

The JOURNAL of TRUE
Education

VOLUME 14

APRIL, 1952

NUMBER 4



The JOURNAL of TRUE Education

KELD J. REYNOLDS, EDITOR

Associates

ERWIN E. COSSENTINE
LOWELL R. RASMUSSEN

G. M. MATHEWS
ARABELLA MOORE WILLIAMS

CONTENTS

Cover Photograph <i>By Eva Luoma</i>	
Supreme Artistry <i>By R. L. Hubbs</i>	Page 4
Enlisting Teachers in Personal Work for Students <i>By Alfred W. Peterson</i>	5
The Effective Chapel Program <i>By John M. Howell</i>	8
Promoting the Church School Program in the World Field <i>By Otto Schubert</i>	10
Organization and Operation of a Vocational Library <i>By Lawrence Brammer and Milton H. Williams, Jr.</i>	12
Outcomes of Seventh-day Adventist Secondary Education in Michigan <i>By Clinton W. Lee</i>	16
False Dichotomies and Educational Perspective <i>By Paul B. Horton, Ph.D., and Rachel Y. Horton</i>	19
Meaningful Mathematics <i>By Charles H. Butler</i>	23
School News	25

ISSUED BI-MONTHLY, OCTOBER THROUGH JUNE, BY THE DEPARTMENT OF EDUCATION, GENERAL CONFERENCE OF SEVENTH-DAY ADVENTISTS, TAKOMA PARK, WASHINGTON 12, D.C. SUBSCRIPTION PRICE, \$1.50 A YEAR. ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT WASHINGTON, D.C., UNDER THE ACT OF CONGRESS OF MARCH 3, 1879.

SOMETHING TO STAND ON—An Editorial



IN PRESENT-DAY education we are in danger of forgetting that the best values in life are found and developed by human beings who are and dare to be different. This danger grows out of the technological civilization in which we live. Education does not function in a vacuum, but seeks to fashion man in the image of his contemporary philosophy. Our industrial civilization demands that the school shape men and women who are "well adjusted," who are "adapted to their environment." The environment to which one is to be adapted is constantly changing. Therefore adaptability as such becomes a virtue; and solitude, be it physical, mental, or spiritual, becomes a vice or at least "antisocial behavior."

On all levels of education the leaven is working. The toddling individualist must as quickly as possible become group-minded. He must learn to shun ideas or behavior which makes him different. Freedom of thought must as quickly as possible be transformed into the safer freedom from divergent thought. He must learn to swim with the stream. His education is satisfactorily progressive when it has become natural; that is, when educational direction has been reduced to a minimum and the child has been saddled with the responsibility for getting his own education from teachers and schoolmates.

On the secondary and collegiate levels the student meets educational pragmatism. This has been described as a doctrine defining truth as anything that will work, knowledge as a tool for day-by-day use, the good life as a daily calculation of agreeable versus disagreeable consequences, and reality as an infinite series of momentary occasions about which something must be done.

What manner of person is the end product of an education based upon such a revolving-squirrel-cage philosophy? The school has taught him that morals are relative to time and place; that unusual behavior is crude and possibly dangerous; that no concepts are worth fighting for, since they will probably be short-lived; and that the highest mental virtue is objectivity, that is, the refusal or inability to achieve personal convictions. This infinitely adaptable opportunist, socially integrated and charming though he may be, has not the tough fiber of mind and soul needed in these days to do battle with the world, the flesh, and the devil.

The basic philosophy, the aims, and the program of Seventh-day Adventist education are in conflict with these trends. We have long been on the alert against the philosophical interpretations of the evolutionary theories in textbooks. The philosophies of pragmatism and materialistic naturalism are equally dangerous and much more insidious. They are pleasingly presented in schoolbooks from the elementary school through the college. In the history of education and educational theory in the teacher-training schools they are studied as the most modern of educational concepts, backed by the names of William James and John Dewey. It requires keen perception and consecrated judgment for the Seventh-day Adventist teacher to separate the wheat from the chaff, to learn how to utilize the excellent techniques and procedures of modern education and yet keep sound and pure the Christian philosophy of education which conceives of education and redemption as complementary processes, and which ascribes to education the aim of restoring in man the image of his Maker.

Supreme Artistry

R. L. Hubbs

EDUCATIONAL SUPERINTENDENT
ARIZONA CONFERENCE

WHAT a wonderful process it is to take some jewels, springs, sprockets, cogs, and compensating mechanical devices and put them together to make a watch that will accurately mark the progress of celestial bodies as they move across the shelterless astral stretches of the open firmament, by which it is possible for us to measure in hours, minutes, and seconds, the flow of life's most precious essence—**TIME!**

It would be no less an adventure to record in color on canvas the symmetry, grace, beauty, and form of any one of nature's unique exhibits—blending the cosmic tints so that they soothe the soul. Such consummate and supreme skill and imagination delight the hearts of men and draw them nearer to the "one who is ultimate perfection."

The skillful artisan may take the tools and the strength, and from cold, mute, pulseless, inanimate stone chisel the exact features of one of earth's great heroes. Posterity may set it up in a public square or place it in a museum for the cultured to copy and admire, or in a hall of fame where following generations may see and remember with thanks and appreciation.

More wonderful than all these accomplishments is the work of the Christian elementary teacher! She pushes back the mountains of doubt. She levels off the foothills of ignorance. She opens up the gates of truth for the child's slow passage within, where the image of the Eternal is restored to the children of the church.

Teaching is just that interesting and that important. You are doing a work that no one else can do exactly as you do. How much more thrillingly you may

live in the classroom than you could if you were a watchmaker with constant temptation to lure the world to make its beaten path to your door for the timepiece. How removed you are from the handicap of those who, for money, are tempted to reduce artistic expression on the canvas to commercial art on paper. How much pride the world might incubate in your life if you were a famous sculptor who copies the features without the spirit, the form without the meaning.

The Christian teacher may claim with equal fervor—and gratitude—this beautiful and challenging statement concerning the work of the mother: "She has not, like the artist, to paint a form of beauty upon canvas, nor, like the sculptor, to chisel it from marble. She has not, like the author, to embody a noble thought in words of power, nor, like the musician, to express a beautiful sentiment in melody. It is hers, with the help of God, to develop in a human soul the likeness of the divine.

"The mother who appreciates this will regard her opportunities as priceless. Earnestly will she seek, in her own character and by her methods of training, to present before her children the highest ideal."¹

Truly "this work [teaching] is the nicest, the most difficult, ever committed to human beings. It requires the most delicate tact, the finest susceptibility, a knowledge of human nature, and a heaven-born faith and patience, willing to work and watch and wait. It is a work than which nothing can be more important."²

¹ Ellen G. White, *Ministry of Healing*, p. 378.

² White, *Education*, p. 292.

Enlisting Teachers in Personal Work for Students

Alfred W. Peterson

EDUCATIONAL SECRETARY
AUSTRALASIAN INTER-UNION CONFERENCE

AS IN the commercial world businessmen have adopted high-speed, assembly-line methods of manufacture, so in the field of education there is a tendency, in these times of heavy enrollments and enlarging curriculums, for schools to adopt methods that lose the individual student in the mass. Therefore, the teacher who is under the pressure of heavy classwork and extracurricular duties needs to be watchful lest he find himself a mere wheel in a great educational machine. Especially the Christian teacher, who understands the great objectives of Christian education and who realizes that he must meet his students again around the great white throne, will see in each one a candidate for immortal honors, and will not be satisfied merely with mastering the technical skills and procedures of teaching, lest the Master Teacher find him awkward and inefficient in his main task, the shaping of Christian personality.

Of course, skills and subject matter must be well taught. Of course, lesson assignments must be made, recitations heard, notebooks read, and papers corrected; but if the emphasis is upon the teaching of subject matter rather than upon the molding of young life, teaching easily can degenerate into a professional routine of recitations, grading, and percentile ranking—a deadening experience for both teacher and students.

Perhaps no generation of Adventist students has ever needed inspired teaching more than the present, because no previous generation of youth has ever found itself in a world so confused with strange philosophies, inverted values,

and almost-irresistible social pressures. Never before have students needed individual encouragement, counseling, and spiritual help more than at present. Without this personal attention to the individual student, teaching becomes a hit-and-miss occupation, the teacher missing more often than hitting the mark.

Inspired teaching is characterized by insight and sympathy. Beneath the crude exterior of careless attitude and thoughtless behavior, the teacher sees those traits and aptitudes which, when developed, make possible a vigorous Christian character and a high quality of service to both God and man. The inspired teacher sees as Christ sees.

"Christ discerned the possibilities in every human being. He was not turned aside by an unpromising exterior or by unfavorable surroundings. . . .

"The same personal interest, the same attention to individual development, are needed in educational work to-day. Many apparently unpromising youth are richly endowed with talents that are put to no use. Their faculties lie hidden because of a lack of discernment on the part of their educators. In many a boy or girl outwardly as unattractive as a rough-hewn stone, may be found precious material that will stand the test of heat and storm and pressure. The true educator, keeping in view what his pupils may become, will recognize the value of the material upon which he is working. He will take a personal interest in each pupil, and will seek to develop all his powers."¹

Through personal acquaintance the teacher understands and shares the struggles, aspirations, and deep longings of the student's heart. Personal contact alone can bring insight and sympathy and hope into the teacher's teaching and make its influence dynamic.

Personal work means exploring personality, discovering the student's aptitudes and attitudes, ambitions and hopes, problems and fears. Personal work brings the student's specific needs and problems

into direct focus, and enables the teacher to give intelligent help where needed.

Personal work means the teacher's giving the best of himself to the individual student—his larger experience, his keener and deeper insights, his idealism, his sincerity and kindness of heart, and his spiritual power. "In all true teaching the personal element is essential. Christ in His teaching dealt with men individually. It was by personal contact and association that He trained the twelve. It was in private, often to but one listener, that He gave His most precious instruction." ² The Master's way is the effective way. It lifts teaching out of a dead level and brings to the personal worker the thrills of the discoverer and explorer of new fields. The personal approach to the problems and needs of youth makes teaching exciting, challenging, productive, satisfying.

Personal work is so important to the success of the Christian school that every faculty, at the time when the teaching program is set up, should plan so that every student shall be personally interviewed by some teacher during the first quarter. It must be recognized that the practice of indiscriminately allocating the names of students to teachers for personal work may be a bit superficial, formal, and not wholly satisfactory; but at least it gives every student an initial out-of-class contact with a teacher near the opening of the year and opens the way for both student and teacher to become acquainted. As the year progresses and teachers become better acquainted with the personal needs of individual students, teachers will know whom they can best help. But every teacher should plan definitely to include personal work in his regular round of school activities.

There is no set time or place or method for doing personal work. Sometimes the student himself will create the favorable opportunity. At other times the teacher must create the occasion. Sometimes careful planning and long

pursuit are necessary if the "quarry" is wary and determined not to be caught in the soul winner's net.

In one of our colleges some years ago a young man who lived at his home in the village became a threat to the peace and quiet of the school. He was good in his classwork, but outside the classroom he was uncooperative and rebellious. His teachers could not get close to him. Then, on a Sabbath morning, one of the teachers called several of the young men together and placed before them the great spiritual need of the wayward lad and asked whether they would undertake to win him to Christ. They laid out a plan of attack and set about the task that very day. Week by week they met to pray for him and to report progress. The quest became exciting as little by little they succeeded in drawing him within the circle of their influence and away from the village gang. Finally, one Friday night at the consecration service, he rose and, with a manly confession, gave his heart to God. That little group who with the teacher had worked and prayed so faithfully for so many weeks were thrilled beyond words. For many years this group has shared in the service that man has given to the cause of God.

Sometimes the opportunity for personal work is thrust upon the teacher in an unexpected moment. It may come at the end of a class period when a student remains to inquire about an assignment. Sometimes a visit to the student's home or dormitory room will strengthen the bonds of friendship and open the way for personal work. Resourceful teachers capitalize on small opportunities.

C. C. Lewis, former president of Union College, was such a teacher. One year when the enrollment was large and a number of students were housed in the village, Professor and Mrs. Lewis made a friendly Sabbath afternoon call at the apartment of some young men. They brought with them a rice pudding, rich with raisins. Forever after, Professor

Lewis was regarded by those young men as one who had a more-than-professional interest in them. He had their hearts.

There are times when a teacher will need to give the student a chance to talk out of his heart in an atmosphere free of tension, perhaps while teacher and student walk and talk. Walking can relieve tenseness, and many a student has gotten the poison out of his soul as he walked and talked himself into a more cooperative attitude.

A shop can provide opportunity for fellowship and personal work. Perhaps no other teacher at Southwestern Junior College has so profoundly influenced the lives of so many young men as did H. H. Hamilton when he was instructor in woodwork during the early years when the shop was on the main floor of the old college building. There, among the benches, tools, and shavings, young men learned to make bird cutouts, lamp shades, and sturdy library tables; but they also learned to true up their lives, and scores gave their hearts to Christ and to His work.

One young man, vivacious, friendly, and a bit reckless, came to school from the wide open spaces of the West, and soon became popular with a certain clique. He had scored high in his entrance tests, but by the end of the first quarter his extracurricular activities had made it a question as to how long he could remain on the campus. The mathematics teacher, who had persuaded him to come to the school, in desperation went to some pains to "cultivate" him and by chance discovered a special interest in leather tooling, a carry-over from his church school days. He soon had the young man instructing him in the art. The teacher then invited a few well-chosen friends to join him in this hobby and thus built around the young man a circle of influence that completely changed the character of his friendships, his attitudes, his ambitions, his scholarship, and his choice of lifework.

A friendly word with students at social gatherings or during a recreation hour or even a casual meeting in a streetcar or bus may open the way for subsequent contacts. The teacher with a vision of his task will not overlook any opportunity for increasing his spiritual influence with a student.

In recent years much has been said regarding motivation; but, fundamentally, the motivation of the student is conditioned by the motivation of the teacher. For the teacher to discover through personal ministry the aspirations and deep longings in the heart of a student, to explore his aptitudes and abilities, and to grapple with his problems, is to feel the warming influence of a great sympathy. A teacher who has looked into a student's soul cannot but identify himself with that student's struggles and feel a mighty urge to help him make something of his life. Attitudes are contagious. The interest and earnest enthusiasm of the teacher kindles the interest of the student, and schoolwork takes on new meaning for both. We must ever remember that "the great motive powers of the soul are faith, hope, and love."²

Personal work will give direction and vigor to teaching. It will lay a burden upon the teacher's heart which can be eased only at the mercy seat, and it will immeasurably increase his ability to lead his students to the cross. Personal work is the secret of inspired teaching, which is a gift of the Spirit. The Spirit teaches through the teacher; He thinks through the teacher's mind, and through his lips speaks directly to the heart of the student. No more thrilling experience can come to a teacher than to see students respond to the Spirit's ministry. Skillful teaching mingled with earnest personal work will make our schools truly schools of the prophets, where Advent youth are recruited and trained for service.

¹ Ellen G. White, *Education*, p. 232.

² *Ibid.*, p. 231.

³ *Ibid.*, p. 192.

The Effective Chapel Program

John M. Howell

PRINCIPAL
BROADVIEW ACADEMY

QUITE generally the whole school program can be adequately judged by certain features obtaining in it. If I were asked what are the most important of these features, I would point to the chapel exercises, vesper and Sabbath services, and the Saturday night entertainments. I enjoy visiting classes and talking with teachers about the effectiveness of their teaching, but it seems to me that the spirit of the school is pretty well demonstrated in the above-named general exercises. And they are features that require long-range and careful planning. This article is dedicated to the chapel programs and how they can be made more effective.

Many institutions of higher learning no longer hold chapel exercises because of the students' attitude regarding them. In some cases moving-picture cameras were used to record the actions and attitudes of the student body; and since the schools did not desire to develop negative and injurious habits and attitudes, the general chapel periods were discontinued. Many secondary schools of the land would gladly follow the example of these institutions of higher learning if it were possible for them to do so.

Changing times, changes in teachers and students, and changing techniques of handling student bodies certainly should indicate a change in the type of program presented. Warmth of spirit should not be allowed to lag but should be fanned into greater flame as the days come and go. How can that be done, when so many things have entered to occupy the time and attention of the boys and girls who come to sit in our classrooms for a few hours a day, five days a

week, during the school year? That is the challenge teachers must meet.

First, it would seem that a very definite program for chapel exercises should be planned well in advance. Certainly no principal can hope for success in so important a feature of his schoolwork—one which Satan is most desirous of disrupting—if he waits to see what the week or the day will bring forth. A definite schedule should be carefully planned. Time should be set apart for a distinctly devotional period, and careful study should be given to what is to be presented in the time remaining after that. A little careful thought and planning will clear the chapel programs of much dullness, and the enjoyment the boys and girls derive from them will be reflected in better attitudes and conduct—another case of “an ounce of prevention is worth a pound of cure.”

a. Specific fields might be explored on the several days of the week. In the elementary school we suggest that Monday be devoted to a character-building theme; Tuesday, a study of health as related to the boys and girls; Wednesday, the JMV meeting; Thursday, current events; and Friday, a spiritual topic. Prayer bands should be held in connection with the Monday, Wednesday, or Friday program.

b. The outstanding events—denominational, national, or general—should form a part of the chapel schedule in any academy. Careful forethought will make it possible and convenient to give profitable attention to the several features suggested. Especially has America been blessed with a spiritual heritage that we cannot afford to miss.

c. Special weeks might be observed occasionally: Health Week, Good English Week, National Education Week, Book Week, American Bible Society Week, and the two Weeks of Prayer.

Second, those who are to have charge of such periods should be well prepared for their task. And do not forget groups in planning for those who are to take part: Bible, English, and history classes; the Missionary Volunteer Society; the Student Association, and the several clubs functioning in the school. Needless to say, the materials to be presented by these several groups will need careful supervision, and the teacher in charge should feel that what is presented will be credited—or charged—to him, whether good or ill. But the more the students participate, of course within certain limitations, the more active cooperation and interest they will show in the chapel exercises.

Unless especially gifted speakers are to occupy the time—and I dislike to use the word “occupy” because it savors of some of the drabness I have heard about—those who are to take the program should be required to make careful and specific preparation for the part they are to have. No one likes to listen to a poor speaker, but few people need to be poor speakers if they can have ample time in which to prepare—and then utilize the time in preparation. It is unfair to any member of the staff to be “put on the spot” by being asked to be a minute man in the matter of chapel programs.

Let the speaker first be sure that he has something to say—something to contribute to the present or future welfare and benefit of those who are to listen. If he doesn't have something worth while and important to say, he should not presume to waste the time of a hundred or more people, as well as his own. Children and young people are not easily fooled. When I attended my first camp meeting after returning from South America a few years ago, an elderly min-

ister was giving a talk. It was an almost-perfect repetition of what I had heard him say nearly thirty years before, and I was rather admiring his good memory! Two junior boys were seated just in front of me, and one turned to the other and remarked, “He's as up to date as last year's bird's nest, isn't he?” That remark shocked me out of repetition of once-upon-a-time-worth-while materials. The speaker should also be careful that what he has to say is on the level of the boys and girls who are to listen to him; yes, and on the “level” too, for I've heard stories that would make the impossible seem more than feasible.

Let the speaker use the time allotted to him and then *stop*. Martin Luther used to tell his young preachers, “Stand up, speak up, then shut up.” A great many people can stand up and speak up, but they seem to forget the shut-up part of the program. Someone has said that an optimist is one who reaches for his hat when the preacher says, “With this thought I close.” And indeed, in many places and under many preachers, he *would be* an optimist, for it is not uncommon to hear that or similar phrases several times before the speaker manages to take his seat. And unless the speaker is really gifted or the subject of special interest, fifteen to twenty minutes is plenty to use in addressing students of the academy age. Someone has said, “The longer the spoke, the greater the tire.”

The Seventh-day Adventist manual “Standards for Secondary Schools” has this to say on chapel services:

“These shall be planned so as to foster a positive spiritual atmosphere. The minimum shall be three chapel periods a week. The majority of the chapel programs shall be definitely inspirational and spiritual. Where there are only three chapel periods a week, at least two shall be of a spiritual nature. All chapel programs, regardless of subject, shall be opened with a devotional period.”¹

—Please turn to page 31

Promoting the Church School Program in the World Field

Otto Schubert

EDUCATIONAL SECRETARY
SOUTHERN EUROPEAN DIVISION

THERE is no need to emphasize the importance of our schools. We Seventh-day Adventist educators have a more-or-less definite conviction that the work in which we are engaged plays an outstanding role in our denominational endeavor. We are perhaps even proud of the almost-perfect system of education, from the elementary church school up through the academy and college to our institutions that offer graduate studies. We also zealously promote the school with which we are connected. But do we all experience the same enthusiasm for the lower steps of the ladder, the church school, if we do not happen to be in church school work ourselves?

In order to promote and develop a stronger church school program in our world field, we must believe in it. There are various reasons why we sometimes lack this convicting faith. One is expressed in the question, *Can Christian education really compete successfully with secular education?*

We openly admit that we do not have the facilities or the teaching personnel to compete with secular schools. Often we do not have the buildings with up-to-date classrooms, libraries, and laboratories. Yes, we usually have only one teacher for several grades, and this teacher may not even have a very high academic degree. Our pupils are gathered from a wide area; some use a great deal of precious time in going to and from school. All this seems to indicate that it is at least difficult to compete with

public schools, which have the means at their disposal to ensure success. Still, we firmly believe that Christian education is better than secular education.

There is our educational aim. Is it merely to impart knowledge and to develop the intellect? If it were, we would not need our own schools; for in this respect, we admit, the children of the world may be wiser than we. But our aim includes much more. Then there are the methods of reaching the aim. The secular school applies principles of education based on a materialistic philosophy and psychology. We believe in the principles based on the Word of God and the educational writings of the Spirit of prophecy. Thus there is a fundamental difference between the secular schools and our own. Even representatives of secular education recognize this difference, and therefore differently evaluate the work we do.

I recall an experience I had a few years ago in one of our overseas training schools. The country was ruled at the time by a democratic government. The public school inspector was a progressive educator. Because we had some pupils who, on account of their age, were still under public school law, he had to supervise certain classes, and I became well acquainted with him. Soon I took occasion to speak with him about the principles of education revealed through the Spirit of prophecy. He became very much interested, and thought they were excellent. A few years later the govern-

ment changed, and a new inspector representing the political philosophy of dictatorship replaced our friend. When I was well enough acquainted with him I told him also of our educational principles. He exclaimed with enthusiasm, using almost the same terms as had his predecessor, that we were doing an excellent work and that we could do it much better than they were able to do in the public schools.

At present we are conducting a small church school of fifteen pupils in Berne, Switzerland. The school laws in Switzerland are very strict. The school is periodically inspected by the city authorities. Can we compete with the large city schools? One would think not, for we have only one teacher with several grades in one classroom, and other things are not as they should be. We do not even try to compete in things of the world. But we are endeavoring to follow Christian principles of education. And the result? The authorities are well pleased and are recommending the little school to others not of our faith if they desire that their children receive not only information but a true education.

Another question might be raised: *Do we really understand Christian education?*

One reason why our educational program is rather weak in some countries is the lack of understanding of Christian education. Not only church members do not know what we really mean by it, but many a minister and leader has only a superficial conception of our educational work. Even some of our educators believe that Christian education consists mainly of copying a "good" secular school program, with some Bible added. They reason very logically that, since the public school is better equipped than our own schools, it is preferable not to have schools of our own at all. Our children should simply be sent to a "good" public school, and we should teach them Bible at home or in the

church. In some countries where the school laws absolutely forbid the establishing of church schools, this may be the only way possible, and in such cases it is necessary to give our children systematic Bible lessons in addition to the regular work of the public school. We have organized such Bible classes in many parts of Europe. But this is no substitute for true Christian education.

True Christian education is something much different. It is based on a Christian or Biblical philosophy of life. The aim, the means, the methods, and the educational psychology are different from a philosophy of education based on a secular, usually rationalistic, outlook on life. One weakness in our educational work is that many of our own educators copy their aim, methods, and psychology from a modern, progressively materialistic philosophy of life and education. There is, for instance, the fad of tests, which often take it for granted that the human soul reacts always in the same manner, as inorganic matter. The elements of free choice and of the influence of the Holy Spirit are entirely ignored.

If we want to promote and develop our educational work, including the church school, throughout the world field, we must be sure ourselves that we have our own philosophy of education, which cannot compare or mix with a secular philosophy. We must have the profound conviction that it is not our task simply to pattern our schools after those of the world but must make them different. Everything must be governed by principles derived from the Bible: the general conduct and organization of the school, the discipline and the methods of enforcing it, the curriculum, the content of the subjects taught, the methods of teaching. And, above all, the teaching personnel and other school employees must be true Bible Christians. Only then, it appears to me, will our schools grow and develop and fulfill the task for which they have been established.

Organization and Operation of a Vocational Library

Lawrence Brammer
and Milton H. Williams, Jr.*

THE complexity of the American job scene and the increasing demand for vocational counseling services has created a need for a large amount and variety of educational-vocational information. The volume of occupational materials published by public and private institutions indicates that this need for materials is being met. Agencies which must use this mass of literature need techniques for obtaining, classifying, storing, and distributing the information.

Questions by counselors, administrators, and advanced students in the field of guidance indicate that the majority know little about the sources, systems, operation, or minimum requirements of vocational libraries. This is verified by experience of the writers in institute workshops conducted in California public schools and by inquiries received at the Stanford Vocational Library.

A survey of *Occupations* for the last 10 years indicates that of approximately 720 major articles, only 22 were devoted to the subject of occupational information services in general. Only seven of these articles dealt directly with the "know-how" questions involved in organizing, operating, and integrating a vocational library.

Kefauver and Davis [7] in 1933 reviewed the titles of articles on guidance in five educational magazines from 1927 to 1933. Schultz [14] continued this review, covering the period 1934 to 1939. Kefauver and Davis classified the articles

into 11 categories, none of which covered this subject of organizing information. Schultz added three more divisions; but his analysis still did not include discussions of filing occupational information. Most of these 22 articles cover detailed aspects of only one phase of library organization. Several books have been published, however, on different phases of the subject. [2, 12, 16] Results of this literature survey indicate a need for a structured discussion of the fundamental questions concerning the organization and maintenance of a vocational library.

The purposes of this article are: (1) To present some organizational problems of a vocational library through the medium of a check list. This check list could be used either for the design of new libraries or the evaluation of existing facilities. (2) To discuss the operation and maintenance of a vocational library.

I. General Questions

- A. What problems do we face when organizing and operating a vocational library?
- B. What information do we need, and how do we get it?
- C. How should we file the material?

II. A Check List

Varied local needs preclude presenting ready-made answers to the questions raised above. The following list, however, is designed to insure consideration of the basic problems involved in organizing a complete vocational library.

- A. What are the purposes of our vocational library?
 1. Providing information for vocational and educational planning.
 2. Placement.
 3. Source file for occupational research.
 4. Information for use in teaching units.
- B. What are the characteristics of those using the library?

*Lawrence Brammer is dean of men and assistant professor of psychology at Sacramento State College, California, and was formerly head counselor at the Stanford University Counseling Center. Milton H. Williams, Jr., is doing graduate work in clinical psychology at the University of Nebraska.

1. Age, educational, and occupational levels.
 2. Types of probable employment or further education.
 3. Expected frequency and duration of visits.
- C. Where and how do we start?
1. Adopt the most suitable filing plan. (See Section E.)
 2. Gather bibliographies of free and inexpensive material. (See Tables I and II.)
 3. Select materials to cover the occupational fields most useful in your situation.
 4. Follow suggested ordering procedures under Section G, 1.
 5. Retain those materials which meet the criteria of a good occupational monograph. See [13] for an outline of these criteria.
- D. What kinds of occupational information should we obtain?
- In addition to occupational bibliographies many organizations publish useful occupational literature. Writing to organizations in the categories indicated in Table II will yield much valuable information. Ask your school librarian for lists of scientific societies, companies, and professional organizations to obtain addresses. A helpful government publication on the topic is *Counselor Competencies in Occupational Information*. [15]
- E. What types of filing systems are available?
1. *Alphabetical*.
 - a. *Simple alphabetical*. Consists merely of filing the information alphabetically by job title or by the occupations in your community. It is simple to use and easy to maintain, especially if the library is small. All items should be shelf-marked. Folders and topics are added as materials accumulate, but when materials expand greatly or detailed breakdowns are needed, the alphabetical system becomes unwieldy. Neal [11] describes one type of facility using this plan.
 - b. *Parker*. Alphabetical grouping according to broad functions. May be less prone to filing error. Allows for easy subdivision. Good with small or moderate sized units.²
 - c. *Science Research Associates (SRA)*. Materials are classified in 70 general categories. The various headings are filed alphabetically, e.g., Agriculture, Rail Transportation. Contains a cross-reference system.²
 - d. *Michigan Plan*. A good alphabetical system for a moderately large school library. Based upon 162 fields of work. Contains printed cross-reference cards. Available commercially.³
 2. *Classified*.
 - a. *Census classification*. Composed of 11 major occupational groups under which are 451 titles. These groups are altered decennially. The categories are too broad for the library carrying detailed information.⁴
 - b. *Dictionary of Occupational Titles*. Uses the DOT numerical code scheme. The most useful system for large libraries. Can be expanded indefinitely and still be systematic. A complex system, how-

ever, needing an alphabetical locator such as Vol. I of the DOT, or a card file. Contains industrial as well as occupational categories. Needs at least a part-time person for maintenance. Handville [3] gives suggestions for adapting the DOT to occupational filing purposes. See footnote 5 for publisher of prepared filing materials for this system.

- c. *Dewey Decimal System* (school libraries). Includes materials as an integral part of the school library. This places them in the hands of trained librarians, thus the materials usually are well cataloged and maintained. On the other hand, materials are scattered through the library according to its classification system and usually do not receive the special attention they deserve. Many schools keep two files—one in the school library, the other in the guidance department.
- F. What equipment is necessary?
1. Table and seating facilities.
 2. Book cases—for college catalogs and occupational books.
 3. File cabinet—at least one four-drawer file for letter-size sheets and pamphlets. This file may be placed on a dolly for ease in moving from room to room for workshop purposes. See Hershey [4] for a description of a mobile library.
 4. File folders and labels.
 5. Locator system—
 - a. Standard 3" x 5" cards in box. Sample card heading:
Artist, commercial; see Artist folder in drawer #1. See also: Advertising, Drawer #1.
 - b. Typed or mimeographed sheet of occupational folder subject headings.
 - c. *Dictionary of Occupational Titles*, Vol. I.⁵
 6. Bulletin Board—for civil service announcements, clippings, cartoons, etc.⁷
- G. How can we operate our library efficiently?
1. *Ordering materials*. Local experience has indicated that mimeographed form postcards are time savers when ordering routine materials (college catalogs, free pamphlets, etc.). For materials pertaining to occupations two copies are requested to cover such exigencies as loss, cross-filing, and loan problems. On the other hand, it is often possible, by using a personal letter on the institution letterhead, to obtain inexpensive materials free or at a discount. This is especially true with nonprofit organizations which publish at cost and are pleased to have their available material represented in educational institutions.
 2. *Mailing Lists*. It is well to get on as many mailing lists as possible. An efficient procedure is to add a line requesting mailing list privileges to all letters.
 3. *Keeping materials current*. By virtue of a position on a mailing list one can be assured of receiving notices of new publications. It is advisable to maintain a publisher file wherein one can record alphabetically the names and addresses as well as brief descriptions of the type of materials published. For additional lists of

TABLE I

Bibliographies of Occupational Information

<i>Publisher and Cost</i>	<i>Comments</i>
<p>"What to Read" Kit of Occupational Bibliographies. B'nai B'rith Vocational Service Bureau, 1424 16th St., Washington 6, D.C. \$3.00.</p>	<p>Comes in perforated sheets with four bibliographies to a sheet. References annotated as to suitability for various school levels. Source and price given for each publication listed. Annotated to the <i>DOT</i> system which has since been altered slightly.</p>
<p><i>Occupational Pamphlets: An Annotated Bibliography.</i> Gertrude Forrester. New York: H. W. Wilson Co., 1948. \$4.00.</p>	<p>Widely used and very complete with about 4,000 pamphlets listed which were published before 1948. Includes plans for filing the material, although not in detail.</p>
<p><i>Occupations for Girls and Women: Selected References.</i> Women's Bureau, Dept. of Labor and U.S. Office of Education, Federal Security Agency. \$.30.</p>	<p>} All of these government publications contain extensive bibliographies of useful, authoritative, and inexpensive material.</p>
<p><i>Government Monographs on Occupations.</i> W. J. Greenleaf, Div. of Vocational Education, U.S. Office of Education, Federal Security Agency. Free.</p>	
<p><i>Occupational Outlook Publications.</i> Bureau of Statistics, U.S. Dept. of Labor. Free.</p>	
<p><i>Occupations, Professions, and Job Descriptions.</i> Government Printing Office, Superintendent of Documents. Price List 33a, 2d Edition, July, 1949, Free.</p>	
<p><i>Guidance Index.</i> Science Research Associates, 228 So. Wabash Ave., Chicago 4, Ill. \$4.00 per year.</p>	<p>A monthly annotated bibliography containing a list of briefs and pamphlets.</p>
<p><i>Occupational Index.</i> Personnel Services, Main St., Peapack, New Jersey. Quarterly, \$7.50 per year.</p>	<p>Contains brief annotations of current material. Appears quarterly. Write the publisher also for a list of <i>Occupational Abstracts</i>.</p>

publishers and sources see Kitson [8, 9, 10]. Since much occupational literature goes out of date rapidly, the counselor must check his vocational information against current bibliographies and government statistics.

4. *Checking out materials.* Whether or not a check-out plan is practical will depend on local factors such as help available and case load. Few complaints are received about the Stanford Center's policy of no check-outs. Additional clerical work would be involved, and it would also seriously reduce the advisory function of the occupational specialist.
5. *Keeping the staff informed on current and new materials.* This is one of the prime functions of the library. It may be achieved by desk-routing new material, weekly staff meetings, reports, and weekly bulletins.

H. What elements constitute a complete vocational library?

1. *A vertical file* of classified occupational information on specific jobs.

2. *School and college catalogs.* College catalogs are filed by state, while special schools are filed by subject, e.g., "Art Schools."
3. *A Browsing Shelf* and "idea" materials for those still "shopping." These materials are primarily general overviews of occupations and industries, occupational periodicals, and collections of brief job descriptions.
4. *Directory service:* business and school directories such as *Thomas' Register of American Manufacturers* and *Brumbaugh's American Universities and Colleges*.
5. *Special file:* such subjects as how to get jobs, apprenticeship standards, minority problems, labor problems, wage and price trends, and regional business information.
6. *Counselors' professional library:* contains reprints and texts of value to the staff for reference and professional advancement.

In the foregoing pages, an attempt was made to give some general structure to

the problems involved in the organization of a vocational library. In addition, some primary sources of information were mentioned which would be most useful to those organizing a library.

The books and articles mentioned in the text and listed in the bibliography offer detailed answers to many specific problems of organization.

The vocational library can be an attractive and valuable place for students to do their life planning. The self-direction of clients, which is currently stressed by counselors, may be developed further through a vocational library so organized and administered that clients may go directly to the files, find their information, and replace the materials, without the intervention of a staff member.

Further stress must be placed upon the value of an attractive and functional vocational library, since informational services are as important as testing and counseling in the guidance program.—*Occupations*, vol. 29, no. 3 (December, 1950), pp. 177-181. (Used by permission.)

- ¹ For detailed classification scheme, see Parker [12].
² Available commercially from SRA, 228 South Wabash, Chicago 4, Illinois. Price \$3.95, includes file folders, check-out cards, and manual.
³ Sturgis Printing Co., Box 329, Sturgis, Michigan. \$20.00.
⁴ See [1] and [5] for adaptations of the census classification.
⁵ The Chronicle Press, Moravia, New York, publishes a set of 254 folders labeled for the DOT system, \$12.50.
⁶ If the DOT system is used, the DOT can serve as a locator file. This system is discussed in Section E of this article.
⁷ Karp [6] has a good discussion of bulletin boards.

BIBLIOGRAPHY

1. Corre, Mary P., "Filing Occupational Information," *Occupations*, vol. 22 (October, 1943), pp. 122-124.
2. Forrester, Gertrude, *Occupational Pamphlets: An Annotated Bibliography*. New York: H. W. Wilson Co., 1948.
3. Handville, R. M., "How to File Vocational Information," *Occupations*, vol. 22 (October, 1943), pp. 35-38.
4. Hershey, J. O., "A Mobile Occupational Library in the Classroom," *Occupations*, vol. 24 (November, 1945), p. 91.
5. Huey, Mary L., "Filing Occupational Information," *Occupations*, vol. 22 (February, 1944), pp. 315-318.
6. Karp, W., "Bulletin Board as a Tool of Vocational Guidance," *Occupations*, vol. 21 (May, 1943), p. 661.
7. Kefauver, G. N. and A. M. Davis, "Investigations in Guidance," *Occupations*, vol. 12 (November, 1933), pp. 17-25.
8. Kitson, H. D., "New Pamphlets on Occupations," *Occupations*, vol. 24 (October, 1945), pp. 14, 15.
9. Kitson, H. D., "Publishers of Books on Occupations," *Occupations*, vol. 24 (February, 1946), p. 269.
10. Kitson, H. D., "Where Can I Get Pamphlets on Occupations?" *Occupations*, vol. 24 (March, 1946), p. 411.
11. Neal, Elizabeth, "Filing Occupational Information Alphabetically," *Occupations*, vol. 22 (May, 1944), pp. 503-506.
12. Parker, W. E., *Books About Jobs*. Chicago: American Library Association, 1936.
13. Publications Committee, Occupational Research Division, NVGA, "Standards for Use in Preparing and Evaluating Occupational Literature," *Occupations*, vol. 28 (February, 1950), pp. 319-324.
14. Schultz, F. G., "A Recheck of Articles on Guidance in Five Educational Magazines," *Occupations*, vol. 19 (April, 1941), pp. 492-495.
15. U.S. Office of Education, *Counselor Competencies in Occupational Information*. Misc. 3314-3, Washington: Government Printing Office, March, 1949.
16. Yale, J. R., *How to Build an Occupational Information Library*. Chicago: Science Research Associates, 1944.

TABLE II

Types of Organizations Publishing Occupational Materials

<i>Kind of Organization</i>	<i>Comments</i>
Professional Associations and Technical Societies	Example: American Medical Association. These publish information concerning requirements, training, certification, and professional standards in special fields.
Industry Organization	Example: National Association of Manufacturers. General material about activities such as manufacturing, insurance, sales.
Educational Institutions	Examples: Boston College and Simmons College. The material outlines the program of study leading to entrance in a field as well as general information about the opportunities.
Individual Companies	Examples: Montgomery Ward; Ford Motor Co. Tables of organization, information about the requirements and desirability of work in a specific firm.
Federal and State Agencies	Examples: Departments of Education and Employment. These are usually sources of free and inexpensive information about labor conditions, outlook, and job descriptions.
Chambers of Commerce	Local opportunities, trends, directories of retailers and manufacturers.
Commercial Publishers	See Forrester [2] and Kitson [8, 9, 10] for lists of approved commercial publishers. Some of these publish occupational periodicals valuable for browsing purposes.

Outcomes of Seventh-day Adventist Secondary Education in Michigan

Clinton W. Lee

INSTRUCTOR IN SOCIAL SCIENCE
EMMANUEL MISSIONARY COLLEGE, 1946-1951

THE PROBLEM.—In the State of Michigan there are several academies that have been operated continuously for many years. The four principal ones are Cedar Lake Academy, founded in 1899; Adelpian Academy, established in 1904; Emmanuel Missionary College Academy, which began when Battle Creek College was moved to Berrien Springs in 1901; and Battle Creek Academy, an outgrowth of Battle Creek College. It will be observed that our various types of secondary schools are well represented in these schools. Cedar Lake and Adelpian academies are boarding schools; Battle Creek Academy has always been a day school; and E. M. C. Academy is a college-attached school. Furthermore, all these schools have a long history, which condition makes the study more valid as to outcomes.

The problem chosen was to make a follow-up study of the graduates of these schools through the years, and by the use of certain criteria evaluate the outcomes. From 1907 to 1948 Cedar Lake Academy had 686 graduates. The first graduating class of E.M.C. Academy was in 1908, and in forty years its graduates numbered 657. Records of the graduates of Battle Creek Academy were available from 1918 onward, a period of thirty years, and its total was 364. It was found that alumni records of Adelpian Academy were very incomplete before 1944; and because many of the students came from metropolitan areas where residence is not so permanent, their whereabouts could not be determined to any large degree from earlier dates. For the four years there were 163 graduates. This study was concerned with the lives of

1,870 graduates of these four schools since completion of secondary work.

CRITERIA.—Judgment of any thing or any enterprise must always take into consideration the purpose for which it was intended. Secondary education must be evaluated by criteria based upon its objectives. In 1918 the United States Bureau of Education issued a bulletin entitled *Cardinal Principles of Secondary Education*. It is interesting to note that fifteen years earlier, in 1903, our own book *Education* enunciated all these principles—not always in just the same form, but usually with higher standards. This provided common ground by which the outcomes of our schools could be studied alongside the public schools.

As listed in the bulletin of 1918, these principles or objectives chosen for American secondary education are: (1) health, (2) command of fundamental processes (that is, proficiency in reading, writing, speaking, and arithmetic), (3) training for worthy home membership, (4) vocational training, (5) training for good citizenship, (6) worthy use of leisure time, (7) ethical character. To these seven was added the objective of college preparation; that is, the integration of the secondary school in the educational ladder. The order and form of the objectives were adapted to our own system, and a questionnaire was devised that contained thirty-four spaces for concise answers, which could be measured by the criteria. These questionnaires were sent to the 1,870 graduates, and 1,047 replies were obtained from the graduates themselves; and in some fields, by other means, practically complete returns

were obtained. This data was tabulated, and the results were evaluated.

RELIGIOUS-ETHICAL.—This is placed first in importance in our educational system; therefore, it was placed at the head of the list. The questions had to do with whether an active Christian life was being maintained, whether church was attended regularly, and whether tithe paying was a life practice. Of the 1,047 returns, 946 said that they regularly attended church, 940 believed that they were living consistent Christian lives, and 906 reported that they are tithepayers. This last item seems important in evaluating the ethical standards of men and women because it is a tangible recognition of ethical responsibility.

HEALTH.—The second group of questions asked whether good health had prevailed in the life, whether the health principles taught in the academy were being followed, and whether tobacco and alcohol were being used. Among the 1,047 graduates that replied, 984 said they had had good health, 929 affirmed that they had followed the health principles taught in the academy, 1,024 stated that they did not use alcohol, and 1,016 made the same statement regarding tobacco. Only 26 persons may be assumed to be users of alcoholic beverages and/or tobacco—16 men and 10 women.

HOME RELATIONSHIPS.—To determine outcomes in home relationships, data were compiled concerning marriage, divorce, parenthood, and home ownership. An even 700 had married; that is, not quite 70 per cent. Of these, 507 had become parents, 352 owned their homes, and 27 had been divorced. Compared with the general population, this is an excellent record.

VOCATIONS.—Each one was asked to specify his vocation. The answers were tabulated, and the results were as follows: 333 became homemakers, 201 were engaged in office or business work, 177 were teachers, 140 were artisans, 124 were nurses or medical technicians, 54

became ministers or Bible instructors, an equal number became doctors or dentists, 49 made agriculture their occupation, 65 were engaged in miscellaneous other occupations, and 85 reported that they had been frequently unemployed.

CITIZENSHIP.—Whether one is a good citizen is not easy to determine by a questionnaire; but some questions were asked and very frank answers were obtained: 417 reported that they frequently voted, 266 said that they had done various types of civic service, 501 reported having done public speaking, and 220 had done writing to influence opinion. Eight reported that they had been arrested, and one reported imprisonment.

AVOCATIONS.—As in the matter of vocations, opportunity was given for answers to include the various avocations. Upon classification it was found that 432 made social service their principal hobby, 310 practiced creative hobbies, 173 spent some leisure time in nature study, 216 engaged in athletics, 69 made reading their source of relaxation, 129 regarded listening to radio and other programs as their avocation, and 11 spent leisure time in looking at moving pictures or games played by others.

ACADEMIC ATTAINMENTS.—In considering outcomes of these academies as a part of the educational ladder, besides the replies, use was made of the records of Emmanuel Missionary College. Of the 1,870 graduates, at least 1,081 had entered college, 87 had discontinued after one year in college, 157 had completed two years of advanced education, 163 completed two- or three-year courses, 179 obtained Bachelor's degrees, 37 had later obtained Master's degrees only, and 50 had completed work on Doctorates.

This completes the major items obtained from the study. Each item was tabulated by schools, so that the outcomes could be compared. They were also considered in periods of five years, that tendencies might be observed. Com-

parisons were made with statistics available from other secondary educational systems. In this manner outcomes were evaluated.

Michigan educational statistics showed 15 to 20 per cent as the maximum number that could be expected to enroll in college after graduation from high school. This figure is for recent years; formerly it was much lower. Including the graduates from 1907 onward, 57 per cent from the Adventist academies had entered college. Those attaining to a Bachelor's degree from our schools in Michigan about equal the percentage from public high schools who entered college.

The professions have claimed 610 of the Adventist group. This is decidedly above the figure for the public high schools. Several surveys have been made by city school systems as to employment of their graduates; alarm was expressed at the large number who reported uncertainty of employment. Our percentage is very low; perhaps this is a part of the outcome of students in our schools working their way through school—a practice which impresses the idea that one must give value received for what he gets. The occupational pattern of today provides an ever-increasing amount of leisure time, which has brought no small concern to those who are conscious of the dangers involved. To meet this situation, the *Cardinal Principles* urged that schools endeavor to turn the students toward creative and personal- and social-enrichment activities rather than to amusements, especially those in which one becomes merely a passive observer. In the field of avocations, though we might do better, our schools have a record that is outstanding.

In 1908 approximately one marriage in thirteen ended in divorce, but by 1946 this had mounted to more than one in four. Yet for the whole period our academy graduates averaged about one divorce in twenty-five marriages. In view

of the large number engaged in professions in which frequent changes of location are necessary, the number owning their homes is good. It would seem that graduates from our academies are above average in the matter of successful homemaking. No statistics are available in the matter of health outcomes from public schools. The fact that about 90 per cent of the graduates follow the standards of health promulgated by the academies, and that an even larger percentage are not users of alcohol or tobacco, speaks well for the influence of our schools.

It would seem that citizenship is closely related to the ethical standards of the people. Although we would like to see 100 per cent of our graduates reach the ethical and religious standards set in our schools, 90 per cent makes the investment involved in these schools money well spent. Delinquency and crime are negligible among graduates from our academies, as compared with others. The writer believes that tithing will furnish a good index of ethical ideals and citizenship. A tithpayer recognizes his indebtedness to society and acknowledges himself as a steward for God rather than an owner. It is doubtful whether one can become an intentional criminal while he practices faithful payment of tithe.

Such, in brief, are the outcomes discovered. It is impossible to know just how much of these results are attributable to the homes of our boys and girls. It was found that there was no intrinsic difference in outcomes whether the student attended a boarding academy, a day academy, or a college-attached school. On the whole, the day academy showed a slightly lower attainment than the others, but it is not clear that this is attributable to the fact that the school is not a boarding academy. It would seem that the individual-adjustment needs of the young people, along with their home conditions, should be the basis upon which decision is to be made.

False Dichotomies and Educational Perspective

Paul B. Horton, Ph.D.,
and Rachel Y. Horton *

WE WHO teach are constantly being summoned to choose upon which Procrustean bed we shall lie. We are instructed that we must do either *this* or *that*, with no middle ground or other alternatives possible. But many of these dichotomies¹ are unsound and unrealistic. Often there *is* a middle ground, or there are still other possible courses of action. Such false dichotomies confuse educational policy by artificially narrowing our alternatives. Worse yet, we are denied a balanced synthesis of educational outlooks in being forced into one or another of the educational extremes. Let us examine several of these dichotomies which falsely state the issues and needlessly restrict our choices to equally unrealistic alternatives.

I. "*Subject matter*" versus "*guiding the learning process*." In recent years, concern with "subject matter" has become pictured as a sort of affliction, like measles, to be recovered from as quickly as possible. College teachers in other than Departments of Education are "subject-matter people" who have never been baptized in the sacred waters of educator's lore, and are lamentably corrupted by vested interest, besides. Public school teachers who demand specific content outcomes may be excoriated as "subject-matter" teachers, crucifying the kiddies' personalities upon a cross of inflexible objectives. For, as subject-matter people, these teachers are by implication excluded from having any interest in or understanding of the personality needs of their charges. A recent statement is

fairly typical of this very point of view.

"Do you believe that teaching is using all appropriate means of getting children to learn the subject matter designated in the curriculum at the time when it is presented? Or do you hold to the theory that 'teaching is guiding children through their experience so as to increase their ability to use better the process of achieving intelligent behavior'? If the first definition better fits your ideas of teaching, then . . . you hold the following points as prime factors in education: 1. You are most concerned with subject matter teaching. . . . 2. You do not hold emotional and social growth of pupils as important as mental growth or concern about subject matter mastery. 3. In your teaching, you will tend to emphasize skills performance instead of the development of meanings which are necessary to real learning and understandings."²

This statement poses a set of unrealistic alternatives, and includes an unsound and pernicious depreciation of the proper role of subject-matter content. Of course it is true that traditional education often stressed subject-matter mastery to the neglect of other outcomes. Certainly the traditional school loaded the curriculum with much subject matter quite irrelevant to the backgrounds and needs of students. But the cure for these failings is to be found in a more judicious selection of subject matter, not in its cavalier dismissal.

Certainly we should "guide the learning process," but the process of learning *what*? Learning does not proceed in a vacuum! The answer often given is that children are learning attitudes, group cooperation, responsibility, self-confidence, initiative, and other social skills and values. No informed person denies the importance of these outcomes, or the propriety of emphasizing them. But wherein are these outcomes incompatible with subject-matter content? Far from being incompatible, reasonable requirements for subject-matter mastery

* Associate professor of sociology, Western Michigan College of Education, Kalamazoo; and teacher of choral music, South Junior High School, Kalamazoo, respectively.

are essential to personality development in a real-life situation. In real life, people are held to reasonable standards of accomplishment. In real life, it is not enough to display commendable initiative, self-confidence, and co-operation; some concrete goals must be attained in the process. If the "guiding of the learning process" consist of permitting much aimless activity, with no requirements that concrete goals be attained, the children are receiving an excellent education in how to avoid responsibility, how to get by with shoddy workmanship, and how to kill time while appearing busily occupied.

There is grave danger in teaching students to "express themselves," to "state their opinions," and "hold a discussion," unless they are also taught the difference between a fact and an opinion, a fact and a value, or an expert and a layman. The failure of some students to appreciate how an intelligent discussion is always founded upon large masses of facts may be partly responsible for the GREAT AMERICAN DELUSION—namely, that from the collective ignorance of a group of persons who know nothing about a problem, the alchemy of the discussion process will in some strange way distill a collective wisdom. To seek to cultivate these processes and skills, except in a setting of significant subject matter which the student is expected to comprehend, may contain dangers as great as those in the despised traditional preoccupation with bits and pieces of unrelated data.

In addition to the necessity of personality development, which should by no means be minimized, there are certain subject-matter learnings which every efficient citizen *must* learn—to read with comprehension, to write with some clarity, to compute basic arithmetic, and so on. It is best that he should learn these with interest and enthusiasm, but learn them he must (and is now learning more fully than ever before, popular criticism

notwithstanding). Certainly we should seize every opportunity to capitalize on interest, to inspire enthusiasm, and make the total curriculum a meaningful and challenging adventure. But I know of no evidence that pupils are damaged by occasionally being required to learn something in which they have no consuming interest. Real life requires a certain amount of uninteresting work, and education need not shield children from the realities of life.

There are few who would disagree with these propositions, but apparently there are some who forget or misuse them, and therein lies the danger. Some teachers are too dull and uninspiring to make subject matter interesting and meaningful, and so they excuse their failure by repeating the refrain that life is hard, as though hard work were an end in itself. And some teachers whose aimless activities produce few concrete learning outcomes excuse their failure by taking refuge in vague verbalizations about "developing the individual personality," or "it isn't what you teach but how you teach." While in a certain sense true, these slogans can be beautiful rationalization for plain teaching incompetence.

Personality development is important, and the acquiring of useful knowledge is an inseparable part of personality development. Any attempt to oppose them as incompatible alternatives is so unsound that no responsible educator knowingly does so. Yet by emphasis and implication, some educators seem to suggest that the effective teacher must, as one of her sins, shed her concern for subject matter before entering the inner circle of the educationally sanctified.

II. "Discipline" versus "personality development." "Personality development" is a versatile club which can be wielded in practically any educational dispute. Sometimes it is used to beat a conviction of sin into the teacher who expects her pupils to behave themselves. The di-

chotomy may run something like this: "Are you a teacher who feels that learning can proceed only in an atmosphere of absolute quiet and order? Or do you believe that the wholesome development of personality is preferable to a submission to authoritarian discipline?" Such a dichotomy is false. Neither wholesome personality development nor desirable learnings occur in an atmosphere of rigidly authoritarian discipline. Nor can either of these values be attained amid chaotic confusion. *A balance between freedom and order is needed for successful learning of any sort.*

I know of no experimental or observational data showing that a moderate amount of firm discipline is harmful to children. But there *are* scientific data suggesting that both very severe discipline and very lax discipline are distinctly harmful to personality development.⁹

The theory that child misconduct *always* indicates an unsolved emotional problem which must be hauled to the surface and psycho-analyzed or counselled, is a theory seldom stated but often implied. It is true that "there's always a reason" for child misconduct, but sometimes the reason is simply a very natural curiosity to discover how much they can "get away with." I seriously question whether there is any class which fails to "try out" every teacher it confronts. While corporal punishment is, thankfully, disappearing as a classroom control, a general suspicion by the class that the teacher is fully capable of violence does wonders to cultivate an atmosphere conducive to learning. Of course, constructive discipline is never obtained through fear alone, but I see no reason why pupils should not know that teachers become angry, and feel temporary dislikes for and hostilities towards their pupils. This, too, is similar to real life. When employees anger the boss, they get fired. Drivers who irritate police officers get ticketed, or worse. People who

create disturbances in public places get bounced. *If a school fails to teach children these things, it is failing to help them cope with life.*

Of course—discipline must be tempered with understanding. Certainly the family background and emotional needs of each child must be taken into account in all cases of individual misconduct. To be sure, the skillfully-manipulated discipline of the group is preferable to the personal authority of the teacher. The child needs all of these, but he also needs *the sense of security* which comes through knowing exactly where he stands, and what the teacher expects and will tolerate from him. It is entirely possible to develop a classroom atmosphere in which children feel perfectly free to make any spontaneous expression or contribution to the class activity, and yet at the same time realize that any child who starts any mischief which interferes with the class activity will have the heavens descend upon him. Children like and respect a teacher who encourages a natural and easy spontaneity, yet restrains the obstreperous ones who disrupt the class routine. A good disciplinarian in the proper sense of the term is a teacher who can cultivate such a reaction from her pupils. This sort of discipline (carefully adjusted for the pupils who have special problems) is helpful, not harmful, to wholesome personality development.

Any effort to treat discipline and personality development as incompatible rests upon superficial observations of real life; it is probably a defense mechanism of the poor teacher. Here again the insufferably dull teacher uses stern discipline as the only means of averting chaos, meanwhile insisting that stern discipline is good for them. On the other hand, the weak teacher who simply cannot maintain reasonable classroom order may rationalize her failure by maintaining that she is, after all, "developing personality." But it would be most un-

fortunate to allow a teacher to enter teaching in the belief that she dare never show firmness or anger lest her charges have their little personalities warped and scarred. *Children are not that fragile!*

III. "Predetermination" versus "pupil-teacher planning." According to some views, it would seem almost indecent for the teacher to decide what the children should learn. One writer (in an otherwise excellent article) says, "I have learned to come to my students without demands, without the armor of preconceived notions of what will do my students good, when neither I nor anyone else except the student can possibly know either what ails him or what will do him good."⁴ Another recent writer objects to the teacher who is highly concerned with ". . . the accomplishment of predetermined goals."⁵ The dichotomy might be stated, "Do you base your teaching on a set of predetermined goals, or do you base your teaching upon the needs and interests of the pupils?" The only sensible answer to these questions would be, "yes," an answer which would also reveal the utter absurdity of the dichotomy.

The assumption that immature children (or even college students) know their needs better than their teachers can possibly know them is, to say the least, remarkable. Any idea that the curriculum should be based on the momentary interests of 10-year-old children is too absurd to be seriously stated, although it may be indirectly implied and tacitly accepted. The fact is that 10-year-olds are *not* interested in many of the classroom materials and activities until the school has cultivated an interest. Before deciding to arouse a particular pupil interest, the school must necessarily "predetermine" some needs and goals, else it will not know what interests to stimulate. In doing so, the school should make use of developmental studies, social surveys, interest checklists, problem in-

ventories, and any other clues to pupil interests and needs. Beyond this, it becomes the responsibility of the school to decide upon pupil needs, set goals, and cultivate pupil interests therein. To do less is to confess that *expert knowledge and judgment* have little place in curriculum building, and that an automatic voting machine could do as well.

Let us be specific. In junior high-school choral music classes, if children are asked what they want to sing, most students prefer only familiar songs, mostly popular songs of limited musical variety and with no harmonization or part singing. Only through the teacher's initiative (and "dictatorship") do they learn new songs, learn to sing in parts, and widen their horizon of musical appreciation to include the world's great music. After such forced feeding (if done skillfully), they love to harmonize, and come to prefer the fine music of all periods. But only through "predetermination" are the real values of musical appreciation and joy in musical participation fully realized. Pupil-teacher planning in choral music is practical only when it is pupil choice within rather narrow limits determined by the teacher. Most course planning must be much like this—major goals determined by the teacher, after suitable study of pupil needs, interests, and abilities, with suggestions and minor choices open to the pupils. The extent to which the teacher can maintain the illusion of pupil-sharing in major decisions is another matter, and the pupils' ability to detect subterfuge should not be underestimated.

Here, then, are three dichotomies which prove to be false and misleading. In each case, a synthesis of the two points of view, rather than a choice between them, is the only practical course of action. In each case, an overemphasis upon extreme positions destroys educational balance and perspective. To some extent the difficulties may be semantic.

—Please turn to page 30

Meaningful Mathematics

Charles H. Butler*

DEPARTMENT OF MATHEMATICS
WESTERN MICHIGAN COLLEGE OF EDUCATION, KALAMAZOO

SINCE the turn of the century, efforts to improve mathematical education have taken several directions. Some of the things which have been tried have worked out pretty successfully and have taken root. Others have not worked out so well and have been discarded. Still others are yet in the experimental stage.

On the positive side, it can be noted that general mathematics has emerged and grown until it has become a typical part of the mathematical program of the junior highschool. Noteworthy and helpful modifications have been made in the courses in algebra, geometry, and trigonometry, though much remains to be done.

There has come widespread recognition and acceptance of the principle that courses which are suitable for some students may not be suitable for other students, and that parallel courses of different types should be offered, particularly in grade nine. New types of teaching aids have been devised and made available, and work of a laboratory type is becoming more common. In some highschools, special courses such as vocational mathematics, shop mathematics, and consumers' mathematics have been organized for students who have special interests in these directions.

On the other hand, efforts to teach mathematics through such plans as the activity program, socialized mathematics, and the core curriculum have not been very successful. Efforts to devise suitable courses of general mathematics for grades above nine have met with little success.

Many mathematics teachers feel that

some highschools have not taken seriously their acknowledged responsibility for maintaining and improving the arithmetical ability of their students. The mathematical interests of the very superior students have been notoriously neglected; relaxation of specific requirements has accentuated the need for wise educational guidance to prevent waste of ability.

Probably the most significant change in the whole program of secondary-school mathematics has come in the junior highschool, where general mathematics has practically replaced straight arithmetic in grades seven and eight and has become the typical alternative to algebra in grade nine. This change has come about in a gradual, orderly, and unspectacular manner over a period of years.

Closely related to this, and of comparable importance, is the growing acceptance of the double-track plan for grade nine. It is more than an acceptance in principle. It is being put into actual practice on a large and increasing scale.

It provides a much needed alternative to systematic algebra for those students who do not wish to take algebra or who cannot pursue it with much hope of success, but who need further work in order to attain a genuine mastery of the mathematics of common usage. At the same time, it reserves the algebra course for those students who wish to take it and who can profit from it, and thus tends to counteract the deplorable but common tendency to dilute the algebra.

It has been recommended that the double-track plan be extended into the senior highschool grades, but up to the

* Dr. Butler is coauthor of *Trigonometry for Secondary Schools* and of *Teaching of Secondary Mathematics*.

present time not much real progress has been made in this direction. Apparently, nobody seems to be sure just what ought to go into courses in general mathematics above grade nine, and few textbooks are prepared specifically for such courses.

Substantial improvements have been made in the traditional courses in algebra and geometry. It is probably a gross oversimplification to try to characterize them all in a single word, but the one thing that seems to stand out most clearly is a marked emphasis on *meaning*.

In algebra, this emphasis can be noted in many connections. For example, formulas and graphs are introduced very early in grade nine, and are given increased prominence with a heavy accent on the concepts of variables, variation, and dependence. Operations with signed numbers are being rationalized. The solution of linear equations is coming to be taught as a rational procedure with the reason for each step being made clear, instead of merely as a formal application of memorized rules.

Transposition is giving way to the rational operations of addition and subtraction. Operations with fractions are made to seem sensible by careful explanation and analogy. Parentheses are coming to be treated informally, and the formal rules for "removing" parentheses are being found unnecessary. Work in factoring and operations with fractions is being confined to simpler cases than formerly, but with more stress on understanding and explanation.

In work with verbal problems, more and more emphasis is being placed on such things as ability to analyze problems, to select essential data, to perceive relationships, and to formulate solutions.

These things represent genuine progress in the teaching of algebra. They are illustrative of the thoroughgoing and continuing effort to remove from elementary algebra the objectionable "for-

malism" against which so much legitimate criticism has been directed, and to replace it by an algebra which students in their early teens can understand.

There will always have to be rules and definitions, and procedures will always have to be formalized in the sense of being generalized, for this is the essence of algebra. But the formalization of procedures in ways which convey meaning to the students, and at a level appropriate to their maturity, is not objectionable.

In like manner, one can observe in demonstrative geometry modifications which indicate increasing emphasis on meaning and understanding. Good teachers are not satisfied with the mere stereotyped rehearsal of memorized proofs. On the contrary, they insist more and more that their students be able to state and justify their plans of proof, answer extemporaneous questions about their work, and give evidence that they really understand what they are doing, why they are doing it, and what mathematical right they have to do it.

Increased attention is being given to the matter of making students aware of the real nature of definitions and assumptions, of the role these play in logical reasoning, and of the nature of proof itself. Independent reasoning is encouraged by stressing original work. Objectionable formalism is reduced by decreasing the emphasis on memorization.

Students are being taught how to invent proofs by use of the analytic approach to problems, as well as how to present their work in completed synthetic form. The concept of the indirect method is coming to be taught as a well-defined method of strict reasoning rather than as a miscellaneous bag of tricks. The concepts of variation, dependence, generalization, and continuity are being strengthened by grouping certain sets of theorems and studying their common characteristics.

—Please turn to page 29

SCHOOL NEWS

SOUTHERN MISSIONARY COLLEGE MISSIONARY VOLUNTEERS "invaded" Chattanooga last November 10 and 17, distributing 3,100 pieces of gospel literature, making some 1,000 personal contacts, and signing up more than 500 persons to study the 20th Century Bible Correspondence Course. In addition, 2,500 gospel bombs (literature wrapped in bright-colored cellophane and tied with ribbon) were made by students, teachers, and others, and are distributed by being tossed or handed to folks along the way as the college people travel on vacation and other trips.

STUDENTS AND TEACHERS OF MALAYAN UNION SEMINARY (Singapore) raised \$16,000 (Straits currency) in gathering funds in a two-day campaign last October 8 and 9. In addition, the office group had previously raised \$6,000, making a total for the school of \$22,000 (\$8,000 U.S.), which will enable them to equip their science, cooking, sewing, and woodworking laboratories "in a fine manner."

ART STUDENTS OF ATLANTIC UNION COLLEGE were highly privileged during December to be able to make several visits to the Boston Museum of Fine Arts to study the treasures from the Vienna collections lent by the Austrian Government. These trips were under the supervision of Mabel R. Bartlett, instructor in art at A.U.C.

UNION COLLEGE last year paid a total of \$179,265.45 for student labor in its various industrial and service departments. The largest user of student labor was the furniture shop, with 50 to 60 students earning \$40,000; but a score of other fields provide work opportunities for all who want them.

EMMANUEL MISSIONARY COLLEGE SUPPLY STORE reports a sales increase of \$25,000 during July through November, 1951, as compared with the same period in 1950. A chief factor in this success is the new location and fine new building.

CECIL L. WOODS, dean of Pacific Union College, taught science and mathematics at the Hawaiian branch during the winter quarter.

FIFTY-THREE STUDENTS FROM 19 FOREIGN COUNTRIES are included in this year's enrollment at Pacific Union College.

A MASTER GUIDE CLASS of 57 at Union College is working hard in preparation for investiture later in the spring.

LA SIERRA COLLEGE FRENCH CLUB sent Christmas packages of soap, candy bars, raisins, and other items for distribution to students at Seminaire Adventiste du Saleve, Collonges-sous-Saleve, France.

PLATTE VALLEY ACADEMY (Nebraska) reports new tablet-arm chairs in the Bible classroom, new study tables and chairs in the library, systematic repairing and repainting of all buildings as fast as possible, and great improvement in the general appearance of the campus.

AN EVANGELISTIC YOUTH CRUSADE was begun February 1 in the Soquel, California, Seventh-day Adventist church by students of Monterey Bay Academy, under the sponsorship of Henry T. Bergh and Alban W. Millard. Congregational singing, special music, color motion pictures, Bible quizzes, and sermonettes by the students lend variety and interest to the programs.

KELD J. REYNOLDS, associate secretary of the General Conference Department of Education, visited South America during December and January. He spent six weeks in Brazil, visiting six secondary schools and the college, and participating in three teachers' institutes. Unfortunately his visit was cut short by the necessity of returning to the States for important meetings.

MELVIN K. ECKENROTH, assistant professor of practical theology at the Seventh-day Adventist Theological Seminary, has been conducting an extended evangelistic effort in the Lyric Theater of Baltimore, Maryland, assisted by a number of his seminary students. At the end of February, when copy for this issue went to press, more than 60 persons had been baptized, another 70 were actively studying in preparation for baptism, and approximately 100 more were on the "definitely interested" list.

HELDERBERG COLLEGE (South Africa) is now offering the following courses above high school: one-year stenographic, two-year commercial, two-year Bible instructor; and three four-year degree courses—teacher training, theology, and home economics. Arrangements have been made with the University of South Africa whereby Helderberg students may meet the full requirements for the Bachelor of Arts degree while completing any of the three four-year courses, and they may write the University's external examinations for the B.A. degree.

SENIOR PRESENTATION DAY at Emmanuel Missionary College was February 11, when 113 members of the class of 1952 marched down the center aisle of the chapel, wearing the traditional caps and gowns. Guest speaker for the occasion was Dr. Irwin J. Lubbers, president of Hope College, Holland, Michigan.

TWO BIOLOGY TEACHERS, 14 students, and several companions—from Walla Walla College—spent the winter quarter in Mexico “studying birds, beasts, and beauty while thriving on citrus fruits at 65c per hundred, and sleeping under clear skies at 60°F. temperatures.”

FIFTEEN OR 20 ENTHUSIASTIC TOP CONTESTANTS on the Pacific Union College Amateur Hour in December visited six California academies during January, February, and March, giving musical and variety programs.

NEWBURY PARK ACADEMY (California) will profit by the re-erection of the Van Nuys tabernacle on its campus—as a machine shed which has been needed for some time.

AUBURN ACADEMY (Washington) recently purchased a fire truck, and a volunteer fire department has been organized, with the assistance of a deputy State fire marshal.

SOUTHERN MISSIONARY COLLEGE reported on October 31 that 55 of the 61 members of the 1951 graduating class had been placed.

THIRTY MEDICAL CADET CORPS PROMOTIONS were given at Union College on Sunday, January 27.

ARIZONA ACADEMY reports much-appreciated alterations and redecoration of its chapel.

THIRTY-ONE STATES, HAWAII, AND 17 FOREIGN COUNTRIES are represented in the student body of Washington Missionary College this year.

TEN STUDENTS WERE BAPTIZED at Caribbean Training College (Trinidad) last November 17. This was the second baptism at C.T.C. for the 1951 school year, bringing the total number to 19.

LA SIERRA COLLEGE is this year offering a one-year course in vocational nursing, which provides an excellent background for home-making, a vocation in a valuable and uncrowded field, and will be helpful to both men and women doing gospel work in home or foreign fields.

BROADVIEW ACADEMY (Illinois) made a gala occasion out of furnishing—or “finishing”—the new kitchenette in the girls' home. On December 4 the girls brought many useful and attractive gifts of various kinds, the dean of girls presented an attractive set of dishes, and the boys sent a \$25 check to be used as needed. Could they be anticipating edible thanks?

AT ADELPHIAN ACADEMY (Michigan) the fall Week of Prayer conducted by John Hancock closed with a field adventure day on Sabbath afternoon. In two hours 78 students visited most of the homes in Holly, enrolling 18 persons in the Bible correspondence course and receiving requests for Bible films to be shown in 10 homes. These interests are being followed up by volunteer students each week.

RECENT ARRIVALS AT MADISON COLLEGE include Mr. and Mrs. W. E. Clayburn—he in charge of the dairy and doing some teaching in the agriculture department, and she working in the credit department at the sanitarium; Mr. and Mrs. James Woodson—he in charge of the campus and roads division of the agriculture department; Fern Potter, R.N., floor supervisor at the sanitarium; and Ingrid Johnson, in charge of the medical desk in the hospital clinic and taking graduate work at Peabody College in nearby Nashville.

THE DEPARTMENT OF SPANISH of Pacific Union College will conduct its Mexican Extension again this summer, making use of the boarding facilities of the Colegio Vocacional y Profesional Montemorelos. The extension is conducted especially to assist our teachers of secondary-school Spanish to obtain further theoretical and practical preparation in the language, and to make available to them the very helpful and broadening experience of a number of weeks spent in the surroundings of a Spanish-speaking people. More than 20 persons enrolled last year for the tour and course.

GEORGE M. MATHEWS, associate secretary of the General Conference Department of Education, spent December and January in Inter-America, visiting schools throughout the field, and assisting the staff of Caribbean Training College in conducting a vacation school for elementary teachers. College credit was given for this professional training, and 55 teachers took advantage of the opportunity.

SEVEN MINISTERIAL STUDENTS at West Indian Training College (Jamaica) spent the summer vacation in active evangelistic work among the churches. Already more than 40 persons have been baptized from these efforts, and it is expected that the total will be at least 100.

THE SUNSHINE BAND OF MONTEREY BAY ACADEMY (California)—some 30 students—sing hymns and give short inspirational programs for the sick folks in Watsonville homes and Santa Cruz and Hollister County hospitals.

THE WEEK OF PRAYER AT COLUMBIA ACADEMY (Washington), conducted by I. M. Burke, was fittingly concluded by the formation of a baptismal class of 14 students.

LA SIERRA COLLEGE STUDENTS filled and distributed Christmas gift boxes to 100 needy families in Riverside County. A copy of *Steps to Christ* was included in each box.

AT BROADVIEW ACADEMY (Illinois) more than half of all student charges is earned on the campus—over \$54,500 for the 1950-51 school year.

LYNWOOD ACADEMY (California) is proud to claim the winner of the 1951 National Temperance Jingle Contest, DeVon Nieman.

FIFTEEN STUDENTS OF PACIFIC UNION COLLEGE will be listed in the 1951-52 *Who's Who Among Students in American Colleges and Universities*.

CHRISTMAS BASKETS OF FOOD FOR NEEDY FAMILIES in Prescott, Washington, laid the groundwork for the series of evangelistic meetings begun early in January by the theology club of Walla Walla College.

MOUNT ELLIS ACADEMY (Montana) is happy over the beautiful new Baldwin electronic organ that was installed during Christmas vacation, made possible largely by the students' enthusiastic fund-raising campaign.

ADELPHIAN ACADEMY (Michigan) reports that last summer a record crop of ten tons of No. 1 tomatoes were harvested from two acres of once-useless land. Besides, the tomato field furnished \$500 in student labor—just a part of the \$66,000 earned by Adelpian Academy students the past year.

California College of Medical Technicians

San Gabriel, California

(Suburb of Los Angeles)

Offers the following
courses:

X-ray Technician

(Fifteen Months)

(One year of college minimum requirement)

Medical Office Assistant

(Twelve Months)

(High school graduation minimum requirement)

**NEW CLASSES BEGIN EACH
FEBRUARY AND SEPTEMBER**

Approved for Veterans

Write for Bulletin

AUBURN ACADEMY (Washington) gratefully reports gifts of two registered Guernsey cows as the nucleus of a dairy, and fruit trees for a small orchard. Maurice E. Wright is the newly elected superintendent of the farm and dairy. Rebuilding of the powerhouse and furniture factory is in progress, and it is hoped the factory will soon be in operation again.

FRESNO UNION ACADEMY (California) reports an enrollment of 79 in grades 9-12 and 159 in the elementary section. The chapel has been provided with new seats, new books have been entered in the library, and much new equipment and supplies have been added to the science department.

HELDERBERG COLLEGE (South Africa) was host to the second South African Youth Congress last September 28-October 1. More than 1,000 enthusiastic Missionary Volunteers and visitors packed the not-quite-completed new Anderson Hall.

SUNNYDALE ACADEMY (Missouri) is a busy place, with each of its 135 students working at least 20 hours a week in the various service and industrial departments, in addition to the classwork which of course is "first things first."

GROUND WAS BROKEN on January 5 for the new administration building at Monterey Bay Academy (California). This will provide a chapel with seating capacity of 500, administrative offices, music rooms, and seven classrooms.

THE CAPE FIELD YOUTH RALLY (South Africa) was held at Good Hope Training School last October 5-7, and the auditorium was packed for every meeting.

WASHINGTON MISSIONARY COLLEGE raised over \$8,200 in gathering funds in the 1951 campaign, about three fourths of it in three days by student bands.

UPPER COLUMBIA ACADEMY (Washington) reports organization of 40 students in a seminar in preparation for greater Share Your Faith experiences.

SHEYENNE RIVER ACADEMY (North Dakota) reports an enrollment of 134, which is the largest in six years and a 36 per cent increase over last year.

CEDAR LAKE ACADEMY (Michigan) reports an all-time-high enrollment of 225, and a spirit of earnestness and enthusiasm.

MIDDLE EAST COLLEGE (Beirut, Lebanon) reports nine students in a baptismal class after the Week of Prayer last December.

OAKWOOD COLLEGE reports a more than 7 per cent increase in enrollment this year when enrollments in most advanced schools have definitely decreased.

PACIFIC UNION COLLEGE PHYSICS DEPARTMENT has recently constructed a 150,000-volt X-ray unit to make possible studies and experiments in X-ray and electron diffraction.

OF 211 PUPILS IN EMMANUEL MISSION SCHOOL (South Africa), only 40 are from Seventh-day Adventist homes. The 5 teachers have as their aim the winning of the other 171 to this message.

THE COLLEGE OF MEDICAL EVANGELISTS has registered 655 students for the year 1951-52, of whom 81 are fifth-year students of medicine serving internships in hospitals throughout the United States and Canada.

AT EMMANUEL MISSIONARY COLLEGE the College Wood Products gives employment to 118 students and 20 full-time workers. It is expected that the mill will reach a peak of over three quarters of a million dollars in gross sales this year.

THE CONGO UNION MISSION (Africa) reports for the 1951 school year 532 primary schools, 244 reading schools, 52 intermediate schools, and 2 teacher-evangelist training schools in which 26,767 pupils were enrolled. Many more schools could be opened if funds and qualified teachers were available.

LA SIERRA COLLEGE has announced an eight-week summer school in England for credit on the books of the home college. There will be a six-semester-hour lower-division course in English literature survey and an additional upper-division course of six hours in English literature. Classroom lectures and study will be correlated with trips to places of pertinent historical and literary interest and value, including several days in Scotland, France, and Holland.

Meaningful Mathematics

(Continued from page 24)

The dynamic and practical aspects of locus are being emphasized. These and many other things bear witness to the fact that demonstrative geometry is coming to be taught more and more as a way of thinking, a method of reasoning which can be applied to both mathematical and nonmathematical situations, and less and less as a mere ritual of memorization.

In both algebra and geometry, teachers are making increasing use of special multisensory aids and devices to clarify meanings and concepts. They include not only films and slides but also models, charts, diagrams, instruments for laboratory and field work, and other special devices. They cannot be regarded as substitutes for teaching, but when wisely selected and used they can often be very helpful in supplementing explanations and discussions.

After the character of the secondary schools changed with the great influx of non-college-bound students, many people acquired an almost emotional reaction against requiring or even advising any mathematics beyond the barest minimum for those not expecting to go to college or to enter professional or technical occupations.

Not infrequently, such an attitude has been reflected in the counseling and educational guidance that has been given to students. It is a shortsighted view.

A review of changes in mathematical education over the past half century indicates that we are moving toward a program of mathematical instruction that will in most respects be better adapted, and more functional and educative than the typical program of 50 or 25 or 10 years ago.

But we shall always have problems to face. In the past decade, more than a thousand articles dealing with various matters related to mathematical education were published in the United States.

This indicates a wide scope of interest.

Problems of mathematical education will find their solutions more and more through research and experimentation and interchange of ideas. National, state, regional, and local organizations sponsor meetings each year for the discussion of questions related to mathematical education.

Large and increasing numbers of mathematics teachers are taking advantage of these opportunities for discussion and interchange of ideas and information. This vigorous interest itself represents a promising trend in mathematical education. In the end, it may prove to be the most important one of all.—*NEA Journal*, vol. 40, no. 3 (March, 1951), pp. 206, 207. (Used by permission.)

THE SEVENTH-DAY ADVENTIST THEOLOGICAL SEMINARY has again extended its borders. During last October and November, Charles E. Weniger, dean and chairman of the department of practical theology, and J. L. Shuler, instructor in evangelism, assisted in two institutes for the workers of the Australasian Inter-Union Conference, one in Australia and the other in New Zealand.

A NEW CONCERT MODEL HAMMOND ORGAN has recently been installed at Broadview Academy (Illinois). Students and teachers raised more than \$1,000 by solicitation last school year; the Illinois Conference supplied the second \$1,000; and the balance of the \$2,700 cost price will be paid off from student rental fees for practice use.

ADELPHIAN ACADEMY (Michigan) reports M.A. degrees earned by two of its staff last August: C. W. Mayor, in education, from the University of Michigan; and Roger W. Pratt, in religion, from the Seventh-day Adventist Theological Seminary.

150 STUDENTS OF LA SIERRA COLLEGE have organized a Master Guide Club and plan to complete requirements for investiture before the close of school.

FOURTEEN STUDENTS WERE BAPTIZED after the fall Week of Prayer at Sheyenne River Academy (North Dakota).

False Dichotomies and Educational Perspective

(Continued from page 22)

Each decade brings its rash of new words added to the educator's lexicon. Sometimes they carry new ideas, while sometimes we have much the same old educational wine in new verbal bottles. Thus, "objectives" become "overviews," the comprehensive "course outline" becomes a "pre-plan," and so on. New words can be a most satisfying substitute for new ideas! But new words and slogans can win their way only when they seem to mean something different from the old ones, and this leads to a caricature of the older practices for purposes of contrast.

Straw men are erected and demolished, and unsound dichotomies are drawn, with the paths of righteousness plainly marked. All this is not a product of educational depravity, but an unfortunate by-product of misplaced enthusiasm and over-emphasis. Teachers and educators must, therefore, constantly strive to maintain a balanced perspective in which a constructive synthesis is not buried under a mountain of educational fads and extremes.—*Michigan Education Journal*, vol. 29, no. 1 (September, 1951), pp. 5-8. (Used by permission.)

¹ "Dichotomy—Division of a class into two subclasses, especially two opposed by contradiction, as *white* and *not white*." Webster's Collegiate Dictionary.

² William V. Hicks, "The Peripatetic Teacher," *Michigan Educational Journal*, April, 1951, p. 443.

³ Lewis M. Terman, *Psychological Factors in Marital Happiness*, McGraw-Hill, New York (1938), pp. 230, 231.

⁴ Marie I. Rasey, "Is Too Much Too Little, or Not Enough?" *Michigan Education Journal*, April, 1951, p. 464. (While the quoted passage refers to college students, similar applications to elementary students are not unusual.)

⁵ William V. Hicks, *op. cit.*

PHILIPPINE UNION COLLEGE presented degrees and diplomas to nine senior students in its second mid-term graduation last November 7, of whom eight are already "in the work," and one is continuing his studies.

500 LA SIERRA COLLEGE STUDENTS joined the American Temperance Society last November 26 and pledged to support the temperance work.

C.M.E.'s SCHOOL OF MEDICINE is one of the first 15—of the 81 medical schools in the United States—to inaugurate "preceptorship." The plan provides that between the junior and senior years students shall spend a month with a general-practice doctor, "getting insight into some of the community problems which must be met by every physician." C.M.E. graduates located in rural areas are preferred tutors under this plan.

ASHEVILLE AGRICULTURAL SCHOOL has an enrollment of 100 students, most of whom are working their way in the various service departments of the school and sanitarium, on the farm, in the forest, and in construction of the new girls' dormitory and boarding department building.

THE CRUSADERS FOR CHRIST of Gem State Academy (Idaho) have arranged for Bible studies in 12 homes where they have previously placed literature. They are also broadcasting each Sunday morning over Nampa Station KFXD.

MIDDLE EAST COLLEGE (Beirut, Lebanon), was host to the open sessions in connection with the annual meeting of the Middle East Division committee last November 15-25.

STUDENTS OF LYNWOOD ACADEMY (California) presented a program of Christmas music and received an offering of \$325.91 for the Voice of Prophecy radio work.

UNION COLLEGE will have 13 senior students listed in the 1951-52 edition of *Who's Who Among Students in American Colleges and Universities*.

The JOURNAL of TRUE Education

Printed by
Review and Herald Publishing Association
Takoma Park, Washington 12, D.C.

Keld J. Reynolds, Editor

Associates

Erwin E. Cossetine George M. Mathews
Lowell R. Rasmussen Arabella Moore Williams

THE JOURNAL OF TRUE EDUCATION is published bi-monthly, October through June, by the Department of Education, General Conference of Seventh-day Adventists, Takoma Park, Washington 12, D.C. The subscription price is \$1.50 a year. Correspondence concerning subscriptions and advertising should be sent to the Review and Herald Publishing Association. Address all editorial communications to the Editor.

The Effective Chapel Program

(Continued from page 9)

Though this permits a reduction to but three chapel periods a week, I always prefer five. This permits getting the whole school family together each school day; gives the chapel periods more continuity; and after a devotional period, when there is need, the music or student or other organizations can take over and thus accomplish their purpose.

The Cooperative Study of Secondary School Standards, of Washington, D.C., has recommended the following setup pertaining to the school assembly:

"1. A school assembly committee is in charge of the general development and organization of the school assembly activities.

"2. School assembly programs are in large part given by pupils and by pupil organizations with pupils presiding.

"3. Assembly programs are planned so as to secure participation and contributions of many, not simply of the few.

"4. Assembly programs have definite entertainment, instructional, cultural, and inspirational values.

"5. Assembly programs often provide for audience participation by such means as group singing or discussion.

"6. Assembly programs are free from coarse and objectionable elements.

"7. Assembly programs are characterized by a variety of presentation, such as music, speaking, devotional exercises, dramatization, demonstration, and exhibits.

"8. Assembly programs stimulate the creative ability of pupils by such means as encouraging them to write and produce plays or other performances, design scenery and costumes, and devise unusual exhibitions and entertainments.

"9. Correct audience habits are developed—no latecomers or early-leavers; reasonable applause; courteous attention to performers; no disturbances.

"10. A definite period and adequate time are provided for the school's assemblies.

"11. Provision is made for pupil evaluation of presentations.

"12. The assembly schedule provides for occasional programs utilizing great artists or leaders in various fields of activity."²

This is only a check list for the evaluation of the school assemblies, and no one school the size of our academies could have all of the items listed; and besides, some of those listed would not square with our educational plan. Num-

bers 2, 6, and 8, for instance, would require definite study by the principal or the committee set up for the management of chapel periods.

It should be kept in mind that the chapel programs are for the purpose of tying the school together, keeping the school body attune to the purposes for which our schools are operated, and directing student activities in the way they should go. The programs should reflect the school's philosophy, and through them some of the warmth of the school spirit should be transmitted to those who come in contact with the school.

¹ "Standards for Secondary Schools," Department of Education, General Conference (1947), p. 8.
² *Evaluative Criteria*, Cooperative Study of Secondary School Standards (1940), p. 42.

LA SIERRA COLLEGE STUDENTS are broadcasting a weekly half-hour program, *The Lighthouse*, over Corona Station KBUC, which two Corona businessmen have offered to sponsor. Mountain Meditations, broadcast each Sabbath afternoon over Riverside Station KPRO, welcomes the return of Walter F. Specht after a 2-year absence while studying at the University of Chicago.

THE CENTRAL AMERICAN VOCATIONAL COLLEGE (Costa Rica) has a capacity enrollment of 143. Dormitories have 4 students in every room. A class of 25 students are preparing for baptism under the direction of Elder Ruiz, Bible teacher.

SEMINAIRE ADVENTISTE DU SALEVE (France) reports a very successful evangelistic effort completed at Annecy City, 25 kilometers south of the college. The seminary president, P. Lanares, was the speaker, assisted by the ministerial students.

AT AUBURN ACADEMY (Washington) 72 students responded to the Week of Prayer call to consecration, several of them joining a class in preparation for baptism.

UNION SPRINGS ACADEMY (New York) provides employment in its 14 departments for 75 to 80 students who must earn all or part of their expenses.

Treasury of
DEVOTIONAL AIDS
for Home and School

THE BOOK FOR WHICH YOU HAVE WAITED
AT THE PRICE YOU WANT TO PAY

MAKE your worship periods more interesting and effective. This volume, prepared by a group of trained teachers appointed by the General Conference Department of Education, admirably fills the purpose for which it was designed—a stockpile of stories, poems, and blackboard mottoes suitable for the planning of worship periods for the classroom or for the home story hour.

- ★ *For Busy Teachers*
- ★ *For Junior Leaders*
- ★ *For Parents in the Home*

The stories and junior sermons were chosen particularly to illustrate moral lessons, and these cover a wide choice of topics, such as bravery, bridling the tongue, care of the body, character habits, God's providence, faith in God's promises, and more than four hundred others.

Lesson topics and Scripture references are all **CLEARLY INDEXED**, and make the most comprehensive collection of worship helps published in our history.

352 PAGES —*Beautifully Bound in Red Cloth*— **PRICE, \$5.00**

ORDER BLANK

_____ Church Missionary Secretary, or
_____ Book and Bible House

Please send me:

No. Copies _____

() *Treasury of Devotional Aids* _____ @ \$5.00 _____

Sales Tax (where necessary) _____

TOTAL ENCLOSED _____

NAME _____

STREET _____

CITY _____ ZONE _____ STATE _____

Prices 15 per cent higher in Canada

Review & Herald Pub. Assn., Washington 12, D.C.
