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THE TECHNE

Life Without Labor is a Crime, Labor Without Art
and the Amenities of Life is Brutality.—Ruskin.

Vol. XV

March-April, 1932

No. 4

We have fought against the wild beasts which once overran the earth and won; human intelligence prevailed over brute strength. But we have not yet conquered the microbe; we are still so ignorant of the causes and modes of operation of certain classes of diseases that they may yet exterminate our race. We have also to fight against famine, against vice, against disruptive social tendencies and against bellicose tendencies to self-destruction. These fights have not yet been won; the issue is still in doubt. We have no right to take it for granted that they will all end in our favour, or that we must inevitably go on to higher and higher things: the dinosaurs and dinoceras of past ages might have thought the same in their day, yet the fate in store for them was decay, defeat and extinction.—Sir James Jeans in "Living Philosophies."

Published by
KANSAS STATE TEACHERS COLLEGE
Pittsburg, Kansas

THE TECHNE

Published by the Kansas State Teachers College of Pittsburg
Pittsburg, Kansas

W. A. Brandenburg, President

Vol. XV

March-April, 1932

No. 4

BOARD OF MANAGEMENT

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THE TECHNE publishes, for the most part, papers on educational subjects, though articles on closely related fields are also used. Part of these papers set forth the results of research; others aim at interpretation of current developments. Though some of the discussions will interest the specialist, it is hoped that in every number there will be something useful for the average teacher.

THE TECHNE is sent free to alumni, school officials, libraries, and, on request, to any person interested in the progress of education.

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DIRECTED TRAINING IN THE COLLEGES OF KANSAS

H. C. Pryor, Director of Training Schools, and Head of Department of Education,
Kansas State Teachers College, Pittsburg, Kansas

In discussing this question the writer is very conscious of the fact that his knowledge of the field is superficial. However, certain opportunities have made it possible to secure some information on the basis of which recommendations for improvement may be made. This is the only justification for the paper.

Prior to 1930, directed teaching in Kansas was limited almost entirely to three teachers' colleges and the University. Only a few other colleges had made beginnings along this line, probably because of the inconvenience and expense involved in putting on such a program. Candidates for a sixty hour certificate were required to complete general psychology, general methods of teaching and classroom management. Those who wished to secure the 120 hour certificate were required to present evidence of graduation together with eighteen hours of professional subjects, including general and educational psychology and school administration.

During the last decade and, more particularly during the past five years, standards for teacher training have been raised very rapidly. In accordance with this general policy, the State Board of Education adopted a resolution early in 1930 making "practice" teaching a prerequisite for all certificates issued by the Board. Later, the Board adopted the Standards of the American Association of Teachers Colleges as a basis for the organization of directed teaching in all colleges of the State. These standards must be followed by all teachers' colleges which are members of the Association. If they are desirable for teachers' colleges, it seems only fair that they should be applied to all institutions engaged in the training of teachers.

The effects of the Board's rulings were far reaching. Some thirty-three junior and senior, private and public colleges were compelled to provide facilities for practice courses in teaching. Since the four year colleges and the private junior colleges did not have the buildings in which to house training schools, arrangements had to be made with the local school systems for carrying on the work in the public school buildings. Several of the colleges began to make plans as soon as the Board's ruling was announced and put them into operation with the beginning of the fall semester of 1930. Others delayed until the beginning of the second semester. Since each college had to set up a new organization and finance it, at least in part, it is not surprising that some of them were unable to do as effective work as others. The public junior colleges which are a part of their respective school systems had less difficulty because they could make use of the elementary schools under the same administration for practice purposes. The four year private colleges with which this report is primarily concerned and the Kansas State Agricultural College had to make arrangements to go into a public school system of which they were not an integral

part. This involved making arrangements on whatever terms the local board of education and the superintendents of schools were willing to offer.

The speaker had an opportunity to study the operation of teacher training plans in two ways. *First*, he was a member of a committee consisting of Dean E. K. Hillbrand of Wichita Municipal University and Dean A. H. King of Kansas Wesleyan University, Salina, appointed by representatives of heads of departments of education of the several colleges to study the problem and report. A questionnaire study was made of the way in which standards VII-C and VII-E of the American Association of Teachers Colleges are being administered. Standard VII-C reads: "The amount of student teaching required of every graduate of a teachers college or normal school shall be ninety hours of supervised teaching." Standard VII-E reads: "It is recommended that at least two-fifths of the teaching in the training school should be done by regular teachers of the training school or by other members of the faculty." *Second*, an opportunity was afforded to visit twelve senior colleges (one public) and four junior colleges (two public) with the Secretary of the State Board and see how teacher training was actually being administered. This inspection confirmed, in large measure, tentative conclusions which had already been reached as a result of the questionnaire study previously mentioned. A brief report of observations follows; While not all colleges were visited, it seems probable that those studied represent fairly well the general practice.

Almost as many varieties of practice were found as colleges visited. However, certain types stand out and should be described here, briefly. Let us examine each one in turn, noting especially their differences:

Type A—The Superintendent acts as Director of Training, selects supervising teachers, requires records and reports of work done, holds conferences with student teachers and supervising teachers and performs duties usually performed by the Director of Training in a normal school or teachers college.

Type B—B is, in general, the converse of Type A. A member of the college Department of Education acts as Director of Training, gives theory courses, supervises the work of student teachers and performs the duties incident thereto. The Superintendent looks after general matters connected with the administration of the city school system but has little to do with the technical problems of teacher training.

Type C—a member of the college Department of Education is designated as Director of Training but has such a heavy teaching load that he can do little in the way of actual supervision of practice. The Superintendent, probably assuming that the college is looking out for supervision, does little.

Type D.—this consists of the public junior colleges which are in a class by themselves because they are under the city school admin-

istration and are able to go farther in setting up a program of teacher training than any of the other colleges described.

The pupils in the training classes come from all levels of the public schools, both rural and urban. One private junior and one private senior college make use of outlying rural schools for practice purposes, concentrating the actual teaching into a period of two weeks. One senior and one junior college (both private) use one-room schools elementary, junior and senior high schools for practice purposes. on the campus for training purposes. Each of the other colleges uses

In some cities the work of teacher training is concentrated in a single building, while in others it is carried on in several buildings scattered over the whole city. No doubt each superintendent and college representative has a good reason for the local practice but surely not both practices are right.

Training teachers are selected in different ways determined by the personal opinions of those who are responsible for the administration. In some cases, this is done entirely by the superintendent. In others, the choice is made by the superintendent and college representative, working cooperatively. In some systems all of the teachers are used while in others only superior teachers are designated for this important work.

The remuneration of training teachers varies greatly, the chief determining factor being the amount the college pays the city board of education for the privilege of using the local schools. In some cases, the teacher receives nothing. The most common practice seems to be to pay the training teacher a stated amount, e. g. \$10.00 to \$25.00 per student teacher per semester.

There is a great difference in the qualifications of training teachers in different cities and even within the same system. On the whole, there are few teachers who have been selected because of their training, for experience or interest in teacher training.

The attitude of student teachers toward practice courses is good. Almost all who were questioned said that they considered such courses much more valuable than the theory courses.

The administration in the majority of colleges and cities is of the opinion that practice teaching should not be thrown open to all students. The tendency seems to be to set up certain scholastic requirements as a prerequisite for enrollment.

Out of this survey of the situation in Kansas should arise some definite recommendations regarding the organization and administration of teacher training. The writer wishes to make some tentative suggestions based on the following: (1) personal experience in training teachers both in affiliated city schools and a campus training school; (2) observation of the different plans in operation here in Kansas; (3) a study of the recommendations of such authorities as Mead, Evender, Bagley, et al.; (4) recommendations of the Committee on Standards of the American Association of Teachers Colleges.

1. A uniformly high standard for preparation of training teachers should be required. The American Association of Teachers Colleges recommends the master's degree as the minimal preparation by 1932. In the case of supervisors in affiliated rural and urban schools such as are used by all of the colleges under consideration, Standard IV-C recommends the scholastic qualifications required of members of the faculty of the college department. The clear implication is that those who supervise the work of teacher training for the College should hold Master's degrees. Nothing specific is said in the Association's standards about the qualifications to be demanded of public school teachers to whom the student teachers are assigned. Is it not reasonable to assume that they should be as high as is demanded for those occupying similar positions in teacher training institutions?

2. Training teachers should receive regular compensation on a student-per-semester basis. This compensation varies from \$10.00 to \$25.00 at the present time. One system pays each training teacher a bonus of \$300.00 and she devotes a large part of her time to the training of student teachers. Just what it should be remains to be determined but it should be paid in recognition of the larger service which training teachers render.

3. Selection of training teachers should be made with great care. It is not sufficient that a teacher be on the "class A" or preferred list in the system. A teacher might be a superior classroom performer and still lack the special qualifications such as sympathetic appreciation of the problems of beginning teachers which are essential to the greatest success. No one should be appointed for this position who is not interested in teacher training as an occupation. The combination of professional preparation, natural qualifications and experience is essential to and should insure success.

4. The selection of training teachers should be a joint responsibility. While the superintendent is responsible for the administration of the city school system and is interested in its success, he should not usurp this duty, entirely. A plan which deserves consideration is for the Director of Training representing the College to make nominations to the superintendent. After discussing the different candidates and making necessary changes, the superintendent should submit the revised list to the Board of Education with recommendation for their approval. This should insure having a group of training teachers with whom not only the superintendent but the Director of Training can work harmoniously.

5. Teacher training should be organized and administered in such a way as to secure the best results. Every administrator will grant this. To begin with, the College should employ as Director of Training a person who has the qualifications essential to success in that position. He should be more competent than the Superintendent because of his train-

ing, experience and other qualifications to perform the duties of office. He or some member of his staff should give theory courses and he should see that they are properly linked up with practice. The Superintendent should make it a part of his administrative business to see that the Director is a competent person and should leave the performance of technical duties to him. The accompanying organization chart shows what authorities consider to be the ideal relationship.

6. Teacher training should be centralized. In any large system there are teachers in widely scattered schools who would be desirable training teachers. For administrative reasons, it might be impossible for the Superintendent to bring them together in a few schools or a single school near the College. As much centralization as possible should be the goal for at least the following reasons: (a) supervision is facilitated, (b) time is saved for all concerned, (c) the number of training teachers can be reduced and the quality improved.

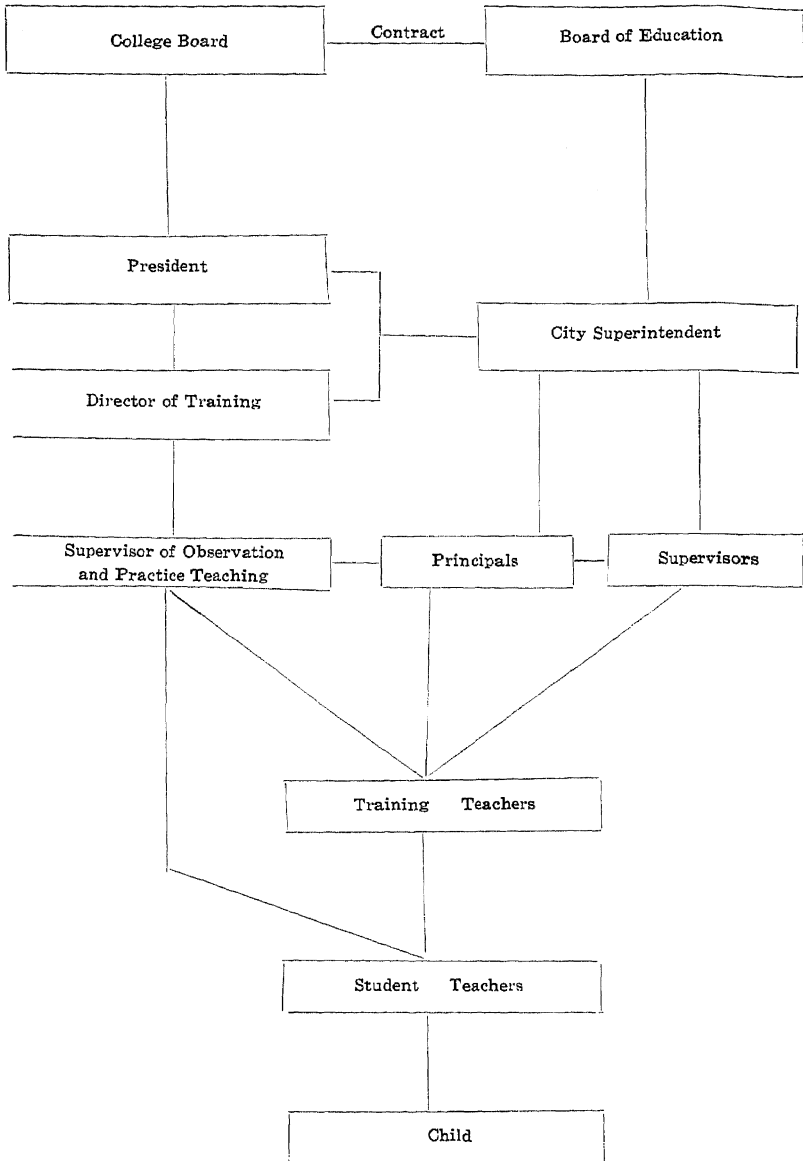
7. A high quality of scholarship should be required of student teachers. Just what this should be cannot be determined easily. A goodly number of institutions particularly in the eastern states, set up high standards for admission rejecting as candidates high school graduates who do not attain a certain scholastic as well as intelligence level. As has already been suggested some Kansas colleges, because of limited facilities, are denying practice teaching privileges to students who are below average in scholarship. Some specify tentatively an average of B in the major subject. This would do much to promote the cause of good teaching.

8. A full time supervisor of teacher training connected with the State Department of Education might do a great deal to place standards where they should be. This would be following a practice which is in vogue with desirable results in several states.

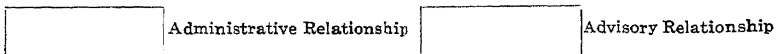
9. The privilege of training teachers should be limited to those institutions which can meet desirable standards. This might be hard on the students of the institutions concerned but it would conserve the interests of the children of Kansas.

10. A constant study of the problem of teacher training on the part not only of departments of education, and city administrators but also of presidents and others concerned should result in much benefit. The annual meetings of representatives of the departments of Education in the several schools has resulted in much good. Longer or more frequent meetings for the discussion of different problems should be arranged. So long as the present certification standards exist, this is a problem that should enlist the attention of all who are in any way concerned with teacher training.

TEACHER TRAINING ORGANIZATION CHART



All problems relating to Administration should go through the Superintendent.
 All problems relating to teacher training should go through the Director of Training.



A MAGNA CHARTA OF RELIGIOUS EDUCATION FOR YOUTH

George D. Small, Secretary of Y. M. C. A.

Students of our high schools and colleges are terribly perplexed about religion. It is seldom that we find one who is not doubting many of the orthodox concepts of religion. To be possessed with perplexities and doubts is, except in a very few instances, a perfectly healthy state of mind for a student to be in and does not present the element of danger that many serious minded leaders would have us believe.

It is generally true that youth who have reached the stage where they are doubting the old concepts of religion, can be more easily guided towards a religion that actually works than students who have never entertained a doubt about what they have been taught to believe. I need only to call your attention to the fact that it is the latter group who have been mainly responsible for the indifference that we see displayed toward religion at the present time. Indifference rather than skepticism has always been the real enemy of religion.

The real danger that develops when we find students doubting religion rests with the fact that we have not as yet developed a religious educational program for youth who are courageous enough to entertain doubts. Rather we have labeled youth who fall into this group as "dangerous" and instead of going out to meet them with a program that is attractive enough to hold their interest, we treat them as though they had some kind of contagious disease which we should shy away from. Despite the fact that we have an ever-increasing number of high school and college students in this group, most of us maintain that the sole function of religious education should be an effort to transmit to others the religious culture which we already possess.

No doubt this concept of religious education is entirely satisfactory to that group of students who choose to follow the "straight and narrow path" of orthodox teachings, but the moment that an "off color" thought creeps into their mind it no longer proves adequate.

It is to this group of students who are uncertain as to what they believe about religion that we must give our attention if we are to develop a religious education program that is adequate for our times, not because we are in danger of losing them from the ranks of the churches, but because through this group alone can religion be placed in an environment that will make it a deep, abiding, prophetic voice among the people of the world.

If an adequate program of religious education is to reach the intellectual youth of our high schools and colleges, it must not be satisfied with just transmitting that which we already know, no matter how steeped in sacred tradition it may be, but it must also hold that religion is a formative creative process in the lives of men.

The general program of "transmissive" religious education as practiced by most agencies today—especially those groups who have carried their programs to the college and high school campus have

failed in their appeals to youth for one or a combination of the following reasons.

1. It has not given youth a comprehensive intelligent plan for the formation of Christian character. Mainly through the efforts of Goodwin Watson and other widely known psychologists we are learning that character can be "taught" as well as "caught." Youth is quick to see the scientific approaches that the general educational program is making in this field and becomes reluctant, even though they are deeply interested in religion, to turn back to a field which still stresses an "emotional re-birth" as means of the highest character attainment. Youth today, possibly because their experiences in life has led them far beyond their age, and consequently made them hard to stir with an emotional appeal, simply fail to respond to emotional set ups as did youth of past generations.

2. Religion has not been able to satisfactorily bridge the gulf that exists between science and religion. When youth is weaned from religion because of this difficulty it is usually the result of an unsympathetic attitude on the part of faculty members or some pretty shallow thinking on their own part. The crisis at this particular point usually comes when it tries to find the same elements of certainty in religion that they have discovered in science.

3. Religion has failed to tie youth to a cause sufficiently challenging to make them push their own selfish interests into the background. These are trying times in the life of almost every youth when the only salvation that they can find in life is to find a cause that is greater than themselves. This element was not lacking in religion a few years ago when we were sending a great number of our young people to the missionary fields.

4. Religion has "blind spotted" them on the various social issues such as the race problem, political issues, war, internationalism, etc. Many a youth passes his high school days and even the best years of his college life before he discovers that religion has anything to say to him concerning these important issues. I dare say that if our religious education program could broaden youth's vision about these great problems that we would have at our command the program that would hold youth loyal to religion throughout life. Practically all of the students of my acquaintance who have left religion and then have come back to its fold have reëntered through this door.

5. Religion has utterly failed (mostly because of petty denominational quarrels) to reach any satisfactory agreement as to what the irreducible functions of Christian education are, as compared to other general phases of education. At a time when non-secular education has reached "norms" in various fields of human endeavor we find religious education floundering around with creeds and dogmas that have little or no significance for a modern twentieth century world. This does not mean that we are to strive to reach the same degree of certainty in the field of religion that we find in the various physical

sciences, for instance, but if we could rid ourselves of the curse of denominationalism we could reach at least the same degree of certainty for religion that we now have attained in some of the less exacting sciences—psychology for instance.

6. The failure of religious agencies to adopt the newest methods of educational technique as discovered by non-secular educational groups. We need only think of the utter disregard that religious education has for the long discovered theory of individual differences to understand how negligent we have been at this point.

7. Visionless leaders who develop programs around themselves and fail to teach the members of their groups any personal initiative. One of the crying needs in the field of religion today is for a leadership that is scientific, moral and intelligent in its approach to youth, and at the same time big enough to relegate itself to the background so that youth can see the real value of religion to their own lives in its true perspective. Such a program may not work as machine-like as the program of a leader who dominates every situation in his group, but it will be more lasting in its results.

8. We have failed to clothe religion in virile enough terms to attract modern day sophisticated youth. It is an extremely hard problem to interpret religion to each successive generation of youth, for it must be described to them in terms that they can understand. As this must be done through the medium of religious literature we can readily see that we are going to have to turn out books and magazines that make a more direct appeal to youth than the literature that we now have on the market. Most of our present day religious literature is nothing more than sentimental "slop" that has no challenge whatsoever to intellectual students.

9. Another glaring failure that our present day religious education program has made is through worship programs as presented through the medium of high school and college chapels. These programs are generally conducted according to set formulas, and vary only slightly throughout the entire country. They are about the most neglected phase of our present educational set up.

To have someone appear before the student body at a high school or college chapel and dispassionately read a few verses from the Bible and lead in a short prayer gives students a wrong impression of religion and might as well be dispensed with altogether for all the good that it will do.

I recently heard of one school which had fallen into this rut, where the students openly made fun of the practice and went so far as to place bets on whether or not the prayer of the morning would be international or local in scope.

With these failures of the past in mind as a point of departure, it would seem logical to say that any program of religious education that is to prove adequate for present day youth must contain the follow-

1. It must help youth experience for themselves the reality of God. Dr. A. D. Stauffacher in a recent article in the Journal of Religious Education has this to say on this point:

"Religious education is not so much bent upon a definition of God as it is to help growing persons to discover God in their own experience and that of other human beings. It begins with the observation that there is a supreme creative energy in and through the universe, and that this energy is operative for good to the degree that man understand it and act in harmony with it. Jesus called this creative energy "Father." The Philosopher calls it "Integrating Activity," "Principle of Concentration." The Scientist calls it "Creative Coordination." The average man calls it "God." The religious educator seeks to help growing persons to discover and understand this creative energy in themselves and in society.

Probably no better statement of this point can be found than that given by the Department of Superintendents of the National Educational Association in the Sixth Year Book, 1928.

"No greater task rests upon the secondary school than to help its pupils to find their God. Man craves more than knowledge of himself, of nature and of organized society. He hungers and thirsts after righteousness. Knowing his own imperfections, he feels that somewhere there is perfection. The great universe calls to his spirit, and unless he ignorantly or wilfully closes his ears, he hears the voice of God. No question of theology is involved here. The individual soul reaches out to orient itself in the universe and to find its place of labor and rest. When this orientation takes place, life assumes poise, dignity, grandeur. Otherwise its striving, its struggles, its achievements seem trivial and insignificant."

2. It must guide youth into a deeper understanding of the Life and teachings of Christ. No matter what else we might believe about Jesus we cannot dodge the fact that he was the most significant religious leader of all times. As long as he stands in this position then we must study his life as a guide in helping us face present day life situations. No doubt we have thought that all programs of religious education have made this a central part of their program, and yet thinking people cannot help realizing the divergencies between the religion of Jesus and the contemporary practices of organized Christianity. One of the teachings of Jesus sheared of all the superficial beliefs that have been great needs of our times is for a fresh unbiased study of the actual plastered onto them by modern day theology.

3. It must aid youth in discovering new sources of spiritual insight and power that will aid them in developing their own lives.

Kirby Page in a recent book "Jesus or Christianity" has listed seven ways in which we can develop our spiritual resources. No doubt there are others yet undiscovered.

1. The losing of self in a great task on behalf of humanity.
2. The cultivation of the art of solitude.

3. The cultivation of the beautiful.
4. To share our lives unstintingly in the practice of fellowship.
5. Participation in incorporate worship.
6. Reading of great biographies and books of poetry.
7. A willingness to follow our idealism no matter what the cost to ourselves.

4. It must aid youth in discovering an adequate Philosophy of Life. The reason that the lives of so many students are shallow and easily indexed is because they do not know what is required of them to live a beautiful ethical, religious life.

As a start toward helping youth build an adequate Philosophy of Life I would suggest the church confiscate Dr. Goodwin Watson's seven "functional department groupings of interests that spring from the demands of actual life."

1. Department of health—physical and mental—the achievement of maximum personal efficiency in body and mind, etc.
2. Department of home participation—how to avoid enslaving relationships and how to build constructive ones, etc.
3. Department of purchasing—what and how to buy the goods for living.
4. Department of leisure—recreation and appreciation—literature, art, music, athletics, etc.
5. Department of philosophy—acquisition of a guiding and stabilizing point of view, way of life, religion.
6. Department of vocation—choice of and preparation for vocational life.
7. Department of citizenship—unemployment, immigration, crime, prohibition, disarmament, restraint on freedom of speech, etc.

Where are "mathematics," "chemistry," "French," "English," "sociology"? They are the acclimations of facts to be utilized appropriately in connection with these functions.

5. It must awaken youth to a deeper understanding of what Christian attitudes are in regard to present day Social, Economic, Industrial and Political situations.

There seems to be a tendency in our transmissive form of religious education to take people away from the realities of life rather than give them an understanding of actual existing conditions.

Since the space allotted to me for this article is limited, I must briefly mention these other points:

6. It must be non-denominational.
7. It must discover more adequate methods of Christian character building.
8. It must be more alert to put into use the sound educational practices of non-secular education.

9. It must ground students more thoroughly in the scientific approach to life.

10. We must look forward to building separate religious centers for youth of high school and college age where a program distinct from that offered to older people can be set up for youth. There is a growing feeling that the two groups cannot be handled successfully together because of their entirely different out-look on life. In smaller centers we would have to be satisfied with a further departmentalizing of the church in order to take care of youth.

Several colleges have already undertaken officially this task. Chicago University under the leadership of Shaler Mathews and Charles Gilkey have made the most notable success. Under the Chicago plan Dr. Gilkey has been officially given the title of Dean of Religious Education and has been granted an official place in the new Chicago educational plan. This seems to me to be a trend that we must recognize if we are to deal successfully with present day youth.

A religious education program with these "built in" features would make religion a "creative" as well as a "transmissive" force and would be the first steps that are necessary in aiding youth to find a religion that will not be an insult to its intelligence.

INSECTICIDES

L. C. Heckert, Professor of Chemistry and Physics

"The struggle between man and insects began long before the dawn of civilization, has continued without cessation to the present time, and will continue, no doubt, as long as the human race endures. It is due to the fact that both men and certain insects constantly want the same things at the same time. Its intensity is owing to the vital importance to both, of the things they struggle for, and its long continuance is due to the fact that the contestants are so equally matched. We commonly think of ourselves as the lords and conquerors of nature, but insects had thoroughly mastered the world and taken full possession of it long before man began the attempt. They had, consequently, all the advantage of a possession of the field when the contest began, and they disputed every step of our invasion of their original domain so persistently and so successfully that we can even yet scarcely flatter ourselves that we have gained any very important advantage over them. Here and there a truce has been declared, a treaty made, and even a partnership established, advantageous to both parties of the contract—as with bees and silkworms—but wherever their interests and ours are diametrically opposed, the war still goes on and neither side can claim a final victory. If they want our crops they still help themselves to them. If they wish the blood of our domestic animals, they pump it out of the veins of our cattle and our horses at their leisure and under our very eyes. If they choose to take up their abode with us we cannot wholly keep them out of the house we live in. We cannot protect our very persons from their annoying and pestiferous attacks, and since the world began we have never yet exterminated—we probably never shall exterminate so much as a single insect species. They have in fact, inflicted upon us for ages the most serious evils without our even knowing it. If human beings are to continue to exist, they must first gain mastery over insects. Insects in this country continually nullify the labor of one million men."¹

Nearly all of the injury that insects do, directly or indirectly from their attempts to secure food or to reproduce their species. They are undoubtedly man's chief rival for the available food supply of the world. Our growing crops must struggle against insect attacks from the time the seed is planted until the crop is safely harvested—attacks upon the leaves, branches, stems, roots, buds, blossoms, and fruits. Our domesticated animals and man himself, are harassed and bitten and worried, and their bodies infested with maggots and inoculated with disease. Our foods are contaminated, our clothing ruined, our books and papers consumed, our homes destroyed, and one species of beetle even bores through the lead casing of our telephone and telegraph cables and short circuits the wires that carry our messages. It has been estimated that the insect damage in the United States for the year 1924, and this is probably not very different from other years, and is constantly on the increase, was \$1,590,044,500.

Insect control in its broadest sense includes everything that makes life hard for insects and tends to kill them and prevent their increase or spread over the world. This control may be obtained by use of chemicals or insecticides which kill the insects by their toxic nature; by physical or mechanical means such as "swatting," screening, trapping, or even electrocuting; by cultural methods, such as crop rotation, timely plowing and planting, selection of resistant varieties, etc.; biologically by the protection of insectivorous birds and animals, the introduction of parasitic and predatory insects, or the inoculation of an insect species with fungous, bacterial and protozoal diseases; and legally by the establishment of inspection and quarantine laws. While some measure of success has been obtained with each of these methods in specific cases, there is no general method of control that is satisfactory, and almost each insect species constitutes an individual problem. The chemical method, the use of insecticides, seems to be the only one that has a vestige of hope of the extermination of a species. The other may limit their growth or spread, but by their very nature do not permit of extermination.

Insecticides are those substances which kill insects by their chemical action. They may be grouped into three general classes: (1) *stomach poisons*, (2) *contact poisons*, and (3) *fumigants*.

Stomach poisons can be used only with insects that obtain their food by chewing. They are applied in two general ways: by the use of poison baits—mixing poison with a food that is particularly attractive to the insect—or by covering the plants so thoroughly with the poison that the insect will get a fatal dose in taking its usual food. A satisfactory poison must be sufficiently active to kill quickly. It must be inexpensive. It must be sufficiently stable that it can be mixed with some other chemicals in water, or in a dust, without changing its toxicity or making it harmful to plants. It must remain stable during shipment and storage. It must be generally available in large quantities. It must not repel the insects against which it is to be used. It must spread uniformly and adhere well to the plant surfaces to which it is applied. The ideal insecticide should not leave any residue dangerous to the health of man or animals on the plants treated. The margin of safety between the dose necessary to kill the insect and the dose that will burn or damage the plant should be as large as possible. Few substances meet even the majority of these requirements. The most widely used stomach poisons are those composed of some form of arsenic, such as Paris green, lead arsenate, calcium arsenate, zinc arsenite, etc. A few others, such as sodium fluoride, the fluosilicates and hellebore have come into general use. Some research is being done in the use of organic arsenicals, and may lead to something of real value. Generally speaking, the killing power of an arsenical is in direct ratio to the per cent of arsenic it contains. The danger of "burning" or injury to plants is in direct ratio to the percent of its arsenic that is present in water soluble

form; since such water soluble arsenic can enter the living parts of the plant foliage and poison them. The ideal arsenical would be one having a very high arsenical content, none of which should be soluble in water, but all of which should be readily soluble in the digestive juices of the insect.

In order to kill an insect with stomach poisons the insect must swallow the poison. Many insects obtain their food by piercing the plants with a sort of beak and sucking the juices from the vein of the plant. These insects will pierce directly through a coating of a stomach poison without so much as obtaining a trace of it. No effective method of poisoning the sap of plants has ever been discovered, consequently these insects must be killed by the use of *contact poisons*, or poisons which can enter the body of the insect through the spiracles or in other ways than through the mouth, or they must kill by suffocation. Obviously, only those insects which are hit by the insecticide will be affected. Unlike stomach poisons, contact poisons cannot be applied in advance of an expected outbreak as a preventative. Neither will they prevent reinfestation. Nevertheless, they constitute one of the main class of insecticides.

Of all contact insecticides, nicotine is probably the most widely used, although its supremacy has been seriously threatened by others in the last few years. It usually appears commercially as an aqueous solution of nicotine sulfate. Free nicotine is more active; as a matter of fact, the action of the solution is probably due to the free nicotine formed by hydrolysis. Its mode of action is unknown; it probably acts both as a contact insecticide, gaining access through the spiracles and affecting the respiratory system by capillary action, and as a vapor in which form it acts as a fumigant. The former action probably takes place because of the selective wetting ability of oils on the insect surfaces. It has been quite definitely shown that the addition of oils, such as kerosene or light lubricating oils to nicotine quite materially increases the insecticidal activity. This seems undoubtedly due to the superior wetting ability of the oil, and the subsequent carrying of the toxic agent to the proper place for action. Obviously, if the insecticide is not applied in the right place, it cannot have the desired effect. Undoubtedly a great deal of valuable information could be obtained by a serious study of the wetting properties of various oils. There is at present a great deal of confusion between wetting properties and spreading, the latter depending upon both wetting ability and surface tension. It is quite conceivable that a liquid with very low surface tension might spread easily over a surface without wetting it, and thus not even touch it. Because of the superior wetting ability of certain oils, they have found extensive use in sprays. In most cases, their action seems to be largely due to clogging of the spiracles with subsequent suffocation. In a few cases however, a toxic substance seems to be present, and a thorough study of these fractions would undoubtedly add to our knowledge of the relation of chemical constitution to insecticidal activity, and inci-

dently form another outlet for the products of the oil companies. Thus a certain fraction of a California crude has an insecticidal activity against flies that is comparable to the best fly-sprays containing pyrethrum.

The active agent in the commercial fly-sprays is obtained by extracting the dried heads of three species of *Chrysanthemum* flowers. The commercial dried flowers are called Pyrethrum powder. The extraction is usually made with kerosene and the subsequent sprays are consequently kerosene solutions. Approximately one pound of the ground flowers are required per gallon of spray, although this amount is reduced considerably by unscrupulous manufactures, to the detriment of the spray. Recently more efficient extraction of the active agent has been obtained by the use of acetone, subsequently recovering the acetone by vacuum distillation and dissolving the extract in kerosene or suitable diluent. Water is satisfactorily used in barn and dairy sprays, but kerosene is still universally used in household sprays as it does not stain the furnishings.

The active agent of pyrethrum has been isolated and its structure determined by Staudinger. The toxicity was due to the presence of two related substances which he named Pyrethrin I and Pyrethrin II, both of which were esters of a substituted cyclopropane acid with an allene substituted cyclopentanone alcohol. Although Staudinger synthesised a number of compounds approaching these in structure, he was not able to secure one of insecticidal activity even approaching the toxicity of the pyrethrins. There is no insecticide which has a usefulness approaching pyrethrum. It is exceedingly active against flies, mosquitoes, and any flying insect. It needs only to reach the insect in order to kill. It is about equally effective in oil, water, dry powder, or almost any carrier as long as it gets to the insect. It kills by contact, and thus is finding real use in garden sprays. A water solution of the extract has no toxic action on the plant, and does kill any insect, either chewing or sucking, that it hits. It is equally effective against roaches, bed bugs, and all household pests. Its greatest shortcoming is that it is effective only when it actually hits the insect. It cannot be effectively used to *prevent* infestation. It cannot only be used *after* infestation has taken place. It is too expensive to use as an agricultural insecticide, and of course cannot be effectively used against borers.

Lime-sulfur, oil emulsions, soaps, etc., have been used considerably in certain types of infestations, and are useful when properly applied. However, they must be applied properly, at the right time, or they may do more harm than good. They have a serious burning effect on plant foliage, and are generally applied during the winter as a dormant spray.

Fumigants or poison gases are generally used when the insects and the products they are damaging are in a tight enclosure such as a house, storeroom, or greenhouse. Obviously they cannot be effectively used out of doors. They are, however, sometimes used to kill insects in the soil, in burrows, trees, etc., when a portable enclosure can be

utilized. Of all the fumigants possible of which there are legion, *carbon disulfide* is the peer, in fact no other fumigant even approaches carbon disulfide in penetrating ability. Its use is very limited on account of the serious fire hazard. For killing weevil and beetle infestations in grains, flour and other food products, no other fumigant will penetrate through the material to kill the insects at the bottom. A very thin layer of flour, indeed, is sufficient to completely protect an insect from heavy doses of many of the fumigants. The poison seems to be selectively absorbed by the flour and does not reach the insect. Carbon disulfide penetrates through thick layers of such materials and kills at even comparatively low concentrations. *Hydrocyanic acid* is most widely used, usually with a warning agent, in fumigations where the insect is comparatively easily reached. It is not effective where much penetration is required, and requires a fairly high concentration over a comparatively long period to be effective. Considerable care must be exercised in its use to prevent casualty, and it cannot be used for plant fumigation, except at low concentrations. It tarnishes metals, which are best protected by coating with vaseline prior to fumigation. *Ethylene oxide* has been highly recommended recently for grain fumigation, especially when used in connection with carbon dioxide. It seems to have unusual penetrating ability, and may, if economical, replace carbon disulfide.

A mixture of seventy per cent ethylene dichloride and thirty per cent carbon tetrachloride has been recommended as a household fumigant by the United States Department of Agriculture. It is relatively non-toxic to humans to the extent that they are well aware of its presence long before a toxic dose is obtained. It is non-inflammable, does not bleach or tarnish, and is fairly effective if used in a concentration of about fifteen pounds per thousand cubic feet. It has little penetrating ability, even failing in many instances to kill the larvae of clothes moth in the stuffing of a davenport after 24-48 hours of exposure. Consequently it is not too reliable. Most of the household fumigants sold in the trade are some variation of this formula, usually being diluted somewhat with kerosene.

Contrary to expectation, (and belief on the part of many) formaldehyde, phenols, creosote and the like are not effective insecticides. They may, and do sometimes act as repellants, but have little if any insecticidal action, in the ordinary sense of the word.

A serious study of the control of an insect must be preceded by a thorough study of its habits, life history and physiology. Unfortunately too little of this has been done and our mode of control has been largely rule of thumb-cut and try methods. An obscure habit of an insect may lead to a satisfactory method of control when properly utilized. Thus control of roaches is quite satisfactorily obtained by making use of the observation that a roach is very particular about the cleanliness of his legs. He cleans these by drawing them through his mouth. A little sodium fluoride scattered about where he crawls will

get on his legs; he draws the leg through his mouth to clean it, and about a half hour later, Mr. Roach is in the other world. One of the most difficult of species of insects over which to obtain control are the borers, notably the European corn borer, which now threatens our corn crops, and unless something unforeseen happens it will surely gain the upper hand. The most promising method of control is by soil disinfection at a time when the grubs are in the soil, but even this treatment is complicated by much danger to the soil and crops.

Dr. Clark, of the Smithsonian Institute, says "Our belief that we are controlling the spread of insects is wholly without foundation. We point with pride to the destruction of millions of pests through the use of soil poisons, contact sprays, Parasites, traps and what not. We place an incredible faith in the efficiency of our quarantine regulations, both to keep out foreign invaders and to prevent the spread of a pest once it has entered the country. We are relying upon fallacies, and research along wholly new lines would indicate that this is true. The whole trouble is that we have met the gigantic task of battling the insect world without quite knowing what we have to face. We have resorted to a kind of happy guesswork. We have assumed that insects are endowed with human intelligence, when, in fact, they have certain physiological attributes which make them almost supernatural. Little or no work has been done in insect physiology; we have had to guess at the extreme complexity of these organisms for lack of dependable data. Until we learn to respect and to hold in awe this type of life we shall make absolutely no progress. And in my opinion we cannot in any case do much more than stave off the time when the Age of Insects will succeed the Age of Man."

¹ Forbes "*The Insect, the Farmer, the Teacher, the Citizen, and the State.*"



DR. HUGH CLARK PRYOR

Dr. Hugh Clark Pryor, Head of the Department of Education, died the morning of December 19, 1931. Doctor Pryor was born November 29, 1881 in Lead, S. D. He graduated from the normal school at Spearfish, S. D., received his bachelor's and master's degrees from the University of Colorado in 1911 and 1912 respectively. Columbia University conferred upon him the degree of A. M. in 1917 and the degree of Ph. D. in 1926.

Doctor Pryor was a member of Kappa Delta Pi and Phi Delta Kappa, honorary educational fraternities, and a life member of the National Education Association. His educational experience covered that of high school teacher and principal in South Dakota and Colorado, principal of the University Training School, Boulder, Colo., Dean and Director of Teaching, Northern State Teachers College, Aberdeen, S. D., and Head of the Department of Education, Kansas State Teachers College from 1926 until his death.

Doctor Pryor contributed much to the literature of education by his research work and his writings. His "A Suggested Minimal Spelling List" appeared in the Sixteenth Yearbook of the National Society for the Study of Education. He had recently prepared the "Pryor Health Test" for Junior-Senior High Schools and was extending this test so as to cover the lower grades. He had prepared "A Manual for Student Teachers," "Outlines for Types of Teaching," and was co-author with Dr. Pittman of "A Guide to the Teaching of Spelling." He also contributed numerous articles to educational magazines.

The going of Doctor Pryor was a great loss to the Kansas State Teachers College and to the cause of education nationally. He was an outstanding scholar—a polished gentleman. The President of the Kansas State Teachers College and every member of the faculty appreciated his worth and regarded him as a *man* among men. I was his friend and knew him well. I know that the sentiment of all who knew him could well be penned in the lines of Fitz-Green Halleck:

"None knew him but to love him,
Nor named him but to praise."

EDGAR MENDENHALL

THE TREND

A growing tendency toward nationalization of education has been made evident by the offer this year to transmit to the International Federation of Home Economics in Frebourg, Switzerland, the membership of Americans who wish to cooperate. Thus far, fourteen Americans have responded.—*Journal of Home Economics*, Nov., 1931.

A new International Bureau of Progressive Education has recently been established in Los Angeles, sponsored by the University of Southern California, which seeks to "provide a clearing house for information about progressive schools for visiting educators, and to inform Californians of Educational progress throughout the world."—*Progressive Education*, Nov., 1931.

Plans are being made for a new demonstration college by the Teachers College, Columbia University, designed to train creative teachers for elementary, secondary, and nursery schools. It will open the fall of 1932, and only students of outstanding ability and personality will be admitted. There will be no quantitative requirement of hours or credits, but a qualitative standard based on maturity and mastery of essential field.—*Progressive Education*, Nov., 1931.

Visual instruction as an educational feature has made a decided advance in the past two years, having been found effective in colleges and universities as well as in the grammar school. Each year \$10,000 to \$75,000 is spent on visual education by the larger school systems, the main part of which is motion pictures. Not only have schools utilized them as a means of education, but industrial and governmental agencies as well. The League of Nations is sponsoring a program of pictures to encourage the spread of International Peace. The Soviet government has found it very helpful in combating illiteracy, and in acquainting its people with the Five Year Plan, and England uses it in teaching modern agricultural methods to the natives of Africa and India. Canada, France, Germany, and Austria are also adding it to their systems of national education.—*School Executive Magazine*, Sept., 1931.

A course in the direction of day nurseries has been added to the curriculum of the Teachers College of Columbia University for the winter of 1931-32.—*Home Economics News*, Oct., 1931.

Rapid increase in the use of the radio as a means of education caused the last Congress to authorize the position of Specialist in Education by Radio in the Office of Education Staff.—*Journal of the National Education Association*, Oct., 1931.

The National Radio Commission is quoted as estimating that in

one month in 1930 educational programs took up 3,400 of the total 34,000 hours in which radio stations were on the air throughout the United States.—*Journal of Home Economics*, June, 1931.

At the present time three surveys of national education are being conducted by the Office of Education: (1) a report on twenty-four nation-wide studies of high schools, (2) the National Survey of the Education of Teachers, and (3) the National Survey of School Finance.—*Journal of N. E. A.*, Oct., 1931.

Deposits made by pupils in school savings banks amounted to over \$29,000,000 in 1930, according to reports from the Federal Office of Education and the American Banking Association.—*Journal of Home Economics*, June, 1931.

Art in the public schools of America is today in danger of stagnation from overdirection. The University of Wisconsin offers a course in Creative Art, in which all sizes and ages of people work. The children are learning valuable lessons in self expression and creativeness. Another aim of this school is that of testing out methods to solve actual school room problems. This School of Creative Art believes that what happens in a child's mind is more important than what happens on the paper.—*School Arts Magazine*, Oct., 1931.

COLLEGE ENROLLMENTS

Preliminary figures of college enrollments indicate almost exactly the same number of students as last year, with a fractional gain. The Boston Transcript, compiling the enrollments of New England colleges finds a net increase of 244 students, this year's total being 39,222, as compared with 38,978 a year ago. These figures do not, however, include the enrollments at Boston university and Trinity college. An Associated Press compilation from 144 universities and colleges throughout the country shows 384,481 students enrolled, as compared with 394,075 at the same time a year ago.

The inference is that the yearly increase in college enrollments has been checked, but that the depression has not yet reduced the actual number of students. It is fair to say, however, that enrollment figures are a little difficult to interpret as evidence of the public demand for higher education. Many institutions, especially the large city universities, have so expanded their vocational and extension courses that the total number of students has almost no meaning at all. A person who is enrolled in the vocational department of some university is counted as a college student, where as if he takes work of similar grade in some noncollegiate institution, he is not counted.

The Boston Transcript limits its compilation to "full-time students in college." Yet even this makes it necessary to count vocational students in such institutions as Northeastern and Simmons, while vocational students in the Boston Conservatory of Music are disregarded. A year ago nearly 4000 persons were registered in the college of business administration at Boston university. Presumably these would be reckoned as college students but persons taking courses in the private commercial schools would not. Besides the question of statistical consistency there is no more important question as to what classes of work should be considered as of college grade, if only for purposes of tabulation. The proliferation of vocational courses at such institutions as Columbia and New York university in recent years has imparted to university enrollments an overwhelming numerical magnitude which is not matched by their educational significance. It will probably take more than one book like Dr. Flexener's "Universities" to subdue the trend. But we are warned not to be bewildered by figures.—*Springfield Republican*, Nov. 10, 1931.

BOOK NOTICES

ATCHISON, ALISON E., and UTTLEY, MARGUERITE. *Across Seven Seas to Seven Continents*. x+316 pp. The Bobbs-Merrill Co., Indianapolis, 1931.

Across Seven Seas to Seven Continents is the first book in a Geographic Series. For the teacher trained in "Relationship" geography it fairly bristles with information. The style is interesting and concise.

Objectives for the fourth grade answer the questions: How is man fitting his food, his clothing, his occupations, his recreation into the environment in which he lives. The authors have selected regions where relationships are simple and, therefore, obvious; where people are directly in touch with natural resources, using them without much preparation. Striking contrasts—people living in hot, wet lands, in hot deserts, in polar areas—arrest the attention of the pupil and afford an opportunity for imparting a knowledge of climate, that in the abstract could not be presented to the fourth grade.

The make-up of the book is attractive. The pictures have geographic quality and many of them are not found in other books used in the intermediate grades. The exercises can be used to advantage in emphasizing relationships.

ETELKA HOLT

THOMAS, KATHERYNE COLVIN, *Asia, The Great Continent*, xii+420 pp. The Bobbs-Merrill Company, Indianapolis, 1931.

This book, one of a series, is apparently intended for either fifth or sixth grade. The content is interesting and valuable, but in many instances the material is not presented from the geographical standpoint.

The author sets out in the preface her concept of geography as the study of relationships between man and his natural environment. In a "Geographic Series" historical facts would then be introduced only if and when they contribute to a better understanding of geographical relationships. The reader is disappointed to find the first chapter, entitled "The Journey of Marco Polo," devoted entirely to a historical narration of Polo's adventures in Asia. In several other chapters the introduction is purely historical.

The fifth grade pupil is familiar with relationships connected with food, shelter, clothing, and travel; and acquires an understanding of work relationships. In the sixth grade he is prepared for more advanced thinking and is ready to consider relationships which underlie density and distribution of population and the many cultural features which make up the geographic complex in a given region. The general standard of living and the relative importance of various countries in world affairs are within his capacity. The book does not call into play the geographical understandings which should mark the work of the sixth grade.

Important devices for developing geographical understandings and skill in the sixth grade include (1) the use of political units as organizing centers, and (2) the use of maps, graphs, and pictures—both as a source of geographical information, and as a device for developing skill in the use of geographical tools. The author by the use of political units has grouped her material to good advantage; but her illustrations fall short of the high standard expected from a casual glance at the volume.

The diagram on page 49 and its explanation in the text is an excellent piece of work. The maps on page 253 might be used to bring out the most important relationships between physical features in India and the occupations of the people, but this is not done in the text. Some of the pictures are excellent; some are entirely lacking in geographical quality, e. g. portrait of Marco Polo, municipal offices in Bombay, and the interior of a silk mill.

The matching test on page 267 really determines the reader's knowledge of geographical relationships. Most of the exercises, however, do not test geographical understandings or serve to develop skill in the use of tools.

ETELKA HILL,

HILL, G. G., *Training for Everyday Business*, viii+273 pp. Lyons & Carnahan, New York, 1931.

This textbook is intended to furnish students in the Eighth or Ninth Grades such knowledge of everyday business affairs as every person needs to know.

It is written in simple language and is well illustrated. Lists of questions covering each subject discussed are placed at the close of the discussion to assist the student in understanding the discussion and to encourage reflective thinking.

Some of the topics discussed are: Character Building; Proper Use of Time and Money; Care of Office Records; Telegraph; Telephone and Postal Service; Dealing with Gas, Water, Coal, Grocery and Clothing Companies; Accounts and Budgeting; Common Business Papers; and Everyday Business Law.

WILLA M. DUSH

SHEPHERD EDITH E. and PARKMAN, MARY *Language and Grammar Series*. The Bobbs-Merrill Company, Indianapolis, 1928.

SHEPHERD, EDITH E. *Unit Studies in Grammar XIV* + 271 pp.

SHEPHERD, EDITH E. *Shepherd Tests in Grammar* + 40 pp.

SHEPHERD, EDITH E. *Guidance in Composition X* + 262 pp.

SHEPHERD, EDITH E. *Teachers' Manual for Unit Studies in Grammar* 38 pp.

SHEPHERD EDITH E. *Teacher's Manual for Guidance in Composition* 33 pp.

For junior high school teachers who feel the need of assistance in finding expressional situations in teaching composition, Miss Edith E. Shepherd, of the University High School, University of Chicago,

has designed a worthwhile help, *Guidance in Teaching Composition*. As the title suggests the book is a guide not a textbook; for the author believes that each teacher must discover her own expressional situations. In every chapter, excepting the first, is a description of an actual situation, followed by suggestions for similar expressional situations, and critical helps toward improvement in standards and habits of expression.

A second book, by the same author, *Unit Studies in Grammar*, is an excellent text for an elementary course in grammar given in the seventh and eighth grades. In an accompanying manual the author suggests the following steps in the teaching of each unit: (1) explanation; (2) study test (the purpose is to check immediately the pupil's grasp of the teacher's presentation); (3) exercises; (4) trial test; (5) diagnostic test; (6) remedial reteaching. *The Shepherd Tests in Grammar* has been prepared as a follow-up to test the comprehension of the pupil.

Miss Shepherd has chosen exercises and illustrations which coincide with her conviction that grammar and composition are phases of "daily traffic": her subject matter, in examples, is drawn from the child's knowledge of history, science, geography, nature, every day experiences.

ULISTA HAWKINS

PARKMAN, MARY R. *Guide Book for Language, Grade Four VII* + 221 pps.

PARKMAN, M (8ff R. *Guide Book for Language, Grade Four VII* + 234 pp.

PARKMAN, MARY R. *Language Ways, Grade Five XIII* + 244 pp.

PARKMAN, MARY R. and SHEPHERD EDITH E. *Language Ways, Grade Six. XV* + 271 pps.

PARKMAN, MARY R. *A Handbook for Teachers, (Guide Book for Language Ways, Grades III-IV and Language Ways, Grades V-VI) VII* + 205 pp.

Mary R. Parkman, Head of the English Department of the James Wilson Normal School, Washington, D. C., has prepared language books for grades three, four, and five; and, in co-authorship with Miss Shepherd, a language book for the sixth grade, illustrated in color by Vera Stone Normal. The plans and projects suggested are lively, interesting, appealing. Although emphasis has been given to the language work, accuracy in oral and written work has not been neglected. The book for grade six contains an introduction to formal grammar.

The Parkman Language Series have been prepared throughout with the child in mind: size, make-up of book, print are attractive; subject matter has been drawn from experiences and interests of the pupil.

ULISTA HAWKINS

FREEMAN, FRANK N., JOHNSON, ELEANOR M., STORM, GRACE E., and FRENCH, W. E., *Child Story Readers*. Lyons and Carnahan, New York and Chicago, 1927-1930.

Primer, 128 pp.

First Reader, 152 pp.

Second Reader, 296 pp.

Third Reader, 411 pp.

FREEMAN, FRANK N. and JOHNSON, ELEANOR M. Lyons and Carnahan, New York and Chicago, 1927-1930.

Fourth Reader, 480 pp.

Fifth Reader, 480 pp.

Sixth Reader, 480 pp.

An examination of this series of readers yields ample evidence that the authors have based their selection of materials and the methods and techniques advocated upon the findings of the more significant of the scientific experiments and investigations in reading. In the Primer, the First, the Second and the Third Readers, careful consideration has been given to size of print, to spacing and length of lines and to repetition of vocabulary. The material throughout the series has been carefully graded as to difficulty and provides for the growing and expanding interests of the child. In the Primer, the First and the Second Readers, reading for pleasure predominates. In the Third Reader, somewhat more than half of the material is of the recreatory type, while in the Fourth, the Fifth and Sixth Readers, about one-third of the selections is for pleasure. This one-third consists of both stories and poems.

BAKER, CLARA B., and BAKER, EDNA E., *True Story Series*. The Bobbs-Merrill Company, Indianapolis, 1928.

The Pet Poney, 164 pp.

Fifty Flags, 200 pp.

The Sailing Tub, 280 pp.

Dinty The Porcupine, 313 pp.

In recent years a great amount of time has been spent in investigating the choice of modern children in literary fields. Although the old traditional fairy tale is still beloved, greater pleasure is shown in the reading of life experiences.

Baker and Baker have prepared the True Story Series to be Companion books to Bobbs-Merrill Readers. The Pet Pony is prepared to follow the Bobbs-Merrill Primer—as the difficulty of words is the same. The other books of the Series follow the other Bobbs-Merrill Readers.

The True Story Series deal with stories of animals and children. As children are more interested in stories of other children and animals than they are in imaginary situations, a great many of these stories are taken from real situations.

Much of the material in the Upper book of the True Stories Series is valuable because of the foundation for future study of geography and science. The material is particularly suitable for silent reading to be followed by tests, but it also makes pleasurable oral reading material.

The books are especially valuable for remedial work because the grade placement is not on the cover, and a child in one grade that needs work in a book with fewer difficulties is happy to read the selections in the True Story Series.

The vocabulary of the series is so graded that it can be used after the completion of any basal reader.

The pictures throughout the entire series are life like and artistic, and the artists have succeeded in portraying the action of the story.

The stories hold the intense interest of children because of their plot, action and characterization.

THELMA J. CARNAGEY,
Supervising Teacher, Second Grade,
Horace Mann Training School.

WHITE, MARGARET L., and HANTHORN, ALICE, *Do and Learn Readers*, American Book Co., New York, 1930.

A First Primer, Boys and Girls at School, 56 pp.

Primer — Boys and Girls at Work and Play, 130 pp.

First Reader, Our Friends at Home and School, 167 pp.

Second Reader — Stories of Animals & Other Stories, 261 pp.

Third Reader, Interesting Things to Know, 289 pp.

Since educators have definitely found out that children learn by doing, that the learner is the active agent and that little is learned through passivity or listening, and as Dr. Kerschensteiner, the great German progressive educator says, "The school should be a laboratory not an auditorium," we feel that the *Do and Learn Readers*, just off the press, give to us interesting and unique ways of teaching reading to beginners and will create a desire to read which will last through his school career.

These very interesting books have a child appeal in that both method and content is determined by children's interests, experiences and needs.

The stories are those which children enjoy. They are about animals and activities of children. The activities and units of work are of such a nature that children in any locality would find them pleasurable and worth while.

The reading is easy enough for the child with ordinary reading ability. The sentences are interesting and have a true literary style. There is, throughout the book, much informational material presented which is taken from the child's immediate environment. Much oppor-

tunity for silent reading is included which gives a chance for review and checking.

The vocabularies used in this series have all been checked by standard lists and are the words most commonly used by children. The vocabulary used in the First Primer is carried throughout the series. This gives the child a chance to form permanent bonds and have the feeling of success in reading.

The stories are written in a pleasing, natural style, and have a desirable amount of repetition. The First Primer, "Boys and Girls at School" contains such interesting stories as, Our Store, Our Pets and Sister's Party. The Primer is no less interesting and has stories about Tommy Turtle, The Story of a Little Rabbit, What Big Brother Does, etc., and so throughout the series the appeal is strong for the interests of children at their own age level.

These books are bound in primary colors and add charm to the set. The illustrations in all the books are childlike, colorful and show activity, therefore adding to the interest in the reading material.

Each book has an interesting work book which gives the child definite instructions to follow and develops naturally his reading ability, when he performs the tasks set forth in his workbook.

Accompanying this series is a set of carefully prepared word and phrase cards which are to be used with the First Primer, Primer and First Reader.

The manuals with this series are a great aid to any teacher, experienced or inexperienced. They definitely show the teacher how to cover the work in the way best suited to materials and the child. Valuable suggestions are given for preparing bulletin boards, incidental reading, purposeful drill, dramatization. The units of work are skillfully prepared guides for the teacher.

ETHEL M. PECK,
Kindergarten Supervisor,
Horace Mann School.

SPENCER, PAUL R.; GANS, ROMA; and HORST, HELEN, *Thought Study Readers*. Lyons and Carnahan, New York, 1929.

Book IV 402 pp.

Book V 498 pp.

Book VI 549 pp.

In comparison with other readers published recently the Thought Study Readers bring a contribution of material of the work type in them which has been tested in the classroom and has been found practical. Very few readers of this type have been put to the test prior to publication.

The selections in this four book series include stories based on Arithmetic, Geography, History, Biography, Community Life, Science, Health and Nature which are developed in such a way as to train the child in

ability to read and interpret various types of reading materials. The training is accomplished by directions given to the pupil for studying the lesson and checking results of his work on each. Individual differences are taken care of in this way.

While the authors suggest that the readers are primarily for the use in the study period, they can be used as other silent reading. The vocabulary in each book makes it easy reading for the particular grade for which it has been written.

AVIS GRAWE,
Supervising Teacher, Third Grade,
Horace Mann Training School.

The material of the work or information type in the last three books of the series is unusually well chosen. The child who has been carefully guided through these three books most certainly should have a deeper interest in, and appreciation of, the industries, inventions, discoveries and true adventures of today's world.

Throughout the series the length of the lessons is such that each can be satisfactorily finished in the time usually allotted to reading in the grade in which the story is to be used.

The illustrations are apt and well placed; the colors used are bright and clear but not garish.

DAPHNE V. CROSS,
Supervising Teacher, Grade Four,
Horace Mann Training School.

Kansas State Teachers College of Pittsburg

Summer Session, May 31-July 29

Opportunity is afforded to students desiring to prepare themselves for teaching, general culture, and other professions.

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In addition to the regular faculty in Industrial Education Doctor C. A. Prosser, Director of William Hood Dunwoody Industrial Institute and Doctor John A. Lapp of Marquette University will give courses in the graduate division.

The following is a partial list of outstanding lecturers that will be heard during the coming summer session:

- Dr. C. A. Prosser, Director, William Hood Dunwoody Industrial Institute.
- Dr. John A. Lapp, Director, Social Science Department, Marquette University.
- Dr. C. S. Boucher, Dean, The College of Arts, Literature, and Science, University of Chicago.
- Dr. Eugene S. Briggs, President, State Teachers College, Durant, Oklahoma.
- Superintendent George Melcher, Kansas City, Missouri.
- Superintendent Merle Prunty, Tulsa, Oklahoma.
- Superintendent A. J. Stout, Topeka, Kansas.
- Superintendent L. W. Mayberry, Wichita, Kansas.
- Superintendent M. E. Pearson, Kansas City, Kansas.

For particulars write the Kansas State Teachers College, Pittsburg, Kansas.