

AN ABSTRACT OF THE THESIS OF

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IN OREGON HIGH SCHOOLS _____

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The right of each individual to develop his educational potential at his highest normal rate seems now to be inherent in our educational philosophy. Coinciding with the development of our modern philosophy of education, with obligatory recognition of individual differences, was the mushroom growth of intelligence testing and allied devices. This gave the problem of implementing procedures for recognizing and dealing with individual differences the scientific support required to promote constructive action toward the educational fulfillment of our democratic obligation to provide for maximal individual development coupled with social responsibility.

The purpose of this study is to determine in so far as practicable the extent to which Oregon high schools recognize, plan for, deal with and endeavor to achieve positive adaptation of teaching procedures to individual differences.

A questionnaire covering the fundamental provisions for individual differences likely to be used in Oregon was sent to the administrators of 222 Oregon high schools. Only the eleven Portland schools were omitted. A return of 138 resulted, constituting a sample of 62 per cent.

The returns were separated into Group A containing schools with seven or less teachers and Group B incorporating schools of eight or more teachers. This was done to obtain a measure of comparison.

Eighty per cent of the schools keep records ^{on} I.Q. or M.A. scores but most schools have no records on the newer developments such as personality tests, interest tests or special aptitudes.

Only seven per cent of Group A and nine per cent of Group B offer any special assistance or enrichment for gifted students.

Only 74 per cent of Group A and 62 per cent of Group B indicate use of any unit plan whatsoever.

The historically significant unit plans are not being used at all with the exception of the Morrison plan which is shown to be used by 10 per cent of Group A and by four per cent of Group B.

The great opportunity assignment making offers a teacher to make positive adaptation of teaching procedures to individual differences and to provide enrichment is ignored by the majority of schools. In Group A 51 per cent and in

Group B 43 per cent of the schools indicate that they make the same assignment for all individuals in a course without regard to student dissimilarities.

Teachers and students alike are confounded and confused by the shock of "judgement day". Confusion is shown by the fact that 53 per cent of Group A and 41 per cent of Group B grade students in open competition but 41 per cent of Group A and 31 per cent of Group B indicate that each student is appraised by the teacher without regard to others.

Conclusions are as follows:

1. Records being kept by the schools are inadequate to provide the basic data needed for guidance or advisement purposes or for the scientific adaptation of teaching procedures to individual requirements of the student.
2. There is a lack of special consideration for retarded students or for those who need to make-up work.
3. Special consideration for gifted students or those with special aptitudes to promote greater opportunity for development is omitted by virtually all schools.
4. Granting of permission to carry an extra subject is a wide-spread practice.
5. In grouping students for instructional considerations grades play a pre-dominant role, while the special aptitudes of students are generally ignored.
6. A textbook-unit plan and a teacher-organized-unit plan are widely used.
7. Differentiation of unit-assignments, though a fundamental adaptive device, is employed infrequently.
8. There is general confusion in regard to grading high school students, particularly where attempts are made to consider individual differences in relative performance.
9. From the varied but related evidence organized here it may be said that none of the schools is making thorough provisions for individual differences. In fact, the majority of schools fail to employ the simplest and yet most fundamental methods for bringing about positive adaptation of teaching procedures to student individual differences in Oregon high schools.

ADAPTATION OF TEACHING PROCEDURES TO STUDENT
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ADAPTATION OF TEACHING PROCEDURES TO STUDENT INDIVIDUAL DIFFERENCES IN OREGON HIGH SCHOOLS

CHAPTER I

INTRODUCTION

In our Democracy emphasis is placed upon individual freedom, individual worth and the right of every individual to the fullest measure of self-development commensurate with the rights of others. Education is the great catalyst in the melting pot.

Umstattd (27:48) in referring to postwar education in the United States says that: "The purpose of education heralded by the peace will be to establish and to perpetuate in our country a growing democratic order consonant with the aims.....[of the peace]*..... , a society which will not become static through processes of indoctrination but will constantly regenerate itself through processes that eternally seek better modes of human relationships..."

Gradually, haltingly, our indigenous educational philosophy has developed to promote the ideal of personal educational consideration for each citizen with recognition of individual differences.

*Wherever brackets[] appear they have been inserted by the writer, as well as the material within the brackets.

Yet recognition of individual differences as an educational movement was not spontaneous. It was an outgrowth of the tremendous population increases after 1900. Because the various laws required that everyone's children be given certain specified education, mass production methods were introduced into the schools of our large cities. The traditional school was inadequate to meet the needs of the pupils in this new America. Objectives had to be changed, new ones developed. A whole new concept of education was in the making.

Skipper (20:459) states that, "The recognition of individual differences was forced upon them [the schools] by the shortcomings of the new school population. Providing for the disabilities of the mediocre was a painful necessity which no amount of rationalization would convert into a virtue."

Coinciding with this enforced alteration of concepts and recognition of individual differences was the mushroom growth of intelligence testing. This gave the need for recognition of individual differences the scientific support necessary to accelerate development of educational concepts adequate to cope with the new situation in the schools and to be a basis for a scientific solution to some of the problems.

One of the first major developments was homogeneous

grouping. Skipper (20:459) indicates that "homogeneous grouping of pupils was introduced to provide against the individual differences so glaringly revealed by intelligence tests." At first this device, according to Skipper, was not introduced out of respect for individual differences but as a grudging admission that they existed.

However, once the medieval armor of the traditional school was ruptured, once educators looked upon individual differences as a problem or a blessing that was here to stay, once they altered their thinking so that they no longer "hankered" for the good old days, they were in a position to make the schools functional, and to educate the educators for their role in the great drama of democracy.

The source of our present day educational objectives is the individual differences of children in relation to the maximal development of each individual student. "Thus individual differences," according to Skipper (20:463), "are assets of a social order which wants to be democratic but which is not living up to its promise."

Part of the greatness of our democracy is its ability to react to new concepts, to change to meet new needs, to be guided by our Constitution's great directive: ".....to promote the general welfare." For instance the following statement by Krug and Anderson (11:1) of our social responsibility in education is a unique development

in our evolving idealism:

The supreme task of.....education is that of building effective human relationships among many kinds of differing individuals. The aim is individual development coupled with social responsibility. On the one hand we seek to avoid a social regimentation which crushes individuals; and on the other to steer clear of a selfish, unrestrained individualism which disregards the rights and welfare of others. Democracy cherishes individual differences. Probably its major tenet is high regard for individual personality. We believe in the right and duty of every person to 'be himself,' not to be merely a carbon copy of others. It is an assumption in a democratic society that human welfare is promoted and protected as each individual develops his unique talents and makes his contribution to the work of the social group.

STATEMENT OF THE PROBLEM

Although educators are charged with the responsibility of adapting educational procedures to individual differences and to promote the maximum development of each pupil, obviously, this is not always accomplished, or even attempted.

The problem of dealing with individual differences is tremendous but encouraging progress has been made. Not considering the age, sex, cultural and economic differences among students there are at least eight categories for classifying fundamental differences. Tyler (25:42) says: "In human subjects measurable differences have been shown to exist in physical size, and shape, physiological functions, motor capacities, sensory and perceptual sensitivity, intelligence, achievement and knowledge, interests, attitudes and personality traits."

All of the categories mentioned above are areas in which certain tests have been developed in recent years. Such tests of interest, attitudes and personality traits have become useful adjuncts to intelligence tests. These are important tools in guidance and in adapting teaching procedures to individual differences.

The need for recognition of individual capacity and performance ability is emphasized by Douglas (8:195):

It is known that the ablest pupils in an unselected class of thirty will be able to solve five times as many algebra problems in a certain space of time as the poorest pupil. He will probably be able to read silently twice as many pages in ten minutes, and he is likely to have a vocabulary containing 50 to 100% more words. Similar differences exist for practically every ability that has been measured.

Although psychology is making frequent contributions through research to our knowledge of individual differences, it is unlikely that these differences will disappear or that our educational system, once charged with the responsibility of dealing with them scientifically, will be relieved of that responsibility. Even if the melting-pot was stirred forcibly, which is a popular political strategy in this decade, it is unlikely that the differences between social and national elements will disappear quickly or at all. According to Tyler (25:130-131)

Among nationality groups in this country and in Hawaii, there is considerable evidence for a hierarchy with Germans, Scandinavians, Jews, and the English-speaking groups at the top, and the South Europeans of all nationalities at the bottom.....There is evidence from a study done in Hawaii that improving educational opportunities for all groups raises their averages but does not wipe out the differences between them.

Though assured that individual differences are here to stay and that it is the obligation of educators to adapt their teaching procedures to these same dissimilarities, for practical reasons, or what are believed to be practical

reasons, this obligation is frequently ignored. In fact, a sort of dog-eat-dog "jungle" code of grading and teaching is commonplace. This originates from such questions, and the philosophy behind them, as: Do you want everybody to go to college? Do you want everybody to have a high school diploma? Though our economy at present requires itinerant laborers, casual laborers and ditch-diggers, their responsibilities as citizens are thought to be as important as their functions as laborers. This "devil-take-the-hindmost" philosophy might be acceptable in certain countries or eras but in our democracy we have the hindmost with us yet. Our social responsibility remains.

The right of each individual to develop his highest abilities at his highest normal rate seems now to be inherent in our educational philosophy. But for practical reasons such programs have not been implemented even when circumstances seemingly were ideal.

"Unfortunately much of the discussion of individual differences," according to Krug and Anderson (11:1), "in the past has proposed methods for overcoming the difficulties rather than suggesting procedures for utilizing the opportunities which these differences present to education. We have looked for panaceas and palliatives, tricks and devices of methodology which would keep the nuisances under control."

Because the high school is the last chance the overwhelming majority of our youth will have to obtain formal education of any kind it should be thought of as a finishing or "final" school with definite goals to be reached. It should not function as a college "prep" school for the few and fail to reach the majority of students, and in this way not fulfill its responsibility for promoting good citizenship and employability. Adaptation of teaching objectives and procedures to individual differences is the accepted solution of this problem.

Furthermore, since the secondary school is a cross-section of any particular American town what is accomplished there soon affects the entire community. In fact educational and moral over-tones emanating from the students in a school at any one time might be used to forecast the moral and intellectual level of the community, as well as its possible future prosperity.

Though recognition of individual differences is part of the great promise of education in America, as Billett says (3:13):

.....the problem is not solely one of providing for individual differences. From a sociological point of view all pupils have many needs in common. Moreover, from a psychological point of view pupils are more alike than unlike. In the reorganization of any secondary-school course, therefore, the teacher's problem is twofold--first, to select and to organize for classroom presentation certain core materials (activities and

experiences) likely to provide for the pupil's common social needs and psychological similarities, and from which suitable deviations may be allowed as provision for individual differences.

Diplomacy Parchment

NO. 100 CONTENTS

PURPOSE OF THE STUDY

The purpose of this study is to make available to educators in the State of Oregon and elsewhere, as well as to students of education and educational psychology and to others who may be interested, factual data and conclusions relating to current usage of certain devices and methods for adapting teaching procedures to student individual differences in Oregon High Schools. It was felt that accomplishing this purpose would constitute a worthwhile contribution to our knowledge in this field.

Since one of the great principles of teaching is providing for individual differences, as well as being a social responsibility in our democracy, the writer felt that this information could provide either encouraging news or an indictment of those responsible who may prove to be failing to fulfill their obligations to the individual student.

Except in time of war, our educational philosophy prevents us from considering any citizen expendable. But only through use of scientific methods for adapting teaching procedures to differing student capacities, rates of learning, drives, and responses can we fulfill our educational commitments. Only in this way can we save a citizen who otherwise would be "expendable" because of educational inadequacies of our school system.

The purpose, then, of this study is to determine the extent to which Oregon secondary schools recognize, plan for, deal with and adapt their teaching procedures to individual differences of their students.

To accomplish this purpose it was necessary to obtain data from the school administrators. Since personal interviews and examinations of their records were considered to be too costly and time consuming, it was decided that the required data could be obtained equally well for the purpose by a carefully prepared inquiry form or questionnaire.

THE QUESTIONNAIRE

A questionnaire like an objective test can be as inviting and intriguing as a cross-word puzzle. In fact it must be, in order to obtain sufficient response to produce adequate coverage of the field of inquiry. Being the primary source of data, the questionnaire* used is the foundation of this study.

It was necessary to build the objective inquiry form with the purpose of covering all essential phases of the study without sacrificing reader interest. This was accomplished by using fundamental catagories. For instance, Billett's study (2:9) shows 28 provisions for individual differences to be in practice in the nations' schools in 1932. But Billett was able to classify these under seven headings.

Likewise, Billett's study (2:96-100) shows that sixteen different criteria were being considered by various schools for the purpose of grouping students for instructional purposes. These allied grouping criteria were fused into nine fundamental and distinct bases for classification purposes of the questionnaire.

Again in the section dealing with unit plans a selection had to be made rather than list all the various

*See Appendix B.

devices actually in practice. A decision was made to develop a check-list presenting the unit plans of greatest historical importance as determined by an inspection of the amount of space given them in various standard textbooks on secondary school principles.

In each instance, except one, the recipient of the questionnaire was given an opportunity to record any method, practice or device he might be using that was not listed in the eleven divisions of the questionnaire.

All of the eleven objective questions required factual answers except two. Number eight required a scientific "guess" as to the degree of adherence of teachers to a particular unit plan. Number nine required that the administrator completing the form, rate, in accordance with his best judgment, the frequency usage of certain motivating factors as used in his school.

The two-page questionnaire was mailed with a cover-letter and return self-addressed envelope. It was sent to the principals of all schools shown in a table entitled Directory of Standard High Schools, page ten to eighteen inclusive in the 1947-48 Oregon School Directory. The only exception was the omission of the eleven Portland, Oregon high schools.

The total number of standard high schools in Oregon is 233. With omission of the eleven Portland high schools

there remained 222 high schools for consideration. Of these 138 were standard district high schools, 82 were union high schools and two were standard county high schools.

A total of 222 cover-letters and questionnaires were mailed.

A follow-up card* was mailed to the 108 schools from which no reply had been received up to that time.

By the time tabulation of results was begun, a total of 138 questionnaires had been completed and returned out of the 222 mailed. This constitutes a return of 62 per cent, which is considered to be adequate for the purposes of this study.

*See Appendix C.

LIMITATIONS OF THE STUDY

The questionnaire, apparently, was well received. Sixteen questionnaires contained simple notations such as: "Fine questionnaire;" "Swell check-list, will you send me one for supervisory purposes?" Four principals sent return envelopes requesting copies of the inquiry form.

However, it was not without limitations. One question which caused a deviation in response was number nine. This question reads: "Unit motivation: rate frequency usage of following appeals or incentives (1 equals most frequent)." There follows a list from "a" to "k" of items to rate in order of frequency usage from No. 1, which equals the most frequently used item, to No. 11, the least frequently used item as a source of motivation in unit teaching. However, there were three distinct variations in response. Seven simply checked one or more items as in all other questions. Thirteen graded each item instead of rating them. That is, each particular item in the check-list was graded as either 1, 2, or 3. The balance of the returns were rated in the anticipated manner as indicated above.

Perhaps this misunderstanding could have been avoided by extending the illustration from: (1 equals most frequent) to: (1 equals most frequently used, 2, next most frequently used, etc., from one to eleven). However, most

of the discrepancies may have come from not reading the question and direction as it was presented. Actually No. 9 was the only question requiring more than a simple check mark. Frankly, for the purposes of the study this question might just as well have been presented in keeping with all the others. But it was thought a variation from checking to rating would provide an element of motivation for the individual rater, himself.

Another limitation resulted from insufficient explanation. No. 2 was: "Who acts as the individual student's general adviser?" It was decided that to add the caution "(check one only)" would not be necessary. However, the results proved that the caution should have been given. Of the 81 returns in Group A, twelve gave more than one answer, that is, they checked two or more persons as acting as the adviser. This deviation would have produced about twenty different combinations, the analysis of which would serve no useful purpose. Likewise, in Group B, of the 58, eleven resorted to checking more than one person. Here, again the combinations of responses thus created would have been, if treated, of no value to the study, as such.

In the study, then, in No. 2 only 69 of the 81 answers were used for percentage purposes in Group A. In Group B, for the same reason, only 49 of the possible 58 were employed for percentage considerations.

This in no way invalidates the results obtained on No. 2 but it might have been avoided by more pointed directions in the questionnaire.

CHAPTER II

HISTORICAL BACKGROUND

The American obligation to provide adequate education for the new masses created overwhelming problems. These problems exist today, a challenge to educators and citizens alike.

This challenge gave impetus to many educational innovations such as homogeneous grouping, special classes, vocational training provisions, and introduction of many of the "sub-academic" courses into the curricula. Meantime, subject matter generally was benefited by the development of unit plans. At first this development filled a scientific need in the field of instruction and could provide some independent work for the student, affording a certain amount of relief for the teacher. But it was soon discovered that the unit plans were essential to provide for individual differences in student rate of learning and growth.

If the classroom were an easel and subject matter was paint put up in tubes, if the student were a paint brush and the teacher in fact a teacher, more than just the mixing of paints (facts), more than just bold strokes of color, more than unrelated tangents of pigment or surrealistic symbols, society has the right to expect a

completed painting with full and readily apparent meaning for all normal members of the culture. A meaningful whole, then, is, in fact, a unit. This is the unit idea. This is the basis for all unit techniques which provide for individual differences. But it was not easily achieved.

Umstattd says (26:130):

The central fact of the unit idea is that content should be studied as complete meaningful wholes rather than in isolated or unrelated lessons or fragments. This central fact applies whether the content is an experience, such as building a radio, or whether it is a topic, such as the industrial revolution. Content based upon the experiences and activities of children and content drawn entirely from books can alike be handled best in unified wholes, or units, which are well rounded and meaningful to the pupil. This is equally true of content derived from any combination made up of varying proportions of pupil activity, teacher experiences and printed material.

The concept of the unit idea is credited to Herbart.

No one prior to Herbart made such a contribution to an analysis of the learning process. According to Umstattd (26:134) Herbart stressed four essentials in the learning process: clear apprehension by the pupil of each individual fact; association or comparison of the facts; systematizing and classification of the facts into concepts; method, or the application of the knowledge learned.

The disciples of Herbart hastily refined his process and defined the five steps more or less as follows: preparation, presentation, associations or comparison,

generalization or abstraction, and application.

John Dewey contributed in this sphere his analysis of a complete act of thought which is seen to be closely related to, if not a paraphrase of, Herbart: 1. a felt difficulty, 2. its locations and definition, 3. suggestions of possible solution, 4. development by reasoning of the bearings of the suggestion, 5. further observation and experiment leading to its acceptance or rejection, that is, the conclusion of belief or disbelief.

Out of the tremendous influence of Dewey developed a number of systems devised to process subject matter so as to make it more meaningful, presentable and readily "learnable," because it would represent a living experience for the student. Such notables as the following are involved: C. A. McMurtry, Henry C. Morrison, S. C. Parker, Helen Parkhurst, Frederic Burk, Preston W. Search, and Carelton Washburne.

In adapting teaching procedures to individual differences the unit idea, being psychologically sound, gave birth to the idea of allowing a student to progress at his most natural rate gaining individual experience of value to him. Of this Umstattd says (26:148)

"If the individual is to proceed independently of the group he should go forward in easily measured steps; that is to say, he should proceed unit by unit. Not all the plans for individual instruction embraced this relationship in their earlier stages;

but as the unit idea grew, it was adopted by them more or less unconsciously until it has become an important element in their techniques."

Various plans for adapting teaching procedures to individual differences which are characterized by a unit assignment have arisen since 1900. In fact, any new plan no matter how closely resembling some existing plan, if put into operation, was certain to make a name for the promulgator. Yet that in no way disparages the sincerity of the educator or the effectiveness of the plan. But it does show that there was a dire need for reform. Administrators grasped at any plan which could help them. Actually these numerous plans were part and parcel of the great movement itself, the unit idea.

The unit idea, then, and related techniques, have made adaptation of teaching procedures to individual differences a possibility. Such individualized teaching is actually guidance in its broadest sense. When considered as guidance, all the data that a teacher can acquire concerning a student and the use of methods and motivations tailored to the requirements of the individual student becomes essential to success.

Some of the most important considerations in administering a program of teaching oriented to individual differences are as follows: 1. Student records, 2. Student adviser, 3. Remedial teaching of tool subjects or

tutoring, 4. Variation in number of subjects a student may carry, 5. Grouping of students for instruction on an ability basis, 6. Use of a unit plan, 7. Selection of a suitable unit plan, 8. Adherence to a unit plan, 9. Individualized unit motivation of each student, 10. Individualization of unit assignment, 11. Measurement of results in relation to differentiated students.

SCHOOL RECORDS

The schools could learn a lesson from the case-work agencies. The records a school needs for guidance purposes and for adapting teaching procedures to individual differences should be as complete as those used routinely by social workers. Yet most schools keep inadequate records. Any confidential personal data if kept at all is usually not secure from investigation by student office girls who thus gain gossip resources.

Secondary schools hoping to progress must make plans to control and store adequate records on all their students. Certainly these records should include personal data covering his home situation, income of family, size of family, position in family, appraisal of each parent.

Such information can be used in many ways not only in educational guidance but in mental and societal hygiene. In this respect Risk says (16:662):

Data relative to home conditions and family history may prove of particular value in dealing with special problem cases. Under such circumstances facts about the community environment may be unusually valuable. Such data are needed for case studies of delinquent or special problem pupils, but except for such cases, there is little need for more than general data about home conditions and the occupational status of parent. These latter data should, however, be of frequent help in classroom work as well as of value for guidance purposes.

In reality Risk understates the importance of records on home conditions. If the confidential nature of such records can be guaranteed, then the schools, authorized or subsidized by public welfare agencies, could be a clearing house for such data. In fact, there is a move in this direction. Information from a government source indicates that an arrangement may be made with schools to keep cumulative records that can be of use to the country in time of war. Since three out of five pensions now being paid by the Veterans Administration are for psychoneurosis (Source: V. A. Branch 11, Information Div., Seattle, Wash.), it is believed that if records were available covering the child's school years and home conditions most potential neurotic casualties could be spotted prior to enlistment.

Records covering mental ability such as I.Q. scores and M.A. determinations are considered to be fundamental. Such information, of course, is widely disseminated and can be of real value when used in connection with other data in guidance and advisement. But, though many schools have intelligence test results on their students, the information often lays dormant until discovered by a student or a score is given out by a teacher. Such an occurrence can cause severe damage to a sensitive student if his I.Q. score is divulged.

In relation to data on a student's mental ability Umstatted says (26:57):

"Usually the only record of the pupil's mental ability to be found in the principal's office is an estimate of his intelligence quotient based on one test. While this is entirely inadequate, it does provide a rough measure for the teacher's guidance in his study of the child. In no case should a teacher consider a single mental measure conclusive evidence of the child's mental ability. It is particularly unwise to classify a child as subnormal or inferior on the basis of one test unless ample provision is made for reclassification. It is less dangerous to accept a high intelligence record as reliable because a child might frequently fail to do himself justice on a test, but he will never make a higher score than his ability allows."

Teacher personality rating is another record that can be useful. Although not all teachers make an effort to be objective, and some are vindictive and neurotic, judgments of personality traits are frequently of value when used as a constituent of a composite data-picture. Umstatted (35:55) states that the judgments of previous teachers regarding the non-intellectual traits of each student should be available. These include such traits as accuracy, initiative, dependability, emotional stability, cooperativeness, reliability, industry, ambition, leadership, and physical vitality.

Keeping records of marks or grades or scholastic ratings on the newer teacher trait-evaluation cards or check-lists or report-cards is the one cumulative record

kept by all schools. There is a vast literature covering the subject of marking, grading or measuring, but there is a real need for scientific investigation of the specific role of evaluation of the student's efforts and its educational implications.

Many studies and researches are now in progress to determine newer, more scientific measuring devices to evaluate the quality of progress and speed of movement in the direction of goals or objectives.

This matter of marking will be discussed later in this chapter. However, for our purposes here, the consensus indicates that even those who are responsible for the abolition of grades and marks altogether in certain school systems somehow agree that grades are of some value. There the matter is marooned.

Personality test results can be used to advantage in the teaching-as-guidance program. Yet most of these tests are easily misused and their real value lost through misunderstanding of the actual implications when not taken into consideration with other supporting evidence. But their potential value cannot be denied. Freeman (9:41) indicates that the two most commonly used tests in the field of personality are the Bernreuter Personality Inventory and the Bell Adjustment Inventory.

Records in the school of unusual experiences are

another source of information for the teachers. Any unique situation involving travel, injuries, illnesses, family tragedies, if known to the counselor, can be used to benefit the student, under certain conditions.

Health records are often neglected, usually inadequate and incomplete, yet health and the promotion of health is a primary objective of our schools. A report of a recent medical examination is often essential to competent counseling.

Justification for the establishment of any cumulative record system, according to Hightower and Samuel (10:30) is based on two assumptions: (1) that guidance is an important part of the educative process and that, (2) personnel records make a valuable contribution to the guidance program. In a survey made of teachers' opinions, Hightower and Samuel (10:30) state that the following divisions of cumulative records were developed: (1) census information, (2) record of school experiences, (3) pupil goals and purposes, (4) aptitudes and abilities, (5) personality, (6) social development and adjustment, (7) home record, (8) physical record, (9) civic record, and (10) employment record. Particularly stressed, however, were the home, health, and school records.

DESIGNATED ADVISER OF STUDENTS

Advisory programs for student guidance in 1932 were functioning in 3604 of the 8594 secondary schools reporting as shown in the monograph on Provisions for Individual Differences, Marking and Promotion by Billett (2:9).

Just exactly who is responsible for acting as adviser is not shown by Billett in this, or other studies. However, during the present era in our public schools much of the work in personal and educational guidance is delegated to the home-room teacher or adviser. According to Umstattd (26:413):

As a result the teacher while acting as home-room adviser can often approach more nearly the ideal in teaching than when actually in charge of a class. It is in the capacity of adviser that he finds the time for personal conferences on matters of vital importance to adolescents under his charge. For example, as adviser he often learns of difficulties which confront the pupil at home, such as various aspects of poverty, broken homes, serious illness in the home, or other equally distracting conditions. Under present conditions he often has a better opportunity as home-room adviser than as classroom teacher to discuss vocational plans with the pupil and to relate the pupil's abilities to his plans for the future.....In brief, the adviser must be able to.....counsel the pupil in answer to any personal, social or educational question that may arise.

Apparently the home-room teacher is most often the counselor and adviser. In very large systems specialists are employed as full-time student advisers. In smaller systems it is the particular teacher who is closest to the

student who is likely to be called upon to do whatever advising is going to be done, whether it be principal, subject-matter teacher or coach. In practice it does not matter who actually does the job so long as the student receives the kind of professional counseling to which he is entitled. And counseling, according to Mathewson (13:26), may be thought of as ".....any mode of professional aid extended to the individual through verbal educative means by which the individual is enabled to make improved adjustments and to pursue his individual development more effectively."

UNCLASSIFIED

PLANS FOR ORGANIZED REMEDIAL TEACHING (Tutoring)

Although most remedial teaching is beamed for negative considerations, in the broadest sense it should be a word symbol for the various teaching techniques which can be called upon to remedy a specific teaching situation. This may involve special consideration for a brilliant student, or, in a small school, tutoring of a particular student in the basic skill of reading.

In this sense that remedial teaching is in fact directed to correcting or alleviating some student deficiency rather than overcoming a teaching deficiency, Blair (4:16) holds that remedial teaching, no matter what the subject, must primarily be concerned with reading ability:

"Reading is the most essential tool of learning in secondary schools. In the typical high school, approximately 80 to 90 per cent of all study activities require silent reading as a means of gaining knowledge. Because this skill is so complex, it can only be partially developed during the elementary school years. The secondary school must, therefore, take the responsibility for engendering further growth in reading.

Presenting the results of his 38 state survey covering 379 high schools located in towns of 20,000 or more, Blair (4:144) lists the responses in relation to action taken to correct deficiencies in tool-subjects and remedial reading. Of the 379 schools 75 reported: "Do

nothing or very little;" 26 indicated that it is "Up to teachers;" 34 reported that remedial teaching was done by "English teachers in regular classes;" 198 show that they have special sections in their English classes for remedial reading.

Remedial teaching, then, in the negative sense used by Blair (4:16) "is essentially good teaching which takes the pupil at his own level and by intrinsic methods of motivation leads him to increased standards of competence. It is based upon diagnosis of defects, and is geared to the needs and interests of the pupil."

In this sense an effort to assist a group of students is automatically stigmatized in an ordinary secondary school situation. Actually, if teaching were to be thoroughly adapted to each individual's requirements, then the collective regard for such negative considerations as pointed out by Blair is obviated.

Nevertheless, Billett's (2:9) monumental monograph shows a number of remedial teaching functions in practice. Fifty-nine per cent (5099 of the 8594) schools provide for those who are retarded, "Special coaching for slow students." For those who have failed a subject 30 per cent provide "Special classes for those who have failed." For those who are able to skip a grade or portion of a course, 686 schools, or eight per cent permit "Promotion more

frequently than once a year." For those who need to "make-up" work six per cent, or 544 schools, have "Adjustment classes or rooms." And for those who are gifted to promote greater development 322 schools or four per cent have what they indicate as "Opportunity rooms." Other than this, seven per cent indicated that they had the customary "Remedial classes or rooms" for negative considerations.

From the standpoint of adapting teaching procedures to student individual differences all remedial teaching devices would be obviated except in the largest of secondary schools, and even here, such learning groups could be protected from stigma and conducted in a tutorial manner.

In this regard Butler holds (6:277-8) that:

"All good teaching makes it possible for individuals to learn independently of others; but teaching which aims particularly to provide conditions so that pupils can progress at their own rate by following a definite set of activities leading to specified standards is characterized as individual instruction..... Individual instruction has for its main purpose the maximum development of each individual according to his capacities. In school situations wherein acceleration [such as the Winnetka plan] is not practiced, development must be thought of as broader growth in the same division or unit of learning; hence, the instruction of individuals becomes individual instruction whenever attempts are devised to make it possible for pupils to grow through their own efforts."

In the past whatever effort has been made to correct educational situations wherein students of differing capacities had to work side by side on the same materials, it

was the slow students and the bright students who received the most educative mistreatment. But even in this situation more attention was paid to the dullards than to those of high intelligence. "Getting rid of" a superior student by allowing him to skip a grade or portion of a course has been practiced but is now in disrepute. Martens (12:9) holds that "the value of marked acceleration is questioned by educators, and the practice is accordingly discouraged.. ...A more commonly approved method of making special adjustments for children of unusual promise is curriculum enrichment opening to the child vistas of experience which will encourage and stimulate breadth of understanding, depth of feeling and height of creative power."

PERMISSION TO CARRY EXTRA SUBJECTS

Because it is such a simple action, permitting students to carry extra subjects is a wide-spread device. However, many schools which permit this may make no other provisions for individual differences. If this is the only overture to individual differences that a school makes then such a pretense may be detrimental to the student. By spreading a bright student a little thinner, over five subjects instead of four, it may avert a one-man rebellion but it is no credit to the school. Likewise, permitting a student who "flunked" a subject to take five subjects in his senior year in order to get by and reach the graduation stage by minimal progress or no progress at all, may be an administrative obligation at present but it is also an educational indictment.

Billett's investigation (2:349) reveals that 6428 of the 8594 schools, or 75 per cent permitted certain students to take one or more extra subjects.

Various factors, purportedly, are considered in determining whether or not a particular student will be permitted to carry an extra subject. According to Bofto (5:41) "the determining factor in most cases is the pupil's average scholarship in all subjects combined. Pupils are also permitted to carry more than the normal load when a few units are needed for graduation during theyear."

CRITERIA USED IN GROUPING STUDENTS FOR INSTRUCTION 36

Grouping of students into ability groups was given early recognition as a fundamental concept in the movement to provide individualized instruction. But of course the problems in achieving desired grouping are frequently so difficult that the desired results are defeated by the new conditions created by the grouping. Certainly a triple grouping into bright, normal and dull, though feasible, may be subject to regrouping or at least the partitioning must be permeable so students can move from one group to another. There are also morale considerations and social obligations that cannot be ignored.

However, Billett (2:9) reveals that 2740 out of the 8594 or 32 per cent of the secondary schools indicated that they practiced some form of homogeneous grouping.

An intensive survey of 289 secondary schools known to be emphasizing homogeneous grouping, Billett (2:96-100) revealed that there were sixteen criteria which were used to achieve the grouping then functioning in the particular schools. From these sixteen, eight basic criteria can be derived, namely: health; grades; I.Q. or M.A.; achievement tests; teacher impressions; industry; application or effort; social maturity; and physical maturity.

The primary object of homogeneous grouping, of course, as Risk states (16:361), is ".....to be able to

differentiate instruction. The plan that is usually followed is to enrich the course for brighter pupils or so-called faster groups and to reduce the work of the slower groups to so-called minimum essentials."

In this regard Billett (2:42), referring to grouping of students for instruction, says, "Good teachers have employed it more or less informally for a long time. Under the procedure, the pupils of a heterogeneous class are divided by the teacher into two or more groups for instructional purposes, and the class period is given partly to individual work, partly to work with small groups, and partly to class instruction."

Regardless of the criteria used to implement homogeneous grouping, upon review, many inadequacies are sure to be detected. Some of the criticisms of homogeneous grouping are summarized by Wyndham who quotes from the Ninth Year-book of the Department of Superintendence, embodying the opinion of 500 school superintendents. The most frequently mentioned disadvantages are:

1. With homogeneous grouping, the slower groups lose the stimulus and the contribution of the brighter groups.
2. Pupils put in the lower ability groups sometimes develop a sense of failure and inferiority.
3. Pupils in the higher ability groups are apt to develop a superiority complex. It may cause brighter pupils to under-evaluate the work of qualities other than intellect, and thus promote intellectual snobbishness. It prevents brighter children from learning tolerance for those with less intellectual ability.

4. Homogeneous grouping is undemocratic and tends to create class distinctions in the minds of some pupils.
5. The adjustment of teachers to the various groups is difficult, particularly to the lower groups. Some teachers object to teaching the duller groups [sometimes it is the duller teacher who is given the job]. Relatively few teachers can handle this group competently.
6. With homogeneous grouping there are no outstanding leaders to inspire the slower groups.....
7. It is difficult to divide pupils into truly homogeneous groups, for a group that is more or less homogeneous in one subject may be heterogeneous in another." (29:159)

Certain conclusions of Wyndham relative to ability grouping may be shown as follows:

1. 'Ability grouping' has not been put into practice in an extensive or thoroughgoing fashion in the elementary schools of the United States of America.
2. Ability grouping either in theory or practice is not synonymous with grouping of children upon the single criterion of scores on intelligence tests.
3.Like all other practices, ability grouping will earn the condemnation of some schools of thought, but it would seem that it is not necessarily undemocratic, nor, considering the task of mass education with which it is faced and which has indeed given it birth, can it be justly condemned as constituting an obstacle to the fullest possible development of child personality." (29:424)

However, Wyndham (29:424) further concludes that [even in 1934] the pendulum started its backward swing. "Without waiting for experimental evidence as to the ineffectiveness or the undesirability of ability grouping, a reaction against the practice has recently set in."

This movement against homogeneous grouping has grown to

such proportions that it now seems that those schools who failed to implement the practice or who were unable to do so, or the very small schools where it was not administratively feasible at any time, may show that they were on the right side of the fence all the time. This may yet prove to be true, particularly where such schools have made and are making full use of a unit method and the techniques which permit the student to learn at his own rate and in his own manner regardless of others who may be superior or inferior.

Certain educators in the social science field now hold no brief whatsoever for homogeneous grouping. In fact, they believe it can be detrimental to our concepts and objectives of education for social living in a democracy.

Durfee holds that heterogeneous groups can and should offer opportunities for individual work. This can be true provided appropriate techniques are used to adapt teaching procedures to students' individual differences, thus avoiding the disadvantages of homogeneous grouping and maintaining all the enriching, social advantages of heterogeneous grouping:

"Classwork should provide a chance for the interplay of student minds on various ability levels. This is especially true of social studies, where the main purpose is the ultimate achievement of a workable democracy. In such a democratic society, there

is a need for people to assume responsibility relative to their capacity to produce. Those who are fitted for greater mental achievement should assume proportionate obligations, while those less fortunate should realize that there are contributions they can and should make. There is much to be gained by the development of respect for capable minds; but it is equally true that the more capable should realize that contributions to social welfare are not dependent on intellectual capacity alone. (7:40)

"The important thing is to recognize," according to Durfee (7:44), "that it is possible to provide for individual differences in the 'heterogeneous' group." A suitable unit plan, unit assignments, one of the newer unit-oriented, unit "wise" textbooks or even a modified USAFI-type (United States Armed Forces Institute) self-teaching text can provide a key to the conflict.

PERCENTAGE OF TEACHERS USING A UNIT PLAN

Apparently there has been no nation-wide study of provisions for individual differences, marking and promotion since Billett's in 1932, or at least no survey of such magnitude or significance. Risk (17:362) interprets some of Billett's data. Over one-third of the 8594 secondary schools reported that they used some plan of individualized instruction. This includes all those using the various well-known plans. "The report shows, also, that the vast majority of teachers in these schools are attempting to work out their own devices....." Because of the myriad variations in practice and the intrinsic difficulty in obtaining data Risk (17:362) concludes that "..... it is impossible to determine the percentage of schools using some form of unit individualized instruction, but it is evident that it is considered a very desirable means of caring for individual differences." Likewise it has not been determined what per cent of teachers actually make use of unit plans even though the school administrator is dedicated to the policy.

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USAGE OF UNIT PLANS

There is evidence however, which indicates a reaction of educators against homogeneous grouping as an educational device. Furthermore, in the field of social science we have evidence of open rejection of "ability grouping" because it is contrary to the social interest of students, because it places them in an intellectually class-less class, an artificial, unreal situation. Because of this reaction, even greater significance will be placed upon an adequate unit plan designed for functioning in heterogeneous circumstances, and flexible enough to treat each student as an homogeneous group of one.

If homogeneous grouping is falling into disrepute, and since only one-third of the schools reporting in Billett's survey were then (1932) using a plan of individualized instruction, there would seem to be room for a plan that could conceivably be used in large and small schools alike. Such a unit plan may be in the making, it may be built upon a new-kind of text-book. But this will be covered later.

Billett's (2:9) survey revealed the fact that some of the most prominent of the "name-brands" among unit plans were actually used by very few schools. The (1932) investigation disclosed that of the 8594 schools responding only 162 were using the Dalton Plan, or only two per cent.

The Winnetka Plan, though famous historically, was used by only 119 or one per cent. The Morrison Plan, perhaps because of its simplicity, fared better. Apparently 737 or nine per cent were using it. A contract unit plan was functioning in 2293 or 27 per cent of the schools surveyed, whereas a problem method was claimed by 4216 or 49 per cent.

Actually, use of the Dalton Plan, developed by Helen Parkhurst and used in Dalton, Massachusetts, demands special training for the teachers, involves a break with the conventional school in that the regular class schedule is abandoned in favor of time budgeting by the teacher-shop-foreman. These radical departures though fundamentally sound, plus the new problems in administration, may account for the low percentage use, namely, two per cent.

However, Parkhurst developed a modified Dalton Plan which is much more widely used than the original or orthodox plan. Billett (2:287-8) explains that:

.....All of these schools have been influenced to some extent by that larger movement in education, of which the Dalton Plan is a part, namely, the movement to provide for the pupil definite assignments of integrated work adapted to his individual needs, interests, and abilities, to be mastered by him under class-room conditions which allow the greatest possible freedom consistent with wise direction.

The Winnetka Plan developed by Washburne is another device that breaks with the traditional school by creating a curriculum that includes two catagories: "common

essentials" and "group and creative activities." However, as has been indicated above, one per cent of the schools in the Billett report claimed to be using it. And even this figure may be in doubt. In referring to certain schools purportedly using the Winnetka technique, Billett (2:302) says, "One may say with assurance that if their practices do not resemble the Winnetka technique then it is very doubtful whether any close approximation to the Winnetka technique exists outside of Winnetka itself.....The practices of these schools are characterized by efforts to present some of their work by means of the unit assignment. These schools differ widely among themselves. Probably their work should be designated by no term more specific than 'procedures characterized by the unit assignment'."

Morrison developed the idea that all subjects in the field of general education as well as vocational education at the secondary level could be divided into five different and distinct types. All subject matter involved can be treated in units and processed by Morrison's teaching cycle. This consists of the basic Herbartian formula: exploration, presentation, assimilation, organization and recitation.

The stability and relative simplicity of Morrison's strategy has resulted in fairly wide acceptance in spite of the Billett report listing only nine per cent of the

reporting schools using it. But that was nine times as much coverage as the Winnetka and nearly five times as much as the Dalton. Actually Morrison's apparent influence on the organization of textbook and workbook material gives a better estimate of his contribution to the field.

Basically the workbook is an outgrowth of a written assignment. Yet this movement since 1915 has received such widespread acceptance that it outrivals any other educational device. There were workbooks on the market prior to the war for nearly every subject taught in secondary schools.

In 1912 Burk implemented "self-instructional bulletins" for an entire school curriculum. Burk's bulletins actually were textbooks written by the teachers with the objective of making them fundamentally self-instructive.

By 1915 according to Umstattd (26:177) "the experimental work with these exercise books and other features of individualized instruction had proved successful in terms of more rapid pupil progress, saving of school time and school costs.....Since that time the influence of the idea has spread to almost all secondary-school subjects and has been adopted by a large majority of the schools in America.....The writer's incomplete files contain more than two hundred different workbooks covering secondary-school subjects."

This phenomenal development of the workbook, however, might be credited, in part at least, to the expendable nature of the books themselves and to the efforts of aggressive salesmen, rather than supposing that all this success stems from the inherent value of any particular workbook designed for a particular course, or as a companion to a textbook.

But then the success of the workbook does not depend entirely on salesmanship. Actually a workbook is more flexible than the usual textbook and therefore can be made to fit more varying conditions with relative ease. To some extent, as a result, it surpasses the basic text in offering the opportunity to redistribute the contents of a course in terms of pupil's interests and abilities.

In fact, according to Umstattd (28:187), providing for individual differences is one of the chief values of the workbook idea. Not only does the workbook provide an opportunity for each individual to proceed at his own rate, which is a fundamental element of any adequate program for dealing with individual differences but, also, as Umstattd says, "Exercises are included which call for all ranges of ability from the very dull to the near genius. Choice is afforded each pupil to pursue exercises which challenge him, after the pretest has indicated where he should begin."

The Billett survey (2:9) indicates that 2293 of the 8594 schools or 27 per cent claimed to use a contract plan, Miller-type or other variations of the basic plan.

The Miller Plan is another example of the revolt certain educators have led against formal, traditional book learning, and against compulsory procedures in and out of the classroom. Whereas the Dalton and Winnetka plans involved a teacher-prepared contract or assignment or job, Miller utilizes a different approach. A contract is created, of course, but it is developed by the teacher and students answering a learning challenge. Once a problem has arisen, it is examined and the appropriate strategy is determined. Reaching the objectives then becomes a group enterprise.

Miller explains (14:11): "A clean sweep will be made. A working group will be substituted for the conventional class organization. Units of learning, comprehensive in nature, will be substituted for 'lessons'..... Pupil power will have right of way over teacher talk."

Umstattd says of the Miller contract plan (26:168) that "While the possibility exists that the procedures will become chaotic unless the teacher keeps the activities within reasonable bounds, when the system is applied in its moderate forms it is unquestionably vitalizing in its effect upon classroom work."

It is apparent now, no matter what their importance historically, or how great their influence has been, the famous plans for individualizing instruction, themselves, were not adopted nor inaugurated extensively. In fact the statistics as to actual usage of the plans in no way indicate their contribution to American educational philosophy and practice.

Yet, throughout this period of development of procedures for dealing with individual differences, the majority of secondary schools has been relatively unaffected. Except for a few "self-instructional bulletins" included in a conglomeration of workbooks which might be included by an administrator to complete a purchase order for textbooks and other supplies, the majority of classroom activities were only slightly influenced. What influence has penetrated to the hinterland high schools may result from the newer textbook-workbook combinations which are developed to conform to the unit principle, the unit assignment, with "core" area interrelation and supplementary inclusions to provide for enrichment, plus the influence of better trained teachers.

Our knowledge in the fields of education and psychology is quite adequate to provide ideal learning situations. Yet, just as there is a "lag" in bringing the amazing technological advances in automotive engineering

from the design to the production phase so that Americans can have their "post-war" automobiles, there is a "lag" in our schools. But this failure or lag in bringing the "technology" of education and psychology into practice in our schools, may be a factor in another detrimental lag, our well-known "social" and/or "cultural" lag.

There is an influence, however, which comes from the businesses involved in education that should not be ignored. For instance, the Publishers Weekly in an article entitled the "First Textbook Institute Survey" refers to the post-war textbook boom (15:31): "In the first systematic survey of textbook sales in the United States, 48 publishers joined under leadership of the American Textbook Institute of New York to pool figures and provide an index to the recent rapid expansion in this field.

The estimated total textbook sales in elementary and secondary schools were up from \$38,600,000 in 1939 to \$62,400,000 in 1946, an increase of 60 per cent. The average book sales per pupil in secondary schools in 1940 was \$1.55 and in 1946 it was \$2.50.

The growth of Burk's self-teaching, self-instructional bulletins into the lucrative and extensive workbook business has been shown. The written contracts, the problem procedures, the project methods, the laboratory system with its laboratory instructions have arisen, some

have declined, but all are extant today in our educational system. But through it all the textbook has carried the burden and its success was more or less dependent upon the teacher's ability and/or opportunity to implement the essential features for adapting her teaching procedures to student individual differences.

These unheralded teachers who worked with what materials they possessed and used the knowledge they gained in their professional education courses have carried the learning load.

But now there is evidence that the textbook itself may be developed into a rich resource and an ever more desirable educational tool. A textbook designed to include the self-instructional attributes of Burk's bulletins and the workbook, a book thoroughly oriented to the unit concept, planned to provide individualized unit-assignments and incorporating elements of the particular "core" area in addition to resources for enrichment may soon be produced.

The influence of the United States Armed Forces Institute may be a factor in the "promise" of the post-war textbook. Spaulding (21:84) in referring to how the USAFI teaches without teachers holds that: ".....it is the textbook editor rather than the author who has been most concerned with self-teaching techniques. The author, usually

a teacher himself, has seldom, if ever, been under the necessity of trying to put all of the teacher into the book....."

"The specifications for self-teaching editions followed a fairly standard pattern. The pattern was based on the principle that, insofar as the limitations of print would allow, the book must be provided with the motivation, the assignments, the direction and guidance, the remedial teaching, the continuing evaluation, which would ordinarily be supplied by the teacher....."

"The objective test item was relied upon," according to Spaulding (21:86), "almost entirely for self-checking purposes, first because it has almost the same appeal as a cross-word puzzle. It actually tempts the student to try himself out. Second, it can be readily and unequivocally scored. Relatively easy but regular and constant self-appraisal together with specific sign-posts to remedial study were considered to be the heart of the self-teaching problem."

In regard to the effect USAFI may produce in the post-war era Spaulding (21:89) says: "Speculation is, of course, inevitable as to what, if any, effect this large-scale program may have on civilian education. If it is possible to get a substantial number of reliable observations on the experiences of men who have worked with the

self-teaching texts, we may learn a great deal that will be useful in the construction of textbooks for the schools."

Though the effect of USAFI has been felt its influence has not yet been measured and probably will not be subject to investigation until the producers are free from paper shortages and other business problems long enough to provide editorial leadership in the direction of incorporating USAFI features into textbooks for civilian students.

Meantime the question has been raised: "Should schools use self-teaching textbooks?" Can this lead to a situation where the teacher can guide or lead students in a heterogeneous group while subject matter is organized for use in considering the "homogeneous group of one," that is, each and every student?

Without answering the question Spaulding and Marvin, (22:407) nevertheless, list the specifications of such a proposed self-teaching textbook as embodying "1. greatest possible clarity of exposition, 2. an objective means of self-evaluation, 3. motivations through functional aspects, 4. pictures that teach, 5. complete study directions."

The idea of self-instruction does not propose to minimize the role of the teacher but to help her reach the goal of individual guidance for each student, and by providing some independent work for each pupil, actually give the teacher more time to perform her basic function as

leader and guide.

Spaulding and Marvin (22:410) believe that:

"Anyone who has tried to devise a completely adequate self-teaching textbook knows there is no fully satisfactory substitute for a competent teacher in the flesh. The teacher contributes immeasurably to the student's learning. There is no book in existence, self-teaching or otherwise, which can do what needs to be done to provide adequately for individual differences among students. The USAFI textbooks made a brave attempt in this direction with their system of self-evaluation and for remedial study and practice, but they inevitably fall short of the teacher-student ideal."

Some of the disadvantages of the self-teaching textbooks as shown by Spaulding and Marvin (22:410) are: no provision for individual reactions and differences in comprehension; no group discussions to bring out the various approaches to a particular, especially a social, problem, so that the various shades of meaning, the nuances, can be brought before the group; no book can provide all the tools and materials to provide maximal progress in a given area of learning; no objective test can substitute for frequent personal teacher evaluation and encouragement.

However, the so-called disadvantages of the self-teaching textbook provide a check-list of true teacher functions. If the "new-look" book can free the teacher from most of the "chores" of traditional teaching, he will be free to perform as a consultant, leader, guide, executive, and in some instances, as companion.

But, then, ".....in general, any textbook must rely upon teacher guidance if it is to make adequate provision for individual differences," according to Spaulding and Marvin (22:410). "There is inherent in self-teaching one major contribution to this problem. With a self-teaching textbook the student proceeds at his own rate.....there is no 'lock-step' about self-teaching textbooks. The fact that they allow freedom in individual rate of progress is, in many teaching situations, a real educational advantage."

Out of the development of the self-teaching textbook a real textbook unit, a unit outlined by the authors in the text itself, but subject to interpretation by the teacher, may supply the requirements of more teaching situations than any plan developed heretofore. If such a book can provide independent functions for the student along with fully adequate units, or supply most of the bases for a teacher-organized unit then it will be providing an inestimable service to secondary school teaching.

Yet, whatever the plan used, or ends declared, motivation is the fuel that starts and maintains the "drives" in the right direction.

UNIT MOTIVATION

In motivating students to action the appeals and incentives are simply those which a politician uses, or a salesman, or those appeals which the government uses in promoting a new issue of savings bonds. A student, in reacting to the social or intellectual stimuli is doing, what comes easily and naturally.

Some of the most frequent educational pressure-devices are as follows: grades; human interest; pride in achievement; competition; love of learning; employability; self-development; threats; praise; utility; privileges.

How frequently each of the above appeals and incentives are used or which is used more frequently than some other, or the order of frequency usage is not designated in the studies available. Although there are psychological monographs covering such subjects as "praise vs. blame" in motivating, or comparative studies on "competition vs. social acceptance," there was no statistical evidence available on how often various teachers use one appeal instead of some other. But the primary sources of motivating secondary school students are well known.

Risk groups some major sources of motivation as follows:

1. Creation of a felt need. This is the highest score of motivation, but not easily accomplished. But the psychological rules of good salesmanship when applied

2. The second choice of motivation is an appeal to present ideals. The appeals to ideals must be made through discussion of what ought to be done or would be worth doing and also through suggestion.
3. The third source of motivation is the appeal to the desire for social approval. This is effective through indirect suggestion.
4. The fourth source of motives is the appeal to values that have no inherent relation to the learning. They are merely incentives that may motivate work not for the sake of the work but for the sake of the reward. School privileges, honors, and material rewards are of this type. These are a less desirable type of motivation, but still they are comparable to many of the rewards of everyday life. When other means of motivation fail these may prove very valuable in securing desired attention to work, but they are far less potent than motives based on other values and felt needs.
5. The proper use of school marks and test scores has proved a powerful stimulus to good work. Symonds found that test motivation was twice as effective as attempted teacher motivation or practice repetition in securing desired outcomes.
6. Another source of motivation is an appeal to rivalry. Pupils may be stimulated to compete with each other, or classes or grades may enter into competition. The spirit of rivalry or competition may be capitalized upon in many different ways, some of which may be very valuable. (17:506-507)

There are many experimental studies with implications for education in the field of motivation. Many of the incentives for motivation are subject to objective experimentation and measurement. For instance, an investigation by Thompson and Hunnicutt (24:266) indicates that:

"1. When introverts and extroverts are grouped together [as in any random heterogeneous classroom], praise and blame are equally effective in motivating work achievement.

2. If repeated often enough praise increases work output of introverts until it is significantly higher than that of introverts who are blamed and extroverts who are praised.
3. If repeated often enough blame increases the work output of extroverts until it is significantly higher than that of extroverts who are praised or introverts who are blamed."

The results of this study by Thompson and Hunnicutt (24:266) indicate that praise, as well as blame, can be used unwisely by the teacher ".....if he does not fully appreciate and understand the different personalities present in the classroom. Praise and blame should not be judged on an either-or basis, but should be used to fit the case."

In reference to some of the other motives frequently used, such as competition, Ryans (18:319) states that competition against oneself is a much more desirable form of rivalry than competition with others.

Where grades and pride in achievement are considered as motivating factors Symonds and Chase (23:19), in their study of practice vs. motivation came to this conclusion in relation to the measurement of progress. In a normal teaching situation: ".....individuals who were informed of the progress they made were superior to those who practiced with no particular motivation." Symonds and Chase concluded that one learning trial involving knowledge

of results was equal to five "unmotivated" repetitions of material. This study covered 2000 children learning correct English usage.

Motivation may be considered as a catalyst which brings about the learning reaction, yet selection of the catalyst requires skill, experience and intelligence. Ryans (18:289) holds that: "Motivation will be considered simply as one of the conditions upon which learning is dependent." But all motivation must be correlated with desired outcomes, administered with due regard to the amount of, the nature of, and purpose of the response to be elicited.

FACTORS GOVERNING UNIT ASSIGNMENT MAKING

Billett (2:9) reveals that 40/47 or 47 per cent [of 859/4] of the secondary schools reported that they used differentiated assignments as a device for meeting the needs of differing students.

Apparently there is some confusion in terminology. The term differentiated assignments might or might not be a differentiated unit assignment and yet Butler (6:258-9) assumes that the term differentiated assignment means differentiated unit assignment because he insists that the above mentioned "differentiated assignment" is in fact no different than or implies nothing that is not implied in the simple term unit assignment.

A unit assignment is, then, an assignment that is worked out for a unit.....during the construction of the unit assignment, it is possible for a teacher to incorporate into the unit exercises that will provide opportunities for able pupils to branch out into divisions of the undertaking which lead to wider and more involved aspects of study. While the core of the unit assignment will include those fundamental ideas necessary for a good understanding on the part of all the members, there should be additional exercises intended for those pupils who are able to do more than the requirements included in the core.

However, Butler (6:261) concludes that ".....the term differentiated assignments carries no significant meaning or connotation not already implied.....[in the unit assignment]."

The factors which govern any particular unit assignment-making plan will be determined by the school situation. In the homogeneously grouped school the assignment may be different for each group studying the identical unit. Or it may be the same for all individuals in a course, or different for each individual as determined by the student's progress or desires. Moreover, the teacher may set up an extra-credit arrangement but this procedure is seldom beneficial.

Simpson and Hoover (19:32) hold that:

Extra-credit assignments have rarely proved to be as satisfactory as teachers have hoped. Often as not pupils who ought not attempt extra credit assignments are the very ones who undertake them. The primary objection to their doing so is that they slight the basic assignment in their haste to get on with the extra credit assignment.

A second objection is that pupils who are highly intelligent see enough implications in the regular assignments to keep them too busy to do extra credit work.

An alternative to the extra-credit assignment dilemma is suggested by Simpson and Hoover (19:32) which seems simply to perpetuate a basic inadequacy. "To obviate these difficulties [extra credit work difficulties] a plan of alternate assignments was devised.....under this plan every pupil works out the basic assignment, the differentiation occurring after completion of the basic assignment. Thereafter, the assignment is divided into

two parts: one for the strong pupils.....[they suggest the upper ten per cent] and one for all the others."

It seems that the suggestion above may solve none of the problems believed to be involved. Actually the necessity for extra-credit assignments, as such, would be obviated by implementing a scientific unit plan of operation, as shown by Butler (6:258-9). This would include a unit assignment which we have shown by definition to be fully adequate and flexible to meet all student demands for growth and learning material.

In the case of a teacher-organized unit wherein teacher-organized assignments are involved Ryans (18:324-5) offers the following precaution: "Individual differences in potentiality for achievement at any given time are widely distributed in a classroom. Care must be taken in making assignments to be certain that the learning required does not exceed the pupil's ability, on the one hand, and that it is not beneath his ability, on the other. In either event, maximum efficiency cannot be expected."

Butler continues (6:325): "Not only the difficulty of the assignment but its length and definiteness.....are important considerations.....Assignments should never be vague; standards or requirements should be definitely stated; and the length of the assignment should be such that it is reasonable to expect its completion. Closeness

to the goal is an important factor in learning. And learning behavior is facilitated as the goal is more closely approached."

Once a unit plan is functioning and unit assignments are fulfilling the needs of the various students, if not before, the question of measurement of items memorized, of aims, of growth, of social development, of attitudes, in fact, the full weight of grading, marking and measuring demands consideration.

CRITERIA USED TO GRADE DIFFERENTIATED GROUPS

At the present time there can be no final proposal for grading, marking or measurement, but there is enough evidence available so that a policy and procedure for grading students who are studying under relatively similar conditions, using correlated materials and subject to closely allied unit experiences, can and should be developed. But, apparently, no such comprehensive plan is extant at this time. There are no widespread policies, but myriad suggestions appear in the literature.

However, Risk (17:671) attempts to consolidate the varying approaches to the problem by holding that: "There are really two basic philosophies that fundamentally affect procedure in measurement and the use of marks. For want of better names, we will designate one of these the 'average passing grade' philosophy and the other, the 'attainment of standards' philosophy."

In viewing the attainment of standards proposal the problem is faced of determining what our standards of attainment are to be. The problem of measurement remains, as well as our responsibility to provide recognition, encouragement, and honest appraisal of our individual student who has been considered as an "homogeneous group of one." But the problem of reality demands that we not ignore the inevitable relativity of any particular student's progress.

Should each student in a course be graded in open competition? Since this is presumed to be the most widely used relative grading device, although no statistical evidence is available at this time, a professional appraisal of the practice might contribute some insight into the fundamentals involved in any relative grading plan. Risk (17:676) holds, that: "While the use of the relative grading plan has resulted in many unfortunate and pernicious practices, we should not shut our eyes to the fact that there are relative abilities and hence a need for measuring and recording relative accomplishment. The problem is mainly one of devising a practical plan for determining actual accomplishment and at the same time giving proper recognition to differences in accomplishment."

But since Risk raises the problem of "determining actual accomplishment" and at the same time giving "proper recognition" to differences in accomplishment it seems to the writer that Risk is guilty of a rather common semantic error. If "actual accomplishment" can be measured then the differences in accomplishment should be easily discernible, if the same tools are used here as were used to obtain a measure of actual accomplishment. But as to what constitutes "proper recognition" Risk does not divulge and the writer cannot guess.

There is probably no one inadequacy of our educational system that causes quite so much emotional

disturbance among adolescents as the grading obligation imposed upon students and teachers alike.

Probably more student-teacher resentment and morale maladies are generated from the common grading system than from any other school condition. The heart-breaking disillusionment that comes to an idealistic, adolescent lover-of-learning when he discovers that he or his close friend has been "measured" and found wanting is a common occurrence. The teacher then in reality or in imagination appears dishonest, the administrator incompetent, the school system itself dedicated to maintaining the fraud, and the full weight of "authority" is enforcing conformity to the evil and often stupid intentions of, to say the least, inefficient "powers that be."

Yet, there is, according to Risk (17:688) a hopeful ".....tendency in many schools.....to put more emphasis upon the individual development of pupils." This does not mean neglect of the so-called subject-matter content, but it means more attention to individual learning and the acquisition of those outcomes valuable for personal adjustment. These include such fields of experience as (1) social adjustments, (2) working with others, (3) oral expression, (4) written expression, (5) reading ability, (6) use of books and other sources of information, (7) care and use of materials and tools, (8) conduct (social

attitudes and ideals), (9) personal habits, and (10) cultural interests.

Of course such a proposal increases the complexity of the teachers responsibility in measurement, but then the grading policies in practice usually have been oversimplified, which would account for a part of the general inadequacy.

But where individual differences are given primary consideration then the mastery concept, for which the profession is indebted to Morrison, may be invoked. According to Risk (17:136): "Mastery should be interpreted to mean the complete acquisition of an adaptation, which may be an understanding, an ability, an attitude, an appreciation, or some habit of conduct. Such adaptations may be referred to as Unit-learnings."

If a unit-learning is considered to be the logical and intended outcome a textbook unit plan or "teacher-organized" unit plan or the Morrison Plan or the Dalton, or whatever plan is used, and where a unit assignment is an integral part of the program, then we have an approach to the measurement of the mastery of a unit-learning. Since "mastery" admits of no levels of attainment, then, presumably, the superior student simply masters more unit-learnings plus whatever "enrichments" may be included, than the other students. Thus a simple count of mastered

unit-learnings at any particular time can be accomplished and designated as a "grade."

But then this, too, involves an over-simplification. That is the ever-present danger in all measuring procedures involving students. However, there are experimental procedures that are designed to remove some of the negative psychological factors involved in any grading scheme and to prevent resentment-producing comparisons. Such a plan is in effect in DeKalb, New York.

Architzel (1:60) explains that:

"The DeKalb plan is divided into four major areas. Starting with the premise that all students desire to pass each subject they elect to pursue, the students are informed that they will not fail any subject, but that it does make a difference as to how they pass the subject. A positive approach is therefore used, and the threat of failure is discarded as a means of motivation. Fear and uncertainty have been removed from the minds of the students and he is free to achieve whatever he is capable of achieving."

The confusion and the conflicts centering around marking grow out of social custom, social pressure, educational psychology, "applied" psychology, and reluctance to change, but the complexity of humans themselves makes any attempt at measurement a strictly limited endeavor.

However complex the measuring and marking problem may be, in the study, at least, the evidence relating to the current use of certain grading practices in Oregon high schools is made available.

The history shows that the introduction of the concept of a "complete act of thought" along with the unit idea gave rise to a "psychological revolution" within the schools. Revolt against the "lock-step" system of education is made clear in all the famous plans for putting learning on a scientific basis which at the same time made it possible for the teachers to take cognizance of individual differences of students.

The historical development of the various plans and procedures for adapting teaching procedures to individual differences, as shown here, possessed a revolutionary vigor. But how far has the revolution gone? How many schools have adopted such methods and how many teachers use such techniques? Or has the movement been emasculated by having a few of its better proposals fitted into the platform of the conventional curriculum-keepers?

This study, directed as it is to administrators in all the Oregon high schools except those in Portland, will give some indication of the current regard for individual differences and what attempt is being made to adapt teaching procedures to the individual requirements of each student.

CHAPTER III

THE STUDY

The questionnaire used in this study was designed to reveal the extent to which certain basic methods for adapting teaching procedures to the individual differences of students is being practiced in Oregon at the present time.

Any plan to consider the individual, demands records designed to make available all the pertinent scholastic information as well as social and psychological data that might be of value in understanding the particular problems of a student.

In addition to records the questionnaire sought data relative as to whom was responsible for student advisement. Facts were sought relative to remedial teaching and tutoring. The criteria considered in allowing students to take extra subjects was also of concern. In grouping students for instructional purposes what criteria are utilized? How many teachers, actually make use of a unit plan? How many schools use a unit plan and what plan is used predominately? The questionnaire, also sought to determine how closely the teachers adhered to the unit plan chosen.

In motivating units there is an urgent problem to be solved. Since each individual will react somewhat

differently or not at all to a given stimulus, the teacher must understand the student and select the right motivating factor to be used with a particular student if the desired response is to be secured.

Likewise, in making unit assignments, the teacher is given an opportunity to adapt the school program to an individual's needs and abilities.

Then, again, in measuring the progress, development and responses of students, the teacher is faced with the stark responsibility for judging the student or his progress. As the social workers say, the teacher may be too "weak" or too "judgmental," but, of course, in education, the desire, the goal, the theme, is to be scientific.

In the study, then, the composite percentages relative to the use of various criteria, methods and procedures will be examined. The size of schools involved in the study as well as a comparison in practices between the two groups of schools used will be shown.

The questionnaire was sent to 222 schools. One-hundred and thirty-eight returns were received, or 62 per cent. The size of the schools, that is, the number of teachers in a school and the number of times a particular sized school is represented is revealed by Table I.

A study of the table reveals that 29 per cent of the schools represented fall in the three or four teacher high

TABLE I

FREQUENCY REPRESENTATION OF SCHOOLS IN RELATION TO
NUMBER OF TEACHERS

| Number of Teachers in School | Per Cent | Times Represented |
|------------------------------|----------|-------------------|
| 1 | 1 | 1 |
| 2 | 8 | 11 |
| 3 | 14 | 20 |
| 4 | 15 | 21 |
| 5 | 9 | 12 |
| 6 | 6 | 9 |
| 7 | 5 | 7 |
| | 58 | N. 81 |
| 8 | 2 | 3 |
| 9 | 3 | 4 |
| 10 | 11 | 8 |
| 11 | 3 | 4 |
| 12 | 12 | 9 |
| 13 | 1 | 1 |
| 14 | 1 | 2 |
| 15 | 4 | 6 |
| 16 | 2 | 3 |
| 17 | 1 | 2 |
| 18 | 1 | 2 |
| 19 | 1 | 1 |
| 20 | 1 | 1 |
| 21 | 1 | 2 |
| 26 | 1 | 1 |
| 27 | 1 | 1 |
| 28 | 1 | 2 |
| 32 | 1 | 1 |
| 33 | 1 | 1 |
| 36 | 1 | 1 |
| 38 | 1 | 1 |
| 48 | 1 | 1 |
| 89 | 1 | 1 |
| | 42 | N. 58 |

school category. Also it can be seen that 46 per cent of the schools are of the two, three, four or five teacher size. Certainly, in these small schools, in order to cover

the subject matter at all, and to pay any attention to the individual's requirements, the work must be adapted to independent endeavor with teacher guidance.

It will be noted as well, that the times a particular sized school is represented is larger and more closely grouped from the one to seven teacher schools. Thereafter, a definite scattering can be seen by inspection. Although 58 per cent of the schools fall in the "seven or less" teacher-class, it was decided to divide the schools into two groups at this point to obtain a measure of contrast in the tabulations to follow.

Throughout the thesis, the "seven or less" group has been designated simply as "Group A" and the "eight or more" has been designated as "Group B."

A prerequisite for any consideration of the individual, as was indicated, is the acquisition of data relative to the case. The variety of records being maintained in Oregon high schools and pertinent data are revealed in Table II.

Inspection of this table of composite percentages shows certain contrasts. As would be expected, both Group A and Group B show 80 per cent or more of the schools keeping records on I.Q. or M.A., that is, mental ability as well as scholastic records and a cumulative health record.

However, only 36 per cent of Group A and only 33 per

TABLE II
SCHOOLS MAINTAINING VARIOUSLY DESIGNATED RECORDS
ON THEIR STUDENTS

| Records Maintained | Group A | | Group B | |
|-------------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Personal Data (Personal Data) | 24 | 30 | 28 | 48 |
| Mental Ability (I.Q.;M.A.) | 65 | 80 | 50 | 86 |
| Teacher Personality Rating | 16 | 20 | 14 | 24 |
| Scholastic Records | 81 | 100 | 58 | 100 |
| Personality Test Results | 11 | 14 | 12 | 21 |
| Special Aptitudes | 14 | 17 | 15 | 26 |
| Interests, Vocational | 26 | 32 | 33 | 57 |
| Interests, Avocational | 10 | 12 | 12 | 21 |
| Unusual Experiences | 6 | 7 | 9 | 15 |
| Health Records, Cumulative | 73 | 90 | 52 | 90 |
| Health Records, Recent | 29 | 36 | 19 | 33 |
| Other | 8 | 10 | 5 | 9 |

cent of Group B has a record of a recent medical examination. It may also be seen, that generally the traditional records are kept, as mentioned above, but that both groups show the newer educational guidance tools to be used by very few schools.

For instance, personality test results. Group A shows only 14 per cent and Group B 21 per cent usage. Also, personality ratings by teachers seem to be used by less than one-fourth of the schools. Records relative to special aptitudes of students are kept by only 17 per cent of Group A, but fares better in Group B where such information is kept by 26 per cent of the schools.

Where vocational interests are concerned, there is a better showing by both groups, Group A indicating 32 per

cent. However, Group B is in contrast here by showing nearly twice the percentage of schools keeping such information.

Although there are no glaring contrasts between the two groups, Table II does unveil the general inadequacy of record-keeping in Oregon high schools.

Recently the terms "segmentation" and "fragmentation" have been discussed in periodicals as a social ailment characterized by groups of our people being separated from others. Actually much of the advice given to students is fragmentary, separated, and obtained haphazardly. Guidance in the field of education is directed toward preventing fragmentation of the student's personality and efforts. Student advisement and guidance is a serious responsibility. It often requires the services of a specialist and should never be undertaken by any but the most skilled. Table III indicates the particular persons assigned for this purpose in the schools included in this inquiry.

Perusal of Table III shows that in Group B the responsibility of being general adviser to students falls to the home-room teachers in 38 per cent of the schools in the group, with the principal playing a minor role in this important function. Whereas in Group A, with fewer teachers involved, this duty is shared about equally between two designations: home-room teachers in 22 per cent

TABLE III

TEACHING PERSONNEL WHO ARE ASSIGNED FOR DUTY
AS STUDENT GENERAL ADVISER

| Person Assigned | Group A | | Group B | |
|---------------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Home-room Teacher | 15 | 22 | 18 | 38 |
| Principal | 31 | 45 | 8 | 18 |
| Subject-matter Teachers | 18 | 26 | 3 | 6 |
| Dean of Boys or Girls | 2 | 3 | 13 | 28 |
| Counselor (Part-time or Full) | 1 | 1 | 1 | 2 |
| Case-worker (Part-time or Full) | 0 | 0 | 1 | 2 |
| Other | 2 | 3 | 3 | 6 |
| | N.69 | 100 | N.47 | 100 |

and subject-matter teachers in 26 per cent. However, in this same group, the principal, who, probably, also teaches, is the designated adviser in 45 per cent of the schools involved.

Group B is in contrast where designation of a specialist is involved; 28 per cent of this group reporting a dean of boys or girls. But Group A reveals only that two of the 81 schools comprising the group have a dean, or only 3 per cent.

Although the case-worker trained as a teacher or the teacher who also has case-work training is believed to be in growing demand in larger school systems, this is not revealed here. Only one school out of 138 reported using the services of a case-worker.

Although the table reveals that the larger schools can and do employ the services, either full or part-time,

of more specialists, possibly out of necessity, this in no way disparages the quality of advisement which a principal of a small high school can and should offer his students.

The tutorial method is probably the oldest teaching technique, in fact it pre-dates all techniques. However, with the advent of mass education, the crowding of recalcitrant youngsters into the mold that a class-room can be, the need developed for a renewed usage of a tutorial technique to alleviate some of the obvious defects of the standard teaching procedures.

Remedial teaching is a sort of educational first-aid for those who fall out of line on the long hike, for the stragglers. But it is seldom concerned with prevention. It is an adjunct treatment that keeps the educational body on its feet. If a student can stay in line, can keep up, then he is frequently ignored, but if he falls out of line he then becomes a problem and may receive some special assistance. Table IV reveals the infrequency and mal-distribution of such aid stations.

Inspection of the table shows that in Group A, 22 per cent of the schools will offer special assistance to "those who are retarded." But only 17 per cent of Group B offer such assistance. Only 11 per cent of the schools in Group A assist a student who has failed and only 9 per cent in Group B. For those who need to "make-up work" 26 per

TABLE IV
SCHOOLS EMPLOYING VARIOUS PLANS FOR REMEDIAL
TEACHING OR TUTORING

| Plan | Group A | | Group B | |
|--|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| For those who are retarded | 18 | 22 | 10 | 17 |
| For those who have failed a subject | 9 | 11 | 5 | 9 |
| For those who are able to skip a grade or part of a course | 8 | 10 | 3 | 5 |
| For those who need to "make- up" work | 21 | 26 | 7 | 12 |
| For those who are gifted to promote greater develop- ment | 6 | 7 | 5 | 9 |
| Other | 4 | 5 | 6 | 10 |

cent of the schools in Group A offer assistance, more than twice the percentage offering such aid in Group B.

"For those who are gifted to promote greater development" only 7 per cent of the schools in Group A and only 9 per cent in Group B offer special assistance or consideration.

Although there are no contrasts that cannot be adequately explained by the differing circumstances faced by the student-teacher ratios, there is a tragic evidence of lack of any special consideration, especially for those who need it most, the gifted.

Although no particular attention is paid to gifted students, they are sometimes benefited inadvertently along with those who have failed a subject or need a credit to

graduate by being permitted to carry an extra subject.

Practices in this regard are made clear in Table V.

TABLE V
SCHOOLS EMPLOYING VARIOUS CRITERIA FOR DETERMINING
WHICH STUDENTS MAY CARRY EXTRA SUBJECTS

| Criteria | Group A | | Group B | |
|--------------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Grade Averages | 68 | 84 | 43 | 74 |
| "Make-up" for Flunks | 15 | 17 | 14 | 24 |
| Need for Credits to Graduate | 50 | 62 | 30 | 51 |
| I.Q. or Achievement Scores | 23 | 28 | 15 | 26 |
| Interest in Particular Subject | 20 | 25 | 15 | 26 |
| Other | 1 | 1 | 4 | 7 |

A study of Table V reveals that 74 per cent of the schools in Group B permit students to carry extra subjects. This is virtually the same as Billett's study revealed. Billett showed that 75 per cent of the schools surveyed permitted carrying of extra subjects although the criteria for gaining or granting this privilege are not indicated. In Group A, 84 per cent permit the carrying of extra subjects and base it upon a student's grade average.

Need for credits to graduate is considered by 62 per cent of the schools in Group A and 51 per cent in Group B. Permission to take a subject simply because of interest in the extra subject without regard to other factors is granted by only 25 per cent of the schools in Group A and only 26 per cent in Group B.

For a complete percentage tabulation of the various patterns of criteria selected refer to Appendix D, Table XIII.

Permission to carry an extra subject is one of the most prevalent provisions for providing for individual differences. Yet in many instances it is not that, at all, but, rather, a remedial means of adjusting the ledger so that a student can attain a required number of "units" for graduation.

In Chapter II evidence was given relating to the fact that homogeneous grouping, at least in certain kinds of subject matter and in certain areas has fallen into disrepute. The writer developed the proposition that the form of homogeneous grouping that will never fall into disfavor is the homogeneous unit of one individual.

Whether the group be homogeneous, of one or many, or heterogeneous, certain criteria must be considered in grouping for instructional purposes to assure achieving an intelligent outcome. Employment of various criteria for this purpose is shown in Table VI.

A study of the table reveals that 60 per cent of the schools in Group A consider grade averages at least twice as important as any other factor. But in the group with the larger number of teachers, the grade factor was thought to be significant by only 30 per cent of the schools.

TABLE VI
SCHOOLS EMPLOYING VARIOUS CRITERIA FOR GROUPING
STUDENTS FOR INSTRUCTION

| Criteria | Group A | | Group B | |
|------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Health | 11 | 14 | 3 | 5 |
| Grade Average | 49 | 60 | 17 | 30 |
| I.Q. or M.A. | 15 | 18 | 12 | 21 |
| Achievement Tests | 12 | 14 | 11 | 19 |
| Personality Tests | 2 | 2 | 0 | 0 |
| Teacher Impressions | 11 | 14 | 14 | 24 |
| Interest, Vocational | 20 | 25 | 13 | 22 |
| Interests, Avocational | 7 | 9 | 2 | 3 |
| Special Aptitudes | 11 | 13 | 7 | 12 |
| Other | 8 | 10 | 6 | 10 |

Health was considered to be an important factor in grouping by only 14 per cent of Group A but was virtually ignored by the Group B schools of whom only 5 per cent checked health as a criterion in their grouping.

Of course personality test results were almost disregarded, probably because, as shown in Table II, so few schools have the records to use in such considerations.

Teachers' impressions seemed to play a greater part in grouping in Group B schools where 24 per cent of the schools named this as a criterion. This was almost twice that indicated by teachers in Group A.

Though special aptitudes were considered by only 13 and 12 per cent of Groups A and B respectively, at least it showed some consideration for and recognition of this particular group of talented students which was not

previously shown in the tables relating to other methods for adapting teaching procedures to individual differences of students.

Although an administrator is dedicated to a certain unit plan, his teachers may have other favorites of their own, or they may not use any such plan. Thus when a school is surveyed to discover what unit plan is used predominately the question as to the number of teachers or the percentage actually using a unit plan becomes important. Table VII offers a clue.

TABLE VII

TEACHERS WHO EMPLOY A UNIT PLAN AS A TEACHING TECHNIQUE

| Number of Teachers in School | No. Schools | Avg. Percentage |
|------------------------------|-------------|-----------------|
| Group A | 81 | 74 |
| Group B | 58 | 62 |

Table VII offers a composite percentage based upon 81 schools in Group A and on 58 schools in Group B. Of the former group only 74 per cent of the teachers indicate that they use any unit plan, however inadequate, and in the latter group only 62 per cent use a unit plan. This occurs even though the questionnaire liberally allowed consideration of a "teacher organized unit" and a "textbook unit." If it were possible to discount those who assumed a liberal

interpretation of the above mentioned unit plans and who actually do not unitize their subject matter at all, the percentage use by teachers of a unit plan worthy of the name, would be even lower than that revealed by the above tabulation.

Use of a unit plan is one of the most important methods for adapting teaching procedures to individual differences. Yet it was shown in Table VII that at best, in Oregon high schools, as sampled, only three out of four teachers use a unit plan. However, the preferences of these teachers is shown by a revelation of the unit plan each administrator indicated was used predominately in his school. This information is provided by Table VIII.

TABLE VIII
SCHOOLS EMPLOYING VARIOUSLY DESIGNATED UNIT PLANS

| Unit Plan | Group A | | Group B | |
|-----------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Textbook Unit Plan | 41 | 51 | 23 | 40 |
| Dalton Unit Plan | 0 | 0 | 0 | 0 |
| Winnetka Unit Plan | 0 | 0 | 0 | 0 |
| Morrison Unit Plan | 3 | 4 | 6 | 10 |
| Workbook Unit Plan | 13 | 16 | 5 | 9 |
| Teacher Organized Unit Plan | 21 | 26 | 22 | 38 |
| Miller Contract Plan | 2 | 2 | 0 | 0 |
| Other | 1 | 1 | 2 | 3 |
| | N.81 | 100 | N.58 | 100 |

Examination of the table shows that in Group B schools 10 per cent are using the Morrison unit plan. This

is seen to be close to the 9 per cent use shown by Billett in his 1932 national survey. In Group A, 4 per cent show use of the Morrison Plan. The Dalton Plan and the Winnetka Plan were shown by Billett to be used only by 1 and 2 per cent of the 8594 schools respectively, as shown by his monumental survey. Thus it is not surprising that no use of these plans is shown here.

However, Group A shows 16 per cent of its schools using a workbook unit plan in contrast to the 9 per cent shown in Group B. In the very small schools where much independent work must be done by the student or where several groups of students must study in a class-room while a class on another subject is being conducted, then the workbook could be particularly useful.

Although no restrictions were placed on the interpretation of the "teacher organized unit plan" as listed in the questionnaire, and since the per cent figure must include those who were strict in interpretation as well as those who climbed "on the band-wagon" in claiming use of a unit plan by their school, it is surprising that the percentages were so small. Group A shows only 26 per cent using a teacher organized plan whereas Group B shows 38 per cent.

In Chapter II the characteristics of a textbook unit were shown and the possibilities that the improvements in

this area hold for secondary school teaching. Of course, the fact that 51 per cent of the schools in Group A and 40 per cent in Group B claim to be using a textbook unit, including as it must those who chose to flatter themselves or wished to believe that the teachers in their school actually make full use of the adjunct materials and references which the more recent textbooks provide, is in itself extremely significant. Forty-one of the schools in Group A and 23 of the schools in Group B or 46 per cent of the entire sample indicate that they rely on textbooks predominately for any and all unit considerations whatsoever.

Knowing this, then, it would seem that efforts for improvement in teaching and increased consideration for adaptation of teaching procedures to student individual differences in Oregon high schools should be directed to special training for the teachers through professional education courses and developing the basic teaching tool, the textbook, into the rich resource it can become.

An attempt was made to obtain certain data concerning the per cent of teachers in the schools who use a unit plan. This was shown by Table VII. In Table VIII the various plans actually selected by administrators as being used predominately in their schools was made clear. In addition an attempt was made to determine the degree to which teachers adhere to the unit plan being given

predominate consideration. This is shown in Table IX.

TABLE IX
SCHOOLS EMPLOYING VARIOUSLY DESIGNATED DEGREES
OF ADHERENCE TO UNIT PLAN USED

| Degree of Adherence | Group A | | Group B | |
|-----------------------------|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Closely | 17 | 21 | 8 | 14 |
| Reasonably Close | 44 | 54 | 29 | 50 |
| In Name Only, Wide Latitude | 20 | 25 | 21 | 36 |
| | N. 81 | 100 | N. 58 | 100 |

Examination of the table shows that most schools in both groups adhere reasonably close to the plan selected. In fact, 75 per cent of Group A adheres closely or reasonably close to the chosen plan. In Table VIII it was shown that in this same group 51 per cent of the schools were using a textbook unit plan. Then of this 51 per cent, it might be assumed that approximately 75 per cent adhere to the textbook procedures they may have developed. But, in any event, 71 per cent of the entire sample is shown by Table IX to adhere closely or reasonably close to the particular plan they favor, or at least, tolerate.

It was thought to be significant to obtain certain data relative to motivation or implementation of units. Not just motivation by one incentive or appeal, however idealistic or basic, is enough; but it is the right appeal and approach at the appropriate time for each individual

that is the goal. Since individuals react differently in kind and amount then the frequency use of various motivating factors and the order and importance in which these factors are employed can provide a clue to the regard a particular group of teachers may show for the individual differences of their students. Such a clue is given in Table X.

TABLE X
ORDER OF FREQUENCY USAGE GIVEN TO VARIOUS CRITERIA
FOR UNIT MOTIVATION

| <u>Criteria Used Listed in Order of Frequency Usage</u> | |
|---|-------------------------|
| <u>Group A</u> | <u>Group B</u> |
| 1. Grade Averages | 1. Human Interest |
| 2. Competition | 2. Grade Averages |
| 3. Privileges | 3. Pride in Achievement |
| 4. Threats | 4. Competition |
| 5. Pride in Achievement | 5. Self-development |
| 6. Praise | 6. Praise |
| 7. Human Interest | 7. Threats |
| 8. Employability | 8. Love of Learning |
| 9. Self-development | 9. Employability |
| 10. Utility | 10. Privileges |
| 11. Love of Learning | 11. Utility |

An inspection of the table would indicate that in the smaller schools, where the teacher, perhaps, is out of the room more often, that the use of "privilege" to buy, if not unit response, then, possibly, good behavior, is used three times as often as in the schools in the group having eight or more teachers.

Human interest, however, is given first preference

and is used most often in Group B. This may result from larger classes with the teacher constantly in attendance where she can more fully develop an approach to, or presentation of, a unit. Whereas, in Group A where classes are small or perhaps mixed together or include students using the classroom for "study" while another class is in session, human interest is a minor consideration.

Competition appears high on the list representing the composite selections of both the groups being considered. But self-development, love of learning and utility are relegated to a much lower status.

Although motivation of a unit is a fundamental consideration, unit assignment making provides an opportunity for the teacher to employ adaptive measures to insure recognition of individual differences. Employment of various factors governing unit assignment making and the patterns of the selections is shown in Tables XI and XIV.

Table VIII shows, significantly, that 51 per cent of the schools show use of a textbook unit in Group A. Table XI shows 51 per cent providing the same assignment for all individuals in a course. But Group B shows 43 per cent use of this criterion when this same group indicated textbook unit use by 40 per cent of the schools involved. However, this possible conflict is averted by noting that Group A permits extra credit work upon completion of the

TABLE XI

SCHOOLS EMPLOYING VARIOUS FACTORS GOVERNING
UNIT ASSIGNMENT MAKING

| Governing Factors | Group A | | Group B | |
|---|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Different for Each Individual | 17 | 21 | 6 | 10 |
| Different for Each Group | 20 | 24 | 20 | 34 |
| Same Assignment for All Individuals in a Course | 46 | 51 | 25 | 43 |
| Extra Credit Work Available Upon Completion of Basic Assignment | 30 | 37 | 32 | 55 |
| Other | 2 | 2 | 0 | 0 |

basic assignment in 37 per cent of the schools and Group B, in 55 per cent.

A complete percentage tabulation of the various patterns of criteria selected is to be found in Appendix D, Table XIV.

Measuring the progress of a student's work, though a problem to be solved by scientific means, is far too often emotionalized and subject to social, economic and personality considerations which forces a teacher's hand. However this may be, the roster of criteria and the percentage use of them for grading purposes is available upon inspection of Table XII.

A complete percentage tabulation of the variously patterned selections of criteria made by the schools involved in the study may be found in Appendix D, Table XV. However, from the composite percentages shown in Table XII

TABLE XII
SCHOOLS EMPLOYING VARIOUS CRITERIA FOR GRADING
DIFFERENTIATED GROUPS

| Criteria | Group A | | Group B | |
|---|---------|----------|---------|----------|
| | No. | Per Cent | No. | Per Cent |
| Each Student in a Course Graded in Open Competition | 43 | 53 | 24 | 41 |
| Each Student Graded for Performance within his Particular Homogeneous Group | 15 | 18 | 14 | 24 |
| Each Student Appraised by Teacher without Regard to Others | 33 | 41 | 18 | 31 |
| Other | 2 | 2 | 1 | 2 |

it can be seen that when it comes to grading, no matter how considerate of the student, no matter how conscientious the efforts to adapt teaching procedures to the individual, he is at last measured or graded, but in open competition with all others in a particular course. At least, 53 per cent of Group A indicated this was its practice. In Group B, 41 per cent grade students in open competition with all others.

Strangely enough a diametrically opposed procedure, "Each student appraised by teacher without regard to others," is seen to be used as a criterion for grading by 41 per cent of the schools in Group A and by 31 per cent of those in Group B. Since there is very little organized homogeneous grouping, these figures must include the practices of schools regardless of their adaptive endeavors

in regard to individual differences because each of the 138 returns, even those indicating little regard for other adaptive measures, answered this particular question (refer to Appendix D, Table XV).

This concluding table reveals, as do some of the previous tables, a measure of inconsistency and a thread of confusion in the efforts being made for adaptation of teaching procedures to individual differences in the Oregon high schools. This will be revealed again in the Summary and pointed out in the Conclusions.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Gradually our educational philosophy has evolved and developed the ideal of personal educational consideration for each citizen with obligatory recognition of individual differences.

Coinciding with the development of our modern philosophy of education with suitable recognition for individual differences was the mushroom growth of intelligence testing. This gave the need for recognition of individual differences the scientific support required to promote constructive action toward a fulfillment of our democratic obligation to provide for maximal individual development coupled with social responsibility.

The right of each individual to develop his highest abilities at his highest normal rate seems now to be inherent in our educational philosophy, but for practical reasons such adaptive procedures have not been generally implemented or even attempted.

Yet the great range of abilities of students crowded together in an ordinary classroom creates such a confused teaching situation that the taking of bold measures to introduce the means for adaptation of teaching procedures to individual differences seems mandatory and inevitable. But

many educators prefer to disregard the situation, introduce socializing activities instead, and blithely proceed to bore the brilliant and ignore the dull.

Recognition of individual differences is one of the great principles of education. To what extent is this educational principle recognized and acted upon in Oregon?

The purpose of this study is to determine the extent to which Oregon secondary schools recognize, plan for, deal with and adapt teaching procedures to individual differences of their students.

To accomplish this, an attempt was made to obtain data from the administrators of the 222 Oregon high schools remaining after omitting the eleven Portland high schools. By means of a questionnaire covering the fundamental provisions for individual differences likely to be practiced in Oregon, and the criteria to be considered in implementing the various adaptive devices, data were obtained from 138 of the 222 schools to which a questionnaire was sent. This constitutes a return of 62 per cent.

The returns were grouped in relation to the number of teachers in the schools. The schools with seven or less teachers form Group A, constituting 58 per cent of the sample. The schools with eight or more teachers constitute 42 per cent of the sample and are designated as Group B.

Summary

In regard to maintaining of records on students, there is a general inadequacy. Eighty per cent or more of both Group A and B keep records of an I.Q. or M.A. score. Only 36 per cent or less show records of a recent medical examination, while personality test results are kept by 14 per cent of Group A and 21 per cent of Group B. However, virtually no records are kept on special aptitudes of students.

Assignment of a student adviser is a function closely allied to making provisions for individual differences. In Group B, 38 per cent of the schools indicate that advisement is done by the home-room teacher with 28 per cent using the services of a dean of boys or girls. But in the smaller schools 45 per cent indicated that advisement was the principals' responsibility.

Remedial teaching is usually directed to overcoming some student deficiency instead of frankly stating that it is a teaching inadequacy that is to be remedied, possibly by using a tutorial method. However, only 22 per cent of Group A and 17 per cent of Group B offer any aid for those who are retarded. Twenty-six per cent of Group A and 12 per cent of Group B offer assistance for those who need to make up work. For those who are gifted, assistance to promote greater development is offered by only seven per

cent of Group A and by only nine per cent of Group B.

Permission to carry an extra subject is a widespread practice frequently used to insure that students will somehow graduate on schedule; and, inadvertantly, may become a provision for individual differences by allowing a superior student to spend his restlessness in five classes instead of four. This is practiced by 75 per cent of "B" and 80 per cent of "A." Permission is granted when there is a need for credits to graduate in 62 per cent of "A" and 51 per cent of "B."

Homogeneous grouping of students fell into disrepute before it was ever practiced extensively. But separating students into groups, however small, for instructional purposes is useful in diagnostic teaching and in the selection of a teaching procedure likely to elicit the desired response. Yet only 13 per cent of Group A and only 12 per cent of Group B consider special aptitudes. Instead, 60 per cent of Group A consider grades to be uppermost, whereas only 30 per cent of Group B consider the grade factor.

Although the questionnaire liberally allowed the selection of a "Textbook Unit Plan" and a "Teacher Organized Unit Plan" without any implied prerequisites, written instructions or definitions, only 74 per cent of Group A and 62 per cent of Group B indicated that they make use of

any unit plan whatsoever.

Among the designated unit plans all the historically significant plans were missing except the Morrison Plan, which was used by 10 per cent of Group B and by four per cent of Group A. The workbook made a small showing of 16 per cent in Group A and nine per cent in Group B. However, the teacher organized unit plan garnered 26 per cent of Group A and 38 per cent of Group B. But the textbook unit plan comes out a winner with 51 per cent of Group A and 40 per cent of Group B climbing on the band-wagon. Actually 46 per cent of the entire sample indicates that a textbook unit plan is used; this includes those conservatives who inevitably applied a strict interpretation as well as those unable to resist the temptation to stand up and be counted.

The caliber of the motivations being used in any particular school might be used as a criterion for judging the moral, social and educational level of the students, and perhaps, the faculty. Although Group B ranks human interest as the most frequently used source of motivation, grades rank second and competition fourth. Likewise, in Group A, grades rank first with competition second, as sources of motivation. In both groups self-development, love of learning, and utility are relegated to a lower status and virtually ignored as sources of motivation.

Assignment making is a technique requiring great

resourcefulness on the part of the teacher. Differentiation of assignments is an indispensable device in adapting teaching procedures to individual differences. Yet, tragically, 51 per cent of Group A and 43 per cent of Group B ignore this proviso entirely by making the same assignment for all individuals in a course. Furthermore, less than one-half the schools offer extra-credit work upon completion of the basic assignment or indicate use of any other form of enrichment.

The obligation of teachers to issue grades periodically produces a feeling of inadequacy and remorse in the faculty members, who are further confounded and confused by the reaction of students to "judgment day" and its attendant turmoil. Elation and terror are common reactions that seem to predominate over the more philosophical approaches evidenced by certain older students who are inured to educational evils. Grading seems divided into two antipodal practices. In Group A 53 per cent and in Group B 41 per cent indicate that they grade students in open competition with all others in a particular course. But 41 per cent of Group A and 31 per cent of Group B indicate that each student is appraised by the teacher without regard to others.

Conclusions

1. Records being kept by the schools are inadequate to provide the basic data needed for guidance or advisement purposes or for the scientific adaptation of teaching procedures to individual requirements of the student.

2. There is a lack of special consideration for retarded students or for those who need to make-up work.

3. Special consideration for gifted students or those with special aptitudes to promote greater opportunity for development is omitted by virtually all schools in the sample.

4. Granting of permission to carry an extra subject is a wide-spread practice.

5. In grouping students for instructional considerations grades play a predominant role, while the special aptitudes of students are generally ignored.

6. A textbook-unit and a teacher-organized-unit are widely used.

7. Differentiation of unit-assignments, though a fundamental adaptive device, is employed infrequently.

8. There is general confusion in regard to grading high school students, particularly where attempts are made to consider individual differences in relative performance.

9. From the varied but related evidence organized here it may be said that none of the schools is making

thorough provisions for individual differences. In fact, the majority of the schools fail to employ the simplest and yet most fundamental methods for bringing about positive adaptation of teaching procedures to student individual differences in Oregon high schools.

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APPENDIX A

COVERING LETTER

Information Document

March 30, 1948
Corvallis, Oregon

Dear Sir:

A study is now in progress to determine the extent to which circumstances permit teachers and school administrators to adapt teaching procedures to individual differences of students. It is felt that such information is particularly important at this time when there is a shortage of fully prepared teachers, and when some schools are under-staffed.

This research is being done under the direct supervision of Dr. Riley J. Clinton, Professor of Education, Oregon State College, Corvallis, Oregon.

The questionnaire is as simplified as it was possible to make it. It should take from ten to twenty minutes to complete. All data will be handled impersonally without regard to individuals, school districts, or geographic areas. Your assistance is earnestly solicited.

Please complete the questionnaire and mail to the undersigned in the self-addressed envelope enclosed for your convenience. Please complete it and mail as soon as possible.

Sincerely yours,

Charles P. Kupper
Veterans Administration
Guidance Center, O. S. C.
Corvallis, Oregon

Diplomacy & Archival

100-1246 CONTENTS

METHODS FOR ADAPTING TEACHING PROCEDURES TO STUDENT
INDIVIDUAL DIFFERENCES IN OREGON HIGH SCHOOLS

1. Which of the following records do you keep on each student?
 - ☐ a. Personal data (home situation, income, size of family)
 - ☐ b. Mental ability (I.Q. or M.A.)
 - ☐ c. Teacher personality rating
 - ☐ d. Scholastic records through elementary and high school
 - ☐ e. Personality test results
 - ☐ f. Special aptitudes
 - ☐ g. Interests, vocational
 - ☐ h. Interests, avocational
 - ☐ i. Unusual experiences (family tragedies, injuries, travel)
 - ☐ j. Health records, cumulative, from grammar school
 - ☐ k. Health records, recent high school examination only
 - ☐ l. Other: _____
2. Who acts as the individual student's general adviser?
 - ☐ a. Home-room teacher
 - ☐ b. Principal
 - ☐ c. Subject matter teachers
 - ☐ d. Dean of boys or girls
 - ☐ e. Counselor, full or part-time
 - ☐ f. Case-worker, full or part-time (social-educational)
 - ☐ g. Other: _____
3. Is a plan of organized remedial teaching (tutoring) available? For:
 - ☐ a. Those who are retarded
 - ☐ b. Those who have failed a subject
 - ☐ c. Those who are able to skip a grade or portion of a course
 - ☐ d. Those who need to "make-up" work
 - ☐ e. Those who are gifted to promote greater development
 - ☐ f. Other: _____
4. What criteria are used to determine which students shall be permitted to carry extra subjects?
 - ☐ a. Grade averages
 - ☐ b. "Make-up" for flunks
 - ☐ c. Need for credits to graduate
 - ☐ d. I.Q. or achievement test scores
 - ☐ e. Interest in particular subject regardless of other factors
 - ☐ f. Other: _____

5. What criteria are used in grouping students for instruction?
- | | |
|---|--|
| <input type="checkbox"/> a. Health | <input type="checkbox"/> f. Teacher impressions |
| <input type="checkbox"/> b. Grades | <input type="checkbox"/> g. Interests, vocational |
| <input type="checkbox"/> c. I.Q. or M.A. | <input type="checkbox"/> h. Interests, avocational |
| <input type="checkbox"/> d. Achievement tests | <input type="checkbox"/> i. Special aptitudes |
| <input type="checkbox"/> e. Personality tests | <input type="checkbox"/> j. Other: _____ |
6. What per cent of your teachers use a unit plan? _____
7. Which of the following unit plans is used predominately in your school? (check only one)
- | |
|--|
| <input type="checkbox"/> a. Textbook unit (outlined in <u>text</u> by authors) |
| <input type="checkbox"/> b. Dalton unit plan |
| <input type="checkbox"/> c. Winnetka unit plan |
| <input type="checkbox"/> d. Morrison unit plan |
| <input type="checkbox"/> e. Workbook unit |
| <input type="checkbox"/> f. Teacher-organized unit |
| <input type="checkbox"/> g. Miller contract plan |
| <input type="checkbox"/> h. Other: _____ |
8. Do you adhere to the plan named in 7 above?
- | |
|---|
| <input type="checkbox"/> a. Closely |
| <input type="checkbox"/> b. Reasonably close |
| <input type="checkbox"/> c. In name only, wide latitude |
9. Unit motivation: rate frequency usage of following appeals or incentives (1 equals most frequent):
- | | |
|--|--|
| <input type="checkbox"/> a. Grades | <input type="checkbox"/> g. Self-development |
| <input type="checkbox"/> b. Human interest | <input type="checkbox"/> h. Threats |
| <input type="checkbox"/> c. Pride in achievement | |
| <input type="checkbox"/> d. Competition | <input type="checkbox"/> i. Praise |
| <input type="checkbox"/> e. Love of learning | <input type="checkbox"/> j. Utility |
| <input type="checkbox"/> f. Employability | <input type="checkbox"/> k. Privileges for good students |
10. What factors govern unit assignment making in your school?
- | |
|---|
| <input type="checkbox"/> a. Different for each individual |
| <input type="checkbox"/> b. Different for each group |
| <input type="checkbox"/> c. Same assignment for all individuals in a course |
| <input type="checkbox"/> d. Extra credit work available upon completion of basic assignment |
| <input type="checkbox"/> e. Other: _____ |
11. What criteria are used to grade differentiated groups?
- | |
|---|
| <input type="checkbox"/> a. Each student in a course graded in open competition |
| <input type="checkbox"/> b. Each student graded for performance within his particular homogeneous group |

- ___ c. Each student appraised by teacher without regard
to others
- ___ d. Other: _____

APPENDIX C

FOLLOW-UP CARD

April 13, 1948

Dear Sir:

Your contribution of certain essential data to the study may have been sent already. However, if you have not yet completed the questionnaire on methods of adapting teaching procedures to individual differences, will you please do so.

You may note on the return envelope that there are two numbers. These refer to the number of teachers and students in your school, as shown by the Oregon School Directory. This is a simple device for grouping returns impersonally without regard to locality.

We are aware of and appreciate your interest in research in the fields of education and psychology. May we expect the completed return soon?

Sincerely,
Charles P. Kupper

Dictionary of Architecture

CONTENTS

APPENDIX D

TABLES OF SPECIFIC INFORMATION

TABLE XIII

SCHOOLS EMPLOYING VARIOUS SELECTIONS OF CRITERIA FOR DETERMINING
WHICH STUDENTS MAY CARRY EXTRA SUBJECTS

| Group A | No. | 23 | 12 | 12 | 7 | 5 | 5 | 3 | 3 | 4 | 4 | 2 | 1 |
|--------------------------------|----------|----|----|----|----|----|---|---|---|---|---|---|---|
| | Per Cent | 28 | 15 | 15 | 9 | 6 | 6 | 4 | 4 | 5 | 5 | 2 | 1 |
| Group B | No. | 12 | 8 | 5 | 7 | 7 | 4 | 4 | 3 | 1 | 1 | 3 | 1 |
| | Per Cent | 21 | 14 | 9 | 13 | 13 | 7 | 7 | 5 | 2 | 2 | 5 | 2 |
| Criteria Selections | | | | | | | | | | | | | |
| Grade Averages | | x | x | x | x | | x | x | | x | x | x | |
| "Make-up" for Flunks | | | | x | | x | | | | x | x | | |
| Need for Credits to Graduate | | x | | x | x | x | | x | x | x | x | | |
| I.Q. or Achievement Tests | | | | | x | | | | | x | x | x | |
| Interest in Particular Subject | | | | | | | x | x | | | x | x | |
| Other | | | | | | | | | | | | | x |

TABLE XIV

SCHOOLS EMPLOYING VARIOUS SELECTIONS OF CRITERIA GOVERNING UNIT ASSIGNMENT MAKING

| | | | | | | | | | | | | | | | | |
|---|----------|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| Group A | N. | 78 | 26 | 12 | 9 | 7 | 5 | 5 | 4 | 4 | 2 | 2 | 2 | 1 | 1 | 0 |
| | Per Cent | | 33 | 14 | 11 | 9 | 9 | 6 | 5 | 5 | 2 | 2 | 2 | 1 | 1 | 0 |
| Group B | N. | 58 | 9 | 10 | 12 | 9 | 8 | 1 | 4 | 0 | 1 | 1 | 0 | 1 | 0 | 2 |
| | Per Cent | | 15 | 17 | 21 | 15 | 14 | 2 | 7 | 0 | 2 | 2 | 0 | 2 | 0 | 3 |
| <u>Governing Factors</u> | | | | | | | | | | | | | | | | |
| Different for Each Individual | | | | | | | | X | | X | X | X | X | X | | X |
| Different for Each Group | | | | | | X | X | | X | X | | | X | X | | |
| Same Assignment for All Individuals in a Course | | | X | | X | | | | X | | | X | X | | X | X |
| Extra Credit Work Available upon Completion of Basic Assignment | | | | X | X | X | | | | | X | | | X | X | X |
| Other | | | | | | | | | | | | | | | X | |

SCHOOLS EMPLOYING VARIOUS SELECTIONS OF CRITERIA FOR GRADING DIFFERENTIATED GROUPS

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