the BC teacher

FEBRUARY – 1963 VOL. 42 – NO. 5

THE UNIVERSITY OF BRITISH COLUMBIA

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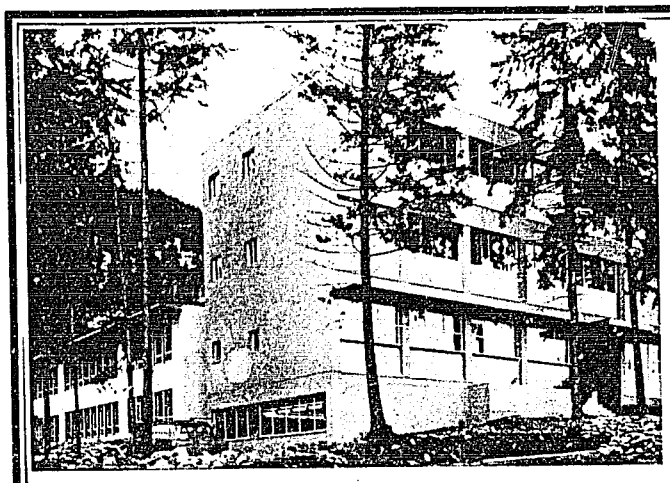

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IN THIS ISSUE

This is our third special issue. In it will be found many articles dealing with educational research and new developments in education.

There is now an agreement among the provinces of Alberta, Ontario and B.C. on the portability of pensions. The agreement is outlined in an article commencing on page 215.

On page 216 are biographical sketches of the candidates for office for 1963-64.

An idyllic summer—studying while cruising. See the article by Meredith Thompson which commences on page 229.

OUR COVER PICTURE

The picture this month is a view of the Creston Flats, a waterfowl preserve. Photo by courtesy of the Photographic Division of the Department of Recreation and Conservation.

Articles contained herein reflect the views of the authors and do not necessarily express official policy of the British Columbia Teachers' Federation.

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the Editor comments

Urgently Needed —

Government Support for Educational Research

THE U. S. OFFICE OF Education in 1956 launched what is known as the Co-operative Research Program, through which colleges, universities and state education agencies are engaging, with federal financial support, in the scientific study of problems in education. It is reported that more than 350 projects have been initiated, representing a total federal and local commitment of over $20,000,000.

Revolutionary change in education is occurring in B.C., too, but unfortunately it is neither being supported to any real extent by research findings nor evaluated by research methods. True, research evidence from the USA becomes known here in time, and undoubtedly influences—to some degree at least—the direction of change. New methods in the teaching of mathematics, in particular, have been introduced into British Columbia schools on the basis of USA experience and experimentation.

There is nothing wrong with borrowing what is good from other school systems, but surely we should not be content to be merely imitators or adopters. Surely we should want the B.C. school system to lead the way on occasion, as well as to follow. Opportunities to provide leadership will be lacking, however, if we do not engage in a substantial research effort related directly to our own problems and needs.

If there is to be a serious concentrated attack on educational problems in Canada and in British Columbia, two conditions must be met. First, there should be established research councils operating at both the national and provincial levels. Second, these councils must be adequately financed. The councils could provide an advisory and co-ordinating function through which school districts and universities could pool resources which now exist and, as they engage in actual research projects, develop new resources. Projects approved by the co-ordinating councils would have to be supported by substantial grants-in-aid.

Nationally, there now exists a Canadian Council for Research in Education. In this province the B.C. Educational Research Council is firmly established, on paper at least. What is lacking is money. So far, apart from the paltry sum of $35,000 a year pledged by the provinces to support the CCRE, there has been no commitment of either federal or provincial funds in support of educational research. The B.C. government makes no financial contribution at all to the support of the BCERC. Logically, the Federal Government, following the USA lead, should provide substantial funds to the CCRE, leaving it to provincial governments to provide money to support provincial research councils. A grant of $20,000 a year would put the BCERC on a sound operating basis.

In its own interest Canada should seek to share in bringing to realization a *Phi Delta Kappan* prediction that "by 1970 it may be possible to state that more was learned about education in the 1960's than had been learned in the previous history of education."★

Our Third Special Issue

THE FEBRUARY ISSUE has, for the past two years, been a special one. In 1961 we featured mathematics; last year we stressed English. This issue is devoted to new developments in education and educational research.

We have attempted to select informative articles with a wide appeal. The articles on research, for example, are non-technical, but have something significant to say. They should give all teachers a better understanding of research and its limitations.

Because the report of UBC President Macdonald on higher education is of such immediate importance, we have had to omit some articles to include a summary of the report. We shall use these articles in future issues.

The proposed reorganization of B.C.'s secondary schools is one of the newest educational developments—or is it? We think you will enjoy a British exchange teacher's reactions to the plan suggested for our province.

The teaching of reading has been criticized in recent months. The article on reading should therefore be of particular interest.

There has been much interest in the newest development in adult education—the King Edward Continuing Education Center. An illustrated article describes this unique school.

All of Canada is watching with interest the educational television experiment in Nova Scotia. The Assistant Executive Secretary of the Nova Scotia Teachers' Union details the experiment in an article written especially for this issue.

Another Nova Scotian, Dr. H. N. Nason, discusses the constants and variables of education. In a period of rapid change it is wise to remember that there are some things which do not change.

Not to be outdone, we have added a new development of our own. With this issue we begin the feature, "A Matter of Opinion," in which teachers can make legitimate criticisms or offer suggestions for change.

These are just some of the features that await you in our third special issue. We hope you will find it a worthy successor to the first two.★

Input Affects Output

THE OCTOBER, 1962 issue of *Administrator's Notebook,* a monthly newsletter published by the Midwest Administration Center of the University of Chicago, reports an interesting empirical study of efficiency in education, directed by J. Alan Thomas, a former B.C. teacher, principal, and district superintendent.

The study, very carefully done, attempted to measure the effect on "the major task of the school—the development of human talent" of 32 independent variables, representing financial inputs, organizational arrangements, and socio-economic characteristics of the community. Test scores on 18 subtests of an achievement test battery were used as a measure of the outcomes of education (with a full realization of their short-comings). The study found that up to 76% of the variance in mean test scores among the 206 high schools (nation-wide sampling) was attributable to the variables representing school, home, and community.

Among the findings were these. The relationship between the mean starting salaries of teachers and the test scores was highly significant:—the higher the salaries, the higher the scores. The number of books in the school library was of minor importance in predicting scores on most of the tests, but was highly significant in predicting Grade XII English results. Although not an important predictor of Total Information score the mean experience of the teaching staff was highly significant in predicting scores in senior English, reading comprehension, mathematics, and abstract reasoning. The age of the school building had a significant effect on most test scores. This effect was due, perhaps, to the fact that staffs in newer buildings had not yet had time to become unified teams.

The newsletter account of the study concludes: "It is proposed that continuation of this line of research will provide further insight into the returns to be expected from variations in the kinds and amounts of inputs into the school system. Additional studies may eventually make it possible to predict the effect of variation in particular inputs upon specific test scores. Such research should also provide empirical evidence establishing precise principles for budget making. In brief, input-output studies can contribute to increased efficiency in the conduct of educational enterprise."★

The unimaginative, pedestrian and repetitious compete for priority with the original and creatively promising. Too many studies set out to demonstrate the obvious, to provide elementary statistical digests, or to repeat earlier investigations.

A Critical Look at Educational Research

J. MACDONALD

"As with so many other basic social processes, the actual process of scientific research and discovery is not well understood"[1]

THE PRACTICE OF education is beset with problems, and the modern cry for massive and sustained educational research must therefore seem, and not merely to educationists, no more than an appeal to common sense. Unfortunately, the existence of persons and groups professionally committed to the examination of educational problems is no guarantee of educational amendment; these persons and groups may indeed, under appropriate circumstances, be identifiable as major obstacles to reform. "Progress," then, may not follow "research."

Complaints are often heard that educational research in Canada is poorly and grudgingly financed, and the charge can no doubt be adequately demonstrated. It can also be shown that parents, teachers and administrators do not accord a high priority to research, preferring superficial discussion and the interplay of opinion. Yet if public and private munificence were to replace miserliness, and apathy to succumb to enthusiasm, the ineptitude and lack of intellectual sophistication of much of what presently passes for research could scarcely be concealed. In their present state of ratiocinative disarray freedom would be no welcome gift to educational researchers.

Thus educationists (especially those who are willing to hear themselves described as conducting educational research) should hesitate before making categorical assertions that educational practices will benefit from greater attention to research, or blaming difficulties on the lack of external support for research endeavors. A wiser, though less comforting, course of action can be substituted—the critical examination of educational research itself.

Nothing is gained, in an examination of this sort, by quoting examples of the limping and barely intelligible investigations held up to derision by recent critics of education as a subject of academic study. The same kind of investigation can be found in other fields, but is less likely to receive general publicity. Attention should be directed instead to deficiencies that appear characteristic of educational research as a whole, and do not arise from the stupidity or inefficiency of individuals.

The most general problem to confront educational researchers (and one which apparently does not present itself in quite the same way to any other body of investigators) is that of providing an adequate definition of what constitutes research. At the moment, in the absence of an agreed criterion, the unimaginative, pedestrian and repetitious is allowed to jostle and compete for priority with the original and creatively promising. There are far too many studies, and too respected, that set out to demonstrate the obvious, to provide elementary statistical digests, or to repeat, with minuscule variations, earlier investigations. I do not deny that the obvious sometimes has to be demonstrated, that statistical digests are useful sources of investigation, or that, because of the many variables present in educational situations, replication is often a wise policy. If educational research is to make a serious impression on educational practice, however, most of the studies falling under these heads have to be placed in a category of "routine inquiry" and clearly distinguished from studies that, in their divergence from the common run, offer some hope of educational change.

Other troubles are, for the most part, a direct consequence of the basic uncertainty in definition. A thorough description would certainly include (1) the exaggeration of the importance of research methodology and (2) the hypertrophy of testing and measurement. While deficiencies like the obvious preferences of educational researchers for the intensive collection of primary data and for polling and survey techniques also lie open to criticism, their claim to special discussion is less strong, since they are in effect already included or implied under the three main headings.

In analytic discussions of research in the physical and social sciences the point is often made that

methodology is the servant of science but, narrowly conceived and pedantically interpreted, is liable to become its master. Because of the general climate of scientific opinion in the more established sciences, however, the likelihood of a triumphant methodology is small, methodological specialists standing no more than moderately high in the hierarchy of scholarship. In education, on the other hand, an unusual interest is taken in methods and procedures of research (in part because of the presence of so many influencing variables in the typical educational situation, in part because of a readily understandable desire to improve the academic quality of educational studies, and in part—it must be said—as a way of averting attention from more fundamental matters), so that a different order of prestige prevails. Whereas in, say, physics or sociology the theoretician occupies the top rank, followed closely by the successful researcher, with the methodological specialist a poor third, the nature of academic judgments in education is such that the theoretician is well outranked both by the researcher and the methodologist, with the last often holding pride of place.[2] In default of comprehensive and internally consistent theories about education, method and technique expand to fill the vacuum.

Roles Seem Reversed

While measurement is limited to a supporting role in other areas of study—econometrics is far from being the whole of economics, and biometry does not dominate the biological sciences—in education, and not improbably because of the concentration on method, psychometry has come to fill a specially honored position. The psychometrist talks an intimidating mathematical language; his field of interest appeals as being "scientific," and therefore in no need of selective eulogy. Since new variables are always discernible performance or standing which can be quantitatively assessed and re-assessed, psychometric practice appeals to practical, industrious and pragmatic men (of whom there are so many in education). It comes into conflict with the educational status quo to a much lesser degree than direct experiment: the experimentalist is forced to make his peace with theory, and must recognize early how far research is constricted by the inflexibility of school systems and the conservatism of educational officials.

Under these circumstances, with the cheapening and lack of definition of the word "research," the relative indifference to theory, the excessive interest in technique, and the choice of the expert in testing and measurement as the model to be imitated by persons with a scholarly interest in educational problems, there can hardly be surprise that research has so far made a minor contribution to educational practice. To head off critical misunderstandings in advance, let me point out that I do not mean here that research has made no contribution to practice, that educational decisions ought to be taken without

Dr. Macdonald is Associate Professor of Educational Psychology, Faculty of Education, University of Alberta, Edmonton.

bothering about research, that financial support of educational research ought to be reduced, that the prevalence of educational problems is solely attributable to the inadequacies of educational researchers, or any similar misconstructions to which (being well read in educational controversy) I am aware that I have exposed myself. I do, however, mean that whatever faults are apparent in educational research do not directly follow lack of funds (although it may be argued, and with some justice, that both are manifestations of a deeper educational malaise), and that some reorganization is necessary, if the faults are not simply to be repeated, perhaps even encouraged, when funds become available.

True educational research is an enterprise that, taken as a whole, exemplifies the unity of theory and practice, on the one hand arising from real problems, on the other gradually establishing coherent theoretical systems and models suitable for the description and analysis of educational themes. The word "real" is difficult to define, but is used in this context in order to introduce a set of questions seldom asked in the literature of research. How are the educational problems of major importance to be identified, to be disentangled from the conditional and the temporary? May there not be many problems that are incapable of direct solution, in the absence of a determined attack on a small number of more basic problems? If educational research confines its efforts to the former, does it not merely become another of the "tinkering trades"?[3] Is not the most essential distinction to be made that between the "natural problems," that are an intrinsic part of the educational process, or at least a consequence of the necessary social organization of education, and the "artificial problems," the ephemeral products of a particular educational system?

Good Background Needed

If questions of this nature are ever to be examined, and the matters with which they deal investigated, the researcher needs to possess both a close acquaintance with practice and a capacity and liking for the construction of theoretical models (or these qualifications have to be represented in the research team). It will be evident that such a view of research encourages the exercise of many purely sedentary intellectual skills, and visualizes the actual experiment, investigation or inquiry as no more than the rounding off of a lengthy period of concentrated thought. Judged by these standards, much of what is today called educational research, in which the "research act" (the choice of statistical method, the location of a sample, the collection of data, the

Continued on page 218

Constants and Variables in Education

H. M. NASON

EDUCATION, LIKE the Pacific sea coast, has its attacks of blinding mist and dense fog. There are times when the varied mists of educational ideas so permeate the air that it is almost impossible for the ordinary teacher to detect any directional markers, times when the flow of criticism from the banks of fog off-shore has a tendency to leave the teacher confused and bewildered, waiting patiently for signs to indicate the breaking through of the radiant sun.

The teacher today lives and works in a rapidly changing world—a world which is adjusting itself under the impact of a whole range of new and complicated machines, a world of atomic power, a world of new and aggressive ideas. All these forces have brought about many new problems in the schools. The cost of education continues to mount with disconcerting strides. When the price of a commodity is high, people begin to question its value and begin to look for a return to the "good old days."

Statements that have been made recently regarding education and the adjustments that have taken place in education in an effort to meet the needs of changing times indicate that we are now in a time of shifting educational values, of competing plans and methods, of far-reaching reforms. It is claimed by some that resultant changes give rise to difficulties which lie far deeper than most of us care to realize, that the trouble emanates from a crisis in our whole system of valuations.

The claim is put forward that not only are we divided against each other in our evaluation of the great issues, but that few among us have any settled views concerning the right patterns of human relations and conduct—any accepted theory and practice concerning the nature of freedom and discipline. We hesitate between treating the lawbreaker as sinner or as patient, and cannot decide whether he or society is at fault. Some claim we are hazy as to the meaning and value of work and leisure. People are asking on the one hand for total security, and insisting on the other that they direct the community in which they live. There seems to be nothing in our lives, not even on the level of basic habits such as diet and manners, about which our views are not at variance.

There can be little doubt that this crisis in our system of valuations grows out of great changes in our way of life occasioned by tremendous industrial growth. In this age of science man is becoming increasingly molded to the administrative convenience of a group of conveniently arranged metals—the machine. Most of the goods we use are machine-made. Only the few at the top receive creative satisfaction from planning and making them. The change in society, uncontrolled and rapid, has certainly caused disturbances in the sphere of evaluations.

In the atmosphere of change and of changing values in which education now finds itself it is little wonder that teachers are asking themselves: What are the things in education that do not change? What things are changing? What are the constants and what are the variables?

In attempting an answer to these vital questions, it is important to realize that there have been similar periods in history. With the impact of science at the time of the Renaissance, people saw their constants becoming variables. At that time an effort was made to solve all problems scientifically.

What are the reactions to this current human problem? First, some deny that there are any constants. These people, as a group, have a long history, for support of their argument is found in the early Greek civilization upon which our Western way of life is based. It was then said that one could not step in a river twice. The people of that time failed to realize that one cannot step in the same water twice but the river is still there. Darwin, in his *Origin of Species*, claimed everything was moving. Tennyson was a member of this group. In his *In Memoriam*, he expresses his philosophy that everything is changing and that the old standards are gone when he says:

"The hills are shadows, and they flow
From form to form, and nothing stands;
They melt like mist, the solid lands,
Like clouds they shape themselves and go."

A large number of people say today that everything is changing. They say, "The only thing constant is change."

Then there are those who deny the existence of variables. They, too, have a long history. Plato could not tolerate change. He said truth and beauty could not be ever changing. He trained perfect citizens in his ideal state; but these citizens died, they could not live forever.

With this background, let us ask ourselves: What are the variables in education? First, there has been a change in our idea of what teaching really is. Second,

the range over which we attempt to apply the process has changed.

Not too many years ago most of our teaching energies were directed to developing the elementary skills in reading, writing, and arithmetic. The demand was that predetermined levels of ability and quantities of knowledge be imparted to all pupils by rigidly defined procedures. Teachers included in their bag of tricks methods that were designed to improve certain parts of the minds of their pupils. All pupils were taught to learn by rote, by heart. All were expected to understand material presented in one way and to learn at the same rate. The pupil's mind was thought to be like wax; all the teacher had to do was put an imprint on it, and the impression would be left forever. Teaching was a unified, mechanical process. The amount learned was measured carefully at different levels, and in some instances the value of the teacher was determined by the amount measured. The job of the teacher was to present a given amount in a given time and way, with the expectation of the same results for all.

Behind all this was an authoritarian outlook. Everything came from the powers above. The philosophy could have been expressed in the words: "I am the potter; thou art the clay."

Nothing is Automatic in Education

There is a change today. What is the nature of this change in our idea of what teaching is? Educators are trying to induce in each child modes of behavior which do justice to that child's powers and abilities. They realize that every child differs from every other child in the way in which he learns and in the rate at which he learns, and that it is not possible to bring every child to the same place at the same time under the same conditions. They realize that there is nothing automatic about education.

Educators today realize that it is safer to put more trust in the direct observation of children than in any theories about them. The shift in emphasis is to consideration and understanding of the child to be taught. This shift brings a change in thinking with regard to teaching method. It calls for an approach which does not advocate any one method for teaching anything to all pupils but uses all proven methods in an effort to find the one that will induce modes of behavior which will do justice to each child's powers and abilities.

Teaching then becomes a skilled clinical profession, one that calls for a breadth and depth of training. There has been an attempt to refine and improve methods by patient and continuous experiment with children in the classroom. Effort must be made to discover objectively the strength and weakness of each individual pupil with a view to providing an educational diet which will expand each to the limit of his interests and potentialities. In the teaching of reading, for instance, though some may suggest that

Dr. Nason is Director of Elementary and Secondary Education for the Department of Education in Nova Scotia.

the "sentence" method is more likely to be successful with most children than the "alphabetic" or the "phonic," the skilled teacher will study her pupils carefully and select from all her knowledge, experience, and materials the prescription that will best serve the needs of each child.

Adaptions at Elementary Level

It is at the elementary level that research and experimentation have resulted most rapidly and popularly in adaptions involved in the new approach. It is here that shifting emphasis has brought a multiplicity of suggestions regarding procedures, much of it helpful and appropriate—all of it, however, demanding great care and skill lest the very idea of such an approach be misunderstood.

We have seen or studied some of the activity methods which have the effect of developing intense interest in the pupils. They can, however, lead to sloppy habits of speech, thought, and action if they fail to give the sense of achievement which comes from work well done. In the elementary school the pupil should learn the value of work. His work must expand his intellectual ability to the limit. Learning does not come easily for most children. It is a matter of hard study and application. No child should be allowed to grow up with the mistaken idea that everything comes without effort. Perhaps one of the fundamental things that the elementary school child should learn to do is to develop the capacity to apply himself and to work hard and consistently at difficult tasks. The type of work done in the schools will have its effect upon the industrial life of the nation. If pupils do sloppy work in school, or work that does not challenge their full capabilities, they will so continue in industry. This confidence without competence is most dangerous. The man who understands, knows, and will work in this complex fast-moving society is less likely to get out of step with a free society than the man who does not.

Further, the more controlled skills the child has, the freer he is—acquisition of the skills is releasing and emancipating. That he cannot be free in a world he does not know must be accepted. One cannot be free behind the wheel of an automobile unless one has first mastered the technique of driving. He who has mastered the technique of skating is much freer on the ice than he who has not. Freedom is not an original birthday gift. It is a continuing conquest, a conquest which implies trained capacities of thought and action.

Behind all this change in our concept of teaching is the idea that we must state our objectives in human form. We have become more intelligently humane. We are interested in the human beings of today who

will become the citizens of tomorrow. Most educators have accepted the idea that school should be a happy place where natural growth takes place. The concept of the "schoolboy creeping like snail unwillingly to school" no longer applies.

This changing emphasis and changing approach points up the significance of this first variable in education—our concept of what teaching really is. Equally significant is the second variable—the range over which we attempt to apply the process.

Curriculum was Limited

By present standards, the curriculum of the schools of some years ago was very limited. For instance, physical education played a very minor part. The arts and crafts were rarely heard of. Co-curricular and extra-curricular activities such as educational visits, music festivals, sports meets, existed only in the dreams of the older teachers and the visions of the new. Such services as medical and dental inspections, health clinics, and school lunch programs, were considered to be outside the work of the school altogether. On the other hand, arithmetic, spelling, history, and geography were carried to a stage of mechanical excellence probably far beyond that achieved by students today.

Severe critics of the curriculum and the products of our schools today reflect the thinking associated with the traditional character of education that one finds in some quarters in England. In these quarters the ruling notion is that education is an authoritative body of knowledge and an accepted code of belief and conduct to be communicated. Moreover, the communication is to be effected by traditional methods. Dr. Johnson's opinion on the matter of applying study to the curriculum is well known: "Sir, it is no matter what you teach them first, any more than which leg you should put into your breeches first. Sir, you may stand disputing which is best to put in first, but in the meantime your breech is bare. Sir, while you are considering which of two things you should teach your child first, another boy has learned them both."

As educators today concern themselves with all the child's needs, their thinking is somewhat similar to that of Dr. Johnson. As the conception of education has broadened, there has been fuller realization that in the total development of the child we must consider the physical, the emotional, and the spiritual phases as well as the mental. Slow classes can sometimes be helped to improve by a few doses of cod-liver oil. It is difficult for a child to learn arithmetic if he has pains in his stomach or a mouthful of aching teeth. It is also difficult for a child to enter into the co-operative spirit of the school if he comes from a home where there are frequent family quarrels.

With this consciousness of the multiplicity of the child's needs has come recognition of the impact on education of the press, radio, television, the movies, and other educative agencies. The influence they exert has become of major educational importance, demanding concern with the standards of speech, thought, and action developed by these agencies. These factors are prompting expansion of the areas over which we apply our educational procedures. Coupled with them is a realization that education must concern itself with the way of life of the people and with the way the people make their living. There must be taken into consideration all the activities and interests characteristic of a people—not only their vocations, their religions, and their achievements in the fine arts, but also their County Fairs, Field Days, Old Home Weeks, Dominion Day Celebrations, Labor Day Celebrations, Sports Days, Apple Blossom Festivals—the whole social inheritance of beliefs, habits, institutions, manners, and techniques, and all else that goes to make up the social complexity of a community. Canadian life carries the marks of the trapper, lumberman, farmer, fisherman, miner, and captain of industry. If a system of education does not develop in and through the way of life of its people, it becomes rootless and falls quickly into disrepute. This tendency to keep a system of education in step with the way of life of our country has reflected itself in the desire for practical and vocational offerings on the school curriculum.

Education is Expanding

A purely academic course is not best suited to many of the children who attend our schools. Further, our society is not best served by schools which do not offer courses that will allow some children to develop the practical abilities basic to entering the industrial life of the nation with promise of profit and satisfaction.

This aspect of the expanding range of education has brought with it the same danger as have some of the activity methods associated with the new approach to education. Some people have interpreted "practical" to mean "easy," and courses are sometimes devised that do not require the intelligent application of all the child's powers. Careful, solid work must be demanded in the special subjects as well as in the academic.

Teachers today must expect and meet changes in the school's responsibilities, in the teacher's tasks. They must expect expanding curricular and extra-curricular activities arising out of our concern with all the child's needs. They must expect a new approach arising out of our recognition of differences in the interests and abilities of the children we teach.

These then are the variables in education. To adjust ourselves to the changing trends and yet to maintain high standards of efficiency and adequacy, we must keep in mind the things in education that do not change. What are the constants?

Regardless of the number and diversity of definitions of the aims of education, the purpose of education remains the same as long as humanity is what it is.

This purpose is best expressed in the words, "That they might have life, and that they might have it more abundantly." We shall always be indebted to Europe for one outstanding contribution, one that comes from Christianity—the belief that each ordinary human being really matters. Western civilization differs from some other ways of life in its respect for the rights of each human being to have some choice in his destiny. Our purpose in education, therefore, is to make life more worth living. What do we mean by "worth"? The values which determine it are real and rooted in nature itself.

Human nature does not change although it changes the form in which it expresses itself. Shakespeare expressed this concept admirably in his *Merchant of Venice* when he said: "Hath not a Jew eyes? Hath not a Jew hands, organs, dimensions, senses, affections, passions? Fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter?" It was the writer's privilege to take part in seminars in which fifty-two countries of the world were represented by interested educators. The debates and discussions strengthened the belief that human nature is much the same the world over. All human beings have a capacity for language and art. Language and constitutional problems may vary from country to country, but the learning processes remain the same.

The third constant is that discipline is the strategy by which we gain citizenship in a free society. The dropping of the word "discipline" from the educational vocabulary is possibly one of the worst disasters of the last fifty years. Whatever else education may be, it is certainly a discipline. It becomes urgent to restore the word, now discredited through grave misuse, and to rebuild it into our educational strategy. We all realize that too much unearned freedom in the classroom can produce unstable characters as well as illiterate minds. Thus, at times, it is necessary to remind some educators that a happy school is not an end in itself. Neither is an unhappy school evidence of high educational standards.

It behooves us, then, as administrators in education and as teachers to recognize what things are changing, and changing with a valid purpose; and what things remain unchanged because they are the true constants in the changing world of education. The educator needed for the future is one who can choose properly from among the new, for the good of the children under his care, and abide by what is of highest worth in his heritage from the past. The challenge is so to choose among the constants and variables as to establish a sound and solid philosophy and practice of education.★

IS THIS YOU?

Do you start each class with a quiz or do you test just two or three times a year? Wherever you are between these two extremes, read what the results of research indicate.

"It has been realized that if tests increase effort, the more frequent the testing the greater the total effort. It is probable that the optimum frequency of testing depends upon the nature of the tests, the method of teaching, whether pupils score their own or each other's tests, the subject matter, and the ability of the students. When given too often, the relative importance of each test is reduced. Daily examinations probably have but little more energizing effect than daily assignments."

"It has been found in a variety of fields at the college level that when tests are given weekly and the results discussed, individual errors noted, and the final examination made up of similar questions, the lower ability students achieve more than with less frequent examinations. However, the more able students may be retarded by this process unless there are, in each test, items of sufficient difficulty to challenge their ability. If, as is frequently true, the examinations cover only minimum essentials, it is possible they would profit more from the additional material which could be covered if less time were devoted to testing and remedial work. It is probable that the advantages of frequent testing even for the less able are the result of directing their learning and selecting the right responses rather than of an increase in energy stimulated by the examinations."

"The influence of general praise and general reproof following an examination has been investigated by Hurlock. The results indicate that, in general, praise is more stimulating than reproof. However, praise is most effective with the mature and competent student. Either praise or reproof is more stimulating than no comment."

Details of source available from BCTF Research Committee

The Individual Experience Reading Program

A report of an experiment which resulted in remarkable progress for many students.

L. F. CONANT, Jr.

Mr. Conant is a member of the Faculty of Education, University of British Columbia.

DURING THE SCHOOL YEAR of 1959-60, the administration of the public school system of Calaveras County, in central California, asked if there was some way in which the elementary school reading program could be changed in order to develop greater activity, and result in greater achievement on the part of both teachers and pupils. As a consulting psychologist to the administration, I began to formulate ideas and develop plans to attempt to answer this question during the following year.

First, a pilot study was run using two first grade classes. The classes were selected because their teachers were interested and willing to become involved in a novel approach to the teaching of reading. Several hours a week were spent with these teachers in a workshop-like training situation. The results of the pilot study indicated that the program was feasible, and that it could be reasonably expanded the following year to include the first three grades in the elementary schools of the county.

Second, with the expansion of the ideas and methods of the pilot study, a testing program was developed with a "before and after" design. The California Achievement Test was used for this purpose.

The workshop-like training situation for the teachers was retained and expanded to take in all of the teachers. For working purposes the county was divided in half geographically, and the teachers from each half met for two hours of training and discussion on alternate weeks throughout the year.

Third, a continuous program of discussions, lectures, and progress reports was made available to parents at grade level meetings and P-TA groups. These contacts were made by all of the staff members involved in the development and conduct of the reading program.

With the exception of the statistical analysis of the "before and after" test data, the following paragraphs describe this reading program and its methodology, and give some conclusions based on the overall experience.

The Individual Experience Reading Program is not an entirely new idea, but it is different in some basic ways from the standard developmental textbook approach to reading. The place and need of mechanical skills, books, and many other resources are functional parts of the learning experience rather than the major object of instruction—reading simply for the sake of reading.

The Individual Experience Reading Program approaches the problem of reading instruction by stressing three general ideas.

First, it brings together all of the fundamental learning activities necessary for the development of communication. Nothing is left to incidental learning. The goals are superior communication skills for some, and adequate communication skills for all.

Second, the self motivation common to all children is exploited and guided to its fullest expression by the teacher. Emphasis is placed upon drawing out the store of experiences within the child. The limitless curiosity of the child is encouraged and guided by the teacher for the production of oral and written materials. The source of instructional materials is changed from a "formalized" package, which contains relatively limited ideas and vocabularies, and only extrinsically motivating materials at best, to the verbalized and written experiences of the child, whose vocabulary is only self limited, and whose personal experiences are, to himself, intensely interesting.

Third, the role of the teacher changes from that of a technician who works within a relatively inflexible system of "methods" to that of a guide and mentor. If the child is to profit and learn from his many school experiences, then he must be allowed to perform the major portion of the work. If the teacher does the work, or the major portion of it, the teacher learns the "system," and the child loses out as he sits by and watches. In the Individual Experience Reading Program, the children do the creating of the major portion of the instructional materials. These materials take the form of written stories which contain all the necessary elements of communication on a given level.

Skills Must Be Learned

The many technical or mechanical skills which must be learned by the children such as phonics, word attack skills, writing, punctuation, spelling, etc., are taught as a functional part of the learning experience. Elaborate "readiness" tests and exercises, as well as an endless parade of workbooks, have no place here. The child's productions, both oral and written, clearly indicate whether or not he is "ready" to start this special type of communication called reading and writing. Again, it must be emphasized that these technical skills are not ignored, but rather, that they are emphasized within the functional approach to learning communication skills.

Experience with the Individual Experience Reading Program in Calaveras County has shown that children are ready, and that they can produce reading and writing materials of a quality which carries them forward at a greater pace and with greater motivation than has been the case in the past. The children approach the learning of the communication skills with vigor and purpose, and within a short time begin to look for a great variety of additional and new resource materials for the production of their stories. Included in these new resources, of course, is a wide variety of books, magazines, and pamphlets. In addition to the books, other resources are stressed such as people and industries, and the direct observation of things and events.

Every normal child enters the first grade with relatively high expectations for what he is about to do; he has some idea as to what this business of reading and writing is all about. This information has been developing for a year or two as a result of activities at home and in the neighborhood. Note that the term "normal" has been used to describe the child we are talking about. The abnormal or exceptional child will be discussed later. The first task of the classroom teacher is to find out how much each child understands about the process of communication and to take him on from there. The simplest way for a teacher to do this is to talk to each child about things with which he is familiar. In order to do this the teacher asks questions which will stimulate the child to relate stories about himself, his home, his backyard, or anything with which he is familiar. This is the beginning of communication between the child and the teacher. The child is communicating with language symbols in the best way that he can, and the teacher listens with an ear tuned to the type and quality of this communication. An intelligent and capable teacher does not need to test, or to give exercises over a long period of time in order to determine so-called readiness.

Clarity and Quality Important

What are the things in language communication which are important? For the moment let us put aside the subject matter of what is communicated. If we do this, then the most important things are clarity and quality of expression. In other words to be able to "say something" using language symbols so that somebody else will "understand" what you "mean" with the least possible error. In order for this verbal perceptual transaction to take place there must be clarity and quality of expression. Depending upon the children's environment, the teacher can expect to encounter a very wide variety of individual differences in her pupils' more or less habitual manner of expression. Her primary job in the beginning will be to help and encourage those of lesser expressive ability.

It cannot be overlooked that emotion and personality play an important part in one's ability to communicate. This is just as true of the child as it is of the adult. The excessively shy child, the monosyllabic child, the child with a poverty stricken vocabulary, or the child with speech problems is not "born that way"; he grows that way. Again we are speaking of the normal child. There are also the problems at the other extreme. Here we have children who talk many words, but they are poorly put together and leave the listener wondering what was meant. Most teachers are familiar with the vivacious child who was vaccinated with a hi fi needle. Here the expression is good, and often has quality, but the personality interferes. It begins to sound as though the teacher needs to be a psychotherapist with a specialty in child behavior. This is perhaps

closer to the truth than not. It is an unhappy and emotionally fatigued teacher who faces these problems every day with no understanding of and offering no help in resolving the growing pains of these developing egos.

But what has all this to do with teaching children to read and write? Everything! The teacher must create a milieu in which learning can take place with the greatest amount of efficiency. In order to do this, she must be well grounded in the techniques of teaching and the laws of learning. This is the science of education. She must also be a warm and understanding human being. This is fundamental for developing the art of teaching. A teacher has two general functions in the classroom. She helps the child to learn particular skills, and she helps the child to learn to become a social being. These goals are accomplished through the discipline of learning, and the discipline of loving. We need to remember that the definition of education is a drawing out—not a pouring in—and to bring a child to a point of learning and understanding requires the consistent application of both of the above disciplines.

The Teacher's Procedures

Exactly what does the teacher do when she meets her new pupils in the Individual Experience Reading Program? First, she must gather the children around a table, or in a circle on the floor. The best situation is that where the teacher and pupils can all see and hear each other. They must be relatively quiet and paying attention. The teacher calls on one of the pupils and asks him to tell about something specific that has happened in the last few days. Sometimes incidents in the summer vacation are vivid enough to be remembered and these can be used. These stories will usually be short, and the teacher can go from one child to another rather quickly. The shy or monosyllabic child must not be pushed. It is better for the teacher to move on to another child. She should not, however, give the child the idea that he is being ignored or cut off. She can say to him that she will come back to him a little later. This could be felt by the shy child as a punishment for failure to respond, and in a way it is, but it is also a reality situation, and the child must be helped in dealing with it. The teacher has learned something about one of her pupils. This child is afraid to talk in a group, but he is not painfully so. A little encouragement and a few examples from the other children—then we'll see.

The next child, the teacher already knows, can express himself quite well. He tells a story about something that happened just before the bell rang. Another child breaks in eagerly. The teacher must give the rule about interrupting others while they are talking. Is this punishment, or teaching social order and learning discipline? Another child takes the floor and tells a long and involved story about a personal family experience. After a couple of minutes the rest of the children become restless. The teacher must break in on this child in order to hold her group's attention. In a kindly way she can break in when the child hesitates, explain whether or not the story is good, and say that for now the stories shouldn't be that long. She can add that later on they can all tell long stories and write them down. Here the teacher learns that this child is capable of fairly complicated verbal expression. Back to the shy child. The teacher is more concrete this time. "Did you come to school on the school bus this morning, Jim?" "Yes." "Did some of your friends ride with you?" "Who are they?" or "What are their names?", etc. After the second try she goes on to another child, and so on, getting all to respond to the best of their ability. It is best to avoid the more personal questions such as, "What does your father do, Bill?" You might get, "Nothing, he's in jail!"

Somewhere in this group process the teacher will get a simple sentence answer. She will write this in manuscript and hand it to the child telling him that this is what he has just finished saying and asking him to "read" it. This is the child's first experience seeing something he said in written form. Most children will respond to the question, "What is a word?" by saying "Something you say." At this point the concept can be started that words are also something than you can see and read, and that what the child says can be written down, kept, and read later by himself and others exactly the way he said it. At the same time that the concept of "reading" is started, the idea of writing should be started. During these beginning steps the teacher must always have a supply of paper and pencils close by for demonstrations, and for the children's use when they first want to try to write.

Use Child's Own Interests

The most important factor in drawing out and using the oral individual stories is that they are very high interest material. We all like to talk about ourselves and our experiences. It is obviously possible to "create" motivation and interest in materials such as textbooks and workbooks at the primary level with the applied or real threat of embarrassment, punishment, or failure. But, why force a child to be interested, or force curiosity, when it is much simpler and easier on both the teacher and the child to make maximum use of the normal, natural interest and curiosity that is already available? The best way to do this is to encourage the pupil to produce the endless materials and questions he has been storing up for six or seven years. The average child needs only the slightest show of interest from parents, teachers, or even strangers in order to produce an endless barrage of verbal fact and fancy. This verbal barrage is made up of words in some sort of composition. Permit and encourage the children to

create their own stories (organized vocabulary), then teach them to recognize them in printed form.

For the most part, the process of teaching and learning is done on an individual basis with each child producing his own instructional materials as he writes his stories. However, one period during the day is reserved for group activity centered around a group chart story. This chart story can be motivated by the teacher or by one of the pupils in the class. After a couple of teacher-motivated stories, the pupils usually take over the process of developing a story topic, and then each one in the class contributes his share. This does not mean that each child gets to say something for each story each day. This would be impossible in a class of thirty or more children. However, in a week's time all the children will have an opportunity to contribute to a group chart story.

Begin with the Familiar

The chart story very often starts with the drawing of a picture concerning an event or a place with which the class is familiar. Let us take an example. In Calaveras County there is a park called Big Trees State Park. In the winter many of the children go there to play in the snow. It is an event that is very familiar to all. The teacher might start by saying to the class, "Jack told me that he went to Big Trees last Saturday and rode down a big hill on a toboggan." As she says this, she begins to draw a picture on a large piece of paper that is attached to the chart stand. As she draws, she asks such prompting questions as, "How deep was the snow?", "Can someone tell me what a toboggan looks like?", "How many times did you go down the hill, Jack?", or "Don't you get tired climbing back up the hill?" With this type of prompting she soon has all the pupils waving their arms in the air wanting to contribute some bit of advice or knowledge. Then one of the first items of instruction develops. "What shall we call this story? All stories must have titles, or we wouldn't know what they were about."

After a title is written, the teacher usually uses something that Jack has said for the first sentence. Then she calls for additional contributions. While the teacher is writing the story she decides on one or two skills which she will mark for later use as instructional material. These skills can be capital letters at the beginning of sentences or for proper names, or periods at the end of sentences, or one or two beginning sounds, especially if it happens that a particular sound repeats several times in the story. No more than two or three ideas or skills are presented at one time or period. This procedure moves quite rapidly and as many pupils as possible are asked to participate.

There is a general sequence or pattern to be used in developing the group chart story. In the paragraphs just above the development of a first story was described. This will very often take up an

Teacher and pupils gather where all can see and hear before beginning the lesson

entire period along with the instructional work. This story is not discarded, but left on the chart stand. The next day, say Tuesday, the story and instructional materials of the previous day are reviewed and misunderstandings corrected. Then a new story is developed in much the same way. Whenever any of the children are motivated to take over, as they often are, the teacher can then step back and assume the role of guide and mentor. As the story develops on the second day, the teacher again picks out two or three skills to develop from the current story. Again the story is left on the chart stand at the end of the "reading period." The next day the process is repeated, starting with the first story, reviewing and correcting; then the second story, reviewing and correcting. This, again, is followed by the development of the third story.

When Friday arrives the group will have reviewed the first story five times. This plan follows one of the basic laws of learning, simply stated as reinforcement of learning by repetition and practice. The last story for the week is developed, and the "set" left on the chart stand for Monday's work.

There comes a time within this sequence of chart stories, when some of the earlier stories will need to be dropped. The teacher must use her own judgment as to when this time has arrived. She will need to take all of her cues from the group. For example, if most of the children can respond correctly to the two or three instructional items in a story, it is time to remove that story. If the children become bored or restless with a particular story, but have not, in the teacher's judgment, learned the material well enough,

the story can be scrapped, and a new one developed containing the same skills. Very often the teacher will find that not all of her group will learn as rapidly or as much as the main group. These she must keep account of and try to help them with these same materials and skills as they write their own individual stories.

During the early days of the year, the chart stand stories serve an additional purpose outside of the "reading period." You recall that the current day's story was always left on the stand. This story is copied by the pupils on to a piece of paper. This is the practice period for writing. At this early stage it does not matter if the child cannot read the entire story. The purpose here is practice in the manual skill of putting the letters on a piece of paper in as correct a form as possible. The story is not copied over and over, but is copied just once. This follows another basic law of learning which is that learning is more efficient and permanent if the task is simple enough to be grasped, and practice is spaced over a comfortable period of time.

Discipline Must Be Learned

Learning discipline, and class discipline must now become a part of the general activity. The pupils must learn to take turns when offering parts of a story. They must not be allowed to digress from the main topic by injecting little isolated stories of their own. These digressions are often bids for attention, a not uncommon behavior pattern in children or adults. The teacher must emphasize the necessity of co-operating to produce a group story. The story must have a title, a beginning, a body, and an ending of some quality. The pupils must be given as many chances as possible to take part in the activities during the week. A certain amount of dramatic skill in a teacher is an asset when presenting materials to a class. Children enjoy a person who can "ham it up" a little. Above all, allow the children to develop the stories. Let them do the work! They might not be perfect to begin with, but given guidance and practice they will improve rapidly.

The Individual Experience Reading Program does not make an attempt to separate those which are ordinarily considered as reading skills on the one hand, and language arts on the other. Both of these areas are considered and taught as a single area and referred to as communication skills. Briefly, the rationale for this idea is that the teaching of reading and the language arts as one entity eliminates at least one process of complicated learning. This process is known as transfer of learning. For example, if one teaches phonics and word attack skills at one time and spelling at another, the learning which takes place in either areas must then be pointed out and transferred to the other. This seems to be a complicated and time consuming procedure. In the Individual Experience Reading Program, where reading and writing are used as a process of communication as soon as possible, even on the first day, it does not seem to be logical to separate these interdependent functions. If one can accept this premise, then it is also logical to proceed with the idea and to include, in addition to phonics and word attack skills, the language art skills such as punctuation, spelling, and grammar. If the child is going to write, and he can, then he must have some basic knowledge of all of the components of the communication skills before he can begin to write down his first sentence.

There might be some objection at this point concerning the introduction of writing skills as early as the first day of school. Naturally, these skills involve the use of the alphabet. The child must learn the names of the letters, their sounds, and how to make them with a pencil on a piece of paper. There is probably much unnecessary concern here. These days, with TV, innumerable children's books and games, alphabet songs and jingles, and many other common devices using letters and simple words, very few children are ignorant of the fact that there are such things as letters and that these marks represent sounds. In fact, many can already write, or at least recognize their names in print. They have had a head start with this skill, and it seems very odd not to pick it up immediately and expand it. Most first grade starters are highly motivated to get on with this business, and we do them an injustice to hold them back.

Writing Begins at Once

The children must be given the opportunity to start writing their stories as soon as possible after the first day of school. In order for this to take place, they must begin learning the business of manuscript writing immediately. At first, these attempts will be very crude. During the chart story periods, the pupils learn a variety of communication skills and a basic sight vocabulary. Within the first week, some of the first words will appear on paper, and the pupils will begin to flock to the teacher for help. At first glance this activity would seem to lead to utter chaos. However, here again the teacher must teach and insist upon fundamental learning and classroom discipline. There are several ways to accomplish this and at the same time develop some important organizational and study skills. It certainly is true, that left to their own devices in the creation of written stories, the pupils would end up in a state of confusion. One of our first experiences with this was with a class at the beginning of the year. As soon as the children began to write their first words they found that they needed help on nearly every word they wanted to write. The result of this was that the pupils began to form long lines waiting their turns to talk to the teacher at her desk. These lines were fairly slow moving and became the perfect situation for the type of behavior one

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To obtain maximum benefit from automated teaching devices, schools will have to adopt more flexible organizational patterns.

New Approaches to Teaching

L. J. PETER

THE ADMINISTRATOR who plans to use television, language laboratories, teaching machines, and new projection equipment as part of the educational program is faced with a number of problems. He will have to think in quite different terms when considering finance, school plant and facilities, class schedules, teaching load, and curriculum.

In the modern school, teachers have begun to assume roles differing somewhat from those of the past. The demand for uniformity, which appeared to reward mediocrity and discourage innovation, is being discarded. The principle that all teachers do about the same things to about the same number of students in about the same time is being abandoned. The special abilities of each teacher will be realized and be used in specialized teaching assignments. In a world of specialization and automation the teacher will not be required to fill out the same old forms putting the same information in different places by hand, to collect book money, locker money and money for various benevolent causes and school services, to keep attendance records and to perform the routine clerical chores normally done by clerks and stenographers using efficient office equipment.

Teaching teams can provide the much needed flexibility which is impossible when classes of uniform size are taught by one teacher. Team teaching can make use of the special skills of several teachers and can reward leadership and exceptional teaching skill. The rigid school organization of the past can stifle the creative mind of the teacher. Team teaching provides a new outlet for the master teacher who aspires to leadership and can provide rewards in prestige and salary. Each team should be provided with clerical assistance and general aides to reduce routine chores. This approach can help raise teaching to the level of other professions, can free teachers from drudgery, and can stimulate creativity.

To provide for the maximum learning, the best use of team teaching and employment of the new media, three kinds of instructional situations are recommended.

Large-group Instruction

Large-group instruction means teaching activities which involve 100 or more students, all receiving the same instruction at the same time. This may be done by having large groups assemble in an auditorium or lecture room to be taught by a specialist or master teacher. The same type of teaching might involve the use of television in situations where groups of any size might be assembled.

The specialist teacher is highly qualified in a special field and should be given adequate time to prepare and use the most effective teaching aids for his lectures and demonstrations.

Research shows that instructional television is producing good results and is gaining acceptance rapidly. The use of television will not, in itself, improve anything. It offers the opportunity to expand the influence of the superior teacher but also has the power to spread the mediocrity of the mediocre teacher.

One advantage of television is its ability to project image and sound into many separate locations at one time and to focus on the important elements in the lesson or demonstration, cutting down on the extraneous and distracting factors. The teacher's image or a distant scene is brought into many classrooms simultaneously and the essence of reality is captured

by great numbers of students. Educational television can show close-ups of demonstrations at ideal angles and can use many sources of material to provide richer and more comprehensive learning experiences.

The emphasis in large group instruction is on one-way communication. New topics, units, and concepts can be introduced, explored and placed in relation to other knowledge. The stimulating of interest, the raising of problems to be solved and topics to be discussed can be achieved in the large group, or with television.

An exception to the one-way communication of regular television is a recent development under the trade name of "Teletest Communications." This system could be used to teach a single class or a million students simultaneously. With this device each student has a key unit at his desk and responds to questions presented by the instructor during the lesson by pressing the appropriate button. Each student knows immediately the correctness or incorrectness of his response by a signal which is observable only by the student making the response.

Communication takes place between the instructor and the student, thus increasing the control of the instructor in the teaching and testing situation. Individual and group scores are recorded by standardized I.B.M. methods, thus reducing the correcting and recording associated with testing and evaluating. This technique can be used in conjunction with standard broadcast or closed-circuit television. When more systems of this kind are installed it will be possible to teach, test and score classes all across the country simultaneously. However, since this is a multiple-choice device, it is limited to recognition responding. Teletest will provide an efficient means for learning facts or material about which there is little controversy. The fact that correct responses are immediately reinforced, makes the system ideal for learning this kind of material.

Small-Group Discussion

In this type of teaching small groups of students and a teacher meet to examine terms and concepts, solve problems, and pit mind against mind to sharpen understanding. While discussing controversial issues, the students learn about some of the problems of human relations. Situations that permit the student to compose or construct his own responses are provided. The content of the large demonstration and lecture class may often be the content discussed in the seminar group. The small group should be limited to approximately twelve students. Groups engaged in laboratory experiments, making projects in arts or crafts, or learning a language in a language laboratory might be larger, almost the size of present classes.

Mr. Peter is a Special Counsellor attached to King George Secondary School in Vancouver.

Science laboratories are being used in a new way as instructional media. Students using the materials provided by the Biological Sciences Curriculum Study use the laboratory to make discoveries which facilitate their understanding of the structure of science. In the past the laboratory was used primarily to demonstrate rather than to discover. The student was presented with an experiment which could be completed in one laboratory period. He was usually told what results he was to achieve and then he was expected to demonstrate this through the performance of the "experiment." To use the laboratory effectively in the new way, the facilities and equipment, as well as the class schedule, will have to provide the student sufficient time in which to perform experiments as a scientist does when exploring an idea. This approach does not fit the traditional school laboratory organization. Two solutions that have been tried are (1) to have individual laboratories which can be put away so that the student can continue the experiment during successive periods, and (2) to schedule a block of time so that a student can take the experiment to completion.

Language laboratories are already installed in many schools and much experimental work has been done. In its simplest forms, the language laboratory consists of a tape recorder which plays a correctly pronounced foreign language. The student then records the same material. As only the student's recording can be erased, he can listen to the correct pronunciation, record and listen to his own speech, erase and correct his mistakes. Pupils can be taught individually or as a group. A group can be taught where a number of units are connected to a console controlled by the teacher. The complexity of the installation varies and may include two-way communication from the console to the student's headphones and from the student's microphone to the teacher's headphones. A whole class may record at one time and the teacher can listen to any student by pushing the appropriate button on the console. The units can be portable or installed in booths, usually along the wall or walls, or in a combination desk and recording booth. The desk-booth combination allows the students to face the front of the room and facilitates the use of television and other audio-visual material in conjunction with the language laboratory. The manufacturers are providing components and complete installations. Complete booths, with their own lighting and air conditioning systems are available.

The small group provides closer student-teacher relationships. The time saved by use of the specialist teacher and instruction of large groups with the aid of the various projection devices, will give the regular teacher more time for individual and small-group instruction. The teacher with the small group can develop closer rapport and will spend less time

and energy in telling students what they must do and more in raising issues and pointing the direction to possible materials and solutions.

Individual Study

More efforts are being made to develop individual study and to face the fact that teachers will not always be available to answer questions, to tell students where to find answers and finally to tell them whether or not they have learned something. Although today we are opposed to the principle of lock-step and rote learning, we justify its existence on the basis of the administrative structure with its particular emphasis on class size, course content and the grading system. The new media provide many opportunities for the implementation of the principle of self-instruction.

In the future students will spend more time engaged in individual study activities in the library, laboratory, workshop, or material center, inside or outside of the school. They will read, listen to records and tapes, use individual language laboratories and teaching machines.

The teaching machine signifies a major advance toward the emancipation of the teacher so that he may fill his proper instructional role. The teaching machine is a device which (1) presents a unit of verbal or symbolic information, (2) provides the student with some means of responding to each unit and (3) informs the student as to the correctness of his behavior, usually immediately following each response. Included by this definition is a wide variety of preprogrammed, self-instructional devices. One of the simplest is the Chemco Card which consists of a specially prepared answer sheet for multiple choice questions. By chemical action the mark made by the student under the correct answer is black and under the wrong answer is red. Students continue answering each item until the correct choice is found.

A teaching machine is any device which presents a "program." The word program has taken on a new meaning since the development of teaching machines and programmed learning. A program is the information presented in a series of very small steps, arranged so that the student can follow them by his own efforts. This may cover a lesson, a unit, or a course. A teaching machine may be a book containing a linear program where the frames are revealed to the student one at a time in order or it may be a scramble book employing branching, which leaves out unnecessary repetition of learned material and leads the student through additional instruction of material he has not mastered. A teaching machine may be a simple mechanical device, an electro-mechanical device, or an electronic device. It may present the program visually or audio-visually.

Programs are available commercially in 55 subject areas at the present time and many more are being developed. About 150 programs are available and the range includes elementary through college levels.

The punch-board is a simple device which is gaining in popularity. An answer sheet is placed in the board and the student pushes a pencil into the hole he selects as representing the correct answer. If the response is correct the pencil goes deeply into the hole. If it does not, the student continues until the correct answer is found. This reinforces the correct responses and the answer sheet shows the number correct and the number of wrong responses.

One of the most complex teaching machines is the Air Force Trainer or a civilian application called the Subject Matter Trainer. It presents questions in a predetermined sequence with up to twenty possible responses for each. By pressing a button the student identifies and records the answer he selects. By a process of branching, the machine can drop out the kinds of items the student has mastered so that his time is not wasted on unnecessary repetition. This is an electronic machine working on the same principle as the electronic computer. It occupies a large cabinet, but it is flexible and can be programmed and set as a testing or teaching machine in any of a number of modes of operation. Smaller and simpler devices which can be used on a desk have been developed, at reasonable cost, for schools and for industrial and home use. All are based on the Socratic question-and-answer or problem-and-solution method of teaching. Usually they proceed in small steps of graded difficulty so that mastery, understanding, and skill are gradually built up as the student proceeds. All the while his performance is recorded and his errors totalled so he is continuously tested while he is learning.

Psychological Basis for Machines

All the teaching machines are based on behaviorist or reinforcement theories of psychology. They present the individual student with programs of questions and answers, problems to be solved, exercises to be performed and some kind of automatic feedback so that he is informed of his progress, and has his correct responses immediately reinforced.

Some of the principles of reinforcement which teaching machines employ are as follows: (1) reinforcement is immediate, (2) reinforcement is precisely contingent upon performance and (3) a sufficient number of reinforcements are given.

Porter gives the example of a school child learning to spell 10 words having to be reinforced several times for responses to four or five elements in each word. This means that each individual in a class has to be reinforced about 150 times in a 20 minute period. To do this, a teacher would have to be capable of reinforcing correct responses 4,500 times or about 225 times each minute. Quite obviously this is impossible for a teacher though quite possible with teaching machines. Another advantage of the machine is its infinite patience. This is of particular importance in

teaching the slow learner. The problem of programming material, breaking it down into a large number of steps, planning successive steps related to previous steps, and trying it out on machines is a long and difficult task which has just begun and will never actually be finished.

Individual and self-instruction through the new media provide new opportunities for the individualization of education. The new media for individual instruction have important limitations and therefore should be used to augment the work of the teacher.

Without good teachers, there cannot be good teaching. There has always been a shortage of good teachers and this has become a more serious problem as emphasis on universal free public education has increased. Good teachers can do a better job when they have the right equipment and facilities. The new media provide the opportunity to expand the influence of the superior teacher. In the past the expansion of the influence of the superior teacher was mainly through their published writings. Much of the essence of teaching is lost through this medium. Through radio, recordings, television, and motion pictures we are familiar with the talents of the great performing artists of our time. Teaching is a performing art but most of our highly talented teachers work only with students in their immediate classes. When we consider the communication of the talents of the moving picture, recording and television artist, it appears that the art of teaching has been inadequately communicated.

The rapid growth in knowledge has placed demands for improvement of instruction on the teaching profession.

The new media cannot be employed to fullest advantage unless administration sees them as part of a broad conceptual framework. This includes the consideration of philosophy and the aims and objectives of education as well as implementation through modifications within the educational system.

The modification of the school plant to meet present needs and projected developments is one of the first considerations when the new media are being introduced. Some school architects conceive of the instructional materials center as the heart or core of the school. The emphasis today is on the adaptability of space within the school.

Changes in the budget should include more money for the new media, including some money for experimental programs. It would be unwise to purchase new equipment on the basis that it had to be successful. It would be more reasonable to purchase a small quantity on an experimental basis and determine its desirability.

Scheduling of classes and individual students will have to be adapted to the new media. This requires a whole new concept of timetable design. The complex problem that this proposes is being resolved in some districts by the employment of electronic computers for scheduling.

Staff responsibilities are altered by the organization for the new media. This may involve retraining for staff members. Teachers traditionally have been trained to work in isolation. Now they will be required both to share and to delegate responsibility.

Unless an organizational integration of the new media takes place, it appears that full utilization will not be realized. In other words, the procuring of new equipment may not result in the improvement of instruction. The implementation depends upon the realization of the possibilities as well as of the limitations as they relate to the total program and the appropriate organizational modifications.

In the past we have had three avenues to learning: the teacher, writing, and printing. Now we have six more: radio, television, films, recordings, language laboratories, and teaching machines. The utilization of these twentieth century media and the more efficient use of teaching personnel are two of the real challenges for educational administration today.★

Bibliography

Barlow, John. "Project Tutor" *Psychological Reports,* Vol. 6, No. 1, February, 1960.

Briggs, Leslie J. "Two Self-Instructional Devices" *Psychological Reports,* 4:671-76, 1958.

Corrigan, Robert E. "Automated Teaching Methods" *Automated Teaching Bulletin,* September, 1959.

Di Bernardis, Amo, and others. "Planning Schools for New Media" Portland: Division of Education, Portland State College.

Duryea, E. D. *Management of Learning* U.S. Department of Health, Education, and Welfare, Office of Education, Washington 25, D. C.

Holland, James G. "A Teaching Machine Program in Psychology." In *Automatic Teaching: The State of the Art.* Edited by Eugene Galanter. New York: John Wiley & Sons, 1959.

Hough, John B. "Research Vindication of Teaching Machines" *Phi Delta Kappan,* March, 1962.

Lumsdaine, A. A. and Glaser, Robert. *Teaching Machines and Programmed Learning — A Source Book.* Washington, D. C., Department of Audio-Visual Instruction, National Education Association, 1960.

Lumsdaine, A. A. "Teaching Machines and Self-Instructional Materials" *The Education Digest,* Vol. XXV, No. 4, December, 1959.

Morse, Arthur D. *Schools of Tomorrow — Today.* Garden City: Doubleday & Company, Inc., 1960.

National Education Association. "Administration Procedures and Practices for the Academically Talented Student in the Secondary School" National Education Association, Washington 6, D. C., 1960.

Porter, Douglas. "A Report on Instructional Devices on Foreign Language Teaching" The International Training and Research Program of the Ford Foundation, October 1, 1958 (19 p., mimeo).

Porter, Douglas. "Teaching Machines" *Harvard Graduate School of Education Bulletin,* Vol. 3, No. 1, March, 1958.

Skinner, B. T. "Teaching Machines" *Science,* Vol. 128, No. 3330, October 24, 1958.

School Management, "A Schoolman's Guide to Teaching Machines" *School Management,* Vol. 5, No. 10, October, 1961.

Tarbet Donald G. *Television and Our Schools.* New York: The Ronald Press Company, 1961.

Trump, J. Lloyd. "Images of the Future" Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, 200 Gregory Hall, Urbana, Illinois.

Through action research teachers can contribute individually to educational progress.

The Teacher's Role in Educational Research

D. A. WEBSTER

CHANGE IN EDUCATION is becoming commonplace. A statement to the effect that the best elements of traditional teaching should be supplemented with the judicious use of new techniques would seem to us platitudinous, at least in a North American context. The significance of this statement lies not in what is said but in who actually said it. It was the consensus of a group of educators and interested experts from throughout the world, brought together last year by UNESCO to consider some practical applications of modern learning theories. Educational change is certainly not limited to a few centers on this continent, for educators everywhere are now faced with a continually growing variety of new materials and techniques. Those actively concerned with keeping pace in our fast-changing world are placing increasing emphasis on the evaluation of educational practices both old and new.

Enough has been said about the fact that change has become an integral part of education. The main purpose of this article is to suggest some ways of ensuring that changes will be well conceived and to outline the role that classroom teachers can play in this vital process.

In an attempt to place the investigation of educational materials and processes on a high level of objectivity, educators (along with other social scientists) have adopted many of the research methods of the physical sciences. Early in this century, Thorndike professed that anything that existed, existed in some amount and hence could be measured. Encouraged by several early successes, educators rapidly developed many means of collecting and analyzing data related to a host of educational situations. Some of the more useful results to accrue from this early work were studies of attention spans and investigations leading to a widely used statistical concept, the normal distribution. During the First World War, army psychologists developed a prototype for early intelligence tests. Although it has at times been overused through uncritical application as a measure of academic potential, in the long run the I.Q. has proved to be a valuable asset. Another revolutionary contribution was made by research when, in the thirties, the cult of utility received much attention. In many instances, particularly in the United States, research provided the evidence that led to the modification or total removal of some traditional subjects because they apparently had little practical value. The most lasting realization to come out of this work was that a particular subject cannot necessarily be justified on the basis of utility, for we no longer demand that this be the sole or even the main criterion for judgment. These examples are but a few that point out the fact that research has played a major role in guiding (and occasionally misguiding) educational decision-making.

As outlined above, research has contributed to education frequently, although sometimes to its detriment. It has suffered at times from a tendency to be too far removed from the classroom. Some investigators, possibly inspired by little more than the prospect of gaining academic credit, have been satisfied to measure some isolated characteristic of a situation regardless of whether it is educationally significant. A classic example of this kind of study is one that compared the total cost of an educational system to the number of graduates in order to arrive at a "unit cost." This kind of measurement, while it might give a valid indication of the efficiency of some industry, certainly means little in education, despite the fact that it can be determined both easily and accurately. Fortunately, there is a trend in educational research that promises to decrease the proportion of useless findings.

The author, a member of the BCTF Research Committee, teaches in Kelowna.

The research approach to solving educational problems at the higher levels is at present inspired by a broad goal that was lacking in many earlier works. This aim is to generalize the findings of formal research and relate them in broad theoretical frameworks. That is, current research is generally seen as an attempt to confirm or extend some aspect of learning theory. While earlier research often seemed remote, this new movement promises to be closer to actual classroom applications for at least two reasons. First, since it is based on a theory of learning, it will generally be connected directly with learning—the primary classroom activity. Second, of equal importance is the fact that an increasing proportion of research is being conducted by educators with actual classroom teaching experience.

Change is inevitable; investigation is desirable; and research has proven its value, but the classroom teacher's position is not yet clear. Should one participate directly in educational research and, if so, at what level? The first part of this question is really a matter of personal choice. However, the profession of teaching seems to be accepting increasing responsibility for the conception and evaluation of educational innovations. The ability to perform these functions is considered by many to be the high point of professional development. The second part of my question, referring to the level at which a potential researcher might operate, is the concern of the remainder of this article.

Three Levels of Approach

The research approach to problem solving, in its broadest interpretation, might be described at three distinctly different levels. The basic level might be called simply the common sense approach where one faces a problem as objectively as possible in an attempt to formulate a solution. All educators must do this regularly, relying on experience, their own and that of their colleagues, to provide the answers. This approach is limited by the subjectivity forced on it by reliance on personal experience rather than controlled experiment. It often fails completely to provide answers to entirely new problems. Most researchers would not even give this level of investigation the recognition of being included as the lowest form of research. Nevertheless, it is the first step in becoming research minded.

At the opposite extreme is formal research involving elaborate designs aimed at investigating relationships between certain variables and rigidly controlling all others. To achieve this aim, formal research is frequently conducted in an artificial situation. It is most readily performed by university or Department of Education researchers.

There is a practicable compromise between the often inconclusive common sense approach and the rigorous approach of formal research. This level is called "action" research. Generally, problems considered in action research are not necessarily of a theoretical nature, but rather are practical problems arising out of actual classroom experience. An important feature of action research is that it employs only those features of formal research that will clarify the outcome. For example, if the comparison of two methods of teaching a given concept shows that one is consistently superior to the other, and the choice between them does not involve any particular inconvenience or expense, there would be little point in subjecting the data to the thorough statistical analysis that one might find in a formal study. Action research might be described as a streamlined but still powerful approach to solving problems.

Anyone who has taken a course in educational psychology will have come across the terms "validity" and "reliability" applied to tests. The same concepts may also be used as criteria for evaluating research. An action research project, to be at all useful, must be valid. That is, it must investigate exactly those factors for which it was designed. However, reliability is not considered to be quite as vital in action research for several reasons. First, it is often impossible to arrange a classroom situation exactly as it might be desired so one class will give results that are slightly different from another. These results, though still valid, would be less reliable than those from a more formal study. This is why I stated earlier that statistical analysis is not always applicable in action research. A second reason for putting less emphasis on reliability is that often the researcher is simply trying to determine whether a certain process or approach will work for him in his own classroom. It would be folly to try extending the results of one isolated classroom experiment to make some general conclusion. Reliability in action research can best be attained through repetition. If a given experiment is conducted in a great number of classrooms with consistent results, the small variations from one class to another become less significant.

Curriculum Modification Encouraged

Daily we all come across problems in education that are researchable but either do not have the time or do not have the resources to tackle them. A major drawback in the minds of many teachers is the feeling that the Department frowns upon innovation in the classroom. To clarify this point, inquiries were directed to the Department of Education and, under the authority of the Deputy Minister, Mr. Meredith, Director of Curriculum, has supplied an informal statement of policy regarding classroom research.

In response to a question about freedom to vary courses, Mr. Meredith pointed out that the policy as stated in various curriculum outlines clearly encourages modification, providing it still prepares students for work in subsequent courses. In part, Mr. Meredith's statement reads:

"There really should not be any difference in policy regarding the degree to which course outlines are followed at various levels. However, as you know, there are differences in subjects. A change in sequence in mathematics, while not impossible, may create problems not likely to arise in a change in sequence in English literature. Examinations at the upper levels are also likely to limit the flexibility with which a course outline can be treated. Nevertheless it is not expected that course outlines would be slavishly followed or rigidly adhered to provided the same thought and planning goes into the change as went into the original."

The second question asked about the desirability of co-operative research projects involving some number of teachers. This type of research has the strong approval of the Department. It may well be that our own BCTF Research Committee should be more active in this regard—both initiating and co-ordinating province-wide research projects.

A final question about varying the administrative pattern brought the following reply:

"Recent curriculum changes have included an increased flexibility. Flexibility, however, gained, for example, by dropping some subjects and doubling time for others would not be allowed. Projects in team teaching (double classes) have been allowed. Increases and decreases of the number of periods have been allowed for specific purposes. Regrouping across the grades for some subjects has been allowed. All of these involve the principal, the superintendent and therefore both must approve. In some cases the board and the Department are involved and therefore both must approve. Each specific variation proposed for research purposes should be considered on its own merits. The limits within which a local school district (or educators acting for the district) can vary the present administrative patterns are fairly broad. Note, for example, the various patterns of timetables now being used. Note the variations allowed in report cards, selections of electives, grade placements of courses, etc. The Department is primarily concerned not merely with the variations per se but with the educational justification for them and the means being used to evaluate them."

From these statements, it should be clear that research at the classroom level is definitely encouraged in this province. However we must keep several conditions in mind: First, a problem must be researchable. Second, a plan must be formulated that will produce a valid investigation of the problem. Finally, the project must be sufficiently organized to convince interested authorities that the researcher is seriously concerned with finding an answer to a problem and not simply seeking permission to stray aimlessly from the prescribed course. Any potential researcher able to fulfill these reasonable conditions should expect full co-operation from interested bodies.

In this article I have tried to present action research as a level of investigation within the reach of most teachers. I have tried to show how it is a necessary step in testing local applications of new ideas in education. As well as this general value, action research is important in that teachers can individually contribute to educational progress. A worthwhile side effect is that one who participates in action research not only becomes a better producer of research, but also a better consumer. This is one way in which a teacher can earn greater recognition as a truly professional person. Also, a teacher who is enabled to conduct his own research will certainly become more familiar with the school system and those responsible for its operation. This ideally could lead to an educational system in vibrant harmony as exhibited by growth at all levels.

Anyone interested in learning more about the research process might find valuable information in a Canadian Teachers' Federation publication entitled *The Role of the Classroom Teacher in Educational Research.* You are invited to write to the BCTF office for a free copy.★

IS THIS YOU?

"Oh, it will do Larry good to repeat his grade."

If so, read this.

Few investigators have concerned themselves with the identification of those personal, environmental, and instructional conditions under which pupils may be expected to profit most from non-promotion. What little work has been done suggests that girls rather than boys, and pupils of low intelligence with unsatisfactory peer relations are apt to profit most from grade repetition. Greater benefits also appear to accrue to pupils who have been selected to repeat a grade on the basis of definite and individualized criteria. At the same time, there is some evidence that teacher failure to individualize instruction at the point of need, and mere exposure to repetition of the previous year's work, may actually impede the non-promoted pupil's educational progress.

Details of source available from BCTF Research Committee

Full courses are being given through school television (STV) in Nova Scotia

Nova Scotia Experiments with Television

N. FERGUSSON

THE TRADITIONAL ROLE of the classroom teacher is being "threatened" by a number of developments. Programmed learning, team teaching, the use of new methods, gadgets and ideas and of course TV teaching are all being bruited. Many of these developments were only matters to read about in Nova Scotia, for of course "down" in the East one usually is expected to "see how things work elsewhere" before gradually and cautiously adopting any new "frill" or idea.

One can then imagine why some classroom teachers in Nova Scotia received something at least in the way of surprise, if not a jolt, after discovering they had to grapple with the "aid" of STV programs this fall.

These STV programs are not occasional ones, nor are they enrichment ones. The full course in each section of Grade XI Math and Grade XI Science is being covered. There are five 20-minute lectures daily both in mathematics and science. For the first half-year, three of each five per week deal with algebra and physics, and two with geometry and chemistry, and this relationship will be switched for the second half-year. "This year's series of television lessons," according to Dr. Harold Nason of the Department of Education, "marks the first time educational television based directly on the school curriculum has been used in Canada on a province-wide basis throughout the school year." The province-wide basis is possible not only because of CBC satellite stations but through the co-operation of two private stations.

One broadcast lesson commences at 10:30 a.m. and the other at 11:20 a.m. A ten-minute introduction period is recommended and a twenty-minute follow-up period. Preparatory material is sent out by the TV teachers before the lessons. Of course adjustments in school timetabling were necessary in order to incorporate the broadcasts into the school program.

The whole plan was first announced in April when Dr. Nason, Director of Elementary and Secondary Education, invited representatives from a number of organizations to assist in planning details and policy for the fall STV program. CBC had just adopted a plan presented to them by the Department in December. Organizations invited to the planning conference were, in addition to Department of Educational personnel, the Nova Scotia Association of Urban and Municipal School Boards, the CBC, and the NSTU. Out of this meeting evolved the Advisory Council on School Television.

A great amount of work had to be done immediately and a number of sub-committees were appointed. These included Teacher Selection, Space and Equipment, Program Material, and Supervisory and Subjects Evaluation.

The STV teachers were selected in late June after over 30 applications were reviewed and a number auditioned. Mr. Robert Kennedy was chosen for science and Mr. Frank Milne for mathematics. Mr. Kennedy has an M.A. from the University of Edinburgh and was with the Adult Education Division of the Department. He was formerly principal of Pictou Academy. Mr. Milne is a graduate of Dalhousie and St. Mary's Universities, and was teaching at Queen Elizabeth High School in Halifax.

While there is some vocalized reaction to the STV program, it is somewhat surprising that there is not more comment. Perhaps this is owing in part to the suddenness with which the program was introduced and developed, and in part to the fact that most of the production cost is borne by CBC. There is no unanimity of opinion from teachers or pupils at this time. Teachers of course had little experience with TV in the classroom and the coup d'oeil type of introduction did not give time for much study.

Teachers are, however, very interested in determining whether or not the present program contributes generally to overall educational efficiency. That is why the NSTU has been interested in having a worthwhile evaluation of the project.

One of the committees suggested by the Council in April was a Subjects Evaluation Committee which would be left in the hands of the NSTU. It soon became apparent to the NSTU that an overall provincial evaluation would be desirable and necessary. The NSTU then contacted Dr. Floyd Robinson of CTF to assist in an evaluation of the project. Last fall Dr. Robinson was in Nova Scotia to aid a committee draft an evaluation proposal for the STV project. This proposal was later adopted by the Advisory Council.

Since the STV project is already underway, the first stage of the evaluation proposal is to collect information about the participating schools and classes.

Mr. Fergusson is Assistant Executive Secretary of the Nova Scotia Teachers' Union.

From this data the CTF Research Division will attempt a selection of representative classes for use in later analyses. Achievement comparisons using provincial examination results will probably be used with the hope that there can be some legitimate generalizations. Later, criterion measures of an attitudinal nature involving teachers' and students' assessments will be dealt with.

In addition to the overall evaluation, participating teachers will be asked to make local evaluations using in part somewhat different data. Dr. Robinson will assist in the drafting of a number of designs for local evaluations. The NSTU will conduct regional evaluation sessions and will be responsible for collecting and summarizing these studies as part of the provincial evaluation.

The NSTU has tentative plans to hold a three-day conference on STV this coming August. By that time, if preliminary results of the evaluation attempts are ready, they will form a part of the discussions.

Television has immense possibilities. "The success of the project," as Dr. Nason notes, "will not only help shape the future of education in this province but might well help determine the form that education in all of Canada will take in the future."

It may well be that the role of the classroom teacher is in for some change during the next decade. If so, then changes should be directed and abetted by teachers and teacher organizations with an eye toward the improvement of educational opportunity. But we must guard against changes which do not make such improvement.★

What's So New About Three Streams?

PEREGRINUS

W. S. GILBERT WAS fortunate. In his day it was indisputable that

Every boy and every gal
That's born into this world alive,
Is either a little Libe-ral
Or else a little Conserva-tyve. Fa, la, la.

According to the Vancouver *Sun,* December 15, 1962, Minister of Education Leslie Peterson confirmed that a new master plan is being prepared for secondary education in B.C.—but children are more complicated these days or perhaps it is the demands of our complicated civilization that have upset Gilbert's simple choice of two alternatives. The new plan for B.C. will stream children into three types after Grade VII—academic, who will advance towards the university; technical, who will enter technical colleges; vocational, who will enter employment from school. This analysis of children out-chants the Chant Report, which laid down only two streams of boys and girls after Grade VII. It has enchanted Dean Neville Scarfe (according to the *Sun's* reporter) who, at best, was only lukewarm about those two streams, and it will give B.C. teachers something solid to argue about for a long time to come.

How profound or original is this idea of splitting students into three categories? Is it as practical or clear-cut as it seems, or does it, perhaps oversimplify? Is there a touch of apostasy here that the observant teacher may well have already noticed?

First, let us take a quotation from page 10, *Administrative Bulletin for Secondary Schools, 1961,* issued in Victoria, which reads, "It must be recognized that the secondary school today is no longer a selective institution for the intellectual, cultural, or economic elite. It is a school for every man's child." It is true that every child in B.C. goes from elementary school to junior high, but from that moment, until he leaves school for university, or technical college, or a job, if this new plan operates, he will be in a fiercely selective institution, because the principle involved is that of "exclusion." No amount of official pontification or pedagogic exhortation will ever convince parents that this neat and tidy classification is other than three descending classes. Class I leads to university; Class II leads to technical colleges — not quite the same thing; Class III is the lowest level — a job at 15 or 16 years of age, without the assured future that higher forms of education make possible. All parents will hope that their children will qualify for Class I. Some will demand it, almost as a right, and will be hostile and critical, if the school cannot promise this desired result. This is especially true of parents who have had little education themselves and wish to see their own

children fulfill what to them was only a cherished dream. Wealthy parents will use their power of buying expert instruction to give their children burdensome coaching, and perhaps force them into a scholastic program that is beyond their intellectual powers. Here is the beginning of serious maladjustment for the child, and resentment and disappointment from the parent. Exclusion from Class I will arouse much antagonism and teachers will be hard worked to justify or account for it. Exclusion from Classes I and II will stir a real hornets' nest at any P-TA, where as every teacher knows, it is normally assumed that failure is not so much due to the inability of the child as to the teacher's shortcomings and the general ineptitude of the school. Could this happen? Do parents behave like this? Is it true that selection by "exclusion," to segregate the types fitted for university education, will produce an intellectual and cultural elite? If it is true, the statement from the Administrative Bulletin is turned upside down.

How is Segregation Accomplished?

Now to another point. Are three neat types an oversimplification? How do educators and administrators intend to arrive at clear-cut segregation? The administrator will call for marks, or percentages, or a group of so many A's, B's, or C's, and draw a line – the arbitrary division of the impersonal arbiter. The educator knows that countless parents will not accept this but will demand a scrutiny of marks or grades. By how much did their offspring fail? If by one or two marks only, they will demand a second attempt, or account for the apparent failure by alleging temporary ill-health or "examination nerves." There will sometimes be the explanation that "my son has always beaten someone else's before, yet that other fellow has now just got himself above the line." This kind of comparison causes much trouble, especially if the teacher knows that it is true. There is the very real criticism that student A, who has brains, but does no work, and who is of undesirable character and unworthy of a place in an intellectual elite, gets in; yet student B, who has vast industry, good home background, and excellent character, is excluded – by a paltry mark or two. And so on – for there is indeed around the arbiter's line a very wide area of borderland which includes many students that are on the wrong side of the line. The same applies as between Classes II and III. Human beings cannot be tidily categorized at all and to make a plan work where three such categories are presumed to exist, very wide provision is necessary for the "border line" cases and the "second try."

This tripartite division is, in fact, neither profound nor new. The British tried it out after the 1944 Education Act, calling the three groups, Secondary Grammar, i.e., leading to university; Secondary Modern, leading to manual or office jobs, for the "hewers of wood and drawers of water"; and Technical, leading to engineering of all kinds and national certificates in every sort of technology. Out of this triple birth, there came the famous phrase, "parity of esteem," which like many a catch phrase, implies the very opposite. In other words, the scheme did not appeal to many parents because the three kinds of education enjoyed the greatest "imparity of esteem"—to invent a negative. All parents rated grammar school or academic education as Class I. Nobody ever quite knew the precedence which belonged to the other two, modern and technical, and in any case, there were very few so-called technical schools to give the scheme a good start. In the difficult years after the war, few new ones were built and the idea of a technical stream faded away. Secondary Modern began to be everything that was not academic or aiming at a university. During 18 years many splendid "modern" schools have been built, many gifted and devoted teachers have experimented to find a rewarding and realistic program for them, and much has been said and written by experts and politicians to enhance the "image" of the "modern" school. Yet, the word "failure" is still used, quite absurdly, by many parents whose children must go to a "modern" school, or, as they say, "have failed to pass the 11 plus examination," or "failed to get into a grammar school," and there is undoubtedly still "imparity of esteem." But the British, with their genius for compromise, and their most cherished possession, freedom to experiment in municipality, school, classroom, syllabus, books, and teaching aids, have begun to find a sort of equilibrium by widening the borderland or overlap between grammar and "modern" school, i.e., between academic and vocational-cum-technical education. The "modern" schools are beginning to have small academic streams – modest perhaps, but they win publicity by getting into the press on Prize Giving Day for it is just these students who carry off most of the prizes. Some grammar schools are beginning to have engineering shops and rooms for metalwork, i.e., showing a more practical bias.

Perhaps Gilbert was right after all.

Every boy and every gal, etc.,
Is either an academical,
Or techni-cum-vocational. Les, Les, Les!

Will any of this happen here – parents, human nature and economics being what they are? Or has the new political party, that did not exist in Gilbert's day—the British Labour Party—found the answer? This is the all-purpose, all-things-to-all-men-type of school—the huge Comprehensive. Streaming is certainly there, in an infinite variety, so gentle and imperceptible that segregation of Class from Class is blurred. There, and Gilbert has the last word:

Where everyone is somebody,
Then no one's anybody.★

Photo by Visual Education Department, VSB

A small seminar group in social studies at King Edward Continuing Education Center

A Unique Delevopment in Continuing Education

ONE OF THE NEWEST and most exciting experiments in B. C. education is the King Edward Senior Matriculation and Continuing Education Center. This secondary day school for adults—the result of imagination and enterprise by the Vancouver School Board and its officials—is a major breakthrough in adult education in our province. The center is meeting a real need, and developments so far indicate that the experiment will be a great success.

The center is designed for full time adult students. Four programs are offered: (a) full Senior Matriculation, (b) partial Senior Matriculation (with some Grade XII), (c) the Interrupted Program for University Program standing, and (d) the Interrupted Program for General Program standing. Fees are $30 per course per year, with a maximum fee of $150.

Because it is designed for adults, the school tries to be flexible in its approach. The timetable has been arranged so that most classes can be conveniently combined for large group instruction, but provision has also been made for seminar and tutorial instruction. Arrangements have also been made to accommodate shift workers; combinations of courses in day school and night school can be taken. (Day classes are scheduled from 9:00 to 4:00, and separate late afternoon classes are offered from 3:00 to 6:00.

In addition, the school is filled each evening with night school students. Every effort is made to accommodate students in one or more of the three schedules.)

Two full time counsellors are available to advise and assist the students in their program planning, but the students are given full responsibility for their own selections. Additional responsibility is placed on students by allowing them considerable free time for study and assignment work or consultation with staff members.

The reaction to the new school exceeded everyone's most optimistic expectations. One thousand eighty-three people registered for the day school programs and 1,034 actually attended classes in September. Because of the unexpectedly high enrollment (700-750 had been expected), ten additional teachers had to be found during the first week of September. The school now has a staff of 38.

The large enrollment has had one deleterious effect; the staff has had to carry a heavy load. The teachers have accepted the burden cheerfully, however, and in spite of it they are experimenting with new approaches and organizations of work to create the best possible atmosphere for the job to be done.

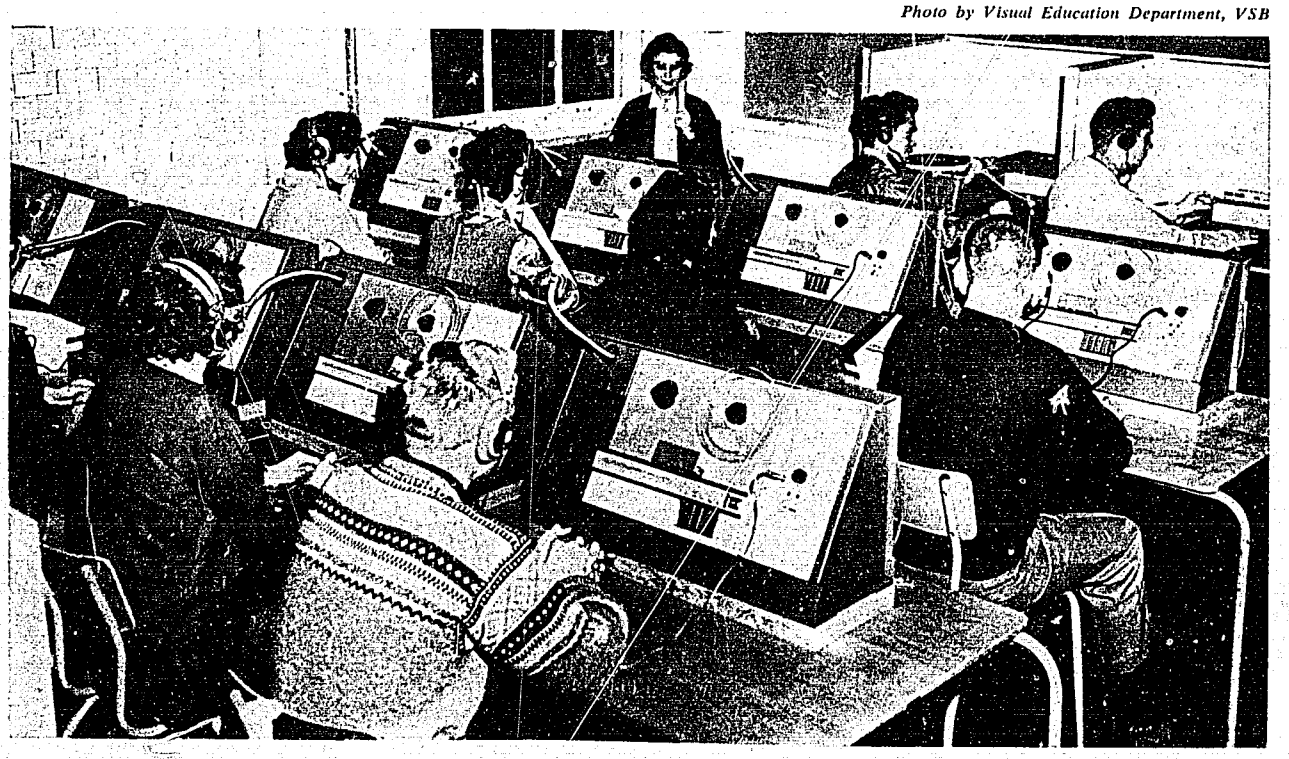
Although King Edward is classified as a secondary school, it is like no other secondary school in the province. There are no homeroom classes. Students are expected to attend regularly, but no notes for absence are required and no detentions for unexcused absences are assigned. The cafeteria is used as a coffee bar and common room, university style, and smoking is permitted there. The library is open from 8:30 a.m. until 9:00 p.m. Discipline problems are virtually non-existent. Attendance is kept by a clerk in the office, using subject teachers' reports. The reason for these innovations, of course, is that King Edward is a school for adults. Self-discipline is the keynote.

To qualify for Departmental grants (Senior Matriculation), the school must keep attendance records. Students are therefore expected to obtain approval in advance for any necessary absences. That they take this request seriously is illustrated by the request of one young man to be excused for a half-day. His reason? He was getting married that afternoon!

Why did the Vancouver School Board develop the Center? Prior to this school year the Senior Matriculation course was offered at only two of Vancouver's 18 secondary schools, King Edward and Magee. The demand for Senior Matriculation at other schools was growing. The Board wanted to extend Senior Matriculation, and wanted it to be as much like first year university as possible. Moreover, the Board, because it had been very pleased with its experimental classes for unemployed people, wanted to

The language laboratory features the newest electronic equipment

Photo by Visual Education Department, VSB



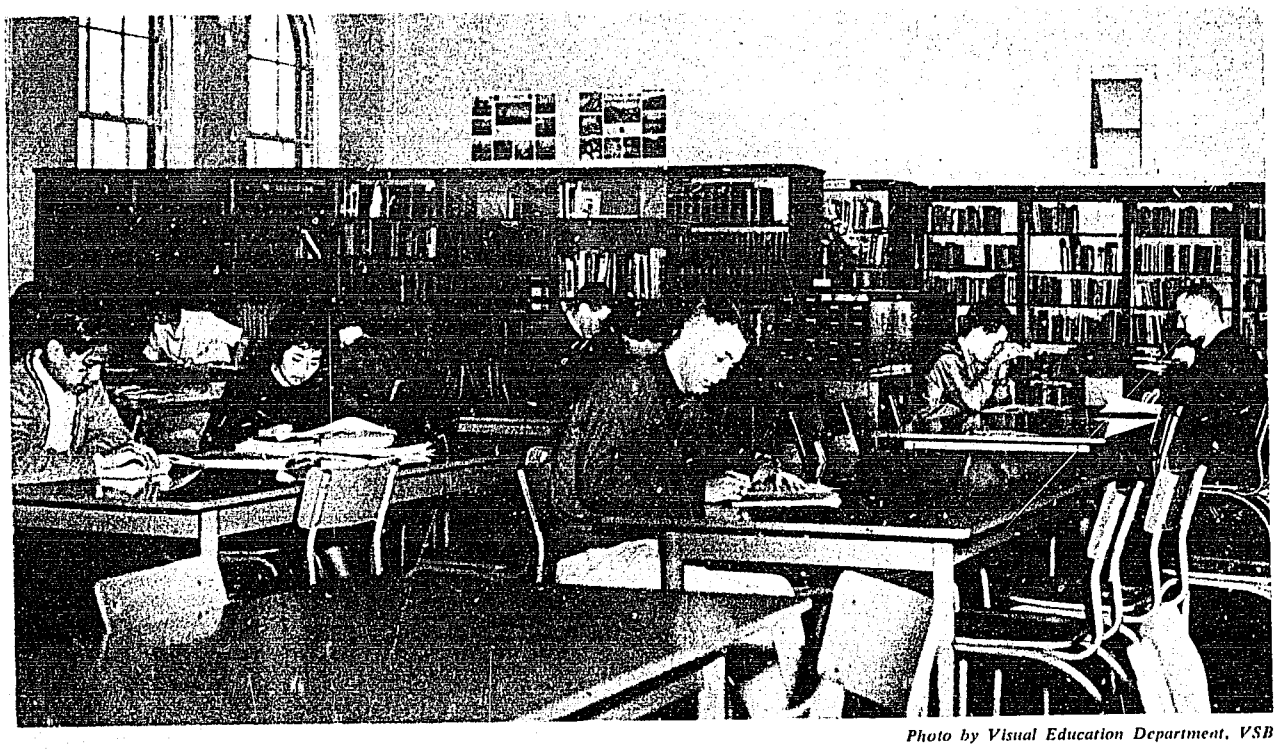


Photo by Visual Education Department, VSB

Many new books and the redesigned library assist the students to study alone

provide an opportunity for adults who had dropped out of school to return to complete their high school graduation standing. The Board's officials, after careful study, concluded that the best way to accomplish both objectives was to have one adult education center.

The Department of Education was consulted and co-operated wholeheartedly in making the adult education center possible. Certain rules and regulations were amended to enable the school to function effectively. Although the Department was very sympathetic, all agreements were tentative, and the school is being operated this year on an experimental basis.

Having received Departmental approval, the Board proceeded to name a principal for the new school, J. D. Newberry (principal of the "old" King Edward), a vice-principal, A. H. Glenesk, and a staff based on the expected enrollment of 700-750. All teachers were selected from people who had indicated an interest in teaching in the new school.

Because of the enthusiasm of the staff, a great deal was accomplished during the two summer months to prepare for a brand new type of school in September. On the basis of teacher recommendations, the stock of library books was greatly enlarged, and the library redesigned into a reference and study area. A language laboratory was provided for the teaching of foreign languages. (The English department now has plans for using it to present well-read poetry.) A start was made on replacing the conventional desks with tables and chairs and tablet armchairs. Some rooms were changed to provide classrooms for large groups. Science teachers had to develop new methods for handling several hundred students in the laboratories each week.

The 1,034 students who started in September varied in age from 16 to 52. Age groups were as follows:

31 or over	— 37 students.
26-30	— 40
21-25	—128
19-20	—223
18	—432
Under 18	—174

As would be expected, the school has had some dropouts. Indeed, a school for adults is particularly vulnerable to dropouts, for circumstances can change so rapidly for adults. In January the enrollment was 921. The two most common reasons given for withdrawals were accepting employment and transferring to night school. Some students, of course, moved from the city. Others withdrew as a result of poor achievement. The latter development was fully expected, however, for the school accepted all applicants on a give-them-a-chance-to-prove-themselves basis. The alternative would have been a strict selection process, which would have negated what the

school was trying to do—to make academic education available to adults in an adult atmosphere.

Physical education is not included in either the Senior Matriculation or Interrupted Program courses. However, the school has worked out an arrangement with UBC's Physical Education Department whereby senior or graduate PE students are assigned on a regular basis to develop and supervise physical activity programs. Next year a recreation director, sponsored jointly by the School Board and UBC, will be appointed to the school.

Other extracurricular activities have developed from students' requests. The staff has encouraged, but not initiated, extracurricular interests. The students have organized such groups as a choir, jazz band, square dance club, creative writing club, Future Teachers' club and U.N. Club.

Vice-principal A. H. Glenesk summarizes the school's approach in these words: "The school is not designed to relieve the pressure of increased enrollment at UBC; it is designed to provide an opportunity for the extension and completion of educational programs of both college and non-college students. Adults are particular about their classmates; they like to learn with adults. Every effort is made, therefore, to treat the students as adults. They are encouraged to assume responsibility for learning outside the classroom. Adults can learn rapidly, and it is important to provide the opportunity to learn at the rate which represents the individual's capacity." If student response is any criterion, this philosophy is a sound one.

Plans are underway for a new unit at the school which will incorporate science laboratories, a new library, and an administration area. In serving its new function, the present building is least adequate in these areas.

As the King Edward Center develops and the Vancouver Vocational Institute expansion is completed, the Board hopes to introduce even more flexibility into its adult education offerings by making it possible for people to take some courses in both institutions. Students might spend, for example, two days a week at VVI, and three days a week at King Edward.

Dr. B. E. Wales, Director of Adult Education in Vancouver, sums up the experiment this way: "The response has been even more gratifying than we had anticipated. There has been an enthusiastic reaction by both students and staff to this new approach to education for adults. Given the freedom to continue the development of this center, we believe it will become a most valuable part of the Vancouver school system."

There is no doubt that the school has met a real need. This need is becoming greater each year. The King Edward Center may well prove to be a prototype for similar institutions all over the province.★

A Study of Adolescent Underachievement

A recent study has been made in the United States of the relationship between parental acceptance and the academic achievement of adolescents.

The results of this study would indicate that, in attempting to solve the problem of underachievement in the schools, it would be advisable for the teacher of the underachiever to discuss the problem with the student and his parents in order that all concerned may understand the dynamics of the problem. Furthermore, it is obvious that effective counselling services for both children and parents would assist greatly in preventing and solving the problem. All too often, the schools and the parents rely upon "warning" or "de ncy" notices, threats of wit. awal from athletic teams, band, and other extracurricular activities, in the belief that such steps will force the student to achieve to capacity. Many times, these very steps aimed at ameliorating the situation force the child deeper into a state of underachievement. It should be pointed out that a brief, perfunctory conversation between counsellor and student, which in many schools is a ritual which follows the issuance of "warning" notices, may ease the conscience of the counsellor but will in itself lend little to the solution of underachievement. In conclusion, one must realize that the frequency of underachievement in our schools is great, and that the probability of successfully solving the problem at the secondary level is much less than during the first few years of school. Consequently, earlier identification of the underachieving student and the availability of counselling services at the lower grade levels for parents and students are most important.

Barwick, Janice M. and Arbuckle, Dugald S., "A Study of the Relationship between Parental Acceptance and the Academic Achievement of Adolescents" in *Journal of Educational Research,* Vol. 56, No. 3, Nov. 1962, pp. 148-151

Dr. J. B. Macdonald,
President of UBC

A Summary of the Macdonald Report

IN RECENT YEARS many citizens of British Columbia have been aware of the growing need for additional opportunities and facilities for higher education. The time has now come when plans must be made at once if British Columbia is to provide educational opportunities necessary for its social, economic, and cultural progress. The matter is one of the gravest urgency.

In the realm of scientific and technological change, and the effect of these two forces on every aspect of human life, more has been accomplished in the last half century than in all previous human history. As a measure of the pace of change, it has been stated that 90% of all the scientists who ever lived are alive today. We are witnesses to the first act of a new scientific revolution. Our work, our play, our lives are inevitably shaped by that revolution; and if man is to survive as a species, and if we are to prosper as a nation and as individuals, we must strive to understand the meaning of the revolution as we plan for the years ahead.

We have moved into a new world in which the skills of today become obsolete tomorrow. The days are rapidly disappearing when the man with little formal training can make an appreciable contribution to our national strength. Education, and more particularly higher education, must be designed to permit individuals to interpret and understand the revolutionary changes which are occurring everywhere. The persons who will make the greatest contribution to society, and who will lead happy and rewarding lives, will be those educated to the limits of their capacities and talents by the best kinds of educational institutions we can finance and staff.

The province of British Columbia has an abundance of natural resources which provide a base for an expanding industrial economy. Our population is growing rapidly. It is the only province that has shown an increase in population in every decade since 1925. For the years 1945-56 British Columbia increased by 41.4% as against a national population growth in the same period of 30%. It is predicted that the provincial population will be 2,000,000 by 1971 and 3,000,000 by 1981. The growth in the provincial population is reflected directly in the number of students who are seeking education beyond the high school level. It is estimated that by 1971, 37,000 high school graduates will be enrolled or seeking entry to our universities and colleges. The increase in numbers is not restricted to this province: the 37,000 students seeking entry to institutions of higher education in British Columbia in 1970 will be part of 312,000 students for the whole of Canada. Since in British Columbia there are not more than 17,000 students registered in programs beyond the high school level for the academic year 1962-63, this means that in the brief period of seven years we can look forward to double the enrollment we have now.

The most crucial problem facing us as a result of this enormous increase will be that of finding staff and facilities for our colleges and universities. In British Columbia alone we shall have to add 125 members to teaching staffs every year if the present student-staff ratio is to be maintained. The alarming fact, however, is that the whole of Canada is graduating annually only about 280 Ph.D.s. The Ph.D. is now almost mandatory for anybody seeking a career in higher education.

Second only to the problem of staffing our uni-

This summary was supplied by the Information Service of the University of British Columbia.

versities is the need for an entirely new concept of financing higher education. The present average cost of higher education in Canada is $1,550 per student per year. This is expected to increase to $2,100 by 1965 and, in my judgment, to $3,000 by 1970. Cost per student over the last five years in Canada went up from $1,072 to $1,550.

Capital costs for the five years from 1960 for higher education in Canada, according to the Canadian Universities Foundation, could go to one billion dollars, that is two hundred million dollars per year. The population of British Columbia is approximately 10% of that of Canada; therefore, proportionately, the projection for this province is twenty million dollars per year for a total of one hundred million dollars by 1965-66.

Clearly the task and cost of meeting requirements for higher education in the years ahead are of a new dimension.

Excellence as a Goal

Two requirements are fundamental to the promotion of excellence in British Columbia's higher education. These are first the diversification of opportunity both in respect to the kinds of education experience available and the place where it can be obtained. The second requirement is self-government of individual institutions in respect to setting objectives, standards, admissions, curricula, administrative structure, and all the other things that go to make up the operation of a college.

British Columbia needs educational opportunities of a diversified kind because many different programs of study and training are required for citizens whose talents and interests are different and whose vocations or careers are markedly dissimilar. It is inconceivable that any one institution can serve successfully the wide range of educational training needed for the modern world. Society requires theoretical physicists, electronics technicians, agricultural scientists, school teachers, physicians, lawyers, as well as food, mining, agricultural, and forestry technologists, diesel mechanics, data processors, and so many others who possess the highly technical skills demanded in today's world.

In order to develop an excellent system of education in this province, the individual institutions must be self-governing in respect of their academic programs. Each institution must be permitted to define its own aims and organize its program to achieve goals based upon local, provincial, or national requirements. The only way in which smaller institutions can compete for competent staff is to offer a program which is unique and so provide opportunities which contrast with those of the University—for example, smaller classes, seminar education, intimate association with other disciplines, higher standards of admission, and a greater emphasis on experiment in education.

Kinds of Institutions Required

The resources available for higher education in this province have been centered on two main objectives: the development of the University of British Columbia at West Point Grey as an institution for students proceeding to degrees in the liberal arts, the sciences, the professions, and post graduate studies; and the development of Victoria College first as a two-year institution, then in the last three years as a four-year liberal arts college, giving the degrees of the University of British Columbia. These are the only public institutions offering higher education. The two institutions mentioned, while they serve the whole province, draw most of their students from the metropolitan areas of Vancouver and Victoria. The problem of numbers of students has already been indicated. Yet British Columbia and Canada are educating too few of the suitably qualified students in the college-age group who could benefit from education beyond the high school. If we wish to maintain our cultural and economic status, then we must provide for a larger proportion of able young people, but at the same time avoid undesirable congestion in the present institutions.

I see the need for two basic kinds of institutions of higher education:

(a) Universities and four-year colleges offering degree programs and advanced training for those students who have the necessary ability and aptitude;

(b) Two-year colleges offering a variety of programs (academic and technological) of one or two years of education beyond Grade XII.

The two-year college would be a new kind of institution for this province. It would be designed for those students who plan to continue their education at a degree-granting institution; those who wish to take only one or two years of higher education (technical, academic, or a combination of both); those who are undecided about their educational future; those who by preference or for financial reasons wish to remain in their own locality. The two-year college would have its unique character and ideals and offer enough courses parallel with those of degree-granting institutions to invite the best students to pursue further studies. Although two-year colleges may differ from one another in accordance with local needs, that difference will exist mainly in the non-academic areas of their work. Such institutions could attract very able students and professors by offering courses and facilities of a distinctive character. Their academic programs must be parallel so that the best students can transfer to the University, but parallel should not mean identical.

If new two-year colleges are established at major centers of population throughout the province, much will be done to equalize educational opportunities for all young British Columbians. The University could then concentrate on the tasks for which it is best suited:

(a) Undergraduate education in the humanities, the sciences, the fine arts, and the social sciences;
(b) Advanced teaching and research connected with graduate work;
(c) Professional preparation: for example in medicine, dentistry, engineering, law, forestry, commerce, education.

In addition, we need four-year colleges offering degrees in the liberal arts, science, and education. At the moment, I see no need for more than one institution giving extremely expensive professional courses such as medicine and engineering, and much of the advanced scientific and graduate work.

Locations for Colleges in B.C.

There are several important criteria to be employed in deciding upon the location of new colleges. These are:
(a) The total population of the area concerned;
(b) The size of the "student pool" within this total;
(c) The number of students within commuting distance (one hour by car) of a particular center;
(d) The proportion of this number which seem likely to need post high school education;
(e) The existing level and quality of cultural activities in various communities.

Experience in the United States reveals we must seek communities having a fairly high density of population to act as centers and to which can be added students residing within one hour's travel by car. Moreover, in order that a system of decentralization may be economically feasible, new institutions must have a minimum enrollment of about 300 students in a two-year program. Most communities in British Columbia are not large enough to supply such a pool of qualified students, and those that are large enough owe it to their smaller neighboring communities to co-operate in a regional college program.

Any local considerations must be seen in the broad perspective of the added benefits that can accrue to the citizens of the province at large; because my prime consideration has always been to develop a system for the whole province rather than for a particular area. The regional college will act as a leaven in the community. It will foster and promote higher education and cultural activities among the students who are in attendance; at the same time, it will provide an opportunity for continuing education among interested citizens. In even broader terms these new institutions will contribute markedly to raising the whole intellectual and cultural life of the citizens of British Columbia. Having examined those regional areas in the province which could support a college on the basis of the criteria I have already set out earlier in this section, I recommend:
(a) that Victoria College have the privilege of deciding to become an independent degree-granting college;
(b) that a four-year degree-granting college be established in the Western Lower Fraser Valley to serve the growing population in that area, an area not within easy commuting distance of the Point Grey campus. This institution, and this institution alone, can most effectively alleviate the demand for undergraduate education on the Point Grey campus. A suitable location exists at the Stormont Interchange (Burnaby). This institution could command a freshman enrollment of 2,000 in 1965 and reach an enrollment of about 7,000 in a four-year program in 1971.
(c) that the school districts of the Okanagan Valley co-operate in establishing a two-year regional college with the expectation of its becoming a four-year degree-granting college by 1970. The most appropriate site would be adjacent to Kelowna. However, this should not be considered as a college serving only the needs of that city; it should be viewed from the beginning as a college for the whole of the Okanagan area.
(d) that a two-year regional college be established in the vicinity of Castlegar to serve school districts from Trail to Nelson. A two-year regional college in that area could have 500 students in 1965 and 900 students by 1971. Residents of the East Kootenays would have to decide between offering Grade XIII and establishing residential dormitories at the college in Castlegar.
(e) that a two-year regional college be established in metropolitan Vancouver. It seems apparent that the Vancouver School Board would like to see the King Edward program develop as a two-year college serving Vancouver and the adjacent muncipalities, particularly in the field of continuing education, terminal academic education, and transfer facilities for students on the academic program.

I see the desirability of two-year regional colleges being planned for operation by 1971 in the following regions:
1. Central Vancouver Island region
2. Kamloops and South Cariboo Region
3. Central Interior (Prince George)
4. Eastern Lower Fraser Valley

Assistance for Higher Education

Although I have stated elsewhere that new institutions should be self-governing, it is important that provision be made for guaranteeing the academic standards of the various regional colleges that will be established. Therefore, I propose an Academic Board which would foster the growth and academic development of new institutions; assist in gaining public support for essential facilities and resources to enable new institutions to attain the goals they set for themselves; negotiate with larger institutions to procure staff and to arrange temporary exchange of academic personnel between established institutions and new colleges; assist in arranging the transfer of students from one institution to another and in

general aid new institutions in their basic planning.

The Academic Board would have no direct responsibility for the distribution of funds to the regional colleges. However, it is essential that this Board maintain close liaison with the Grants Commission I shall propose later in this section in order that scholarly interests may be served in an imaginative way.

If there were any indication that the academic standards of a regional college were not being maintained in line with the goals it had set for itself, the Academic Board would investigate and give assistance for correcting the situation. On occasion it might withdraw its recognition of a college, and the Grants Commission might in turn withdraw financial support through public funds. Therefore, the Academic Board would become an accrediting agency, and it would be understood that any institution eligible for public financial support would have to be approved academically by it.

The financing of two-year institutions should come from three sources: local, provincial, and federal. In order to provide for a balanced and harmonious development within the whole provincial system of higher education, and to achieve a consolidated plan for advancing our educational ideals, it is most important that responsible and effective representations be made to the Provincial Government concerning the financial support which should be given each institution. Requests by individual institutions must be considered in terms of the overall program for higher education. Any means established should ensure the equitable distribution of funds among institutions, and at the same time ensure that the best possible use of public funds is being made by avoiding a duplication of expensive course offerings, libraries, professional schools, laboratories, and equipment for specialized teaching and research.

The kind of commission I envisage would be vested with the specific responsibility of appraising the requirements of institutions and of satisfying the government of the soundness of their proposals. Such a commission would be extremely useful as a senior advisory body to the Provincial Government, not only for immediate projects, but also for a long-range plan of continuous development of education within the province. The presence of an informed commission, commanding public respect, would increase confidence of the government itself and of the people that every precaution had been taken prior to decision.

The function of the Grants Commission would be:
(a) To analyse and appraise the needs, aims, and future plans of individual institutions in relation to the whole development of higher education in this province.
(b) To seek and gather systematically pertinent information and advice from the institutions themselves and from all available sources.
(c) To recommend to the Provincial Government policy, both long and short term, with respect to the continuing operation and financing of higher education.
(d) To receive and study the budget estimates for both capital and operating needs of each institution.
(e) To make a combined submission on behalf of all institutions to the Provincial Government for support for the operating and capital revenue of each.
(f) To exercise an executive function by distributing the funds which the Provincial Legislature assigns for higher education.
(g) To distribute the grants made by the Federal Government towards the operating revenue of institutions of higher learning.
(h) To submit an annual report to the Legislature.

I recommend a Grants Commission having the following membership:
(a) A Chairman appointed by the Lieutenant-Governor-in-Council. Because of the inseparable connection between academic and financial matters, this person should also act as chairman of the Academic Board.
(b) One member nominated for a three-year term by each of the institutions whose work the Commission embraces. The number of members will have to be increased as new institutions are established. It would be desirable if the Faculty of each institution had a voice in the appointment of the representative.
(c) An equal number appointed for a three-year term by the Lieutenant-Governor-in-Council. The choice of these members should be left to the Government, but it is suggested that they include representatives of business, labor, and the professions.
(d) A full-time, paid Executive Director, a Financial Officer, and secretarial staff who will act jointly for the Academic Board: these persons should be employees of the Commission.

Governing Bodies for New Institutions

In the case of new regional colleges it is important that local needs be served. Therefore, citizens of regions must have a large voice in the governing bodies of these regional colleges.

If new institutions are established on a regional basis by agreement between the Provincial Government and groups of boards of school trustees, I recommend that governing bodies be established for each institution composed as follows:
(a) One representative named by each of the co-operating Boards of School Trustees;
(b) One representative named by the Lieutenant-Governor-in-Council;
(c) One representative named from their number by the superintendents of schools in the co-operating school districts;
(d) One representative named by the Academic Board;

(e) One representative named by the Grants Commission;
(f) The President or Principal of the institution, who shall not be a voting member;
(g) One representative named by the Faculty of the institution, who shall not be a member of that Faculty.

In respect to the procedure for establishing a four-year college in the Western Lower Fraser Valley I recommend that the governing body be appointed to include:
(a) Appointments by the Lieutenant-Governor-in-Council;
(b) Appointments to the Board from the Senate, when it is established;
(c) The election by the Faculty of the institution of at least one Board member, but that Board member should not be a salaried employee of the institution itself;
(d) The Chancellor of the institution to be a member of the Board of Governors;
(e) The Board to elect its own Chairman;
(f) The President to attend all Board meetings as chief executive officer;
(g) All members of the Board, whether elected or appointed, to serve for a three-year term and no member should be eligible to serve consecutively for more than two three-year terms;
(h) The first members to be appointed for one, two, and three years respectively so that thereafter an equal number shall retire each year.

If new two and four-year institutions are established, appropriate legislation will have to be passed by the Provincial Government.

Financing of New Colleges

It is convenient to consider anticipated development of higher education in three phases:

Phase 1: the present to 1965
Phase 2: 1965-1971
Phase 3: 1971 onward

During Phase 1, the expected increase in school-age population will continue to overtax the resources of existing institutions. The building program at Victoria College will accommodate about 3,000 students by the end of this phase. At the University studies are under way on capital costs, but no accurate estimate can be given at this time, since studies are premised on what will take place elsewhere in the province.

During this phase, operating costs will increase, and per student costs will increase to $2,100 with the projected Canadian average cost per student for 1965-66.

During the same period it would be desirable for the Vancouver Board of School Trustees to expand the present operation at King Edward School to provide a well-rounded two-year regional college offering.

By the summer of 1965, initial construction should be completed for the four-year college in the Western Lower Fraser Valley and the two-year colleges in the Okanagan and the West Kootenays.

Early in Phase 3 it is probable that the college in the Lower Fraser Valley would have approximately 7,000 students. About the same time the college in the Okanagan will probably be ready to become a four-year degree-granting institution.

During Phase 2 plans should be elaborated for the new institutions recommended after 1971.

The following table summarizes capital costs for new institutions established in Phase 2:

	1963-64	1964-65	1965-71
Western Lower Fraser Valley	$2,000,000	$2,000,000	$5,000,000
Okanagan	1,000,000	1,000,000	1,500,000
West Kootenay	450,000	450,000	800,000
	$3,450,000	$3,450,000	$7,300,000*

*For the five years 1965-71, about $1,460,000 per year.

Operating Costs

The following table summarizes operating costs for the Western Lower Fraser Valley College:

	Estimated No. Students	Approx. Cost Per Student	Approx. Total Operating Cost
1965	2,400	$1,650	$4,000,000
1971	7,000	2,350	16,000,000

The following table summarizes operating costs for colleges in the Okanagan and the West Kootenays:

	No. Of Students	Cost Per Student	Total Operating Cost
Okanagan—1965	750	$900	$ 675,000
1971	2,400	1,300	3,000,000
West Kootenay—			
1965	500	900	450,000
1971	900	1,300	1,170,000

The methods used for establishing the costs in the tables above are shown in detail in the printed version of this report. The reader is asked to refer to it.

The estimated capital costs for the Western Lower Fraser Valley total $9,000,000 up to 1971. Total capital costs for the Okanagan in the same period are estimated at $3,500,000 and those for the West Kootenay at $1,700,000. It must be emphasized that these capital costs are not new costs to be imposed on the province by decentralization. If the capital requirements are not met by decentralization, they will have to be met through equivalent expansion of undergraduate and auxiliary facilities at Point Grey and Victoria College.

The two-year regional college, if it is to fulfill its

function, to a great extent must embody the characteristics and aspirations of the community and the region it serves. These colleges will, therefore, require regional and community financial support. This has been the pattern in most successful two-year colleges in the USA. However, once a college becomes a degree-granting institution and so serves the needs of the province at large, it should be supported as are other provincial institutions, not only in British Columbia, but also in the other provinces.

I recommend that the costs of establishing and operating two-year colleges be apportioned as follows:

Capital: One third of the total capital cost (including land, buildings, equipment, and libraries) should be borne by the community or region which the college serves, and two-thirds should come from funds supplied by or through the Provincial Government. If a portion of the capital cost is paid by the Federal Government under the Vocational and Technical Training Act, the Provincial Government's share would be reduced.

Operating: About 25% should come from student fees, at least 25% from the community or region, and not more than 50% from government grants (Provincial and Federal). This is analogous to the pattern recommended in a study undertaken for the Department of Health, Education and Welfare in the United States—one third state, one third local, and one third fees.

Colleges, such as the one proposed in the Lower Fraser Valley area, which from the beginning are planned as four-year institutions, should be financed on the same basis as the University and Victoria College, both for operating and capital costs.

When and if two-year regional colleges develop to the point where they change their function and become four-year degree-granting colleges, the regional share of operating costs would be taken over by increased in grants from the Provincial Government and students' fees, so that their financing would be on a par with other four-year institutions.

I indicate below the implications of my financial recommendations for colleges in the Okanagan and the West Kootenay during the first five years:

OKANAGAN COLLEGE:

Capital Costs

Total Building Costs	$3,500,000
Regional Share	1,170,000
Provincial Share	2,330,000

Operating Costs

Fees	25% or $169,000	($225 per student)
Regional Cost	25% or 169,000	($225 per student)
Federal Gov.	133,000	($177 per student)
Provincial Gov.	204,000	($272 per student)

WEST KOOTENAY COLLEGE:

Capital Costs

Total Building Costs	$1,700,000
Regional Share	567,000
Provincial Share	1,133,000

Operating Costs

Fees	25% or $112,500	($225 per student)
Regional Cost	25% or 112,500	($225 per student)
Federal Gov.	88,500	($177 per student)
Provincial Gov.	136,500	($273 per student)

It should be remembered that not all of the local community's contributions — or the province's — will represent additional expenditures. Some of the new costs will be balanced by savings resulting from the closing down of senior matriculation in regions with colleges.

How should regions finance their share of the costs? The school district where the college is located benefits most. Adjacent school districts within one hour's travel time benefit to a decreasing degree the further they are from the college. Thus, the mill rate should be decreased as the distance from the college from the school district increases. This method of financing is being used successfully by the two-year college at Lethbridge, Alberta, and its adoption is recommended for regional colleges in British Columbia.★

Individual Experience

Continued from page 192

would normally expect from children of this age as they stood around with nothing to do. This is more than just a bad classroom situation. It ends by creating resentment and boredom in the children, and anxiety and frustration for the teacher.

To correct this unhappy development, a set of procedures was worked out so that the children would have a step-by-step system for finding the answers to their many questions. Ultimately, this is how we all go about solving problems, and there is no reason why first graders cannot begin to learn some basic patterns of research methods. The most basic research method is, of course, to ask a question about something. The second step is to decide where to look for the answer, or whom to ask where to look for it. First graders are quite good at the first step, but they need guidance from that point on. The immediate resources

in the classroom are the teacher, other pupils, instructional materials on the walls, the chart stories, story and reference books on the book shelves, and various types of dictionaries.

The first step in setting up an organized classroom program is to have the pupils start personal dictionaries. An eight and a half by eleven spiral notebook will be best for this purpose. The children can start this dictionary by printing in the letter categories, allowing two or three pages for each letter. This activity serves two purposes. First, it gives the child practice is using the alphabet and begins the concept of how information is catalogued. The first word to be written in this dictionary can be the basic sight vocabulary words learned from the chart stories. Second, it gives the child additional practice in writing words.

The second step in this organizing process is to start a special classroom dictionary. This is set up like a small filing system in a shoe box, or something similar, with 4″ x 6″ or 5″ x 7″ cards. It is important to remember that the pupils must do all of this work, while the teacher helps and guides their activities. The classroom dictionary will keep in order all of the words that the whole class has learned and used. It will, at least at first, have many more words written in it by the children than the personal dictionaries.

Teacher Organizes Displays

The third step is done by the teacher when she organizes the displays for her classroom. Most obvious, of course, is the putting up of an easily read alphabet in a conspicuous part of the room. Some of the more common words used by all of us can be written on the board or on cards and tacked on the bulletin boards of the room. The chart story is left on the stand for this purpose. Sometimes the teacher can find a group of pictures of objects, and attach their names to them and place them about the room as a display. The room should have many resource materials placed about in a neat manner, and left there so that the children can learn where they are and refer to them easily.

The fourth step is to have many reference materials in the room from the school library. Picture and regular dictionaries are a must, and a wide variety of story books, picture books, magazines, science literature, and a variety of "live" displays and projects should be placed around the room. The more resource materials you have available, the easier it will be for the children to look for and find their answers.

These four types of instructional and resource materials will serve to give the teacher a certain amount of protection from a constant bombardment of questions from pupils wanting to know how to use or spell a word for their stories. The teacher must set up a firm and consistent routine for the children to follow in their researching for ideas and factual information. Here is an example of how this might work for Johnny. He is trying to write a story about his dog, and he needs to know how to spell the word "bone." This is a word that is already part of his vocabulary, otherwise he would not be wanting to write it. For the sake of the example, let us assume that Johnny has already learned the "research system" in the classroom. He knows that he must look for the word he wants in the several resources located in different parts of the room. First, he must check his personal dictionary under "B." He may have written it there a few days ago, but has now forgotten it. If he finds it there, his search stops. If it is not there he will go to the second resource, which is the classroom dictionary. If it is not there, he will go to the picture dictionary or the regular dictionary. If he has trouble finding the word he is free to ask some of his classmates, who might be able to help him. This is about his last hope if none of these others can help him. His last resource is his teacher. Johnny goes to her desk, or wherever she may be, and states his problem. The first question the teacher will probably ask is whether or not he looked in all the possible places he might find it. She will then work with him, helping him to sound out the word. She might say, "Tell me how it starts—what is the first letter? What is the second sound?" In other words, she tries to draw the spelling of the word out of him, rather than just spelling it for him. When she has helped him this far, the teacher then asks him to write the word on a piece of paper, and helps him to do this. She does not do this for him, but guides his efforts at spelling correctly and printing neatly. By this time the child has done quite a bit of work to find what he wanted and the process, as well as the word, is more likely to stay with him. But he is not finished yet.

Routine Has Teaching Value

After Johnny has written the word with the help of his teacher, he must now reverse his pattern, so to speak. First, he must go back to the classroom dictionary and look up the word "bone" again. If it is not there, then he must write it in the proper place. Next, he must check again in his personal dictionary to see if he might have missed it there. If it is not there, he must write the word on the correct page. Finally, he writes the word in his story. This may seem to be an extremely complicated system to follow for such a young child, but it is not. It takes a great deal longer to say or write it than it takes the child to actually do it. The value of this routine is that it teaches the child to seek out and select information in an orderly way, and it requires him to use his new information three or four times in a meaningful way, so that it is not easily forgotten. If the teacher simply wrote out the word for him on a piece of paper, or on the blackboard, he would copy it down in his story, and that would be the end of it. This routine not only helps to "fix" the new word in the pupil's memory by purposeful repetition, but it also lets the teacher work

with only a part of the total class at one time. She may have several children gathered about her desk, and the rest are busy working with the other resources in the classroom.

It goes without saying, that the first attempts a child makes at writing will certainly lack the polish and form he will acquire with practice. Think back to the first time you hit a golf ball or put on a pair of ice skates. Even though the beginnings of writing will be crude, the start must be made and there is no logical reason to delay the start. Our manuscript form of making letters is quite simple, and if a child has sufficient control and co-ordination to make the lines and circles used in manuscript writing he can start writing. It is incorrect thinking to assume that children cannot learn these strokes because of immaturity or the lack of manual dexterity and co-ordination. It is true that the activity must be learned and practised in order to achieve good form. Remember, an adult beginner plays an abominable game of golf because of a lack of manual dexterity and co-ordination, but that doesn't mean that he cannot learn and improve with practice. In the Individual Experience Reading Program the materials and motivation for the development of this skill come from the child's own experiences and the stories he tells.

Tested Techniques Used

It will be well to strongly emphasize here that the Individual Experience Reading Program does not use some magical method to teach children to read and write. All of the time-tested techniques are used. The great difference lies in two fundamental notions. First, that reading, writing, and the language arts are here considered as one area called "communication." The second is that the instructional materials are the words and stories created by the children from their many experiences. Readiness exercises, workbooks, and reading texts are put aside and in their places are a wide variety of story books, picture and regular dictionaries, magazines, and reference works all at appropriate levels. In addition to these reading materials are many living and dynamic projects which are started and built by the children, and kept in the room for study, observation, and as sources for research ideas. Educational television has become one source, as a motivator, for many projects and written productions by the children.

The individual stories written by the children are used as instructional materials in the same way that the group chart stories are used. When a child has finished a story, he takes it up to the teacher and reads it to her, while she looks on and listens. If there are mistakes she marks them and talks to the pupil about them, and explains them. The pupil must then go back to his seat and make the corrections. Whenever the opportunity arises in a pupil-teacher conference of this type, the teacher always picks out one or two items to point out, such as a blend, a phonic, or a similar sound that is spelled differently. It is a constant process of locking for information, pupil-teacher conferences, making inteiligent use of the pupil-produced instructional materials, and evaluation by the teacher.

These are not quiet rooms, but they are busy rooms with children engaged in purposeful activity. It is not an easy job for the teacher, but if a job of teaching children to communicate well, and to be social beings is of value, then it is worth working for.

Summary of Results

1. The first test was administered in October, 1960. The averages for each of the first three grades of the county were the same as the averages indicated for the nation.

2. There were about three to four percent at the lower end of the frequency distribution that could be classified as remedial readers. Remedial readers are here defined as those pupils falling one full year below grade level.

3. The second test (alternate form of the first test) was administered in May, 1961. The averages for each of the first three grades of the county indicated these grades were one full grade level above the national norms.

4. Starting with expected averages at the beginning of the school year, the gain equalled two months for each month in school.

5. Approximately twenty percent of the total number of children taking the second test in May, 1961 went to the limits of the testing device, so that there was no completely reliable way to determine what their real level was. This effect was not anticipated. If it had been, the next higher test level could have been used.

6. The data for the second test did not indicate any child to be further behind in grade level for reading than three months. This would mean that there were no remedial readers in the county, using the above criteria.

7. There were no direct comparisons made between the Individual Experience Reading Program and any other program.★

Bibliography

1Betts, Emmet A.; *Foundations of Reading Instruction;* American Book Co., New York, 1957.

2Brown, Roger; *Words and Things;* The Free Press, Glencoe, Ill., 1958.

3Burton, William H.; *The Guidance of Learning Activities;* Appleton Century, New York, 1944.

4Fielder, Sybil; "Motivation for Reading"; Claremont College Reading Conference Yearbook, 1957.

5Miller, George A.; "Speech and Language"; *Handbook of Experimental Psychology,* S. S. Stevens, Editor; John Wiley, New York, 1951.

6Van Allen, R.; "Initiating Reading Through Creative Writing"; Claremont College Conference Yearbook, 1957.

7Yacorzynski, G. K.; *Medical Psychology;* The Ronald Press, New York, 1951.

8Zirbes, Laura; *Spurs To Creative Teaching;* G. P. Putnam's Sons, New York, 1959.

Portable pensions are a reality at last. B.C., Alberta and Ontario have developed a workable plan.

You CAN Take it With You

AN ARRANGEMENT NOW exists among teachers' pension authorities of British Columbia, Alberta and Ontario, whereby a teacher who moves from one to another of those provinces does not have to lose his entire equity in the pension fund. Public announcement of the arrangement was made on December 6, 1962, but effective date of the plan was agreed to be September 1, 1962.

The plan is new and tentative, and hence imperfect. It had to be negotiated within the limits of existing pension legislation in the three provinces, and consequently is a compromise rather than an exercise in pure logic. Nevertheless, it constitutes an important first step toward portability of pensions for migrant teachers.

The architects of the plan quickly discarded any idea that funds should be transferred with the migrating teacher, with the receiving province assuming sole responsibility for payment of the retirement allowance. The great variations which exist from province to province as to benefit formulae, required levels of employee and employer contributions, and methods of funding, made that approach impractical. The method adopted is that of provisional vesting of the teachers' equity, payable at retirement in the form of a deferred annuity.

The migrating teacher elects, at the time of transfer, to participate or not to participate in the portability arrangement. If he decides not to participate, he accepts from the exporting province a refund of his own contributions, and by so doing renounces any other claim on the pension fund of that province. If he elects to participate, he leaves his contributions in the fund of the exporting province and retains a vested interest in that fund. He then becomes a contributor to the fund of the importing province, and eventually retires from the service of that province. If upon retirement he is eligible to receive a pension from the importing province, he also receives a pension from the exporting province, based upon the vested interest he has retained there.

Not all migrating teachers will be able to qualify for the dual pension, and not all who do qualify will find the benefit sufficiently attractive to be worth while. The plan is subject to a number of limitations and conditions.

To be eligible for pension, the migrating teacher must satisfy the eligibility requirements of the importing province. The requirements are not uniform in the three provinces. In British Columbia the general requirements are attainment at the age of 60 years or more, and completion of at least ten years of service in British Columbia. Alberta requires a total service of fifteen years, of which at least ten years have been in Alberta, and all after attainment of the age of thirty years; the minimum retirement age is 60 years. Ontario has a total service requirement of twenty-five years, of which at least fifteen must be in Ontario, and a minimum age retirement of 62 years; the age requirement vanishes if the total service amounts to thirty years or more.

To be eligible for a deferred pension from the exporting province, the teacher must qualify for a pension from the importing province, and must have sufficient total service to satisfy the eligibility requirements of both provinces. Moreover, for deferred pension calculation, service rendered before the age of 30 years is not counted. The British Columbia or Ontario fund would refund the contributions made before the age of 30; Alberta would not do so, because all Alberta teachers are required to contribute while under that age and may count for pension purposes only service rendered after age 30.

Each province may impose a time limit on the actual process of transfer. British Columbia will grant the vesting privilege only if the teacher becomes a contributor in Alberta or Ontario within five months after making his last contribution in B.C. The corresponding time limit when leaving Alberta is fifteen months; when leaving Ontario no time limit is imposed.

The three provinces have different regulations as to retroactive application of the plan. British Columbia will not apply the plan to anyone who left the province prior to September 1, 1962, whether or not he has taken a refund. Ontario will apply the plan to past transfers if no refund has been taken. Alberta

Continued on page 232

Candidates for Office 1963 - 64

AT THE CHRISTMAS Executive Meeting, the Executive, as the Federation Nominating Committee, named the following candidates for election to office for the year 1963-64.

For President

F. James Cairnie, a past president of the Greater Victoria Teachers' Association, represented the association on the Executive Committee in 1959-60. He is at present B.C.T.F. First Vice-President. Mr. Cairnie is Scottish-born, but attended both elementary and high school in Victoria. He attended U.B.C. after two years of service in the Canadian Army, and graduated in 1950 with a Bachelor of Arts degree. He followed this with a year of Teacher Training and began teaching senior high school subjects at Lake Cowichan Jr.-Sr. High School. After five years, he moved to Victoria and is now at Oak Bay Senior Secondary School. In his local associations, Mr. Cairnie has served on the executive and reached the presidency of both. He has also served on the Federation's Academic Standard Committee. He is at present a member of the Consultative, Scholarships and Awards, Teacher Education and Certification Committees and the Ethics sub-committee.

For First Vice-President

Isobel Alison Cull served two years as representative for the Vancouver Elementary School Teachers' Association on the Executive. She was born in the Okanagan Valley and had her early schooling in Vernon and Kamloops. Later she graduated from the University of Toronto with the degree of Bachelor of Music. Mrs. Cull is also a graduate of Victoria Normal School. She has taught in a rural school in the North Thompson area, in a graded school in Duncan and in Vancouver. Mrs. Cull is active in both association and Federation affairs, having served as chairman and member of V.E.S.T.A. committees and as chairman of the B.C.T.F. Workshop Committee. She is past president of V.E.S.T.A., having been both second and first vice-president of that association. She is the Federation's Secretary-Treasurer this year.

David J. S. Smith, born in Barriere, attended school in North Vancouver and took senior matriculation at King Edward High School, Vancouver. He graduated from Vancouver Normal School in 1936, earned a Commercial Specialist Certificate in 1942 and a B.A. degree from the University of British Columbia in 1944. He started teaching in Peace River, then moved to southern B.C. where he taught in Abbotsford, Hedley and Delta. In 1949 he went to Port Alberni, where he still teaches. He has served on District Councils in Fraser Valley, Okanagan and Northern Vancouver Island. He represented Northern Vancouver Island on the Executive for a year and a half. He was president of the Alberni Teachers' Association from 1953 to 1955. He was a member of the Education Finance Committee

F. J. Cairnie

Mrs. I. A. Cull

D. J. S. Smith

for eleven years and was its chairman for three. He has also been chairman of the Constitution and By-Laws Committee. He is a member of the Consultative Committee and the Ethics sub-committee. He is now Second Vice-President of the Federation.

For Second Vice-President

Peter G. McLoughlin, from Newcastle upon Tyne, is a graduate of the University of Durham, where he took his B.A. and Diploma in Education. He also holds a B.Ed. from the University of B.C. He taught in England for three years and was a lecturer in the Municipal College of Commerce, Newcastle, for two years. Mr. McLoughlin served in the R.A.F. for two and a half years during the War. He came to Canada in 1954 and was vice-principal of Yellow Grass High School in Saskatchewan for a year. He came to Nanaimo in 1955, where he is now vice-principal of Woodlands Junior High School. He served three years on the Nanaimo agreements committee and has been president of the Nanaimo Teachers' Association. He has been a member of the South Vancouver Island District Council for four years and is its representative on the Executive for the second year. Mr. McLoughlin is also a member of the Consultative Committee.

Douglas N. Weicker is serving his third year on the Executive, representing North Central District Council. Mr. Weicker was born in Vancouver. He attended both Victoria College and the University of B.C., graduating in 1950 with the degree of Bachelor of Arts. He took Teacher Training in 1950-51. He has since earned a B.Ed. Mr. Weicker served in the R.C.A.F. from 1943 to 1946. He began his teaching career in Kamloops in 1951 and moved to Prince George in 1953. There he has been a member of the staff of Prince George Jr.-Sr. High School, supervising principal of an elementary school, vice-principal of Duchess Park Jr. High School and is now supervising principal of that school. Mr. Weicker has, since he commenced teaching, been active in local association and District Council affairs. He was chairman of the public relations committee in Kamloops, member and chairman of the Prince George salary committee, represented Prince George on the district council, and is at present chairman of the district council. He is serving his second year on the Federation Consultative Committee.

For Secretary-Treasurer

Rudy G. Kaser is serving his second year as Geographical Representative for Vancouver Secondary School Teachers' Association. He was born in Alberta and attended elementary and secondary school there. He is a graduate of Camrose Normal School and the University of Alberta. He holds a B.Ed degree from the University of B.C. also. Mr. Kaser served with the R.C.A.F. for two years during the war and is still associated with that service. Mr. Kaser began his teaching career in Alberta, where he taught for six years. In British Columbia, he first taught in Prince George, where he was head of the social studies department and, for two years, vice-principal of Prince George Junior-Senior High School. He has taught for ten years in Vancouver, in both elementary and secondary schools. He is at present head of the social studies department at Lord Byng Secondary School. Mr. Kaser has been president of the Prince George Teachers' Association and a member of the North Central District Council. He has also been president of Vancouver Secondary School Teachers' Association, president of the Lower Mainland Chapter of the B.C. Social Studies Teachers' Association and a member of the B.C.T.F. International Affairs Committee. He is a member of the Consultative Committee and chairman of the Constitution and By-Laws Committee.

P. G. McLoughlin

D. N. Weicker

R. G. Kaser

P. L. Morrison

P. Logan Morrison, born and educated in Nelson, joined the RCAF after graduation from high school. On his return from service, he attended the University of British Columbia, earned the degree of Bachelor of Arts and took teacher training the next year. Mr. Morrison has taught English and mathematics in Grand Forks for twelve years. During his whole teaching career, Mr. Morrison has been very active in local association, district council and Federation affairs. He has been PRO, chairman of the salary committee and president of the local association. On the district council level, he has been Agreements Co-ordinator, secretary, chairman and Geographical Representative. He has served on the Federation Executive Committee in past years and is at present Geographical Representative for West Kootenay. Mr. Morrison has also served on the Steering Committee, on the Fergusson Memorial Award Committee, and on both the Salary and Agreements Committees.

A Critical Look

Continued from page 183

detailed analysis is of supreme importance, and analytical thought tedious piece of foreplay, to be scamped so far as possible, is only a game with unusually complicated rules and little reference to real life.

"Most scientists . . . would defend the proposition that science has taken a marked turn for the theoretical and intellectual in the last two decades . . . a process of maturation."[4]

Note: The institutional pattern of educational research in Canada does not favor a planned attack on educational problems. Presumably there are major problems of an urgent nature, which require concentrated study; for this purpose a semi-autonomous research organization, staffed by teams rather than by individuals, and working in close association with formal educational agencies, but not under their detailed direction, is desirable. Universities and colleges, when considered as research establishments, suffer from a number of serious disadvantages. For one thing, the team research of equals, which is almost a necessary condition of profitable educational research, is usually undeveloped, personal advancement being better served by the solitary pursuit of personal interests.[5] Second, the links between universities and school systems are so fabricated that research either bears no relation to practice or is severely constrained by the immediate desires of practitioners (who have exclusive control of access to experimental data). Third, members of university and college staffs have, in general, other matters to deal with besides research, sometimes to an extent that makes research impossible except for the most devoutly conscientious (which, abilities not being distributed in deference to the strictures of the virtuous, need not mean the best). There is no reason why some basic research should not be carried on at universities, nor why full-time university staff should not assist with many projects; if much progress is to be made, however, education has to follow the example of the physical sciences and medicine (in particular) and devise, for the purposes of research, new institutional models.★

[1]Bernard Barber and Renee C. Fox, "The case of the floppy-eared rabbits: an instance of serendipity gained and serendipity lost," in Bernard Barber and Walter Hirsch, eds., *The Sociology of Science.* (The Free Press: New York, 1962). p. 525.

[2]Some explanation may be required here. In a thriving science the tripartite classification made is somewhat artificial, since (a) the large majority of successful practitioners are a composite of theoretician, researcher, and methodologist and (b) most practitioners would be very reluctant to assert that some one who is sitting and thinking about problems in his field is not doing research. A clear line of demarcation is drawn between theory and technique, however, and it is this primacy of theory in the established sciences, and its disparagement in education, that the discussion is intended to illustrate.

[3]This useful and illuminating phrase is appropriated from Erving Goffman. "The medical model and mental hospitalization: Some notes on the vicissitudes of the tinkering trades." In *Asylums* (Doubleday and Co., Anchor Books: New York, 1962), pp. 321-386.

[4]Robert H. Knapp and Joseph J. Greenbaum, "The younger American scholar," in Bernard Barber and Walter Hirsch, eds., *The Sociology of Science* (The Free Press: New York, 1962). pp. 168-184.

[5]See Theodore Caplow and Reece J. McGee, *The Academic Marketplace* (Basic Books: New York, 1958), pp. 67-72.

School District No. 38 (Richmond)

689 No. 3 Road, Richmond, B.C.

This is an expanding school district in the Vancouver Metropolitan Area, comprising Lulu and Sea Islands. In September there will be additional secondary and elementary teachers required to provide for increased staff.
Teacher vacancies will include:

SECONDARY

(a) Girls' Physical Education and English 20 or Social Studies 20.
(b) Girls' Physical Education with general subjects at the junior secondary level.
(c) Boys' Physical Education with general subjects at the junior secondary level.
(d) Occupational I and II.
(e) Industrial Arts with general subjects at the junior secondary level.
(f) Home Economics with general subjects at the junior secondary level.
(g) Commerce 10, 20 with Mathematics 20.
(h) Commerce 10 with general subjects at the junior secondary level.
(i) Mathematics 20, Science 20.
(j) English 20, Social Studies 20.
(k) English 30, Social Studies 31.
(l) French 10, Social Studies 20.
(m) Mathematics and Science at the junior secondary level.
(n) English and Social Studies at the junior secondary level.
(o) Instrumental Music with general subjects at the junior secondary level.

ELEMENTARY

(a) Special Classes Grade 7 level.
(b) Primary.
(c) Intermediate with Music.
(d) Intermediate with Physical Education.
(e) Intermediate with Remedial Reading.
(f) Intermediate with Library.

Salary Schedule

	EC	EB	EA	PC/SC	PB/SB	PA/SA
Minimum:	3,000	3,600	4,000	4,300	4,800	5,200
Maximum:	3,500	5,600	6,000	7,000	8,050	8,700

Apply, enclosing copy of last inspection report, to Board of School Trustees, Telephone CR 8-5511. Interviews may be arranged with the District Superintendent of Schools during regular office hours, or during the Easter vacation, at the above address.

a matter of Opinion

Let's Start Classes Earlier in the Hot Months

H. W. KIRKPATRICK

EXPERIENCED teachers agree that many things that interfere with the learning situation in our province's public schools are never discussed in print. We all know that faulty discipline results in poor teaching, and yet one seldom reads articles on this subject. Students and teachers alike will say that on the hot days of the late spring and early summer the classroom will have a temperature of ninety degrees or more, and many classrooms have no efficient ventilation system and quite often no blinds. How is a student or a teacher expected to do efficient work in such an atmosphere?

Large glass windows have been built into the sides of classrooms in the designs used for the past decade. The idea was to give ample light. This is a worthy aim, but the designers overlooked the fact that the classroom would be like an oven on a hot day. How can this be overcome?

After the Easter holiday school could commence at eight o'clock in the morning. There could be a half-hour break for lunch at eleven with the school recommencing at 11:35 a.m. School could then be finished by 2:00 p.m. at the latest. This is a system that has been used in Germany for many years. The teacher is free in the afternoon to mark papers, to prepare lessons or to go for a swim. Why not June examinations commencing at 8:00 a.m.?

Students who are going to fail usually know soon after the Easter examinations; probably fewer than ten percent of failures are decided after the results of the Easter tests are known. There is, therefore, no reason why a study hall on the shady side of the school could not be set up with a different teacher on duty each afternoon for a couple of hours. Attendance could be voluntary and anyone causing any disciplinary problems would be excluded. In this way we could soon learn who really wanted to pass. The teacher on duty each afternoon could be excused classes from 11:30 a.m. onwards. By rotation there could be a mathematics and science teacher on duty one day, an English and social studies teacher on another day. Other specialists, according to need.

Those not studying would have to move off the school premises and grounds by 2:00 p.m. It is no good having a softball game going on in the afternoon while some students are working.

Some primary teachers may not favor this program. Perhaps it should apply only to students from Grade VIII upwards. It might not work in the parts of the interior which do not warm up until late in May. But in the Lower Mainland, Okanagan and Fraser Valley it would be very welcome.

The question will arise as to what is going to be done with students from 2:00 p.m. to bedtime when their parents are working. In Canada we overlook the fact that school is for learning, and that the home should co-operate in any scheme which assists learning. Let the parents work that out. Study on wet days; play on those that are fine? That is up to mother and father.

Mr. Kirkpatrick teaches in Surrey.

IS THIS YOU?

"Well, with her mother out working all day, you can't expect anything else but unsatisfactory work."

One piece of research is quoted as finding no significant difference in terms of marks, reading ability, attitude or emotional problems, between children of working mothers and those of non-working mothers.

This does not say that there is no difference. It merely says that on the basis of this piece of research we have no reason to assume there is a difference. More research needed. Interested?

Details of source available from BCTF Research Committee

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Careers in Life Insurance—Available in both English and French. A 24-page illustrated booklet. Discusses careers in the life insurance business as a lifetime occupation. Available for useful distribution in quantity, free.

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Money In Your Pocket — For teenage boys — a bright entertaining 20-page illustrated booklet dealing with simple fundamentals of money management and life insurance. Available for useful distribution in quantity, free.

The Family Money Manager — An 8-page brochure prepared to assist families in solving money management problems. Useful for classroom discussions on budgeting. Available for useful distribution in quantity, free.

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Careers in Canadian Life Insurance Underwriting (Revised 1962) — Black and white. Available in both English and French. A 47-frame film strip on the career of the life underwriter, for use in guidance classes. One print and one teaching manual free to each school.

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new Books

ESTHER G. HARROP, Book Review Editor

BIOGRAPHY

Hermann Oberth: Father of Space Travel, by Helen B. Walters. Macmillan, New York. Illus.

Oberth, the rocket pioneer, began experiments in space travel in his boyhood. A rocket he designed for use against England during World War I became the famous V-2 of World War II. His theoretical studies of space flight, designs for multistage rockets, and manned spaceships met with indifference. But Oberth has lived to see his ideas become the basis of space age rocketry. This book makes exciting reading at the junior high level.—C.V.A.

FICTION

The Dog in the Tapestry Garden, by Dorothy P. Lathrop. Brett-Macmillan, Galt. Illus. $3.75

A charmingly told fantasy of a little girl's Italian greyhound who overcomes loneliness when a little white dog (woven into a valuable tapestry) suddenly comes to life. Extensively illustrated with delicate line drawings that are so exquisite they give the reader as much pleasure as the story.—D.S.L.

The Shadow Train, by Rex Parkin. Brett - Macmillan, c1962. (Can. Agt. Collier - Macmillan, Galt) Cloth. Illus. by author. $3.75

This is a good picture story book whose size and format make it very suitable for reading aloud to Grades I and II. Written in verse and illustrated in bright colors. The shadows go for a spring holiday, including a train ride where they switch owners.—M.B.M.

Village of Stars, by P. Stanton. Longmans, London, 1961. 217pp. $1.20

This stimulating novel will revive many nostalgic memories in Canadians who served overseas in the World Wars. The author is a master of description and writes in a compelling fashion. The reader can certainly visualize the activities of Helen Durrant.—D.S.

Submariner, by H. B. Lent. Macmillan Company, New York, 1962. Illus. Glossary of Technical Terms. No index. 182 pp. (Distributed in Canada by Collier-Macmillan Ltd.) $3.00

New London, Connecticut, U.S.A., is the site of this boys' story. At the American Naval Submarine Base the young recruits learn the basic training for their arduous future careers in the U.S.N. Mr. Lent gives a vivid account of the training of a boy—Jim O'Hara.—W.D.M.S.

Guns at Quebec, by Dwight. Brett-Macmillan, Galt, 1962. Illus. $4.00

An exciting story of the 18th century days when France and England fought one another for the possession of the New World. The arrival of Wolfe and Montcalm by ship; vivid pictures of Indian warfare; and d and nights of treachery. This book l delight boys who are interested in early Canadian history.—E.G.H.

Silver and Lead, by Ralph Moody. Brett-Macmillan, Galt, 1961. Illus.

Intermediate grade readers will enjoy *Silver and Lead* describing as it does the 1848 mining days in California and the Middle West. Here is an authentic and well-illustrated story of life, work, homes and towns in the middle 19th century.—E.G.H.

Mystery at Ghost Valley, by Harriett Carr. Brett-Macmillan, Galt, 1962.

A story involving mystery and a family feud. The episodes belong to the present days, but the background for them belongs to the people and events of early Pennsylvania Dutch settlements. The incidents are somewhat entangled, but teenaged readers will enjoy the tale.—E.G.H.

MATHEMATICS

A Book of Curves, by E. H. Lockwood. Cambridge University Press, Cambridge, c1961. Illus. $5.00

This is an interesting book for those who are mathematically inclined and desire some enrichments. The illustrations are very numerous and there is a glossary of terms as well as suggestions for further reading.—R.T.C.

MISCELLANEOUS

Applied Programmed Instruction, by Stuart Margulies and Lewis D. Eigen. John Wiley & Sons, New York.

The editors have collected a series of articles which give a clear picture of the impact of programmed instruction on a variety of American business and industrial concerns. The chief value of the book in school circles is not what is said about programmed instruction as such. In fact it should not be used as an introduction to this area. Its most interesting feature from an educational standpoint is in the wide coverage given of the training problems in some of America's "exotic" industries. The potential and actual applications of teaching machines in companies such as I.B.M., Bell Telephone, Eastman Kodak; the value of this approach in military training of the most complex kind gives one an appreciation of the impact of modern technology which would be hard to duplicate.—J.F.C.

Explaining Teaching Machines and Programming, by David Cram. Clarke, Irwin, Toronto, 1962. Illus. $2.00

This book answers two important questions for teachers. What is programming? What are teaching machines? Questions on the nature of this subject are pertinently answered, and teachers may see for themselves just what can be accomplished. The book is small, and teachers can easily find their way through it. The advantages and variations of the techniques are explained and discussed fully. A good book for its size.—E.G.H.

Learning How to Learn (An American Approach to Montessori), by Nancy McCormick Rambusch. Palm Publishers, Montreal, 1962. Illus. Bibliography of materials compiled by Gilbert E. Donahue. $4.95

This book made enjoyable reading, but one must admit that free discipline may be possible in a very small group which occupies its own building. Large groups in public schools must learn to be obedient and must also learn school routines for the safety of one and all.

The reviewer does not agree with the idea of the 3 or 4-year-old child learning to read before he is physically ready. She also thinks that a child misses a great deal of pleasure and enjoyment by using only mechanical devices. However, she agrees with the idea of developing self-control. And she also believes that "work is a means of achieving self-respect."—K.S.

Buffalo Land, by Wm. D. Berry. Brett-Macmillan, Galt, 1961. Illus.

A splendid book about one type of animal life — the buffalo — which were found roaming from Saskatchewan to the Rio Grande in the early 19th century. With the spread of civilization these animals died out. A good bibliography accompanies the text.—E.G.H.

British Commercial Institutions, by Peter F. Payne. Harrap, London, 1961. 212 pp. $2.85

This brief survey of British commercial institutions today would be a useful but limited reference book in the Commercial section of a high school library. There are informative chapters on the British banking system, money and foreign-exchange markets and many other aspects of commerce. Students of Economics might find useful material for comparison with North American practices.—L.C.B.

MUSIC

Elementary Recorder Instruction Book, by Don Cowan. School Aids Publishing Co., Regina, 1962. 60c

Mr. Cowan has set out a clearly edited presentation of recorder instruction covering five key-signatures. His book is made up of studies and pieces in unison and two-part, ranging from simple folk tunes to Mozart and Bach. In this publication teachers and students can find practical aids combined with musician-like challenges — a worthwhile addition to any music library.—G.J.

READING and LITERATURE

Sounds and Words, by Vera Southgate and J. Havenhand. University of London Press, London. c1959. (Can. Agt. Clarke, Irwin, Toronto.)

This pamphlet, given a secondary subtitle "Teacher's Book," is meant to accompany six "Children's Work Books for ages 5½ - 8½ years," probably aimed at Grades I-III. It guides the teacher in the aims, rules and techniques of phonics. Through the progressive arrangement in the workbooks I to VI, the pupils will have been introduced to 138 sounds, digraphs and phonic rules. They will have done this through the medium of over 2,000 interesting words.

The Meaning of Modern Poetry, by John Clark Pratt. Doubleday, New York, 1962. A Tutor Text. 400 pp., no illus., poor index. $5.95

We have here a specialist's book. It is for the very intense student of English who will follow the complicated directions in detail. This book is not recommended for the casual reader of literary pieces. The question and answer techniques employed by the author are exasperating. Perhaps this is a phase of modern learning but to the reviewer it would be a very difficult book to use in the classroom.—W.D.M.S.

SCIENCE

A.B.C.'s of Astronomy. Doubleday, Toronto, 1962. $4.75

This is an excellent reference book for the amateur astronomer, either at the intermediate or Grade VIII science level. As the title indicates, it is a collection of definitions, graphic illustrations, photographs, charts, maps and reference tables of the elementary facts concerning the study of the sky and its "inhabitants."

Accompanying many of the 500 defined terms are well labelled illustrations, some in color, enabling the young astronomer to get a concise, accurate concept of the term. The book is recommended for both intermediate and junior secondary school reference libraries.—H.M.P.

Intermediate Science 1, by Hallman, Gillies et al. $3.15

Intermediate Science 2, by Hallman, Gillies, Taylor. $3.30

Intermediate Science 3, by Taylor, Hallman, Gillies. $3.38

Holt, Rinehart, Winston of Canada, Toronto

These books are designed for use in Grades VII, VIII, and IX respectively.

They each contain approximately 300 pages, with an index which combines a Glossary in color. Numerous diagrams and figures are also in color with excellent clarity of reproduction.

Book 1 includes eight units on Plants; Water; Heat; Magnetism; Rocks, Minerals and Fossils; Milk and Farm Animals; Seeds and Seed Germination, and Forests.

Book 2 has eight units on Flowers, Fruit and Seeds; The Animal Kingdom; Astronomy; Air; Weather; Plants and Gardens; Soil, and Wildlife.

Book 3 is divided into eight units on Sound; Measurement; Solids, Liquids and Gases; The Cell; Invertebrates; Vertebrates; Biology of Man, and Agricultural Applications.

Suggested Experiments and Problems and Questions should make these books very useful in a classroom situation, and might very well prepare the students for such courses as the Biological Sciences Curriculum Study Committee has to offer in Grade X and higher grades.

It is not known whether a Teachers' Guide Book exists, but more detailed instructions to some of the experiments could prove helpful.—R.E.G.

Rocks, Minerals and Fossils, by Walter Shepherd. McClelland and Stewart, Toronto, 1962. 142pp. Well illustrated in b. and w. Index. $2.50

This is Book 5 in the Young Scientist Series by Weidenfeld and Nicolson Ltd., London. It describes the composition of rocks, and the basic ways in which rocks are formed. Crystals and fossils receive special emphasis, and the book is concluded with instructions to the amateur collector. (In Plate XII, facing p.97, "secular iron" should read "specular iron," as it does elsewhere in the book.) Intermediate to junior high level.—R.E.G.

SOCIAL STUDIES

The Story of Scotland, by L. Stenhouse and B. Biro. E. Benn Ltd., London. (Can. Agt. McClelland and Stewart, Toronto.) 64pp. $3.50

Here is a wonderful history of Scotland for high school students! To many people of Scottish descent, however, the number of violent deeds recounted will come as a shock. To the Sassenach will come interesting insights into Scottish behavior. Mr. Biro's illustrations are of a very high order.—D.S.

Techniques in Field Geography, by Angus Gunn. Copp, Clark, Vancouver, 1962. 48pp. No index or price.

Mr. Gunn has performed a major service to the teaching of social studies in B.C. by the production of this little book and its sister work, *Focal Points of World Geography.* The author has skillfully pointed to the study of local geography in the West Vancouver area and, after he has explained certain fundamental pieces of knowledge, has cogently asked thought-provoking questions which the students are to answer. By employing good photographs and sketches he has been able to project the reader into sample study of local geography.

It is the reviewer's sincere ambition to urge that, when the proposed social studies curriculum is achieved, it will stimulate students to work from the known geography and history to the unknown. In my opinion, Mr. Gunn has greatly aided in a vibrant renaissance of local geographical knowledge in *Techniques in Field Geography.*—W.D.M.S.

Focal Points of World Geography, by Angus Gunn. Copp, Clark, Vancouver, 1962. 48pp. No index or price.

The author has raised his geographic sights and now turns to twelve world focal points. He carefully examines climate, environment and trade problems associated with the twelve. The places chosen are: Ioco, Kitimat, Churchill, Winnipeg, Montreal, New York, Southampton, Hong Kong, Adelaide, Aden, Freetown, Sao Paulo and Santos. Climatic graphs are employed with clever questions to stimulate thinking. In the case of Ioco, Mr. Gunn has the students study the graph and photograph and then answer questions. Then there is a short historical summary of Ioco and a consideration of Transporting Crude Oil and Refinery Products. Following this stage there is a discussion of the simplest aspects of oil refining.

In my opinion this real effort to explain these focal points in relation to their various backgrounds is very stimulating and aids the teacher and his students to answer the "why" in geography, which is a major achievement.—W.D.M.S.

The New Primary Geography Series, by A. H. T. Glover and I. V. Young. Clarke, Irwin, Toronto. Illus. Constance Marshall. Book 1—*Looking Around* $1.50; Book 2—*Looking Further Afield* $1.60

Although these books are written for British schools, they would be of value for science and social studies in the primary grades. The text is simple and direct. Excellently illustrated, with black and white photographs.—D.S.L.

about People

In Memoriam - Lt. Col. E. L. Yeo and Miss H. R. Estabrooks

Friends, former pupils, and colleagues of **Lieut.-Col. E. L. Yeo** were shocked by the news of his death on Christmas Day, 1962. The vitality of his personality belied the fact that he had been in poor health for several years.

Students whom Col. Yeo taught during his forty years in Victoria and Vancouver schools may remember him as their rugby, basketball, or track coach, but they will remember him too as an inspiring teacher of English who stressed the importance of sound scholarship.

On his return from World War I, as a young man, Col. Yeo first taught in Victoria. In Vancouver he taught at King Edward High School, Technical High School, and, after six years in the army during World War II, as vice-principal at Grandview High School of Commerce. He was then appointed vice-principal of Britannia High School of which he later became principal. His last teaching years were as principal of Magee High School, and finally Lord Byng High School.

As a principal he was never too busy to thank his staff members personally for any extra work they had done. His appreciation was usually followed by one of his "stories" which often brightened a dull day.

Col. Yeo was interested in the broad aspects of education, and gave readily of his time to professional groups. He was at one time associate editor of *The B.C. Teacher*. Even in the four years preceding his retirement he served on the Pensions Committee, and for the last six years of his life on the Educational Finance Committee.

We extend our sympathy to his widow and family. We, too, shall miss "Buck."—K.L.C.

Helena R. Estabrooks, pioneer Richmond teacher, died on January 1, 1963 at the age of 81.

Miss Estabrooks received her degree from Mount Allison University in New Brunswick in 1900. She taught first in her native province of New Brunswick prior to coming to British Columbia. She taught at Greenwood in the Kootenay, then at Lac La Hache in the Cariboo, and later at Brackendale near Squamish. In 1908 Miss Estabrooks was appointed to the teaching staff of Bridgeport School in Richmond. She remained at the same school until her retirement in January, 1936. She had made her home in Steveston for over fifty years.

WATCH FOR THIS

The Committee Reports and Policy Resolutions booklet will be distributed in the first week of March.

The booklet will have an entirely new format, including larger type.

Because the AGM will decide policy for the year to come, it is important that all teachers study the various reports and resolutions.

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Across the desk

In Appreciation

Washington 6, D.C.
January 4, 1963.

The Editor,
Dear Sir:

Please accept our heartiest thanks and appreciation for the December 1962 issue of your esteemed magazine. Two of its items especially—Sir Ronald Gould's address and "What Is WCOTP?"—are for obvious reasons extremely gratifying to us.

May we also say now what we have thought for a long time—that *The B.C. Teacher,* issue after issue, achieves an excellence in both contents and format that is indeed enviable. Your publication is most lively, attractive in make-up, and professionally useful in the varied fare that it offers the teacher. We have come to look forward to its arrival with anticipation of much good reading and pleasure.

Sincerely,
BALDWIN LEE,
Director of Information Services, WCOTP.

On "Education for Freedom"

Vancouver, B.C.,
January 14, 1963.

The Editor,
Dear Sir:

May I suggest that the article "Education for Freedom" (Vol. 2, No. 2) is definitely doctrinal? Moreover, the doctrine preached by Dr. F. E. Ellis has been dinned into our ears ever since we have been old enough to enjoy "freedom of hearing."

Surely "education for freedom" should entail exercise in the practice of free choice. The student should be free to adopt that theory of government which he believes to be true. Does authority derive from "the consent of the governed," or is authority derived from above? No teacher can answer this question without assuming a god-like omniscience which matches any claim made by "authority" in the pre-democratic era.

Yours faithfully,
(MISS) MARGARET CARTWRIGHT.

Teachers' Holiday Exchange

Apt. 138, 211 College St.,
Toronto, Ontario,
January 2, 1963.

The Editor,
Dear Sir:

My wife and I, both high school teachers and members of OSSTF, have recently organized as a private venture the Teachers' Holiday Exchange. The purpose is to create a central exchange for the interchange of information regarding short-term rental accommodation available during school summer holidays. We feel that such information would be particularly useful to teachers attending summer school or taking trips.

We are in contact with teachers' organizations across the country and in the U.S.A. and Great Britain.

The organization is not sponsored by a federation in any way. As part of the activities of the exchange a group of Ontario teachers is flying to England next summer.

We are hoping to put out a spring list of houses available and are particularly interested in obtaining addresses in British Columbia. It is quite possible that some of your members may be visiting the East during the summer and would like to be put in touch with similar addresses here. We should therefore appreciate your co-operation in giving publicity to this venture.

Enquiries should state the nature of the accommodation to rent, or required, the period, the rent, and any details as to the nature of the amenities of the locality. Information will be treated in confidence; publication of details will not give the name and address of the enquirer. A stamped, self-addressed envelope should accompany all enquiries. Paying-guest accommodation would also be of interest.

Yours truly,
RALPH & PATRICIA DYE.

More Foreign Aid

Vancouver, B.C.,
December 29, 1962.

The Editor,
Dear Sir:

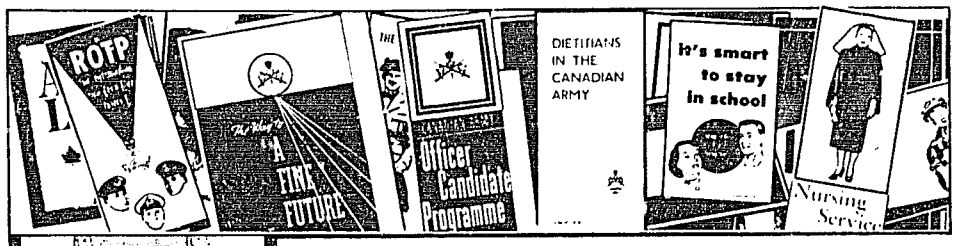
I have long been involved in a plan to prod the Canadian government to give more foreign aid and I have carefully studied means and methods to bring this about.

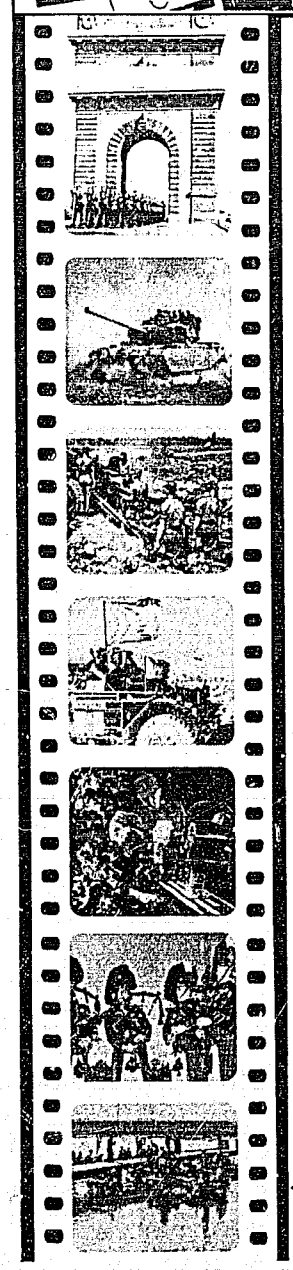
Our foreign aid is so ridiculously low because the Canadian people know very little about foreign aid and care even less! How... Green said a while ago, speaking on foreign aid, "We give as much as the Canadian people are willing to give." It is certainly time that someone educates the people on foreign aid, on the reasons for giving foreign aid and on the results of giving foreign aid. It is time that they (the people and the government) realize the tremendous challenge and opportunity that foreign aid is and how it affects our lives and our nation and also how it affects other nations and the world as a whole.

Newspapers and magazines are obviously some of the best means available to further a cause such as this and I sincerely hope that you will help to make the people and the government aware of their responsibilities and their duties in regards to foreign aid.

Further information or a copy of our brief on this topic may be obtained from the undersigned at 4506 W. 9th Avenue, Vancouver 8, B.C.

Sincerely,
JOHN WIEBE,
United Nations Club,
University of B.C.





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2. The Way to a Fine Future – Soldier Apprentice Program.
3. Career Soldier (to be available early in 1960).
4. The Thin Blue Line (The Canadian Army in Egypt).

PAMPHLETS

1. Dietitians in the Canadian Army.
2. The Way to a Fine Future – Soldier Apprentice Program.
3. Canadian Officer Training Corps Pamphlet.
4. Officer Candidate Pamphlet.
5. Nursing Sisters.
6. Nursing Assistants.
7. Regular Officer Training Plan.
8. Engineering Your Future.
9. It's Smart to Stay in School.

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One-Year B.Ed. Degree Discontinued

On December 12, 1962 the Senate of the University of British Columbia ruled the discontinuance of the one-year Bachelor of Education degree, which for many years has been available to certificated teachers who already held an appropriate first degree such as the B.A., B.Sc., B.S.A., B.P.E., etc. The Faculty and College of Education therefore may no longer accept applications for registration in this program. Those who were registered for it prior to December 12, 1962 must complete the work leading to the degree not later than October, 1964. The degree will not be awarded under any circumstances after the fall congregation of 1964.

Summer Accommodation Withdrawn

For many years Anglican Theological College of British Columbia has offered accommodation for teachers attending summer session at the University. This year the College will be unable to offer this accommodation because new buildings are being constructed and the old ones remodelled.

Be in the Know

Your school staff can easily be fully informed of what the Federation's Executive and Consultative committees are doing. Reports of the meetings of the two groups are available to local associations and school staffs. Some associations have ordered a copy for each staffroom.

CTF Flight to Brazil

The Canadian Teachers' Federation has announced a slight upward revision of the fare for the charter flight to Brazil during the summer of 1963. The rate given in the announcement carried in our January issue was $380 return from Montreal to Rio de Janiero. The new rate is $415.

The required number of participants is 120 for a Convair jet or 150 for a Boeing 707. CTF is now receiving enquiries from teachers all across Canada. Application forms and information on optional side-trips are available from the CTF office, 444 MacLaren Street, Ottawa 4, Ontario.

B.C. Youth Science Fair

The B.C. Science Fair, originally a Youth Science Hobby Show, now covers all British Columbia. The purpose of the Science Fair, sponsored by the Vancouver Central Y's Men's Club and the *Province,* is to stimulate the interest of students who have scientific talent and to report to the community and parents on the scientific outlook of these talented young people.

A Science Fair is a collection of exhibits, each of which is designed to show a biological, chemical, physical or technical principle. Local fairs are often a feature of a school function to which the public is invited. Winners are selected and with the aid of a sponsor, the finalists enter the B.C. Science Fair in Vancouver, to be held in mid-April. The grand finalist in the B.C. Science Fair will be sent on an all-expense-paid trip with his or her science teacher to Toronto to compete in the Canadian Science Fair.

Participation in the B.C. Science Fair is open to all boys and girls in Grades VII to XII in any public or private school.

Further information and application forms are obtainable from The Director, B.C. Science Fair, c/o YMCA, 955 Burrard Street, Vancouver 1, B.C.

Grade VIII Mathematics Questions Ready

Lesson Aids now has available the second booklet of supplementary questions for Ma 8. The booklet covers chapters VI to XI, and sells for 40c. Order number is 3002.

BCTF, BCSTA Combine on Brief

Officers of the BCTF and the BC School Trustees Association agreed at their January Liaison Committee meeting to make a joint presentation to the Minister of Education covering three topics: (a) the Department's policies of building small elementary schools and returning Grade VIII students to ungraded rural schools, (b) recognition in full for grant purposes of out-of-province teaching experience, and (c) understaffing in the Departmental Registrar's office and the delays in certification changes.

The two organizations will also conduct a study to try to determine the minimum enrollment required to operate a secondary school successfully. This problem is of particular concern to senior secondary schools, many of which will be left with only two grades as a result of the reorganization of secondary grades.

Want to Go to Africa this Summer?

The Canadian Teachers' Federation may again assist in staffing a summer school for teachers in Nigeria. An account of last summer's project appeared in our December issue.

B.C. teachers who would be willing to participate in the project on

an expenses-paid basis are invited to register with the General Secretary. If and when CTF announces definite arrangements, teachers who have registered will be sent application forms.

Ontario Graduate Fellowships

Several fellowships and other forms of financial assistance are available for students in full-time attendance during the regular session 1963-64 and enrolled in courses leading to graduate degrees in Education.

Graduate and research assistantships, up to $2,000, are available. These involve varying amounts of part-time professional work, some directly in Graduate Studies, others in the Department of Educational Research or in the Guidance Center at Ontario College of Education. Information and application forms may be obtained from the Director of Graduate Studies, Ontario College of Education, 371 Bloor Street West, Toronto 5, Ontario.

The OSSTF Scholarship for Educational Research, in the amount of $2,500, is open to practising teachers in Canada undertaking full-time advanced graduate study at a university of their choice in a field related to the work of the schools. Details are available from the General Secretary, Ontario Secondary School Teachers' Federation, 1260 Bay Street, Toronto 5, Ontario.

Alberta Graduate Assistantships

Several graduate teaching assistantships are available in the Division of Secondary Education, University of Alberta, for the academic year 1963-64. Applications for these awards are invited from experienced teachers who hold Bachelor's degrees in Arts, Science, or Education. The amount of each award is $1,800-$2,400. In addition, a number of inter-session bursaries up to $1,000 are available (on a competitive basis) to promising graduate students. The assistantship carries a commitment of approximately six hours teaching or other service to the University. Otherwise, appointees are free to pursue programs leading to the M.Ed., Ed.D., or Ph.D.

Interested candidates should write directly to L. W. Downey, Chairman of the Division of Secondary Education, giving details of age, experience, etc., and enclosing documentary evidence of achievement and professional competence.

An Opportunity for Writers

Writers now have an unusual opportunity to offer manuscripts for a new series of children's books. The series was launched last fall by the Macmillan Company of Canada; it is called *Buckskin Books,* and aimed at young readers aged between eight and eleven. Three titles have already been published. Macmillan of Canada will publish three more *Buckskin Books* in spring, 1963, and there will be a continuing need for manuscripts in the series.

The chief requirement is a good story, preferably fictional. The setting may be imaginary, but any historical interest must be accurate. The intention of the series is to interest children in stories set against a Canadian historical background—up to 1900 for most parts of Canada, but the editors will consider others. Length of the books should be between 10,000 and 12,000 words.

CANADA in the 20th CENTURY

Prepared under the direct supervision of Dr. Carlton Williams, of the University of Toronto, Canada Album is the first pictorial record of Canadian achievements in the 20th Century—ideal for students and project studies. Every week The Star Weekly is publishing three picture stories of famous Canadians and their achievements — a series of 60 in all.

These picture stories can be made into a permanent collection by pasting them in the colorful Canada Album, provided free. For copies, write to Canada Album, The Star Weekly, Toronto, Canada.

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Summer Session in the South Seas

MEREDITH THOMPSON

THE ISLAND PARADISES that float dreamily on the South Pacific and the colorful sister dominions of New Zealand and Australia may be visited in a luxury cruise ship in your 1963 summer vacation, with plenty of time for leisure, sightseeing, shopping, etc., and opportunities to take courses for credit as well.

Many teachers from B.C. and elsewhere have indicated their desire for a study cruise. This year, the University of Southern California and the southern branch of the California Teachers Association (as joint sponsors) have decided to invite teachers anywhere to join their study cruise and have arranged sailing dates to make this possible.

The Matson Line's S.S. *Mariposa* will leave San Francisco on July 11 and return on August 22. Courses will be offered in education, literature, and native arts, especially as these are related to areas visited. The cost? Well, rather high, although it is just the regular fare plus the regular summer school fee and a purely nominal charge to cover travel arrangements. But for all the rich experiences in store—golden memories to cherish for a lifetime—it is not too much.

Perhaps you already "know" Tahiti (the first port of call) from the recent film *Mutiny on the Bounty* or the novels of Melville or the paintings of Gauguin. But it has to be seen to be believed. There is about Tahiti and the neighboring islands of Moorea and Bora Bora (also on the tour) an indescribably exuberant beauty almost as if our mountains of British Columbia were covered with tropical forests and flame-colored flowers to the very top. Of course, you will meet the Polynesians, tawny - skinned, gentle-voiced — probably the most comely race under the sun; you may see their intoxicatingly beautiful dances; and, if you wish, purchase very cheaply the gay hand-blocked prints they wear or the fantastic primitive carvings their artists create. And you may feast at a luau—real Polynesian food of strange and unusual delicacy (very different indeed from the variant of Chinese cooking that passes for "Polynesian" in North America). As your ship glides away, over the still green lagoon, and out beyond the pale coral reef, you will long sense and longer remember the sweet spiciness that blows from these islands—until it melts in the warm fresh Trades that give the Pacific its characteristic quality and its name.

Meanwhile, you will already be hearing lectures and reading and discussing course materials especially chosen not only for their general academic value but also to make the cruise more meaningful and memorable. And, this year, a very interesting group of "experts" has been chosen to guide you. You may choose any one or two of the following (three American unit) courses:

(1) A combination of Native Art of the South Seas (1/3) and Education and the World Order (2/3) taught jointly by J. Halley Cox, Professor of Art, University of Hawaii; Sterling J. McMurrin, U.S. Commissioner of Education, 1961-62; and William O'Neill, Asst. Professor of Education, USC.

(2) The South Seas in Literature: The islands and Australasia as seen by Melville, Stevenson, Gauguin, Maugham, Mansfield, Michener, etc., given by Meredith Thompson, Professor of English, UBC.

(3) Comparative Education: Aspects of foreign schools in comparison with American, including comparison of Western and South Seas systems, given by William O'Neill, Asst. Professor of Education, USC.

Before continuing, here are answers to some questions you may ask:

How much "classroom" time? About the same number of hours as in the regular summer session, that is, 1 hour and 50 minutes daily per course; but no classes when you are at a port of call.

How much outside reading? This depends on individual instructors and you.

Will there be time for study as well as other cruise activities? Despite ports of call, most of the 15,000 mile trip is spent at sea; and despite all the ship's activities (swimming, dancing, parties, etc.), much of the fun of a cruise is to bask in a deck chair—and read. All classes are in the morning.

The author, a UBC professor of English, lectured during a credit cruise two years ago and will do so again this year.

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Where are classes held? The ship provides adequate space and privacy for this purpose.

Will there be sufficient library facilities? The ship has a large library of general literature relevant to places visited. This will be supplemented by many books from the USC Library.

Will text books and course reading lists be available ahead of time? Yes.

Will the academic standards be equivalent to those of the regular USC Summer session? Yes.

Can USC credits for these courses be transferred to UBC or some other institution? As with all transfer of credit from one university to another, this depends on the individual student's program. It is, at any rate, quite possible.

How much will it cost? The Matson Line fare is from $1,125.00; University courses are at $32.00 per unit (that is, $96.00 for one course, $192.00 for two courses); the planning fee for travel arrangements, etc., is $25.00. A $100.00 deposit should be made at time of application. In addition, there is the fare to San Francisco.

Where should one write to get more information or to apply? To Travel Service, California Teachers Association (S.S.), 1125 West 6th St., Los Angeles 17, California. (Limited information is available from the BCTF office.)

Now, back to the trip. From Tahiti, like Captain Cook and the intrepid Polynesians of old, you will follow the Southern Cross over the more than two thousand miles to New Zealand. But, on the way, you may remember how the mutineers of the Bounty, seeking refuge, first discovered and passed by a particularly beautiful little island; and then, as if by magic, this very island will appear on your horizon —Rarotonga. And, if you're lucky, a crowd of laughing youths and maidens, with golden bodies clad in leaves and flowers, will clamber over the ship, deck you with frangipani leis, and delight you with their dances and drums and songs. And, more surprising, they will discuss with you their parallel problems as teachers and teachers-in training—in the very mellow brand of New Zealand English which is theirs.

If you know England, New Zealand will surprise you with its astonishing similarities of scene (bits of Kent and the Cotswolds) and social custom (English pubs and formalities) and people: but if you've read Katherine Mansfield and other native writers, you'll know that beneath this by-some-carefully - preserved Britishness, there are serious colonial neuroses and a continuous striving for self-identity, which you, as Canadians, will certainly understand and compare with things at home. And you may even return wishing that our Indians were as well integrated into the national life as are the highly enlightened Polynesians, the Maori, under the highly enlightened government policies of New Zealand. If you wish, you can visit a Maori village; and in the Auckland Museum and later in the Bishop's Museum at Honolulu see the most wonderful collections of Polynesian arts and antiquities in the world.

From New Zealand to Australia across the Tasman Sea is about as far as from Vancouver to Winnipeg or Winnipeg to Toronto; but the differences are infinitely greater. Auckland is a charming, somewhat quaint English coastal town. Sydney is a teeming metropolis of two million, whose speech accent is English enough but everything else Australian—or, to our eyes, when we first see its skyscrapers, rush, bustle, traffic jams and luxurious modernities, somewhat North American. But the Australian would prefer to be like himself. One peculiarity of the country is that by far the majority of its 10 to 11 million people live in the half-dozen chief cities. For this reason, after you have sufficiently explored inexhaustible Sydney, you can take even a comparatively short excursion and have the feeling of being right in the middle of the great lonely continent down under, with its endless gray bush and grazing lands, its cloudy blue mountains, its impenetrable and aboriginal mysteries. Or you may prefer to risk your life in some of the world's most famous surf-boarding waters at Sydney's beaches, or risk your pocket book in the quaint shops or your reputation in the quainter bistros of Sydney's "Latin Quarter" at King's Cross. All too soon, the ship's whistle will blow: you will rush to get on board, weighed down with late purchases and new experiences, and realize—the trip is but half over.

Nor is there space here to tell you of all the rest. You'll have fun and endless surprises discovering for yourselves: A yet totally different Melanesian (Pacific negroid) world at Suva in Fiji and Noumea in New Caledonia. Returning to other gentle Polynesians at Niuafoou in Queen Salote's Tongan kingdom and at Pago Pago in Samoa (immortalized by Robert Louis Stevenson and Somerset Maugham). And if you want to take them, there'll be moderately-priced tours at all the important ports of call. So do get out a map and find where all these far-flung island paradises are located. And do read Michener's *Hawaii!* Hawaii, which George Vancouver thrice visited and whose submission to England he accepted—which submission, though never ratified, accounts for the Union Jack in the flag of an American state. Yes, you'll go there, too, en route home—for one last glorious fling or sad farewell to Polynesia—and then, in the four and a half days between Honolulu and San Francisco, there will be a little matter of turning all your experience and reading to profit in winding up the courses of your study cruise. On the night of August 21, there will be farewell parties all over the ship; and it just won't seem possible that you are saying good-bye to all these rich experiences and the richer associations you have had with your fellow-teachers from California and far away. ★

You CAN Take it With You

Continued from page 215

has the most generous degree of retroactivity. Any teacher who is now in B.C. or Ontario, and has countable prior service in Alberta, may repay with interest any refund he may have received, thereby reinstate his interest in the Alberta fund, and become eligible for a deferred benefit. Bear in mind, however, that service prior to age 30 is not countable.

Upon retirement, the teacher who has participated in this plan receives separate pensions from each of the co-operating provinces, each based on his service in the paying province and on the benefit rates of that province.

Portability of death and disability protection is limited. The teacher leaving British Columbia, for example, retains any right he has earned to a benefit related to death in service, but does not retain his right to a disability allowance.

Generally, then, the plan is of value chiefly to the teacher who, at the time of transfer, has a significant history of service rendered after the age of 30, and is still young enough to be able to satisfy the minimum service requirements of the province to which he is moving. Any teacher who contemplates a transfer from B.C. to Alberta or Ontario, and who thinks the plan may be profitably applicable to him, should seek complete information from the Commissioner of Teachers' Pensions, Parliament Buildings, Victoria, B.C.

Any teacher now in B. C., who has prior service in Ontario and has not accepted a refund from that province, may enquire as to possible application of the plan to him by writing to the Secretary, Teachers' Superannuation Commission, 204 Richmond Street West, Toronto 1, Ontario. The teacher, now in B. C., who has prior countable service in Alberta, may direct an enquiry to the Secretary, Teachers' Retirement Fund, 11010-142nd Street, Edmonton, Alberta. Even though a refund has been taken from the Alberta fund, reinstatement and participation in the new plan may prove possible and desirable.

At present there appears to be little likelihood of early participation in the portability plan by any province other than British Columbia, Alberta and Ontario. As and when this condition changes, further announcements will be made.

Even the limited progress toward portability represented by the plan here described was the product of much thought, study and willingness to persevere and to compromise. Credit for the achievement belongs in large measure to the chief administration officers of the three co-operating funds, Mr. Howard Forrest of Victoria, Mr. Roy Eyres of Edmonton, and Mr. James Causley of Toronto. Special mention should also be made of a former Ontario administrator, now retired, Mr. Hunter Henry. The initiative and the faith in the portability principle which now appear to be bearing fruit were originally engendered and kept alive through the efforts of Mr. Henry.★

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"Certainly one of the most important criteria of the value of an achievement test is the degree to which it directs teaching and learning procedures into desirable channels resulting in the achievement of the most acceptable objectives."

How far down into high school do these generalizations apply? Isn't the problem important enough for some research?

Details of source available from BCTF Research Committee

Preliminary Announcement of Courses
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It is proposed to offer the following credit courses at the 1963 Summer Session:

BOTANY	105	Introduction to Botany
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	307	Music Education
	308	Curriculum and Instruction in Elementary School Physical Education
	309	General Science for Elementary and Junior High School Teachers
	331	Psychology of Childhood
	332	Psychology of Adolescence
	400	Survey of Educational Thought
	404	Curriculum and Instruction in Specific Secondary School Subjects (English, History, Geography, Guidance)
	405	Curriculum and Instruction in the Kindergarten and Primary Grades
	407	Teaching the Mentally and Physically Handicapped
	411	Guidance and Counselling Services in Schools
	414	Audio-Visual Education
	415	Developmental Reading
	461	Diagnostic and Remedial Teaching
ENGLISH	100	Literature and Composition - First Year
	200	Literature and Composition - Second Year
	300	English Composition
	301	Children's Literature
	400	Advanced English Composition
	411	The Drama to 1642
	413	Modern Period
FINE ARTS	101	History of the Fine Arts
	300	Introduction to the Plastic and Graphic Arts
	301/302	Drawing and Composition; Drawing and Painting
	305/405/415	Design I; Design II; Design III
	401/402	Painting I; Painting II
FRENCH	120/210	French Language and Literature, Part I; Second Year University French
	300	Literature of the 17th Century
GEOGRAPHY	101	Introduction to Physical Geography
	201	Human and Economic Geography
	303	World Geography
	304	The Geography of Settlement
	409	Geography of Canada and the United States
HISTORY	101	Main Currents in Twentieth-Century History
	102	The History of Canada
	200	History of Modern Europe
	201	British History
	305	The Expansion of Europe—the Atlantic Area
	419	Great Britain Since 1688
MATHEMATICS	202	Calculus
	203	Elementary Mathematics for Teachers
	306	Topics in Geometry
MUSIC EDUCATION	101	Elementary Theory
	201	Intermediate Theory
POLITICAL SCIENCE	200	Government of Canada
PSYCHOLOGY	100	Introductory Psychology
	206	Dynamics of Behavior
	301	Developmental Psychology
RUSSIAN	200	Second Course in Russian Language
SOCIOLOGY	200	Introduction to Sociology

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For Secondary School Teachers

JULY 15 - 26

Time: 1:30 - 3:30, Monday to Friday inclusive

Fee: $25.00 Instructor: Dr. Peter L. Smith

English

For Secondary School Teachers

JULY 15 - 26

Time: 1:30 - 3:30, Monday to Friday inclusive

Fee: $25.00 Instructor: Dr. John D. Peter

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