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A CONSIDERATION OF INDIVIDUAL DIFFERENCES IN CLASSROOM INSTRUCTION IN BEGINNING COURSES*

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SYNOPSIS

I. There are individual differences of ability in acquisition and learning which manifest themselves in classroom instruction.

II. The present system of instruction does not adequately meet the needs created by these individual differences.

III. There is a necessity for a classification which will place students of like abilities in the same group.

IV. There is a plan which it is believed will more nearly meet various needs created by individual differences than does the present system.

V. There are advantages to be gained by the adoption of such a plan or classification.

It is my purpose to present, for your consideration, some suggestions pertaining to the solution of that important problem of "Individual Differences" which presents itself in all forms of group instruction and more especially in beginning courses. This is not a new problem, but it is one in which there are revealed new and intricate complications with each analization. These new revelations have presented some impregnable barriers to even the master pedagogical minds of the age. With all the enlightenment of our present educational system these obstacles stand as a challenge to the inventive genius of our most progressive leaders. And thus will they continue to stand until an intelligent and adequate adjustment has been made.

I am not assuming that no adjustment of a practical nature has been made; my point is that an adequate adjustment has not yet been found. It will, no doubt, be obvious to you that I have not

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included within the scope of this paper a definite formulated plan whereby this much desired adjustment can be fully brought about; however, if the suggestions set forth here stimulate such thoughts as will result in bringing us nearer to such an adjustment, the paper will have served its purpose.

Scientific investigation reveals the fact that individuals differ, and differ widely, in any trait or combination of traits. Industrial practice finds that a large fraction of this variability remains within a group willing to do a given sort of work at a given wage per hour. Likewise scholarship practice finds that a large per cent of this variability remains within a group of students registered in any given course.

In every course there are registered, generally speaking, two main classes of students, one group which is interested in the work and the other group has no interest whatever. The only reason why the latter group is represented is because the class happens to fit into their schedule. It is not a rare thing to find in this last group some who have an aversion to the course. It is in this consideration that we find our first general division.

1. The interested group, and
2. The uninterested group.

It is obvious that while the instructor is using every conceivable device to sell the course to the uninterested group those who had an interest from the beginning will be getting nothing from the instruction given. Yet such action on the part of the instructor is necessary. No one will question the value of taking time to create an interest in the work, for unless an interest is created the course will mean nothing to the student.

It is not, however, the above stated difference in which we are most concerned, but rather it is with the "*individual differences*" which are found, in every group along the line of acquisition and learning. Taking it for granted that we are all agreed that some such differences do exist, I shall not take time to submit any proof in support of the facts, but immediately take up a discussion of some of the elements which enter into the situation.

By describing the laws of learning or modifiability and the changes in mental functions, which learning brings about, it is assumed that different individuals learn at different rates; and that

individual natures must, if subjected to the action of different external situations or environments, become different. The report of studies of the amount, rate and permanence of improvement gives frequent illustration of the variability of individual students in whatever feature of intellect, character or skill we examine.

Any method which is the best possible for those of one degree of a trait cannot be the best possible for all individuals. Nor will two or three varieties of treatment suffice to educate all in the best way. Variations in human nature are wide and continuous, so that theoretically treatment also must vary much and continuously.

It is not possible with ordinary facilities thus to give each individual in each trait the best possible treatment, but my contention is that a fuller knowledge of the amount and distribution of variation will prevent certain blunders which have frequently occurred in the past. A division into three groups is always preferable to a division into two groups, because the three group division is more conformable to the need which is created by individual differences. Since the variations in any trait are so wide, a student should always be measured, not only, as now, by his ability in comparison with his fellows, but also by his improvement over his own past record. It occurs to me that it is very desirable to strive for a rating of the individual on the basis of his own record rather than to rely entirely upon his record as it is compared with someone else who doubtless is more or less favored by nature in ability for acquisition and learning.

The study of the facts and laws applicable to all men by virtue of their common humanity gives education its fundamental rules for the control of changes in intellect. The study of the facts and laws of individual differences enables us to apply these principles economically in the case of each individual whom we seek to educate. In studying individual differences it is necessary to reduce the infinitude of tendencies to think, feel, and act in certain ways in response to the varied situations which life offers, to the more general, and so, fewer tendencies which the psychologists call abilities, interests, habits, qualities of mind or mental traits.

All reliable studies so far are made of the relation between the amounts of desirable single traits in the same individual agree in finding direct or positive relations between such traits. Having a large measure of one good quality increases the probability that one

will have more than the average of any other good quality. He who can learn better than the average through the eyes, tends to learn better through the ears also. He who can attend to one thing better than all other men, will be able to attend to many things at once or in rapid succession better than most of them. Artistic ability, as in speaking, music or painting, goes with scientific ability and matter-of-fact wisdom. The best abstract thinker will be above the average in concrete thought also. Efficiency in one respect is positively correlated with efficiency in others.

All the sciences and arts of controlling human nature must accept the original variety of human nature as a condition for thought and action. The instructor who has not learned by ordinary experience that each student is, to some extent, a separate problem demanding his best interest, and educational theory and practice, should learn it once for all from psychological theory.

The reaction against the blight of uniformity in teaching has deepened. It has exposed itself positively in the demand for administrative and instructional means that will develop an increased regard for individuality.

From the facts revealed by a mental survey of high school seniors made by Dr. W. F. Brook and from facts revealed through the various tests given to those entering college we find that there are about as many individuals of the mediocre grades of intelligence who go to college as there are of those who possess special abilities. What uniform quality of work should be expected from college students who vary so greatly in mental endowment and how may reliable ratings assist us in giving to these young people the educational direction and guidance they need?

If, as we may assume, individuals possessing a superior grade of mental ability, when measured by a standard obtained from a normal or average group, are capable of making a good record in their work, we may safely conclude that any student who makes a score above medium or average score for the group is capable, so far as native mental ability is concerned, of doing good work in college. If he makes a score very far above the average, we may conclude that he has mental ability to do superior work and this grade should be expected of him.

It is an evident fact that many individuals do attend college who cannot do average or first-class work unless the standards are

adjusted to the level of ability of such students as attend. We should not expect the same quality or amount of work from students who vary so greatly in native mental endowment. We should, on the other hand, use the knowledge which has been obtained concerning the differences in intelligence and adjust our work accordingly. If students of all grades of intelligence are admitted to our courses, as they are, some arrangements should be made for grouping these students into classes or sections of approximately equal mental strength and physical possibilities so that the problems of instruction might be facilitated and the superior students given the kind of opportunity and assistance which their special ability demands. Likewise those students of mediocre ability or those below the average, should be grouped into classes or sections of equal mental strength and physical possibilities in order to get the maximum development out of their training. It seems to me that in this way alone can we hope to have an adequate adjustment brought about. I know of no other way in which we can bring about proper retardation and acceleration of our students.

In recognition of the ever increasing demand, from the classroom in beginning courses created by individual differences I should like to submit for your consideration a proposed classification of five stages or levels upon any one of which a student could enter the course and receive the specific training which he most needs. As soon as he is considered proficient in one stage he may be accelerated to the next stage or level. I feel no hesitancy in presuming that you will agree that in any heterogeneous group of thirty, forty, or fifty students such as promiscuously registered in any course, there will be represented individual differences which will justify the application of many individual treatments. In offering a reason for taking the liberty of such a presumption I shall submit the results of a case of grading which was taken from a department of speech training. This case was picked at random and I am sure that it is not extraordinary in any respect. I feel sure that it is only typical of the average situation which may be found in any such department of speech and not at all foreign to situations existing in other departments of systematic educational training.

These results were submitted by five instructors teaching beginning courses in the same department. A total of 516 students was considered. At the end of six weeks training a check was taken

on them by their respective instructors. Thirty-two made an A grade, seventy failed to make a passing grade. The majority of the remaining group made an average grade of C. Then there were two representative groups which made D and B grades.

I am aware of the fact that these, or any group of grades, should not be taken too seriously, however they do have a pertinent significance. That is that students do learn at different rates and that the method of instruction which is best for one group will not be best for all concerned. This being true, there would be better results obtained if students were grouped according to ability. The grouping which I would suggest is as follows:

1. Those suffering, more or less, from organic troubles which are correctable with ordinary departmental facilities.
2. Those who manifest shallow thought content and poor thought organization.
3. Those who have wrong habits of articulation, enunciation and pronunciation.
4. Those who are poor coordinators.
5. All students who have no outstanding defects which would merit their being placed on any of the four levels suggested above could be grouped together and permitted to proceed with their work in a more advantageous manner than they could were no such divisions made.

Though incomplete as such a classification may appear, I am sure that it has certain fundamental advantages which do not appear in the present system used in beginning courses.

Those who would object to this, or any classification, would base the support of their objection upon the well established fact that no instructor uses a blanket form of instruction and with such a statement would infer that the individual needs of all the groups are adequately met. I am willing to grant that every instructor does, in a certain measure, vary his method of instruction and a classification of students would not prevent the continuance of such. The facts to which I do wish to call your attention are: that it is humanly impossible for any instructor, be he ever so versatile in his art of teaching, to vary his methods, in the brief time allotted to the average recitation period, sufficiently to give adequate help to the many needs presented. That if this or some

similar method of classification is used there will not be an entire elimination of individual differences but that the number and range of differences will be limited to the extent that it will be possible for the instructor to meet them in a more advantageous manner. That in such a classification each group can be working upon its own particular problems and as soon as the difficulty is sufficiently solved to warrant the student's acceleration to the next level, he can be admitted to the next stage, thus he can be advanced as an individual and need not be retarded by some one who is slower to acquire the same amount of development.

The practical difficulty of working out a class schedule such as would meet the various needs created by such a classification could be met by developing a technique conformable to such a group of needs, and by having a staff conform to the technique established. Any instructor could easily conduct five sections, or more, representing these five stages or levels. Should an instructor pass a student from one stage to another and the student not be able to enter the next level under the same instructor, he should be able to enter the desired level under some other instructor and get approximately the same needed training.

It is very clearly shown that if such a classification is used the various groups will vary in the time needed to complete the course, if the standards are the same. It is obvious that group one would need much more time to meet the average requirement than would group five. This fact points out one of the greatest advantages to be gained by the adoption of such a scheme, namely, that when a student is ready to be advanced he need not be retarded by some one else; that when a student, or group of students, has met the required standard, he can be passed on to an advanced course whether it be at the end of one, two or three semesters' work.

I realize that this point of view is not in harmony with the ultra-conservative idea of educational training; however, our most progressive institutions of learning are no longer holding rigidly to the view once held by them—which is as absurd and fallacious as it is ancient—that a student must spend four years within their walls before he can take his degree, when he might have met all the requirements in three years or even less time.

Why should any student be required to spend a definite amount

of time upon a given subject when he might master it in less time than that which is allotted?

Why should he not be asked to master certain principles in the course and assured that when he has done this he will be advanced?

Would not such an agreement between instructor and student be conducive to greater effort on the part of the student?

Why should a student's acceleration or retardation be dependent in any way upon a group?

In conclusion may I ask if we, as instructors, have not faced situations where the progress of certain individuals has been retarded by others of less ability?

In the discussion of the advisability of adopting such a classification I realize that reputable opinion can be cited in support of remote extremes. The greatest difficulty encountered in writing the paper was to adequately treat a subject of such magnitude in the brief period of time allotted for its delivery and discussion. Consequently I have only hinted at a number of facts which could have been profitably discussed at length.

In submitting the suggestions set forth in the paper, the writer is frank to confess that many of them can be greatly improved and your earnest consideration of them from any angle is coveted.