THE B. C. TEACHER

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Editorial

WHY do we hold teachers' conventions? Why do teachers attend them in such large numbers? Many and varied though the answers to these questions may be, the Annual Easter Convention conducted by the Federation is most decidedly filling a definite need in so far as the teachers of British Columbia are concerned. The convention just closed has again offered something worth while from the standpoint of inspiration to a wider conception of "the job," of stimulating suggestion regarding school objectives, of definite technical assistance to the classroom teacher, and of opportunity to meet old friends and make new ones.

We are deeply indebted to the National Council of Education for making it possible for Mr. F. Milner, headmaster of Waitaki Boys' School, New Zealand, to address us at the public meeting held in St. Andrew's Church. He brought us from a sister Dominion an inspiring message of imperial unity, and painted for us a picture of an education at once practical, in that it is related directly to the economic demands of the community, and cultural in the highest sense of the word, virile and essentially British.

Mr. Milner's picture of New Zealand's educational system as one in harmony with the particular needs of the situation strongly supported the plea of the Hon. Joshua Hinchliffe for an education "suited to the needs of British Columbia and of British Columbia at the present time."

Dr. M. E. La Zerte of the University of Alberta spoke as one who is constantly striving to find out. He raised question after question, suggesting problems to be attacked and ways of attacking them. Helpful to class teacher as well as to administrator, shot through with a humor which revealed a thorough understanding of the work-

ing of the child mind and of classroom situations as they arise, Dr. LaZerte's address at the general session, on the subject, "Is Psychology Determining Our Classroom Practice?" will for many be perhaps the outstanding feature of the convention. Those who were privileged to hear him at the Principals' dinner on "Our Opportunities," and at the High School luncheon, were stimulated and encouraged. It is good sometimes to be brought to feel that you have been doing at least something that is reasonably praiseworthy, and yet that you may be able to add to the value of your work by utilizing suggestions put forward without dogmatic assertion, but as from one striver after better educational ideas to another.

We expected something "different" from Professor Eden Quainton, and were not disappointed. Not enamoured of many of the more recent developments in the field of education, Mr. Quainton, associating himself with the younger generation, drove home, in his characteristic witty style, his thoughts on the development in students of that willingness to work and devotion to duty which must be our salvation in these swiftly moving times.

President Klinck took us through the art centres of Europe, and allowed us to bring back far more than the "gleanings" which were mentioned in the title of his address. Our visitors from Australia, Mr. Jeffreys, Adelaide, and Mr. Smith, Director of Education, New South Wales, brought welcome messages from "down under."

Sectional programmes attracted many who failed to attend most of the general sessions. No mention can be made here of all of them. Very large and exceedingly interested gatherings filled the library, where demonstrations were being given by primary grade teachers.

Great credit is due to the committee of the Vancouver Teachers' Association for the delightfully conducted dance and social evening at the Hotel Georgia.

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Yes, conventions are a good thing for those who attend and bring with them that spirit of professional co-operation which will enable someone else to take away a warmer feeling for his colleagues than he has, perhaps, experienced during the year when his professional contacts have not been so numerous. Conventions should make us better teachers by making us think better of teachers.

IT HAD been intended that this issue would contain reports of the Annual Business Meeting of the Federation, held at the time of the Easter Convention. The General Secretary, however, has been unable, through a sudden attack of illness, to prepare these reports for this number, and as it is necessary that they be given fully and accurately, they have been left over until next month.

MEMBERS of the Federation, and especially those in close touch with the office, will regret to learn that Miss Charlotte Clayton, our Assistant Secretary, has been compelled by her doctor to take a complete rest for a time. During her absence her duties are being taken care of by Miss White. It is to be hoped that the rest will result in Miss Clayton's coming back completely restored to health.

Three Problems in Education

By DEAN WILLIAM F. RUSSELL, *Teachers' College, Columbia University.*

(Teachers' College, Columbia University, being the largest teacher training institution in the world, the reports of its officers have unusual significance and interest. The annual reports of the elder dean, James E. Russell, who served the institution during its twenty-five years of building, are monumental records of growth and development. The first annual report of the younger dean, William F. Russell, the son of the great pioneer, gives every promise of building upon the great foundations laid by the father.

Much of these reports necessarily deal with internal affairs of the college but included in Dean Russell's first annual report is a discussion of three problems of education which is worthy of repetition here for the general reader.—Ed.)

The Triple Problem

ONE of the most perplexing problems confronting the American educational system arises from the simultaneous impact upon the school of three popular demands—that pupils be accommodated in greater numbers, that training of better quality be offered, and that there be greater economy in all public expenditures.

Quantity

The American people want educational opportunities to be widely extended. Our nation was founded upon the assumption that all men are created free and equal and we have come to believe that all should have an equal chance. We desire no leader to be selected on account of his wealth alone, no child to be bound by the accidents of birth; and we hope that the time may soon come when the race of life will be run from an even start with a free field. "Onward and upward" is a favorite motto. The most gratifying spectacle to most of us is that of the poor boy rising to the gilded heights. The humble origins of Smith and Hoover are political capital. This is the explanation of the growth of our school system and forms the underlying cause of the extraordinary expansion of all its parts. The public school is dear to the hearts of the American people. Through it they hope to realize their fondest desires; and they will not rest content until every boy and every girl is given opportunity commensurate with ability, regardless of birth, wealth, or health. Americans want more education.

Quality

At the same time they want better quality of education. They are not satisfied with the schools as they are. Returning travelers receive thoughtful attention when they pronounce American education as inferior to European. Merchants and manufacturers complain of the deficiencies of the graduates of our schools. Famous critics perceive a lack of thoroughness, they detect a certain softness in our teaching; and they plead for the production of true scholars and a return to scholarly ideals. Legislatures enact laws requiring higher standards and better teachers. School author-

ities advance admission requirements and restrict attendance. Certain colleges practically elect to membership a favored few. Waiting lists are long. Institutions secure popular support by announcing as their aim education of fine quality, and they point with pride to small classes, individual instruction, and education by conference under a tutorial system.

Economy

The American people want quantity and quality, and at the same time display a solicitude concerning all public expenditures. The economy program of the national administration, which has had wide public appeal, has been reflected in states and localities by the appointment of budget directors, the adoption of economy policies, the rigid scrutiny of all payments, and the reduction of taxes. Some experts assert that the United States cannot afford to support its present educational program. This seems absurd, but one may well pause when he looks into the future. If the American people proceed with a policy of extending education widely and at the same time increase expenditures in order to work for quality, the time may be not far distant when we shall be forced to consider whether we, as a nation, can afford to pay for all that we want. It is to be hoped that our economists will address themselves to this problem. A portion of the people, by their own labors are able to support the balance who are not at work—the young, the aged, the ill, the unemployed, and those who are in school.

Quantity and Quality With Economy?

The problem is as difficult as it is important. Those who favor quantity are extending educational facilities and welcoming the hordes of students who flock to the doors of our schools and colleges. Those who think first of quality are restricting attendance in order to do their best for small numbers. If it were possible to give a satisfactory education to large numbers in big institutions under conditions of reasonable economy, the results would be of utmost importance. After all, it is a question of the possibility of quantity production of quality in education.

Beginnings of Quantity Production in Education

We are apt to forget that there is nothing new in this idea. Long ago the leading countries of the world embarked upon such a program. Once the typical educational relationship was a teacher and one pupil at a time; and even in the present day, when one considers the teachers in the old-style schools in Confucian, Buddhist, and Mahometan countries, masters with apprentices, and the adults who are the teachers among primitive peoples, it is probable that there are more teachers in the world teaching one pupil at a time than there are teachers teaching more than one.

Problems of Quality in the Schools

Class work has often been criticized adversely. There has been much discussion concerning proper limits of effectiveness, upper and lower extremes, and the optimum size of the group to be taught. Recent research is giving encouragement to the adherents of the tutorial system.

Careful studies of the exact way in which children learn to read, to spell, to add and subtract, reveal that much of it is an individual matter. Class exercises, they say, may serve to help the teacher to diagnose difficulties, to test results, and to give directions; but the learning process is more economical when the individual works alone. This has not forced the abandonment of class work; rather it has called for a new technic of teaching. Educators have found ways so to vary the procedures of class management that individual instruction can be given under school conditions without greatly increased cost. The plan resembles a correspondence course given in residence. Undoubtedly the American genius for administration when turned to this problem will find in the future more perfect methods of supplementing the individual contacts of teacher and pupil so that better results will ensue. It is said that Mark Hopkins on one end of a log and a student on the other would make a university. One wonders why so obvious a statement should be handed down from generation to generation. Naturally it would be a fine institution and the annual tuition charges per student would be exactly the salary of a distinguished man like President Hopkins. The real problem is so to arrange the logs like the spokes of a wheel that a Mark Hopkins may sit at the hub and pupils and students on the rim in numbers sufficient to carry the cost.

Problems of Quality in the Colleges

Once when the colleges were small there were intimate relations between students and faculty. Students were few. Famous teachers surrounded by their books gave individual attention to a small group. Research was attacked together; interpretation was made incidentally; great scholars were the inspiration; great scholars were the result. As a general thing these times are past. Now the colleges have thousands of students, huge buildings, multiplicity of offerings, and a variety of departments. Professors mourn the days that are gone and the temptation is to try to bring back former conditions. But the commitments are here. Students make their demands. Sheer numbers force a change. In occasional subjects, such as anthropology or astronomy, the old methods are still possible; but for most subjects they are out of the question. The conference becomes a lecture course. What was formerly personal advice is now a printed syllabus. Some of the research guidance is given in a class; and the library, formerly the workroom, the meeting room, the research laboratory, and the classroom, tends to become a collection of books, housed in a separate building, upon the campus to be sure, but in no sense holding the intimate and integral relation to the life of the institution that once it held. The colleges are not remaining static. Despite the fact that some are strictly limiting attendance, there are many that are trying to improve their methods the better to adjust themselves for numbers.

Thus the school and the college as we find them are already making efforts toward quantity production in response to the demand that many be educated. They are modifying their procedures so that many may be educated better. By giving quality in quantity they are serving the interests of economy; but the persistent demands for extended facilities, the criticism of American standards, and the call for reduced expenditures indicate that the problem is not yet solved and that much remains to be done.

The Scientific Background of Method

(*By* FRANK ROSCOE, M.A., *in "The Schoolmaster"*)

YEARS ago I was taking an afternoon walk in the company of a famous Oxford philosopher who began to discourse on education, declaring that all attempts to formulate a science of education were bound to fail, by reason of the great number and variety of the factors involved. He pointed out that these factors include heredity, physical power, early environment, the general state of society, the equipment of the teacher, and many other items, making a total which, he said, cannot be brought within the compass of any body of that organized knowledge which Huxley called science. I ventured the rejoinder that his counsel of despair would apply equally well to other forms of human activity, from agriculture to doctoring or preaching. In all such activities it is possible to affirm that they demand many efforts and attributes which cannot be resolved under one heading, although each of them, taken by itself, may be regarded as material for scientific study, the facts being investigated and results compared until there is a body of organized knowledge or science relating to each separate activity. From these distinct but related sciences it is possible to gather conclusions which are of service in a more general activity such as education.

The Science of Education

Such conclusions, properly selected and collated, may form the body of something which may be called the "science of education," if we bear in mind that we are here using the word science in a special sense as covering a wide range of contributory sciences rather than a single and highly concentrated set of enquiries. In other fields the same kind of thing goes on. What our fathers knew as the science of biology is now a compendium of many "ologies," and most of us can recall how Thomas Henry Huxley brought together portions of several sciences and devised the one which he called physiography. If we are ever able to set forth in orderly and comprehensive terms a science of education, it will be found to include portions of psychology, sociology, political science, anatomy and physiology, history and logic. That is not to say that our new science will be an overloaded pantechnicon containing all that is known of each of these topics. Selection will be called for, and from each contributory body of organized knowledge will be selected such portions as bear most directly upon the work of education. Our present difficulty is that we have no accepted authorities on any of the subjects I have named, accepted, that is, in relation to teaching. There are authorities on psychology, on sociology, and the rest, but we have so far not succeeded in escaping from conflicting views and obtaining such a modicum of agreed opinion as forms the basis of the recognized books of authority in other professions. We have no "Osler on Medicine," "Anson on Contract," "Dicey on Constitutions," or "Blackstone's Commentaries." Much of even our best teaching is a rule-of-thumb business, intuitive and empirical rather than scientific.

Educational Theory and the Teacher

There are those who claim that teaching is not a matter of theory at all, that the teacher can gain no real help from the study of psychology or any of the subjects I have named as ancillary to the craft. We are told that teachers are "born, not made." The same is said of the poet, only in more elegant language, as is becoming. But when we have said *"poeta nascitur non fit"* we have not thereby absolved the young poet from the necessity of learning at least so much of his craft as may be found in the rules of metrical composition. Unless he has some regard to these rules he will not be a poet in the accepted sense, and if he has to regard the rules he must learn them, since it cannot be supposed that he was born with them all ready for use. Similarly the born teacher has a lot to learn before he can bring his congenital aptitudes into full play, and to this extent at least he must be "made" as well as "born." Rather it should be said that he must make himself. All our devices for training teachers succeed only in so far as they set beginners on the road to make themselves teachers, encouraging them to study the principles of their craft, and to apply them to their own conditions. Those teachers who declare that there are no principles, that theory is useless, and that the training of teachers is superfluous, are guilty of a foolish belittling of their own avocation, for it is evident that work which can be done by any casual newcomer without special preparation is hardly likely to command public esteem or to deserve much reward. Other professions act differently for they stress the importance of theory and sometimes make of it a mystery.

Science and Satisfaction

An important aspect of the value of theoretical study is the increase of satisfaction which it brings to the teacher. I find striking confirmation of this in the admirable book *Eton and Elsewhere,* by Mr. M. D. Hill, lately an assistant master at Eton. He says: "I know little enough of psychology in all conscience, but it is to me undeniable that our work would not only be more efficient, *but even more interesting* if every man in the scholastic profession would study the science" . . . . "Through ignorance I have, time and again, treated boys quite in the wrong way. It is only in the last eight years that I have even dabbled in psychology, but it has taught me to do a little to retrieve past errors, or at least to avoid repeating them."

This is the view of one who might fairly be described as a "born teacher" in the sense of having natural gifts of sympathy, enthusiasm and intellectual power. One of his grand-uncles was Sir Rowland Hill, of Penny Post fame; and another was Arthur Hill, a celebrated schoolmaster. He himself was at Eton as a boy and master for over forty years. Yet he tells us that natural ability and even the advantage of being "born" are not enough, and that a scientific background will make teaching "even more interesting." We need not urge that every teacher is to become a psychologist, doctor, historian, political philosopher and the rest. He may pursue any of these studies as far as he likes, but he should be first and foremost a teacher. To this end he should be able to understand and use with intelligence the conclusions of all sciences relating to his work.

The farmer who spends his days in the laboratory will not grow much corn, but all farmers should be able to understand and apply the conclusions of the agricultural chemist.

Science as Prophylactic

In the absence of a scientific background we may expect that the teacher who is mentally inert will rest his procedure on tradition, supplemented, perhaps, by a more or less hazy memory of his own schooling. The alert and active-minded will tend to seek some alleviation of the monotony of traditional methods by adopting new devices. But where scientific principles are not formulated or understood there is left open a wide field for every form of nostrum, such as flourish on ignorance. It is almost pathetic to see the uncritical zeal with which eager teachers will sometimes take up methods and systems, or accept suggestions from their official superiors, forgetting that one man's meat is another man's poison. It is the bounden duty of every teacher to consider all systems, methods and suggestions in relation to his own circumstances and in the light of his own knowledge of principles. This knowledge serves as a prophylactic or antidote to prevent our being poisoned by another man's meat. Often, too, it serves as a touchstone whereby we can test the essential truth of a device. Of late there have come into vogue certain methods which cannot be right in practice because they are wrong in principle. Yet authorities and teachers have not hesitated to adopt them, probably through a vague desire to be up to date. Placed in a dry light against a scientific background these transient devices would be seen at once to have inherent faults which outweigh the merit of novelty and all the other merits which some undoubtedly possess. Our present need is a firm grasp of certain principles and such knowledge of the history and purpose of our craft as will enable us to find an active intellectual interest in teaching and to leaven its occasional monotony by a glowing consciousness of the social possibilities of the work where it is carried out with professional skill and understanding.

G. A. FERGUSSON MEMORIAL FUND

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Note: In the February issue of "The B. C. Teacher" credit was given to the Fernie Teachers' Association for a contribution of $5.00, instead of to Mr. E. S. Martin, Fernie, B. C.

"A Rising Market"

OUR advertising stock went up several points during the past month. This was due, in a great measure, to a report direct from the field, to the effect that Teachers had shown that they were behind the scheme, and had indicated their support by acknowledging to Advertisers that they had seen their advertisement in "The B. C. Teacher." We predict a still further advance in May. Get your share now so that there will be no regrets.

APRIL ADVERTISERS

Victor Talking Machine	Educational Records and Music
Bowell, McDonald Motor Company	Pontiac Cars
Wrigley Printers	"If It's Printing, They Do It"
Sir Isaac Pitman & Sons	Publishers
Gehrke's	A Full Line of Stationer's Supplies
Kelway's	"The Place to Eat in Victoria"
Ditto Systems	"The Talk of the Convention"
Ingledew Shoe Company	Fine Shoe Specialists
Spalding Brothers	Sporting Goods
J. M. Dent & Sons	Publishers
David Spencer & Sons	"Anything You Want"
Lisle Fraser	"1020"
Copp Shoe Company	"Says Teachers are Good Customers"
Summer School	"Victoria at Its Best"
Vancouver Motors	Ford Dealers and Drive-yourself Service"
Royal Bank of Canada	Federation Bankers
University of Washington	Summer Session
Clarke & Stuart	"Everything in School Supplies"
Magill University	Physical Education
Gregg Publishing Company	Publishers
G. G. Heather Fur Company	"A Friend of the Fur Coat Owner"

Ramblings of Paidagogos

Curiosa Felicitas.

As this, of necessity, is being written in March, it is impossible for Paidagogos to animadvert upon the profounder aspects of the Convention. But it is entirely likely that our April issue will do full justice to this exalted theme.

I turn, therefore, to a witty suggestion which I have lately received from a member of our Courtenay Association, and which I would recommend to my brethren as containing a lively nucleus of wisdom. My only regret is that I have not been clever enough to think of it for myself; but constant exposure to this sort of situation has rendered me philosophical, and I proceed to plagiarize the suggestion with all the adroitness of a Chaucer!

Like every truly great idea, this one is notable for its simplicity, and for its perfect adaptation to current necessities; but to come to the point without further ado, it is suggested that university credits be made hereditary.

Much time might be wasted upon argument. One might easily contrast the real value of hereditary credits with the questionable worth of hereditary titles as expounded by the minor prophets of Ottawa. But it is a work of supererogation to light the feeble torch of dialectic in aid of the blinding coruscations of truth, and I forbear!

Let us rather envisage the veteran teacher, worn out with service and finally brought down upon the bed of death. (It is a piteous and melancholy spectacle, and we may pause a while to weep). He calls to his bedside his eldest son Richard, a middle-aged and slightly myopic man whose shoulders are painfully bent. "Richard," says the dying teacher, "you are well aware that I am not rich in this world's goods. I am devoid of lucre and estate, and it is an ironic commentary on life that Midnight Oil has not yet been listed on the Calgary Exchange. Your father's blessing, and a few dog-eared university textbooks will be all your inheritance. But stay!"—he fumbles beneath the pillow and draws forth a slip of paper,—"there is something more. Seven years have I labored in secret that I might endow you with an inheritance to be prized far above rubies. Here, my son, are credits in Latin and Mathematics,—build them into the fabric of your academic salvation, that my labors may find fruition in your achievement."

For a time Richard is overcome with emotion: he wipes his dimming glasses, and at length replies in halting but impeccable diction: "My father, it is impossible for me to express in adequate terms the deep sense of gratitude and the filial veneration that suffuse my bosom. Such a manifestation of family devotion cannot but spur me to redoubled effort. But alas! our yearning after academic distinction may scarcely find consummation in my person; already the yoke of life is heavy upon me. Nevertheless, I rejoice in the fact that your grandson, William, inherits our studious disposition, and that when these credits are added to those which I shall be able to accumulate in my lifetime, there is a legitimate hope that William, in his declining years, may achieve the fabled dignity of Baccalaureus Artium." Curtain!

The New Technical School

(Continued from Last Month)

The dimensions of the auditorium are 90 by 60 feet, with a balcony seating 250; the whole seating capacity being 1250.

The stage is designed so that at some future time it may be fully equipped for stage plays. Provision is also made for an organ loft so that this part of the school may become a real community centre.

The auditorium is also fitted with a modern projection room to be equipped with two standard machines and the auditorium is also equipped with dressing room facilities for both men and women.

On the first floor are also eight classrooms, the Mechanics lecture room, laboratory, store rooms and office.

Second Floor

On the second floor are seven classrooms, Physics lecture room, laboratory, store rooms and office, library and reading room and medical department. At present the library and reading room are used as the drafting department.

Third Floor

On the third floor, there are twelve classrooms, two Chemistry laboratories, two lecture rooms, and adequate storerooms and offices.

Boiler House

The boiler house contains two 350 h.p. water tube boilers, equipped with King Coal stokers. This department is really a Thermodynamics laboratory and will eventually be fitted with all modern equipment for carrying out experiments in heating.

The academic building is heated and ventilated on the Plenum system, all rooms having their temperatures controlled by automatic thermostats.

Shops

One of the main features of this school is the shop building, which consists generally of a central corridor running right through the building and having on the one side galleried lecture-drafting rooms and on the other side, the shops themselves.

The shops consist of Machine shop, Woodwork shop, Printing shop, Sheetmetal shop, and, underneath, an Auto Mechanics shop with a floor area of 9000 square feet.

The equipment of the shops is in every case thoroughly up-to-date and the daylight lighting is secured by means of sawtooth roofs with glass for a northern exposure. There is thus plenty of light, but absence of glare.

Gymnasium

The gymnasium and swimming pool are at present under construction. The gymnasium will be 48 by 125 feet, with a swimming pool 30 by 75 feet on the ground floor. The gymnasium is equipped with dressing rooms, showers, and gallery to seat 400 spectators.

Conclusion

The artificial lighting of the whole school has been the result of a careful study of the best modern units and in every room, laboratory and shop, special care has been taken that, whilst the lighting is fully adequate, yet there is an entire absence of glare.

In the construction of this school everything has been subordinated to the real purpose of the institution; that is, teaching.

There is not a single piece of machinery or apparatus that is not accessible to students without in any way interfering with the operation of the school.

Thus, many thousands of dollars' worth of equipment which is usually part of the structure, in this school is part of the teaching apparatus.

There is ample room on the grounds for a school to take care of the technical work of British Columbia for generations to come.

THE Advisory Committee on Intellectual Workers, at a meeting held at Geneva, October 22 and 23, requested the International Labor Office of the League of Nations to prepare a report on unemployment among teachers and other intellectual workers, and at the same time approved a scheme of procedure for the inquiry.

In compliance with this request, M. Fernand Maurette, chief of the Research Division, asked educational authorities in many countries for information and data as enumerated in the plan, and compilation of the material received is now under way.

Schools that are Prophecies

The Pioneer Burk School

(EDITOR'S NOTE:—*Many of our teachers know of Dr. A. C. Roberts and his work, both at the University of Washington and as a speaker at one of our conventions. The following account of the training school in connection with the San Francisco State Teachers' College, of which he is now President, will therefore be of added interest*).

By JOHN H. BUTLER

THEY build boats that sail, or that speed along from the thrust of propellers driven by tiny electric motors. They make airplanes that actually fly. Or, if they are girls, they sew doll dresses—dazzling creations; they cook in real pots and pans, decorate living rooms, and the like. They plant flowers and beans and rutabagas, raise rabbits, collect moths. They build radios, mix interesting things in test tubes, and look through telescopes.

They write stories because they wish to, read books because they wish to, give little plays because they won't be denied. They sing in real glee clubs and put on real "shows"—even darky minstrels with end men and everything. Some solemnly decide to become artists and, to that end, paint pictures that are actually exhibited.

The odd thing about it all is that they do these—and the many other things this article is too short to list—because they want to do them. They themselves choose the things they wish to do. *They* are the children in that elementary school known as the training school of the San Francisco State Teachers' College, and the fact that there is time for such things in school hours is entirely due to the school's system of individual instruction that was pioneered here fifteen years ago.

Fifteen years ago the President of the Teachers' College, Frederic Burk, now dead, devised a plan of breaking up what he called the lock-step in education. He put it into operation in the college training school, where 750 elementary pupils were housed. That plan, devised fifteen years ago, has become known all over the world.

The Winnetka Plan grew from it, for, when Burk was asked to send to the Illinois city someone who could try out his ideas there, he sent one of his faculty members, a young man who had supervised teaching several years in the college training school. This faculty member was Carleton W. Washburne.

When Washburne went to Winnetka he took with him a nucleus of instructors from San Francisco. Two out of this little group have since made names for themselves. One is Louise Mohr, now the head of the research work at Winnetka. The other is Willard Beatty, who, after working awhile with Washburne, is now at Bronxville, New York, where he, too, is running his schools under the individual plan.

Burk's experiment, started in 1913, had been working two years when San Francisco's great Pan-Pacific Exposition was in progress. At this

exposition, Madame Montessori was demonstrating her educational theories. She was aided by an American woman, since become world-known. This woman, hearing of the individual instruction methods being used in the training school of the San Francisco College, visited it, for she had been thinking along the same lines. A few years later a new type of individual instruction came into being. That woman was Helen Parkhurst and her creation, the Dalton Plan, has swept over the world.

But one of the most significant movements Burk's plan has ever inspired is yet hardly a year old, yet hardly known outside the state of California. If it is successful, it may vitally affect the lives of millions of American boys and girls, for, according to those enthusiastically developing it, the plan will revolutionize the rural school.

Under the driving energy of Helen Heffernan, chief of the Division of Rural Schools in California, experimental schools are being set up all over the state. One in San Joaquin Countyy and one in Yolo County are already operating, while Fresno County has fifteen regular rural schools rapidly taking over the plan.

The plan in question is that which has been functioning quietly at the San Francisco College training school for fifteen years, functioning almost in obscurity while other schools have reaped the credit. Every rural school in California is included in the scope of Miss Heffernan's ambitious program, and if individual instruction solves some of California's problems, it will be copied eleswhere. Already other states are eagerly watching.

Miss Heffernan is using materials, courses of study, and teaching methods borrowed directly from the San Francisco College. Not only that: she is sending several of the college staff up and down the state to lecture to the rural teachers and to demonstrate the methods. The rural teachers she picks for her experimental schools make trips to San Francisco to observe in the college training school. This summer the college is setting up a series of demonstration classes where elementary pupils will be taught by the San Francisco plan, directly under the eyes of hundreds of eager rural teachers—and taught by other rural teachers now mastering the method.

Which brings us back to this plan that Burk started fifteen years ago. this plan that has been so developed that today, in spite of the label, "individual instruction," it offers far more socializing work than almost all but the impractically projectized schools.

In the Frederic Burk Elementary School—it was named in honor of its founder—the tool subjects only are individualized, these and the tool parts of the social subjects. Reading, spelling, phonics, arithmetic, and formal grammar are individualized. So is creative composition. That part of geography dealing with locations and the like, together with tool material in history, is individualized, too. But it is the reading, spelling, and arithmetic where the organization functions most vitally.

The child studies at his own rate of speed. "Break the lockstep" was Burk's cry fifteen years ago. Each child differs from his fellows. Though he differs in intelligence, he also differs in so many other things that intelligence cannot be considered alone. And it is not capacity to do that should be considered; it is actual performance.

Not only—so Burk held—do children differ from their fellows in actual performance; they differ in themselves in their respective abilities to perform at respective studies. Granting that, if all things were equal, a child who tended to do well in one subject would tend to do well in all subjects, this philosophy sternly held that all things were seldom equal, that there was often a wide variation in a given pupil's abilities to perform at the several subjects within the particular grade in which he found himself.

So, in the Frederic Burk School, each child goes at his own rate of speed in the tool subjects. The material is largely self-instructive. Practically all of it has been written by the college faculty. In the fourth grade, a pupil may be doing third-grade arithmetic, fourth-grade reading, fifth-grade spelling, etc. Often a child takes a year and a half to do fifth-grade arithmetic, but does sixth-grade work in half a year.

But what about the social side? Few schools have such a richly socialized curriculum. From their very essence, there is little socialization possible in arithmetic, reading, spelling, and the other tool fundamentals. And so, in the Frederic Burk School, such work is handled by the pupil studying by himself. In the social and other subjects, a high degree of socialization motivates and goes along with the individual pupil's work. In those studies that are social in nature, he is an active member of a group. In the life of the school, he is an individual working with other individuals toward a common purpose.

The time saved is enormous. Most children finish their tool studies a year or two ahead of time. In the history of the fifteen years, no child has taken more than eight years to go through. *And no child has failed.* It is this saved time that the pupils use for the things listed at the beginning of this article.

But first let us take up the required socialized work. Every child takes group work in music, dramatics, story-telling (the pupils tell the story), physical education, health work, nature study (field trips and all), group geography, group history, book lovers' club work and writing. (The last—writing—is taught in group work for efficiency's sake.) Certainly this side of the school's work is widely social, far more so than that in all but perhaps one per cent. of the country's educational system.

Now to the elective socialized work. There are fifteen clubs which any pupil from the fourth grade up may join. Those in the fourth grade may pick one club; those in the fifth and sixth grades may belong to three; and those in the seventh and eighth grades to four. Every pupil takes his full allotment—and begs for more. There are manual training clubs, sewing and cooking clubs, book lovers' clubs, clubs for story writers, dramatics, public speaking, nature study, elementary science, general science; not to mention glee clubs for both boys and girls, orchestras, and even a travel club.

The pupil picks the things he likes. This develops the individual in him. But he works as one in a group, and, since these groups are natural ones, not artificial classroom chain gangs, the socialization he gets is far superior to that which is to be found in the pseudo-socialized schools.

Education at the Frederic Burk School is life. As in life, there are

chores to do, serious work where the individual can best toil alone. To help him do this work efficiently, the school uses individual instruction. But in the Frederic Burk School, as in life, there is the other side. And how rich and varied is this other side. Because the pupils save so much time in their tool subjects, they have marvelous opportunities at the other. More than half his time the pupil is working with his fellows, studying with them, playing with them. He is learning to govern by governing, learning to live fully by living fully. But—and this is the most precious thing of all—even as he learns the duties of the being to his fellow beings, that valuable bit of individuality which every child possesses is nurtured, fed, trained, and he is turned out of the school, not a drab marcher in a drab chain gang, but a being who is himself, reliant and proud in the knowledge that he is himself.

Four years ago Frederic Burk died, but his successor to the presidency, Archibald B. Anderson, took up the development of the school where Burk left off. One year ago Archibald B. Anderson died, and Alexander C. Roberts was called from the University of Washington to direct the San Francisco State Teachers' College and also the elementary training school. Dr. Roberts, too, is taking up the work where his predecessor left off, and has already broken ground for a fine new building that will be devoted to the teacher training needs of the college, and to the needs of the Burk plan of individual instruction.—From *The Journal of the National Education Association.*

Performance Tests and Their Place in the Measurement of Intelligence

THE measurement of intelligence at the present time is a well-established feaure of psychology. It is often erroneously thought that the conception of psychological testing is a foreign import, and that mental testing originally developed in France. This view does not do justice to the facts. The conception of the mental test was originally brought to being by an English scientist, Sir Francis Galton, who, in 1883, in his "Enquiries into Human Faculty and its Development," first indicated the possibility of the measurement of intelligence by simple laboratory tests. In his "Hereditary Genius," published in 1869, Galton wrote, "I propose to show in this book that a man's natural abilities are derived by inheritance, under exactly the same limitations as are the form and physical features of the whole organic world." By "natural abilities" he meant "mental characteristics and capacities" and he proceeded to construct a theoretical scale for the measurement of what we call "general intelligence." This scale was based upon the theory of normal distribution of intelligence, between the idiot on the one hand and the genius on the other, and was divided into 14 grades. Galton also suggested many of the chief statistical devices now in use.

In 1890, Cattell, an American Professor of Psychology wrote on "Mental Tests and Measurements," and emphasized the necessity for standardizing procedure.

The work of Cattell and Galton may be claimed as the first attempts, and the first seed from which have sprung all the later developments. The work of Galton was carried out in his laboratory at South Kensington Museum. The work of Cattell was carried out at Columbia University.

In 1895, Binet published in "L'Année Psychologique" the description of ten tests for ten separate functions, and he hoped to secure by these, in the space of an hour or so, an exhaustive survey of any given personality.

Binet's scale, with which most of us are familiar, was originally published in 1905, for the testing of the intelligence of Parisian children who were suspected of mental deficiency. This scale was expanded in 1908 into a scale for the measurement of the intelligence of any school child, and since then the majority of intelligence tests have been based directly, or indirectly, on Binet's 1908 scale.

But at the moment we are not concerned with the description of the Binet scale, but rather wish to concentrate on the principles underlying it which form its basis, and incidentally the basis of all tests of a similar nature.

The Basic Principles

In mental testing we may say that we are measuring an individual's general inborn mental ability. When tested, he is placed in a situation to which he must respond, and his type of response depends on his possession of the knowledge or ability in question. Theoretically, we ought to be able to test intelligence in the same way as we test any of the school

subjects. In reading or writing, the individual is placed in a situation where the responses depend on the ability to read and write. In the case of intelligence, however, when we consider it practically, certain difficulties arise. In the first place, we are not too sure of what we mean by intelligence, and, as a matter of fact, there has been a great deal of controversy on the subject. The solution of the theoretical problems, however, has lagged behind the practical applications of the tests, and we find that intelligence has been measured long before we have decided as to what intelligence is.

The question then arises—how do we know that our tests are tests of intelligence? A vague general impression that such is the case is not enough. The method employed to show that our tests are indeed tests of intelligence is a simple one, and is dependent on the application of one of the canons of inductive logic, the canon of concomitant variation. This may be briefly expressed as follows: when two phenomena vary together, they are casually connected. This canon may be applied in various ways. If we consider, for example, success in school work, then we know that it may be regarded as largely dependent on intelligence. If the results of our tests correspond with school success, then there must be some common underlying factor in school success and in success in the tests. Or if the results of our tests agree with the teacher's estimate of his pupils, then again it must mean that both are assessing the same thing.

Mathematically, the degree of correspondence can be measured and is known as the correlation coefficient. This works out as a fraction lying between + 1 and — 1, + 1 denoting positive correspondence, and — 1 negative correspondence.

The correlations have been worked out for the Binet and other similar tests, and it has been found that they agree closely with teacher's estimates and school success. The Binet tests therefore do test the same kind of ability which is required in school work. But we are claiming more for them when we say that they are measuring intelligence.

The crux of the whole matter is that we are biassed in our conception of what intelligence really is. The fact that success in school life and success in after life do not always correspond, should make us pause and think. We are apt to lay too much stress on the traditional view of intelligence that we ourselves possess, and discount all other forms of it. In other words, we overvalue the linguistic type of intelligence. This is borne out by the fact that the intelligence tests of the linguistic type are more influenced by schooling than is at all desirable.

Professor Burt, by using partial coefficients, estimates that over one-half of the total result is attributed to school attainment and that "linguistic ability and linguistic attainments exert upon the Binet-Simon tests a special and positive influence of their own."

Very striking evidence of this was obtained by Hugh Gordon who tested 82 gipsy and 76 canal boat children by means of the Stanford Revision of the Binet Test. His results are very illuminating. "These children, "in respect of health, cleanliness, morality, feeding, etc., are fully equal, if not superior, to town dwellers of a similar character. That they are not mentally defective, as is generally understood by that term, is shown by the life and wages of their parents, who in many cases have

had no education. Their intellectual life, on the other hand, is of a most meagre description, owing to their lack of education, and also owing to their social isolation." When tested, 36 children were found to have a mental ratio of 71, and the average mental ratio of the remaining 40 was only 67. The younger children, however, children under 6 years, were found to possess a mental ratio of 90-100, a very significant fact, and in some cases the younger children were found to be more intelligent than the older children, even in the same family. Similar results were obtained with the gipsy children. Now, these children, are they all to be classified as feeble-minded, since they have so low a mental ratio? Apart from the results of the tests, there is no other reason for assuming the feeble-mindedness of these children. What then is the explanation of their poor showing in these tests? The obvious explanation is lack of schooling. As Gordon says, the schooling of these children was negligible. The maximum continuous attendance was 5½ days. On the average, the children came to school for one to two days a month. Their estimated average attendance, in fact, worked out at about 4 to 5 per cent., while the average attendance of children in the elementary schools of England is 88 per cent. Further, in general, the reason why the younger children did better in the Binet tests is that the tests for the early years do not depend on schooling.*

Can we say in consequence of these facts, that our mental tests are tests of intelligence? There is no doubt that our tests are testing schooling and the results of schooling rather than what we have imagined they have been testing, a general all-round innate ability.

Three Distinct Types of Intelligence

A distinguished American Psychologist, Thorndyke of Columbia, has maintained that three distinct types of intelligence must be recognized. These he calls respectively, mechanical, social and abstract intelligence. By "mechanical" intelligence he means the ability to learn to understand and manage things and mechanisms. By "social" intelligence he means the ability to act wisely in human relations, and by "abstract" the ability to understand and manage ideas and symbols. That these three types have something fundamental in common is indicated by the fact that we call them all types of intelligence. Leaving social intelligence out of consideration as of a different order, we find we are left with two main types, "mechanical" and "abstract," or preferably, the "concrete" and the "linguistic."

These two types of intelligence have never been equally esteemed. Abstract or linguistic intelligence, that is, the ability to manage ideas and symbols, has always been regarded as the higher type. This has shown itself in the development of the intelligence test. Further, our whole educational system from primary school to University has been influenced by this view. In other words, our education is heavily weighted on the side of linguistic or abstract intelligence. There are signs, however, that the other type, the concrete type, is not to be so radically overlooked in the future as it has been in the past. The whole problem raises very wide issues, but we all know children to whom the higher intellectual avenues are closed, who might do very useful work in the world, and more so, as the school gives increasing thought to them.

For such children, it is at once obvious, that the ordinary linguistic tests of intelligence are not suitable. For the testing of the concrete type of intelligence, it is essential that we have concrete tests, if not as a substitute for the former, at least as a supplement to them. Such tests are known as performance tests.

A Slower Development

Performance tests have had as long a history as the more familiar Binet tests. Their development, however, has been much slower. Two reasons may be atttributed to this. In the first place, such tests, unlike the Binet, require a great deal of material, which has the effect of making the testing expensive and laborious. In the second place, it has been found a matter of great difficulty to devise tests suitable for older children above the ages of 8 or 9. The earliest kinds of concrete tests devised were form-boards, where the individual was required to place insets into their respective places. These were first used as performance tests in 1906. Since then, many other forms of tests have been devised.

Because of the nature of performance tests, they can be employed, as we have seen, when ordinary intelligence tests are not suitable. In the Binet test, language is used in giving the test, and language has to be used in responding to the test. Any illiterate or foreigner will suffer from a severe handicap if examined by such linguistic tests, and performance tests must be used. They are also indispensable in testing the mental ability of any one suffering from a speech defect, or from a hearing defect.

The best known Performance Scale is the Pintner-Paterson Scale devised in 1923. This consists of 15 tests, of which 7 are pure form-board tests, 2 others are of the same general character, 3 are pictorial completion tests, and the other three are a memory span test, a learning test, and a test of orientation. Form-boards are therefore to a very marked extent predominant in this scale, a rather unfortunate characteristic, since there can be no doubt that chance plays a very large part in the successful performance of most form-board tests, and the attempt to minimize its influence involves elaborate and complicated methods of scoring.

In this country very little has been done with performance tests. The Industrial Fatigue Research Board, however, had an investigation carried out under its auspices by Miss Frances Gaw, which led to the assembling of a series of tests with the predominance of the form-board somewhat reduced. The only other extensive piece of work is that I now wish to describe.

Performance Tests for the Deaf

Two years ago, Dr. Drever, of the Psychology Department, Edinburgh University, was approached by the Governors of the Royal Institution for Deaf Children, Henderson Row, to advise concerning the best methods of assessing the intelligence of the deaf and dumb. He undertook the investigation, and Dr. Drever and the present writer prepared a series of performance tests. We tried out the series first with a small

number of children, about 20, made some modifications on the basis of experience, and proceeded to try out the series of tests on a larger scale with both deaf and normal children. We tested all the school at Henderson Row, and all the children in Donaldson's Hospital. The tests were also tried out on hearing children in Flora Stevenson's School and Stockbridge School. The scheme has been adopted by the National College of Teachers for the Deaf, and this has resulted in an extension of the tests to England. There, 1000 unselected deaf children are being tested, in London, Manchester, Birmingham, Leeds, Bradford, and Boston Spa. The London County Council freed one of their teachers of the deaf for six weeks in order to carry out the testing. The work is still incomplete in Birmingham and Boston Spa, but has been completed in the other centres.

Here are the tests, which are given without the use of language: †

1. Kohs Block Design. 2. Knox Cube (memory span). 3. Domino Test. 4. Size and Weight Test. 5. Manikin and Profile Test. 6. Form-Boards: (a) Two-figure Board; (b) Healy Puzzle A. 7. Cube Construction Test. 8. Picture Completion Tests a and b.

The scoring has been simplified as much as possible, and the whole series takes from 40-60 minutes to administer.

The results of the tests correlate with those of the National Intelligence Tests, Form A, to the extent of .61, which is a high degree of correlation for a performance test. It suggests, however, that these tests are testing certain aspects of intelligence which the ordinary tests do not touch. As we have already seen, these aspects play an important part in everyday life.

There is one special problem of our present-day conditions where the need of performance tests is most urgent. At one time, it was thought that the feeble-minded were a more or less distinct species sharply marked off from the normal, and more or less of the nature of disease, and the care of the feeble-minded as coming into the province of the medical man.

Changed Ideas

Our ideas have undergone a marked change since the advent of mental tests, and medical and legal definitions—and educational as well—are bound sooner or later to fall into line. As a result of mental testing, we find that what we call mental defect or feeble-mindedness is quite continuous with mentality which we regard as normal. The feeble-minded are no distinct species, nor is feeble-mindedness a pathological condition. To speak in terms of mental ratios or intelligence quotients, we find a perfectly continuous range of intelligence quotients from below 50 to above 150, showing practically normal distribution. These intelligence quotients are, of course, based on testing with the ordinary linguistic intelligence tests. But there is no reason to suppose that testing with any other kind of test would give us any different result as far as continuity and normal distribution are concerned. Only a different kind of test might give a different result as far as individual intelligence quotients are concerned.

A very important point emerges here. If there is continuity with

normal distribution, the line of division between normal and feeble-minded must necessarily be an arbitrary one. Moreover, we cannot in reason be satisfied with drawing a sharp line under these circumstances. We must allow for a borderland where mere dullness ends and where feeble-mindedness begins. Of the cases in this borderland we are unable to say with certainty whether they are dull or feeble-minded. If, for example, we adopt an intelligence quotient of 70 as the arbitrary limit of feeble-mindedness then the intelligence quotients from 70 and 75 to 80 will be in this borderland. Suppose we take the lower limit or dull as 80, then the range between 70 and 80 will contain 8 or 9 per cent. of our total school population. This means that 3 or 4 children in every average-sized unselected school class are to be classed as on the [illegible]iers of feeble-mindedness. What is to be done with them? It is clear that a linguistic education of the ordinary type is wasted on them, and, there can be little doubt that many of them are wasted, as far as the good of the community is concerned, by such an education. A large proportion of this not unimportant class belong to the concrete type of intelligence, and this could be brought out by employing performance tests to supplement their testing with the usual linguistic tests. If so, for their own sakes, and for the sakes of the community, they ought to have an appropriate education.

Further, we have been proceeding hitherto on the assumption that the intelligence quotients obtained are fairly reliable. These intelligence quotients, however, are based on linguistic tests. It may be that some of those below 70 would show up very differently if tested with performance tests.

The fact is the whole range of intelligence quotients below 85 should always be tested with performance tests before being finally classified, and if school education is widened, the category of feeble-minded or mentally defective can be employed only for those about whom there can be no possible doubt, the typical institution case.— *"The Scottish Educational Journla."*

•Mental and Scholastic Tests among Retarded Children. Board of Education, Educational Pamphlets, No. 44.

†Vide Drever and Collins "Performance Tests of Intelligence."

Choir-Training in the Schools

By KATHLEEN BOLAND, I.R.A.M.

(*In The Schoolmaster and Woman Teacher's Chronicle*)

THE vast improvement in class-singing in many schools in the last few years is partly due to Musical Festival work. It is regrettable that, in some cases, the spirit of competition is the chief motive of this improvement, but the enormous benefits gained cannot be denied, and in this matter I think the end truly justifies the means.

It is obvious to all that Musical Festivals have come to stay and more and more schools are competing each year, so it is well to consider the points which lead to success. But, before discussing these, I hasten to say, with all the earnestness at my command, that competition work should never be allowed to interfere with the general musical education of the child. That is its chief danger. After all, singing is only one part of the pupil's work, and to neglect the ear-training, sight-singing and general musical knowledge and appreciation in order to give more time to the practice of a chosen item (not always of high musical value), cannot be too strongly condemned. It is quite unnecessary to do this if correct methods of singing are in use in the school; indeed, the too continuous and frequent practice of the test pieces defeats its own ends, causing staleness and a lack of spontaneity and freedom. The Festival work should be taken in the pupil's stride, so to speak, without interfering with any other part of his training, and unless this can be done, Musical Festivals are best left alone.

Let us take for granted that the ear-training and musical education of a class are all that they should be, and dwell a little on the various points which lead to success in a school choir competition.

Testing the Voices

The first task to present itself to the teacher is the choosing of voices for the choir, and this should be done with scrupulous care. Let every child sing the same song, one they know well and in the medium compass of the voice— such as "Bluebells of Scotland," "Annie Laurie," or "The Minstrel Boy." All these are suitable, as they test the powers of expression as well as the quality of voice. It is of the highest importance that the blend of the choir be good and so, within certain limits, the voices should all be of a similar quality. Choose light, clear, fluty voices, discard any child who persistently sings sharp or flat and put aside, for further consideration, any who sing with a woolly or breathy tone. There may be also a girl or boy with an exceptional voice, a voice good in itself, but with a distinctive and unusual quality or timbre. It is all a question of degree, but in most cases, it is better not to include such a singer in the choir, as his voice might be too prominent and thus spoil a perfect blend.

When the clear, true voices, have been chosen, there may still be more than the required number, so these can be tested again for expression and compass and gradually weeded out. For compass, the same song can be sung, transposing it higher and higher until a safe limit has been reached.

Most children can easily sing up to G, but there may be a few who sing low notes well but who cannot reach the higher ones. These should sing the second part, but it must be remembered that the same quality of voice and sweet, clear singing is just as necessary in the second part as in the first, and the practice of allowing the doubtful and uncertain voices to sing the lower part is a disastrous mistake. A still greater mistake is to let the boys sing seconds and the girls firsts. And let it here be made clear that the rules for boys' singing are the same as for girls, and there need be no difference in timbre, but a boy's singing should be just as sweet and expressive as a girl's. The coarseness sometimes heard in children's mixed choirs is more often than not due to habits of shouting formed in the playground. In many schools no effort whatever is made to curb the noise and shrieking during games, despite the fact that quiet habits can easily be cultivated without in the least spoiling the enjoyment. It is not surprising that such shouting injures the vocal cords and results in an unpleasant harshness which makes itself heard throughout the singing.

Learning the Test-Piece

When at last the choir has been chosen and every voice is clear and true, both parts of the song should be learned by the whole choir, the second being taught first. There need be no hard and fast rule about this, but the second part will be learned and remembered better if the children do not already know the easier and more attractive upper part. It is a good plan to let the choir sol-fa the melody, beating time and taking particular care about note values. Then let them sing it to "loo," and then "laa" and other vowels, gradually introducing more *legato* and expression. Before singing the words, they should be read to the children and any difficult parts explained. Let them recite them and use them as an exercise in articulation, whispering them aloud with exaggerated facial movement, then singing them with emphasized initial and final consonants.

Conducted or Unconducted

The question as to whether the song should be conducted or unconducted is a debatable point, but, unless the conducting is good, it is far better left alone. The chief objection to a conductor is that the children loyally follow, with blind obedience, his directions and, in so doing, often lose sight of the inner meaning of the words and thus he becomes an obstruction or barrier between the choir and the audience. For, unless the singers are living the words they sing, and feel the emotions contained therein, they will never appeal to an audience or an adjudicator. So, endeavour to make them understand and love the words and unconsciously they will transfer their message to their hearers. Even when there is a conductor, the choir should not be too dependent on him, but should know, even without the signal, how long a note should be held and exactly where it should be begun. Every child should, if necessary, be able to sing his part alone, with correct timing of attack and release. This sounds a large order, but it can easily be done and the sense of security and absence of anxiety experienced by the teacher is well worth the trouble.

Interpretation and Expression

When these technicalities are known, the rest of the time can be spent obtaining the right atmosphere and interpretation. All true expression depends on the words of the song and, by expression, one does not only mean *crescendo* and *diminuendo* and *rallentando,* etc., though these all have their place and importance, but that inner expressiveness that can only come through the spirit and understanding.

Special Effects

In addition to the above, effects can be made which are not marked on the copy. These should not be overdone, but, with a little invention and imagination on the part of the teacher, little points can be introduced, which sometimes change an uninteresting song into quite a thrilling one. Let the children give suggestions themselves for making the song interesting. They often have good, original ideas which can be made use of, and it gives them a sense of co-operation and esprit de corps.

Balance

The balance of parts is highly important and time given to experimenting with various numbers and divisions is not wasted. Even one voice too many in the seconds can spoil the harmonic balance and "oneness" of the choir. About thirteen seconds to twenty firsts is usually about right, but it varies in different choirs and can only be decided by experimenting.

Articulation

The most difficult things to obtain from children are real *pianissimo* and real clearness of articulation, and these have more effect on the result than anything else.

To produce a real *pianissimo* every member of the choir must be consciously trying to sing as softly as possible. If even a few are singing *mf,* the *pp* will be spoiled. As an exercise for *pp* singing, tell the choir to sing a certain passage very softly on the front of the lips. "Now sing twice as softly." "Now, twice as softly again. "Now, twice as softly again." This causes amusement, but it does teach the class what a real *pianissimo* means. Whenever they sing *pp* passages too loudly, return to the above exercise. If there is a clock in the room which can be heard ticking, let the class sing so that the ticking can be heard above the voices.

For articulation, explain to the class that the laziest and most disobedient muscles of the body are those of the lips, tongue and face. Unless we are very firm with them they will not do their duty. This makes the children interested and for a time they move their muscles vigorously. Constant reminders are necessary to avoid a slovenly articulation, especially when the Festival is near at hand.

Last Practices

Indeed, the last practices should not always be spent in singing, but in discussing the various points, asking questions on pronunciation, explaining the meaning of the words, little exercises on the more difficult pass-

ages, and a reminder of the important matters, such as the pianissimos, clear articulation and expressive words. Even half an hour before the competition, the teacher can do much by reminding them of various points which may have been forgotten during the practices.

Position of Choir

There is no hard and fast rule about the position of the choir, but they should walk briskly on to the platform, stand erect, but not stiffly, with the hands at the side. The children should not stand too close together, as it gives them a sense of restriction; but neither should they be too far apart, as this induces nervousness, disperses the sound and the singing loses volume. The choir should not stand too near the conductor, as this makes it necessary for them to raise the head and chin, causing stiffness and rigidity.

The Accompanist

A point often overlooked by teachers is the obtaining the services of a good accompanist. It is a truism to say that an accompanist can make or mar a performance, and if the teacher herself cannot play well, or is occupied in conducting, it is wise to pay for the services of a really good pianist. The good accompanist can do wonders. He often saves a choir from disaster, gives help in weak places and leads the singers along to victory. It is most pathetic to hear children struggling to do their best against a bad pianist. Sympathy also goes out to the unfortunate player himself, as he becomes red in the fact with effort and exertion, his attention firmly fixed on the unequal struggle of playing right notes, instead of on the needs of the singers and the success of the competition as a whole.

Individual Work

The subject cannot be exhausted in the limits of an article, but I will end by saying that, if time permits, the members of the choir should sing individually as much as possible. By doing so the children gain independence, and it is amazing the number of faults that are discovered in this way. It also gives an opportunity for members of the class to criticize each other in a kindly way, and, in so doing, they begin to realize that every singer is of equal importance and that the ultimate success is dependent on each one of them.

The Teachers' Bookshelf

By W. M. ARMSTRONG

"An Outline History of the World," H. A. Davies, M.A., Leighton Park School. ($2.20, Oxford University Press, 1928).

An author who elects to tell the world's story in five hundred pages has set himself a difficult task indeed. Selection and proportion are the two problems. In viewing the book as a possible text one must compliment the writer on his discrimination. And this is most apparent in his treatment of the twentieth century. Texts of a similar character so often fail in the sense of proportion at just this point in time. Many will regret the lack of detail here, but the broad sweeping lines of an outline seem to do justice to the things that really count. Although intended as a one-year book, it would do admirably for a two-year course. If too limited in detail for the general curriculum in our high schools it might well find a place in both the Technical and Commercial curricula. The craftsmanship of the book is excellent—and much more compact than its pages indicate. The maps can be read with ease, and the illustrations are unusually fine. Had such a book been in existence a few years ago, it would, in all probability, have been chosen for the high schools of this province.

Library Books for Schools, Bulletin 17/41. (Superintendent of Documents, Government Printing Office, Washington, D. C.; 15c.)

The Bureau of Education, Washington, has published an excellent catalogue, under the above title, of books, with publishers and price, suitable for school libraries. Over two thousand volumes are listed with brief descriptive notes. Although much of the material is of high school grade, there is much that lies within the scope of the lower schools. Such a catalogue leaves much to be desired, but it is a real attempt to lay good foundations in library building. As a book of reference it should be in the hands of all principals and librarians. It will serve also as a worth while guide for the general reader.

Geographic News Bulletin, published weekly by the National Geographic Society, Washington, D. C.

This excellent weekly bulletin can be secured by teachers for the nominal subscription of 25 cents per year. Enclose this amount in your order addressed to the School Service Department, National Geographical Society, Washington, D. C. You must state your grade and school. Many of these bulletins will appear later as integral parts of "The Geographic."

"The Case of Sergeant Grischa," Arnold Zweig. ($2.50; Viking Press, N. Y.)

If you like Hardy, read Sergeant Grischa. It was published in Germany last year, and is now available to English readers in an excellent translation. Against a background of the Russian-German front of 1917, Zweig paints Grischa, the recaptured prisoner. But

alongside of Grischa a more fascinating character moves—Babka, the raspberry woman. And the conclusion is as Hardy would have it. The Book-of-the-Month Club gave this book first place in its January list.

Peeps at the Union Jack, and Other Principal Flags of the British Empire," by Nora Hewett. (A. & C. Black. 2s. 6d. net.) This one of the excellent "Peeps" series will make an acceptable gift-book for a Boy Scout or a Girl Guide. At the same time the instructive and historical details given about the Union Jack, the Royal Standard, the Three Ensigns, and the Dominion Flags make it most readable for the more grown-ups. The eight full-page illustrations in colour are an additional attraction to the well-printed and well-bound little book.

Shades of Meaning: an Exercise in Vocabulary Building

(*By* ROBERT T. LEWIS, B.A., *in "The Schoolmaster"*)

THROUGHOUT the junior period abundant exercises should be given which illustrate the varying shades in the meanings conveyed by the same word. At first such exercises will be simplified by using examples where the difference in meaning or use is obvious to the young child, as in the following exercise:

In the following pairs of sentences a word is omitted. This word makes sense in each case. Find the words—

I will (deck) myself in my finest clothes.
All the sailors rushed on (deck).
They . . . . down the stream every day.
When he examined them they all stood in a . . . .
You must . . . . the nail sharply.
He was quite a . . . . on the stage.
I . . . . my doll's pram down the street.
To get on you need . . . .
". . . . with the enemy," they cried.
It was lined with swan's . . . .
He . . . . them three exercises for homework that evening.
He had a complete . . . . of old English stamps.
In the forest they found a . . . .
They . . . . their troubles cheerfully.
The . . . . proved to be wrong when we added it up.
He gave a good . . . . of himself.
The . . . . is not very difficult.
I . . . . at it every evening.

From such exercises the teacher can pass gradually to the more difficult exercises of the following type:

I. The word clear means: (a) free from darkness; (b) transparent; (c) easily understood; (d) free from guilt or blame; (e) without obstruction; (f) sounding distinctly.

Write sentences using the words: "to clear" with the above meanings.

To clear means: (a) to free from obstruction; (b) to remove; (c) to empty; (d) to prove or declare innocent; (e) to leap clean over.

Write sentences using the words: clear-cut; clear-headed; explicit.

If in any of the sentences you have written above, the word clear is used with these meanings, rewrite the sentences using these other words in place of clear.

Other words which have the same meaning as clear are: pure, bright, transparent, free, unclouded, obvious, evident, lucid, clear-eyed; a clearing; a clearing-sale; a clearing-house.

II. Let children come before the class and do something which illustrates one of the following synonyms: bang; blow; bump; cuff; dab; jog; jolt; knock; pat; rap; slap; thump; whack.

The class must note exactly how each action is performed and then try to define each word; for instance: a bang—a heavy blow; a blow—a forcible stroke with the hand; a bump—a violent collision; a cuff—a blow with an open hand; a dab—a gentle blow with the hand; a jog—slight shake; a jolt—a sudden shock; a knock—a blow with something hard or heavy; a pat—a light quick blow with the fingers; rap—a quick smart blow; a slap—a blow with the open hand; a thump—a blow with something heavy or hard; a whack—a smart resounding blow.

Can any of the above words, bang, blow, etc., have meanings not connected with knocking? Write sentences using them with these other meanings.

A dictionary gives the following as instruments used for knocking: bat; club; racquet; cudgel; flail; hammer; mallet. Explain what each of these is used for.

Greetings to the British Columbia Teachers' Federation

By C. W. LAIDLAW, *President, Canadian Teachers' Federation*

THE British Columbia Teachers' Federation has been one of the stalwart members of the Canadian Teachers' Federation from the beginning. In the minds of the leaders of the Pacific province there seemed to be no misgivings in regard to a Dominion organization; they had no conditions to impose, and no sectional interest to serve. They simply demanded that an association which might serve the welfare of all teachers in Canada be formed, and, with such an organization in existence, they proposed giving it their heartiest and most generous support.

Looking back over the history of the Canadian Teachers' Federation, during the decade just about to be completed, one recognizes how splendidly this faith and magnanimity has been justified. The Federation has met its problems as they arose, it has unified the Dominion in the educational field, and it has worked out a thoroughly sound and practical method of co-operation.

It affords me much pleasure, in sending greetings to the provincial organization, to recognize the valuable contribution of British Columbia teachers and their wise leaders to this great work. I recall

with much satisfaction the resourceful leadership in the province itself, particularly the contribution made to the thorough-going survey of educational conditions completed some years ago, and the more recent work in obtaining amendments to the School Act, that have materially improved the position of teachers in the province.

The Conference this year will be held in Quebec, the mother of the provinces in Canada. No more fitting centre than Quebec City could be chosen to round out the first ten-year period of the confederation of the Teachers' Associations, because in this historic city assembled the representatives that officially considered the federation of the Canadian provinces.

Our Conference this year promises to be notable in more ways than one. It is possible that unofficial delegates from Newfoundland will attend; Canadian teachers will welcome this means of contact with this threshold Dominion in our British America area. If the present plans of the Quebec Committee are realized, the programme of events for the Conference week will be exceedingly interesting. I bespeak the interest of the British Columbia teachers in this gathering as well as in that of the World's Federation of Education Associations which convenes shortly afterwards in that world-famous city, Geneva.

CHAS. W. LAIDLAW.

The Island of Hawaii (U.S.A.) now has a very satisfactory pension system for teachers.

Gleanings

PRESIDENT WILTON of Moose Jaw and Past President Coldwell of Regina are to be congratulated upon their success in the recent municipal elections in their respective cities. In both cases small groups of reactionaries raised the question of a teacher's right to seek election to public offices. Mr. Wilton found it necessary to obtain a statement from our Alliance solicitor on this point, while in Regina it was reported that an attempt would be made to amend the School Act or the City Act to prevent teachers from becoming candidates for office. Some five years ago, when C. L. Gibbs was elected to the council of the city of Edmonton, a similar attempt was made, but the legislature poked fun at the suggestion, and shortly afterwards Mr. Gibbs became candidate for a seat in the provincial parliament; today he sits there as securely as any other member. Mr. Coldwell's reply to the Regina episode was to head the polls with the largest vote on record. This is the third time he has headed the polls.

In the matter of teacher representation in other than municipal fields, it is to be remembered that our system of government is, in the main, one of majority rule, and teachers have the right to seek election in any field if their fellow citizens so desire. It is to be hoped that when teachers are elected to the legislature their school boards will grant them every facility to fulfil their public duties in that connection. The British Commons has many teacher members, teachers whose boards invariably give them leave to attend the sittings without penalizing them financially or otherwise. Indeed, it is there regarded as a distinct honor to any school if one of its staff is considered by the electorate to be capable of representing them in parliament. In this matter of public representation may be found one of the most effective methods of earning for the teaching profession at large a new and permanent respect.—Saskatchewan Teacher.

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PERHAPS the most encouraging omen for this new year has been the reception by parliament of the resolution calling for the early consideration of a pension scheme for teachers. W. G. Ross, K.C., of Moose Jaw, sponsored it; Dr. J. T. Anderson of the Opposition expressed approval, and urged that the requisite legislation be introduced during the present session. All speakers agreed that such a measure was non-contentious; was necessary; was practicable; was good business. Mr. Ross intimated that he had made a thorough study of the matter; he acknowledged assistance in that connection from various bodies, including the Saskatchewan Teachers' Alliance. He had reached the conclusion that a system of superannuation for school teachers would increase the efficiency of the schools of Saskatchewan. It was pointed out that such a scheme would attract and retain the best teachers, and would secure greater permanency and security in this most important profession. It was even indicated that retiring allowances should be large enough to assure comfort, and that approximately equal contributions to the fund should be made by the government and by the teachers. The Premier has inti-

mated that the necessary legislation will be forthcoming in ample time to meet the requirements of the situation, and this is interpreted by the press as indicating that a bill will be passed at the next session. It is a happy augury for the future of teaching in Saskatchewan.—Saskatchewan Teacher.

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SOME five thousand teachers submitted themselves to an examination recently in seventy-four centres throughout the Irish Free State for various certificates up to an Honours standard in Erse. It seems, in the opinion of many candidates, that the grammar paper was beyond the fair test line. The same might reasonably be said (except by a complete specialist in etymology) of a similar test in any language.

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C. L. Gibbs, on the staff of the Edmonton schools, was recently elected alderman. He headed the poll in the municipal elections. He already occupies a seat in the provincial parliament.

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Regina elected M. J. Coldwell alderman. He is secretary of the Canadian Teachers' Federation. Mr. Coldwell led in all the polls.

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And the women are doing it, too! Miss Edith Patterson was re-elected alderman for the city of Calgary in the last municipal election

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IN a certain Southern American State the terms of the teacher's contract are very specific. We shall entitle this paragraph "The Statue of Liberty." The clauses read:

"I promise to take a vital interest in all phases of Sunday School work, donating of my time, service and money without stint for the uplift and benefit of the community.

"I promise to abstain from all dancing, immodest dressing, and any other conduct unbecoming a teacher and a lady.

"I promise not to go out with any young men, except in so far as it may be necessary to stimulate Sunday School work.

"I promise not to fall in love, to become engaged or secretly married.

"I promise to remain in the dormitory or on the school grounds when not actively in school or church work elsewhere.

"I promise to sleep at least eight hours a night, to eat carefully, and to take every precaution to keep in the best of health and spirits, in order that I may be better able to render efficient service to my pupils.

"I promise to remember that I owe a duty to the town's people who are paying me my wages, that I owe respect to the school board and the superintendent that hired me, and that I shall consider myself at all times the willing servant of the school board and the town's people, and that I shall co-operate with them to the limit of my ability in any movement aimed at the betterment of the town, the pupils, or the schools." Amen.—Scottish Educational Journal.

The Reformed Calendar

EVERY confidence is expressed by Moses Cotsworth, who has spent upwards of forty years in the work of calendar reform, that the world is starting on its last half decade of use of the present calendar. Mr. Cotsworth believes a reformed calendar will go into effect in 1933 and that decision to do so will be agreed upon at an international conference to be called by the League of Nations, which may be held not later than the summer of 1929 if the reform is to be effected five years hence.

Briefly, the calendar which Mr. Cotsworth advocates, after years of study and consultation with authorities throughout the world, would provide a year of 13 months of 28 days each, every month starting on a Sunday and ending on a Saturday. Every date would fall on the same day every year. The extra day needed beyond the 13 months to fill the year would be dated December 29 and named "Year Day" and come between December 28 and January 1. In leap year a "leap day," a universal holiday, would be inserted at the end of June. The extra month would be known as "Sol" and come between June and July.

The calendar for 1933 is already in preparation at Greenwich, England, as it takes some six years to work out a calendar for any given year, with the necessary working out of sun, moon, planet, star positions and other matters. Decision to change the calendar in 1933 must therefore be made in 1929 before this work has progressed too far. The year 1933 lends itself to the change, because it commences on a Sunday and ends on a Sunday.

Mr. Cotsworth feels assured the reform is a certainty because he has endorsation of it from capital, labor and women's organizations. At present the League of Nations has requested each nation to appoint an advisory council to investigate the project.—Manitoba Teacher.

(Mr. Cotsworth is a resident of New Westminster, when not abroad on calendar reform.)

THE province of Alberta is to witness a remarkable advance in educational organization and administration. The scheme outlined by the Minister appears to follow many of the suggestions made by the Alberta Teachers' Association and the Canadian Teachers' Federation. Teachers are to be removed, as far as salary and tenure go, from the orbit of local prejudices. A provincial schedule of salaries is foreshadowed. The rest of Canada, and particularly the western provinces, will watch with great interest this endeavour to advance the cause of education in Alberta. It should be noted it is proposed to levy a uniform mill rate over the entire province for educational purposes. Doubtless, many of the features of the scheme will be subjected to criticism, both destructive and constructive, but at least it is noteworthy that an attempt is being made to bring the schools into a higher state of efficiency. We can congratulate the Alberta Alliance on having focused public attention on educational reorganization in that province.—World Federation News-Bulletin.

The Problem of Deceit

Character Education—

The first report of the Character Education Inquiry undertaken by Teachers College at the request of the Institute of Social and Religious Research has been published as two books in a single volume.* The investigation, begun in the fall of 1924, was originally planned for a three-year term but was later extended to five years. Upon reviewing character testing and methods of studying the problems of moral and religious education, the investigators found a decided lack of method in research. They therefore made methodology with special reference to testing and measurement their primary interest, and to develop this methodology they have used the problem of deceit.

Three types of deception were tested—cheating, lying and stealing. Deceit was measured in certain classroom situations where the pupils may, or may not, cheat on a test, examination or class exercise; in situations connected with athletic contests where the contestants may, or may not, deceive concerning their achievements, in situations arising in party games where participants may or may not cheat; and in situations involving school work done at home. Lying was tested by asking the child whether he did or did not cheat and by asking questions about those items of conduct which are generally approved but not often practiced. Stealing was tested by placing the subject in situations where there was an opportunity to take money or small articles. Opportunities were given for cheating, lying, or stealing in any of these situations and elaborate techniques were developed to measure the degree of deception. For example, to measure cheating in classroom situations, the investigators used four types of techniques—the "copying technique," the "duplicating technique," the "Improbable-achievement technique," and the "double-testing technique."

To evaluate the various techniques, some eleven thousand children from eight to sixteen years of age were tested. These children varied in social, economic, and cultural levels; in intelligence; in character; in nationality; and in the type of community and occupational and religious groups from which they came.

A group of secondary studies shows the relation between deceit and various factors such as age, sex, intelligence, physical and emotional condition, socio-economic level of the home, the cultural level of the home, the nationality and religion of parents, school grade, attendance, achievement, retardation, deportment, association with friends and classmates, sociability, suggestibility, attendance at motion pictures, progressive versus conventional school methods, teacher influence, and certain efforts to teach or affect honesty. One outstanding relation mentioned is the positive correlation between honesty and intelligence: "In almost any group of children of approximately the same age, those of higher levels of intelligence deceive definitely less than those of lower levels." When the authors

discuss relations between deceit and cultural factors they draw no conclusions. However, the elaborate means used in discovering the cultural differences between the homes are rather significant.

As the result of their studies the authors present several conclusions. These are in brief:

1. No one is honest or dishonest by "nature."

2. The mere urging of honest behavior by teachers or the discussion of standards and ideals of honesty, no matter how much such general ideas may be "emotionalized," has no necessary relation to the control of conduct.

3. This implies that the prevailing ways of inculcating ideals probably do little good and do some harm.

4. The importance of situations in the suggestion and control of conduct indicates the need for a careful educational analysis of all such situations in order to make explicit the nature of the direct or honest mode of response, so that when a child is placed in these situations there may be a genuine opportunity for him to practice direct methods of adjustment.

5. Along with such practice of direct or honest response there should go a careful study of them in terms of the personal relations involved.

6. Particular examples of dishonest practice should be understood before undertaking to judge the blame-worthiness of the individual. That is, the main attention of educators should be not so much on devices for teaching honesty or any other "trait" as on the reconstruction of school practices and regular opportunities for the successful use by teachers and pupils of forms of conduct which make for the common good.—Florence Morgan, in the Educational Research Bulletin, College of Education, Ohio State University.

*Hartshorne, Hugh, and May, Mark A. Studies in Deceit. New York, Macmillan Company, 1928.

THE Incorporated Association of Headmasters is planning to initiate friendly relations with kindred associations of German teachers in the interest both of education and of international goodwill.—Times Educational Supplement.

AMONG the resolutions adopted by the All-India Federation of Teachers' Associations at its annual conference, is one that requests that free public gymnasiums be started and maintained by Indian municipalities.—"Education."