

through three consecutive years, the subject remaining the same. In the sense here used, constant grade value is said to obtain in the case of a pupil whose grade through three consecutive years, in the same subject, falls in the same grade group. It will be recalled that the five grade groups are: 0-75, 75-80, etc. The figures below show the actual number of pupils, by subjects, whose annual average grades fell in the same grade group, or in two of the five grade groups, or in three of the five. From a consideration of the table it is apparent that the probability of a pupil's earning a constant grade value in Arithmetic is less than in History, less in History than in Geography, and less in Geography than in English.

Subject	Constant	2 Groups	3 Groups
Arithmetic	41	151	43
History	71	136	28
Geography	88	128	19
English	113	116	6

The varying degree of constancy in grades earned from year to year, as described above, is perhaps made clearer by the following data. Of 215 pupils accounted for, 93, or 43.2 per cent, showed a maximum variation of 10 to 33 points in annual average grades earned in Arithmetic; in History, 36 of 214 pupils, or 16.8 per cent, showed a maximum variation of 10 to 27 points; in Geography, 31 of 214 pupils, 14.4 per cent, of 10 to 30 points; and in English, 13 of 214 pupils, 6.0 per cent, of 10 to 17 points.

The average median deviation, by subjects, for six different classes are as follows:

Subject	Av. Med. Dev.
Arithmetic	10.5
Geography	5.8
History	5.7
English	3.6

The writer of this does not believe he has made any original contributions to the collection of facts already discovered in connection with the study of grade determination and distribution. The description of the study is not more than an organization of material in hand which in one way or another is closely related to some of the most vital problems which today are not satisfactorily solved.

Until an objective standard of measurement is found, widely used, the present

method of determining grades through the teacher's judgment will certainly be retained. And that, too, despite the uncertainties, the variations which characterize the method and defy logical explanation. While it may be true that the reliability of grades given the pupil by the teacher is not pronounced, it is equally true that we have not yet reached the point where standard tests have proved their undisputed superiority. They are as yet but supplementary aids. However, this is a digression from the purpose of our paper and is a proper subject for the scientific student of educational method.

R. B. MARSTON

III

OUTSTANDING FEATURES OF THE RECENT SESSION OF THE DE- PARTMENT OF SUPERIN- TENDENCE OF THE N. E. A.

It was the opinion of some that this and future sessions of the Department of Superintendence would lack in general interest and value because of the plan adopted last year restricting membership in that body and restricting also the number of other associations meeting with it. Those in attendance were therefore surprised at the richness of this year's conference and found that such associations as did not secure a place on the official program staged their usual meetings in convenient hotels and printed their own programs. There was no evident falling off of attendance although, in contrast with her adjoining neighbors, Virginia had a very small representation, particularly of superintendents and other administrative officials. It is not likely that this indicates a lack of professional interest but rather a lower salary standard.

In the main the problems to which the convention gave attention were very much like those of the last few years. The stress, however, was changed. In the case of the exhibits which were held in the Leiter Building, one was impressed with recent developments in map-making and still more with the

unusual prominence of exhibits of school building plans, as indicative of a new impetus in building which had been slowed down by the war.

RURAL EDUCATION

The Department of Rural Education had a varied and extensive program. It is becoming evident that those directly concerned with the carrying out of the rural educational program mean business and are no longer trying to talk these schools into efficiency. Consolidation, special types of junior high schools, an improved supervisory force and a properly trained teaching staff,—these are features of the new era in rural school progress. Despite all this, one disappointing note was sounded; namely, that, in the country as a whole, in contrast to the wonderful progress made in most city schools, the one-teacher school was still the inefficient, poorly-taught and poorly-equipped institution of the days of the sickle and flail.

In some states, as instanced in the new budget of Maryland, state funds are so equalized in their distribution as to enable the district with the lowest property evaluation to have a good school. Similarly, a few counties of our own state, as elsewhere, are encouraging professionally trained teachers to work in one-teacher and two-teacher schools through the inducement of a slightly better salary. It may safely be predicted that until such state and county practices become common, the isolated country school will be a bulwark of ignorance instead of one of intelligence and democracy. The findings of the New York State Rural School Survey will be awaited with interest and should point the way to the solution of a number of the most trying problems.

FINANCING PUBLIC EDUCATION

The war-time Commission on the Emergency in Education has been replaced by the Commission on Educational Finance, headed also by Dr. Strayer and promising an exhaustive study of the needs and means in an adequate financing of the public schools. The enlistment of such financial experts as Dr. Seligman, who addressed the superintendents, is a promising step. A frequently voiced sentiment was that the present school program must not be abandoned in spite of the fact that, if carried to its logical conclusion, it might require twice the present financial

support. Furthermore those responsible for the public schools must take the initiative in the study of a varied and adequate tax system, and in better and more extensive publicity, so that the public will appreciate and respond to the needs.

It will readily be seen that in one respect Virginia is at a great disadvantage. While, with a much higher tax rate, many states have a real estate assessment at 75% to 90% of the property evaluation, the typical assessment in Virginia is from 25% to 40%. The present Legislature can scarcely be said to have appreciated this problem nor did it make adequate provision, on account of last year's business and agricultural depression, for the hoped-for enlarged school program. North Carolina, whose legislature met last year, and Maryland, whose educational forces have rallied to the support of Superintendent Cook's leadership, are not so likely to have to mark time during the next two years. It may be however that local Virginia communities will find it necessary to increase taxes and take a larger responsibility.

ADEQUATE TEACHER TRAINING

A problem receiving more nearly than usually the attention it merits, was that of teacher training. The association of Supervisors of Student Teaching, the National Association of Presidents of Teachers Colleges (formerly the Normal School Presidents Association), the National Society of College Teachers of Education, and the City Teacher-Training Section of the N. E. A., all had well attended sessions and excellent programs. These bodies are all offshoots of the old Normal Section, one of the earliest formed sections of the N. E. A. Steps were taken looking to the enlargement of these associations so that the problem of an adequate and properly trained teaching staff may take its place in the superintendents' conferences along with those of finances, buildings, salary schedules and the like.

The central importance of practice teaching was emphasized in various conferences. The de-formalization of this work was reported upon, particularly by Mr. Miller of the University High School of the University of Wisconsin. Intelligence tests are now coming into fairly general use as means to the classification and guidance and, occasionally, the elimination of students. Experts

seem to be generally agreed as to the desirability of a well-chosen required course for two-year students with elective opportunities for candidates for the degree. Dr. Bagley took a determined stand for enriched content courses in contrast with the earlier emphasis on special methods,—these courses not to be a duplication of college courses, for example in science, English, and history, but to include fresh, vital material and not to overlook that which is suitable for the grades to be taught.

There was abundant evidence of the rapid growth of a professional body of teachers and administrators in the last two decades. Those who sat down in the banquet of seven hundred alumni of Teachers College, Columbia University, were reminded that the number similarly gathered at Milwaukee fifteen years ago was only seven. Men and women professionally trained in the larger schools of this country are shaping today the educational policies of China, South Africa, and certain South American states. If the progress of the last quarter century is an indication of the future, the outlook is indeed hopeful as regards the development of a profession of education.

SCIENTIFIC MEASUREMENT IN EDUCATION

Undoubtedly the greatest single advance in the direction of developing the profession has been the creation of standards tools of measurements: first, to determine the learning ability of children; and second, to determine their attainments or the results of their education. Both intelligence tests and achievement or subject-matter tests, as practical diagnostic tools, are not more than ten years old. Yet the recognition of their need and value has been so prompt that in the present year, not less than two or three million American pupils ranging from the kindergarten to the university will be tested. In fact it was a frequent remark at the conferences, that critics of the movements are no longer so much to be dreaded as over-zealous and untrained friends are to be feared.

The Twenty-First Yearbook of the National Society for the Study of Education,¹ issued at this time, formed the basis of the discussion at the conference and is the best single contribution on the evaluation and use

¹This volume will be reviewed in a future issue of THE VIRGINIA TEACHER.

of intelligence tests. Specialists in this field have come to believe that general intelligence is nearest akin to learning ability and that therefore all scores are affected greatly by the child's education and environment, in other words by the learning he has acquired. This makes the test no less important but it does make judgments based thereon more subject to error. It was pointed out that different tests measure different things, that they need to be repeated at different ages and that classification of pupils by this means must be tentative and subject to revision later.

Dr. Bagley threw a veritable bomb in the testers' camp and made the discussion of intelligence testing the "storm-center" of the conference through a brilliant address entitled "Democracy and the I. Q.," in which he vigorously protested against some of the conclusions being drawn especially by magazine and newspaper writers. The low scores of the American soldiers in the recent war have led some to state that a very large percentage, perhaps a third or a half of the American people, are morons or are incapable of making any worthwhile advancement in education or life. An equally cheap and easy, but even more false and dangerous influence is that it is possible and desirable in the elementary school to segregate the intellectuals and give them superior educational advantages and to give a vocational-industrial training to those who test low, fitting them for the inferior positions in society. Dr. Bagley pointed out that this was in violation of the fundamental notion of democracy, namely that each individual be given the opportunity to make his greatest possible contribution and further noted the fact that in a democratic society, unlike the army where the tests were first widely given, the leaders must be chosen and the followers trained to do the choosing. It is an all too evident fact that in the early stages of a democracy the political leadership is frequently far from representative of the best "brains". In the debates and discussions that followed it was clearly made evident that the educational leadership of the country is committed to no such policy of educational discrimination, but that the better classification of pupils in the

classroom and individual diagnosis of pupils are made possible, thus achieving a great triumph not unlike many of those in modern medicine.

W. J. GIFFORD

IV

VISUAL EDUCATION

"The eyes are the windows of the brain; they make up the most important channel through which the human mind gets its material for fabrication," says Dr. Thomas D. Wood. "I believe that the image is the great instrument of instruction," says Dr. John Dewey. "What a child gets out of any subject presented to him is simply the images which he himself forms with regard to it."

From experience we know that we learn more rapidly and retain much longer the knowledge which has been gained by contact with things and processes. Through our experiences we are able to form better judgments and to understand better the ideas and judgments of other people. Since three-fourths of all education, it is claimed, comes through the eye, visual education should be emphasized more.

"American education is seriously defective," maintains Dr. Charles W. Eliot, "in that it provides an inadequate amount of training of the senses, particularly of the eye. It relies far too much on book work. There ought to be incorporated into elementary and secondary school work a much larger proportion of accurate eye work and hand work combined with simultaneous training of the memory and of the capacity for describing correctly either orally or in writing things observed and done."

Just words in books often do not make correct impressions. Maps, charts, diagrams, models, prints, descriptions and lectures are useful, but when everybody should be educated as in the United States still more concrete material is desirable. It is impossible for every one to visit the four corners of the globe, or even the museums, but it is no longer impossible for these materials to

be brought to the individual for his proper instruction.

A person can not be expected to remember a thing when he does not get a clear impression, in the start. Many a pupil has been classed as dull and stupid when perhaps he has never really "seen" a thing in his life. Such pupils perhaps need to make more use of their visual sense.

Motion pictures about travel, manufacturing, industry, civic and social conditions furnish a good understanding about the things that are real and also cause a person to become interested enough to read more.

Movies in the classroom are not for entertainment, but for earnest work just as science laboratories and home economics equipment are for real work. All the devices used in visual education can not take the place of the serious and live teacher, nor can they remove the need of effort on the part of the pupil. But visual aids will reduce effort, increase interest and jack-up attention so that more work can be accomplished in a given time. Movies make clear and lasting mental impressions. Besides, as films are expensive and difficult to produce, it would be wrong to employ in schools such expensive means of showing simply trifling and amusing things. For these reasons films on history, geography, health and sanitation, and citizenship—for serious purposes—are being produced by the Society for Visual Education.

WHAT SOME TEACHERS THINK

Mr. A. G. Balcom, superintendent of the Newark, N. J., schools, says that Newark is one of the first of the larger cities of the United States seriously and officially to adopt motion pictures as a part of its school system. Visual education, so far as Newark is concerned, is an accepted fact. The school board has authorized its superintendent, through his assistants, to equip the schools of the city with fireproof booths and standard professional apparatus and it has authorized appropriations for educational film service.

It will be interesting to note that Pittsburgh after making a thorough investigation in visual education in all parts of the country, has adopted the Keystone "600 Set," and now