalog of

thousands of potential workers in order that detailed matching of workers and jobs may be carried forward? It is obvious that for the present such practice would be impossible of administration.

It is a well known fact that for a large number of jobs the learning requirements are almost identical. Beyond this point satisfactory service becomes a matter of interest and personal adjustment. Even here there are to be found large numbers of positions which tend to group themselves. Such is obviously true of junior office, sales, assembly, and other large sections of productive labor. Barring the element of work surroundings and the resultant demands and opportunities for personal adjustment, positions within certain group classifications require capacities very much in common. If Mr. Pound in his extended treatment of employment conditions did nothing more, he did succeed in pointing out the fact that jobs may be classified on a horizontal as well as on a vertical plane; that a worker of given ability may operate a machine in a fish cannery, in a fruit or vegetable canning plant, in a meat packing establishment, and without serious inconvenience, adjust himself to production requirements in a plant manufacturing automobiles, all within the space of a few months. If this means anything to educators and employers, it must mean that attention should be centered upon training and production capacity rather than upon specific trade opportunity and requirement.

Is it not, then, for our less mature workers, a matter of reducing employment requirements to *learning demands* just as we are now classifying instructional materials for mastery by students of varying interests and capacities? Such groupings would make possible effective testing practice in the four major fields of learning rather than in innumerable small units. There is the further advantage that such an adjustment of testing practice for purposes of employment service would lead to more effective classification for training purposes. Training and tests could be made to supplement each other in bringing to the employment office the information most needed in selecting and in assigning workers



to positions for which they are best suited and in which they find their greatest opportunity for service. The combined practice would also inevitably result in a more exacting appraisal of training materials and methods than has yet been attempted.

It should be expected that a more complete classification of school and testing returns on the basis of learning capacity, coupled with corresponding employment returns, would in the end lead to the establishment of a common denominator for vocational education and employment; a common denominator in terms of capacity, interest, and opportunity which represent the important variables in employment.