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EDITORIAL

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TEACHING JOHNNY TO READ ISN'T EASY

Reading is the most important subject in the elementary school curriculum. About 85 per cent of children's elementary school activities directly involve reading. Success in reading is therefore closely related to success in school and consequently also to academic interest and even to vocational choice.

Although reading has always been considered important, the process of reading has not been clearly understood. The research efforts in this area during the last few decades have shed considerable light on the reading process and have led to new ideas about the teaching of reading.

The long and widely held belief that reading is only a skill that can be learned through memorization and practice like learning to write or type has been proved erroneous. Instead, reading has been found to be a very complex process that involves in varying degrees several aspects of the learner's development including the intellectual, physical, social and emotional.

Each child, however, follows his own particular pattern of development in each area of growth. Of two children of the same chronological age, for example, one may be more advanced than the other in physical development but not as advanced in emotional development. Of two others one may be more advanced intellectually but also give evidence of slower physical development.

In view of all these combinations of possibilities it is unlikely that a teacher of some thirty pupils will find in her class two pupils who have attained exactly the same level in all four areas of development. In other words, she may expect that no two of her pupils will contribute exactly the same combination of abilities to the reading process.

It has also been discovered that children differ in the way they learn to read. One child may approach the reading process analytically, breaking down each word into its parts, while another approaches it synthetically trying to gain ideas from combinations of words. One child may learn best through visual presentation of words while another may also need a kinesthetic or even a tactile presentation. Again, one child may do well with the phonetic approach while another may reveal an almost complete lack of phonetic sense.

Ideally every teacher of reading should be able to spot these differences, locate individual difficulties, and apply appropriate techniques to make the teaching of reading effective. But this is a large order. The article by Mr. Lauffer in this issue points out some of the complexities of reading retardation and the number of facets that have to be examined.

Attempts to deal with the problems of reading have followed two trends. One is the trend toward individualization of reading instruction. It is based on the assumption that each child has his own particular approach to reading and should be taught in his own way and at his own rate.

There are teachers who have enjoyed great success with this kind of teaching. Whether this success has been the result of the personality and performance of the teacher, of the enthusiasm engendered by a new method, of the method itself, or a combination of these factors is difficult to determine. It is a method that every teacher should familiarize herself with and explore.

Another trend is the search for a uniform method of teaching reading, a single method that can be used effectively for an entire class. This is an attempt to continue the traditional method of dealing with pupils but to adapt it to present knowledge of reading.

There are great variations in practice within this trend. At the one extreme is the kindergarten teacher who prepares all her pupils for reading in the self-same way in spite of the differences in their background experiences; or the first grade teacher who insists that word attack skills, especially phonics, must in the case of every pupil be taught before actual reading begins and that she must teach the word attack skills in the same way and to the same extent to every individual pupil. Such procedures are attempts to oversimplify the reading process. They ignore the results of research.

At the other extreme is the teacher who believes that reading should be equated with pleasure. She steers clear of basic reading skills because such teaching would require drill and that might be unpleasant. Her theory is that children will learn to read if properly and adequately motivated and that such motivation will cause the pupils to learn for themselves many of the skills that are commonly taught in the schools. But this is another example of oversimplification for not all the pupils in a first grade class are usually mature enough and ready enough to launch out on a reading program independently.

There is also a trend toward combining group and individual teaching of reading. Teachers who use this plan, and their number is increasing, assume that in an average class most pupils can profit from some group teaching, especially in the basic reading skills. Along with their group teaching, however, they use individualized instruction to make their teaching applicable and effective with individual pupils.

The teacher of reading must be a well prepared and judicious individual. She must have a knowl-

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edge of the psychology of reading that is adequate not only to enable her to detect individual differences in the abilities of her pupils but also to determine how to deal with those differences and in particular how to deal with special cases. At the same time she must be well versed in the area of teaching methodology for she will find it necessary to vary techniques with individual classes, groups, and pupils. And she must be judicious enough to avoid the propaganda and quackery that is rampant in the field of reading and to select and put into practice what is sound and helpful.

Can anyone teach reading?

No! Teaching Johnny to read isn't easy.

READING PROBLEMS OF COLLEGE STUDENTS

*E. Coston Frederick

When a graduate of a Christian high school enters college, he usually has a definite aim or purpose. This helps to eliminate one of the greatest reading problems, lack of purpose.

A look about our college campuses will show that there are a great many students who don't belong in college; they have no purpose for being there. Many of them have been sent to college against their will by eager parents. Others attend college because they think it is easier than holding down a job. Still others arrive on campus with unrealistic goals. They set their goals so high that failure is almost a certainty.

In my work as counselor and teacher in the Reading and Study Skills Center, I meet many students with those three basic problems. I have counseled students who literally despised their parents for sending them away to school, students who had no ideas concerning the high level of achievement demanded by colleges, and students who lack the ability to attain their goals. For example, one student pounded his fist on my desk and shouted, "I'm going to get a Ph.D. degree if it kills me!" And this was the third college in succession in which he had failed miserably.

Let us assume, however, that we are dealing with students who have realistic goals, who have ability, and who have the financial support to see them through college. They still have their problems, for they soon learn that they must be able to read and study.

Two Major Problems

When a student sits at his desk with his textbook in front of him, he must be aware of and deal with two major problems: (1) the need for concentrating on the subject matter, and (2) the need for sifting out from a large body of information the basic facts and learning them.

Many students come to my office with the complaint that they can't keep their minds on the chapter they are to study. Their minds seem to wander. They come to the end of a page and suddenly realize that they don't have the slightest idea of what they have read.

I tell these students, "The only trouble with you is that you are normal." It is very understandable that any one can open a textbook, begin in all sincerity to read, and then have the words and ideas on the page melt into a vision of the girl back home, the girl on the campus, or both.

As normal as this may be, it is still a problem and must be eliminated. A technique of study must be developed which will enable them to concentrate on the textbook rather than on their dreams. This is a matter of *focusing* concentration rather than producing it. We concentrate every minute on something.

The second major problem involves what can best be described as naivete. Students just don't realize how many facts are available in a textbook chapter. I attempted recently to determine how many facts there were in an average chapter of a textbook on introductory psychology. The figure I arrived at was 600. This includes major and minor facts, but still facts. Can any one read a textbook chapter once, twice, or even three times and remember 600 facts?

A study technique has to be developed which will enable the student to identify all of these facts and then determine which are major and which are minor. The technique should include the organization of the facts so that they can be learned more easliy. Many students atempt to learn as many facts as they can find, and this usually ends up in a miserable session of memorizing a long list of unrelated, disconnected, and mixed up facts.

The SQ3R Study Technique

The SQ3R study technique is a method of study that will help eliminate the aforementioned two problems. It will help to control concentration and it will enable the reader to identify important facts and organize them for effective learning.

S — *Survey.* The first step is to survey the chapter. A chapter should be surveyed in the same way and for the same reason that a road map is surveyed. The latter indicates where one is going and by which route he will get there.

A survey of a chapter includes reading the introduction, sub-titles, boldface print sub-divisions; maps, charts, pictures, graphs, and explanatory captions; and the summary — in that order. The introduction presents the problem that the author intends to deal with. The sub-titles and bold face print sub-divisions are the author's announcements of what he is going to discuss. The pictures, graphs, etc., are examples of things he intends to treat more thoroughly in the chapter.

After a good survey the reader should have a general idea of what the chapter is all about, no detailed facts but just a good, general idea. This will set the goal for what is to be learned by reading the chapter. It serves as a frame of reference for the facts that are to be accumulated.

Q — *Question.* Educators have known for a long time that a question is the best motivation for learning. Socrates and Jesus used the question method effectively, and other teachers have used it and continue to use it with great success. In reading, the question can

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be used as a self learning device.

The question can be made realistic and pertinent by turning the bold face print sub-divisions into questions.

R — Read. Read to find the answers to questions. The search for something as definite as an answer to a question controls concentration. Helping the student to look for something specific and then seeing him find the answer and enjoy the experience of identifying important facts is a source of great satisfaction for any teacher. The answers to the questions are the *main ideas* that the reader is searching for. This is the logic of writing. It has to be that way.

For example, go back to the second sub-division in this article: Two Major Problems. The logical question is, What are the two major problems in college study? In finding the answer to that question important facts stand out. The rest of that sub-division discusses the two important facts; no new ideas are introduced.

R — Recite. This is where the knock down, drag out study comes in. After the student has identified the main ideas and important details he should go back to the beginning of the chapter and learn them. This is where he underlines, outlines, makes notations, memorizes, or does whatever is necessary to master the chapter content.

R — Review. Review is set up during the Recite step of SQ3R. If the main ideas and important details are identified then, and they are recorded by notes, underlining, or outlining, they are ready for review when needed. It is much easier to review organized main ideas and details than it is to reread an entire chapter or book.

Also direct the student to review within 24 hours after studying a chapter. Studies show that the average college student forgets 50 per cent of what he learns within 24 hours. Many times a quick review of main ideas and important details before a class meeting is all that is needed.

Vocabulary Development

Needless to say, the vocabulary of a college student is a valid determinant of college success. A student needs to know the concepts of his particular subjects and must have the ability to express these concepts in suitable terms. The mere collection of a large number of words is not necessarily vocabulary growth. The student needs to develop a method of adding words to his vocabulary in such a way that he can constantly review the words and develop his concepts of the ideas expressed by the words.

Reasons for a poor vocabulary. There are two reasons why any one does not have a strong vocabulary. The first is lack of experience. By this I mean that the individual has not had sufficient experiences in his life to provide him with a background needed to bring meaning to the printed word. As children we learned by actual experiences, and to some extent we still do. However, by the time we are ready for college most of us have our experiences vicariously. It is no accident that a person who reads much has a large vocabulary; the simple truth is that he provides himself with many vicarious experiences out of which come the meanings of the printed words which he reads.

The second reason for a poor vocabulary is the bad habit of skipping unfamiliar words. This must stop! The argument that some students give is that they would not finish the assignment if they stopped at every unfamiliar word. This argument is not valid, for even if the student finishes the assignment and does not understand the concepts presented, of what use is the reading of the assignment to him? The serious student faces unfamiliar words as a challenge and will let nothing stop him from learning them. The dictionary is a necessity for a college student.

A method of vocabulary development. After looking up a word in the dictionary the battle has only begun because not many people are able to learn a word after looking it up only one time. A technique is needed to record such words in a manner that will give the student an opportunity to view it in its original setting time after time until it is thoroughly learned.

The following process is suggested as the best means of recording unfamiliar words for the purpose of learning them. Use a three by five card and on it: (1) write the word in syllables, (2) give the dictionary definition in your own words, and (3) write the phrase in which the word was used.

vi-car-i-ous
second hand; substitute
many vicarious experiences

Three by five index cards are recommended because of their permanency and their suitability in mixing up or categorizing the words. The definition should be in one's own words so that he is sure to grasp the meaning. The phrase in which the word was used is important for it recalls the original experience with the word.

As the student develops his vocabulary skills he will notice similar parts in many words. These are the prefixes, roots, and suffixes. Such information may be placed at the bottom of the card with other words that have the same elements. The more mature the vocabulary, the more complex will be the words. Students should be taught to be very much aware of the integral parts of the words.

Varied Reading for The College Student

There is no place in our Christian society for the person who spends his life in reading in only one particular academic area. One's academic interests can be served best by reading in one's chosen field and also reading widely and wisely in other fields. The scientist must read the social sciences to understand the use and effect of his scientific knowledge. The teacher should read widely in the social sciences, psychology, and related fields. It is only in this way that the college student can grasp an understanding of himself in terms of the people and the world around him.

Thomas Carlyle has said, "The best university is a collection of books." The writings of the wise are the only riches our prosperity cannot squander.

So, help the college student to become a good reader, for whatever reading he does in college will kindle his imagination, enlarge his vision, and open new avenues of knowledge.

This is not the responsibility solely of the college, however. Reading should be learned long before the student enters college if he is to gain maximum benefit from his college education. High school teachers especially should bear this in mind.

TECHNIQUES FOR HELPING TEACHERS UNDERSTAND READING PROBLEMS IN THE CLASSROOM SITUATION

*Charles D. Laufer

INTRODUCTION

Some "signs of the times" are becoming more than obvious as each day passes. Quoting from Dr. Paul Woodring in an article entitled "Can Johnny Read" in the *Saturday Review of Literature*, January 20, 1962, "Teaching children to read is the most important single responsibility of the schools because all further education depends upon it, and a nation of illiterates can neither govern itself or maintain itself as a civilized society".

These "signs of the times" refer to the growing problem of reading disabilities noted by the regular classroom teacher in her ordinary, everyday classroom experience. In a study undertaken in two local counties this problem has "hit home". In two county Special Education programs, studies were made of the percentage of referrals that were appropriate and those that were inappropriate for the Mental Handicap Program. Over a five year period in one county, and a three year period in the other, the percentage of inappropriate referrals was found to be about 75%. None of the 75% were actually mentally handicapped but all presented significant classroom and/or curriculum problems because of under-achievement.

Analysis of this population shows that the under-achievement problem was caused by both emotionally rooted and reading problems. The total emotional problems constituted 70% of this population; total reading 60%. The overlapping figures are due to the fact that many of the reading problems have serious emotional foundations. Of the emotional problems about 70% were secondary in nature, resulting from other (for example reading) problems. Non-statistical conclusions are that reading and reading problems form a basis for serious under-achieving problems. As such reading difficulties result in problems of grade level placement; general achievement in subjects other than reading (but heavily involved with reading); problems of retention; and problems of academic enrichment at the lower level. Reading problems are obviously creating serious and crucial problems in maintenance of grade level teaching in other areas than reading.

So much for the seriousness of the problem. Now we must focus on techniques for recognizing, assessing and developing a program for remediation of these problems.

Some Basic Areas of Consideration for Teachers:

Prior to attacking any given child's under-achievement problem and/or reading problem some foundation areas of knowledge are requisite. These foundation areas are basically three-fold in nature.

Learning steps. The first is categorized under the topic *learning steps* – steps through which learning takes place. Recent studies have shown that there are eight basic steps through which a youngster traverses in learning to read. 1) The first of these is referred to as *sense reception.* This refers to the receiving of sensory images from the environment, not only in the area of the visual but also in other areas critical to reading. Other areas include: the auditory (pertaining to the ears and hearing); the kinesthetic (pertaining to motion, muscle sensations and balance); and tactile (referring to skin reception of impulses from the environment). 2) *Sensory acuity* (refers to the degree to which one receives senses adequately or sufficiently, or has impairment to one degree or another in the reception of the sensations). 3) *Sensory discrimination.* This refers to the adequacy in receiving sensory stimulus. It also refers to the further step of distinguishing between different types and degrees of the stimulation. For example, lighter and darker in the visual field, heavier and lighter in the kinesthetic field, rougher and smoother in the tactile field, and louder and softer in the auditory field, etc. 4) The area of *Sensory association* refers to the hooking together of clusters of sensory impulses and their reception into small, complex units comprising more than one sensation. The above steps, 1 through 4, together, constitute the entire area entitled perception. 5) The fifth step in the process is that of *Symbolism.* This refers to finding meaning and then placing meaning onto the various clusters of sensory associations accumulated in the prior steps. It then refers to making sense out of a series of lines in terms of converting those lines into what we call letters; and the letters into what we call words. 6) The sixth step in the learning process is that of accumulation of symbolisms into a "fund" of resources. This is entitled *Memory* and falls into two categories. The old (accumulation or storing aspects of memory) and new (the retention of non-meaningful, rote material such as numbers, letters, meaningless words, etc.). 7) The seventh step in the process is that of *Abstraction* and *Generalization.* This refers simply to the ability that one develops to reason with words and sentences and to apply what he has learned in one situation to a similar but not identical situation. 8) The final step in the "learning to read" process is that of *Critique.* This refers to judgment, aesthetic applications, etc., in the use of words in reading.

All of the steps through which one travels in learning to read proceed from basic, more primitive and simple steps (sensory reception) to the more complicated of the steps (critique). The hypothesis exists that one must traverse and master each of the steps prior to advancing to a new step or there is an impairment of one type or another in the process of learning to read. Such an impairment, of course, will not only affect reading but all subjects associated with reading.

Learning media. The second area of consideration in building up a foundation of resources for understanding reading problems is that entitled *the media through which one learns.* Reading research has pointed out that one must proceed through these media from a simple, primitive level to a more refined and complicated level in steps.

The lowest and most primitive of these steps involves the media of the *tactile.* This refers to the media of touch and skin interaction and the use of this in the learning of

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reading – not just letters but words and sentences. Normal age levels through which this is developed, under normal circumstances, are those from age 0 to 1 or 2.

The next media, in order of increased refinement, is that of the *kinesthetic*. This refers to movement, balance and muscle interaction. This level, under normal circumstances, is mastered between the ages of 0 and 5, but especially the ages of 2 to 5.

The third media, in the area of refinement of the use of media, is that of the *auditory*. This refers to sound and the whole area of phonics. This area is generally, under normal circumstances, mastered between ages 2½ or 3 to 6 or 7.

The highest and most refined media through which one learns to read is that of the *visual*. This generally, under normal circumstances, is mastered between the ages of 5 to 10, especially 7 to 10. This area refers, of course, to sight recognition, and in general to sensory images received through vision.

As with the steps through which one proceeds in learning, the media one needs to master the ability to use words always proceeds from a simple to a complex, from a primitive to a refined, and from the underdeveloped to the developed. Thus one may not master learning to read through the visual process unless he has already mastered the three prior processes. As, for example, one may not efficiently learn to read through the method of kinesthesia unless he has already mastered the techniques involved in the media of the tactile. Although, under normal circumstances, most youngsters learn to master most of these media prior to school age, special deprivations involved in our cultural and home lives, special impairments in a given individual's physique and physiology, and other such circumstances frequently interfere to either void mastery of learning through one media or to impair it significantly. Thus, in this way, impairment occurs in the total use of media in the overall learning process. This, of course, impairs efficient use of visual or quick sight recognition methods of learning to read.

Learning mechanism. The third and final area of foundation knowledge for consideration of teachers in understanding children's reading problems is that entitled *the mechanism of learning.* This topic refers simply to the actual mechanics through which we learn to read once we have mastered, or are in the process of mastering, the appropriate step in learning to read and the appropriate medias through which we must learn to read.

At this point we ask the question, "Just how does learning to read take place"? In attempting (perhaps over-simply) to boil down the mass of learning theory data into meaningful elements, adaptable to the teacher for teaching reading, we can say that probably three factors are involved: 1) *motivation;* 2) *meaningfulness;* 3) *contiguity.* The first – *motivation* – refers to the readiness, attraction and lack of inhibition one has in actually wanting to approach learning to read.

The second factor, *meaningfulness,* refers to the fact that learning and re-learning of non-meaningful or rote material, and "learning to read in a void", involve a long and tedious process. This process requires many additional, supportive and "prop" factors, and involves less retention over a shorter period

of time. Or, to state it positively, if one learns to read words that are meaningful and in a meaningful context, one may apply what he is learning to read to something that he is already interested in or knows. In this way the learning process takes place much more quickly than if he is learning in a rote fashion words, symbols, letters or sentences that make no sense and cannot be related to another experience or an experience of interest.

In reading, specifically, this applies to the use of abstract vocabulary word lists as opposed to the learning of vocabulary through the stories with which one is involved. It also applies to the application of one's reading to high motivation – low vocabulary levels as opposed to the old fashioned, "Dick and Jane" low motivation, low vocabulary levels. It further refers to adjunct and supportive, reinforcing motivational techniques in the process of teaching to read or in remedying reading. This is to say that you do not simply sit down and say to a child, "Now you are going to learn to read . . . read!" Rather than this, the teacher offers visual aid, auditory aid, game aids and other traditional "non-work" and "non-school" factors and props.

The third area in the mechanics of the learning process is *contiguity.* This refers to the close presence of an already learned object to the new and unlearned object that is to be mastered. The close presence refers both to time and space and, in the context in which we are using it, it refers to use of all the senses. Contiguity then becomes the placing of the new and unlearned piece of reading material "right next door" to an old and already familiar and interesting piece of material. This is accomplished both visually (words and sentences) and auditorally (the reciting by someone else of the words and the sentences). This also should be applied and used in the tactile and kinesthetic areas if it is to be sufficient.

Further foundation facts of knowledge (which will not be delineated in the present dissertation because of lack of time and space and the fact that they probably have already been gone over many times in curriculum courses in the teaching of reading) are those involving knowledge of what is normally considered to be an average accumulated vocabulary level for the average child of any given age or grade level. (For example, the eight year old, third grade child will have accumulated about 1200 words and will read harder books. This child will need help with word recognition, especially blends and middle vowels, single and double combinations, and word endings, etc.). They will also involve a sound knowledge of some of the emotional aspects which enter into the implementation and/or inhibition of learning. These probably have been well covered by educational psychology courses and the like.

When these foundations are firmly understood, one is ready to focus on the specific problem of what goes wrong when a child does not learn to read well or when he has a manifest reading disability.

The Nature of Reading Disability:

Kinds of Disability. Discussion of the nature of reading disabilities or deficiencies should center initially around their classification into two categories. 1) The slow reader; 2) the actual reading deficiency. The first of these two categories refers to a youngster who is read-

ing not more than one grade level below expectancy, and *not* manifesting one or more critically lowered sub-areas of the reading process. (For example, especially low vocabularly but adequate speed, especially low sight recognition but adequate comprehension, etc.). The second category (reading deficiency) refers specifically to the youngster who reads one or more grade levels below grade expectancy and/or manifests one or more especially lowered sub-area of reading deficiency.

An essential and critical consideration in this matter of differentiating between the two types rests in the matter of the child's intelligence. When the term grade expectancy is used it refers to the grade level at which the youngster is expected to fall, based on mental age or intelligence. For example if a youngster has an I.Q. in the low 80's, and is 7 years of age, he cannot be expected to function overall intellectually at a good second grade level. Therefore he cannot be expected to read at a second grade level. For this reason a youngster of this age who is found to be reading at a first grade level *would not be considered* a reading deficiency. Instead he would be considered a normal reader in view of his intellectual level.

One further word regarding intelligence, and its critical feature in understanding reading problems, involves the measurement of intelligence. More frequently than not when group intelligence or ability tests are administered to youngsters with reading problems in the primary grades, valid mental age, I.Q. or intelligence is not the result. Rather, the low I.Q. which results is actually a measure of the youngster's reading deficiency. All group I.Q. tests on youngsters who may be suspected of reading disabilities must be further verified by either a non-reading I.Q. test, administered in the classroom by the teacher, or a standardized individual psychological test such as the Wechsler Intelligence Scale for Children.

Once one has differentiated types of reading problems into two categories, further differentiation of the reading deficiencies is in order. Basically these fall into five different categories.

The first of these categories is termed *directional* deficiency. Directional deficiency is characterized by poor eye habit patterns. Poor eye habit patterns include skipping of letters and words, poor left-right direction movement, the quick shifting of the eye from one letter and one word to another, superimposing a wrong letter on a good word, reversals (turning words around such as: was = saw) and inversions (turning letters around and upside down such as: W = M and D = B, etc.).

Visual problems is the next category. This consists of actual inability for seeing the word adequately or inability to maintain an adequate focus on the word or letter at hand. In these cases youngsters frequently skip and frequently guess overly quickly. At any rate when they read a word it becomes totally different for them from the actual word that exists.

Perceptual disorders form the next category. These are characterized by blocking out letters and inability to learn letters and letter combinations. The frequent missing of middle vowels, vowel blends, consonant blends, etc., form the expression of these particular deficiencies.

The fourth category has been characterized *symbol-aphasia* and refers to people who are simply total non-readers. The actual deficiency refers to the inability to translate into symbols or to understand the symbols, be they letters, words, phrases or sentences.

The last category is termed *emotional*. This refers to reading deficiencies which are either complicated by emotional problems or stem from emotional problems. Emotional problems are considered either primary or secondary. The primary emotional problems are those that "came first" and underlie the entire reading problem. Whereas the secondary emotional problems are those which stem from an originally existing reading problem. Emotional problems are expressed in consistent word blocking on certain classifications of words (i.e. words that have to do with fighting, dependency, aggression, power, etc.). In addition to this gross inconsistency in the total reading process is noted. A youngster will learn to read one time and not the next. More often than not tenseness and anxiety accompany the emotionally rooted reading problem. This is seen in body tension, raised voice, tightened jaws, sweating, etc.

However, more important for the teacher than attempting to peg a youngster with a category of reading deficiency, is the understanding in the terms of the three basic areas that are involved in learning reading, what can and does go on. Thus the understanding of a symbol disorder as such; the understanding of a memory disorder as such; the understanding of the inability to use the eye adequately in learning to read; the understanding of the mastery of the media of kinesthesis in learning to read – all of these – are the actual working assessment that a teacher needs adequately to understand the problem that the child is actually dealing with. If the teacher then wishes to label the child with one of the diagnostic categories, he may do so. However, a label will not help him work with the problem to any greater degree. For all practical purposes then, the nature of reading disabilities becomes explicit with each individual child. It is then described in terms of the actual deficiency that the child manifests in his ability to learn to read and to retain reading learning.

Assessment of Reading Disabilities

Assessing the actual reading disability now becomes a rather mechanical process. The first step in this process is to understand the child's I.Q., and his reading level compared with this. The second step is to assess whether or not the reading deficiency is a "slow reader" or a "reading disability". When this has been mastered, then finding methods of assessing the youngster's ability in the various areas concerned in learning reading (the eight steps, the four media, or the three "mechanisms") is necessary. When this has been accomplished, the ensuing step involves determining whether or not a reading problem is a "regression", or a "fixation". This terminology refers to specific concepts of how a child learns to read and where and when he stopped learning. Regression refers to the youngster who has mastered all of the steps up to and including his expected level of development, then has "gone backwards" in one or more areas for one or more reasons. Thus he is no longer reading at his expected grade level. The word "fixation" refers to the youngster who has

not yet reached expected age level learning in the area of reading, and who has remained at an early, more primitive level without progressing forward from this. Many and sundry events can create either of these states. However, a regressive state is generally seen to be associated with emotional problems. On the other hand the fixated state is generally seen to occur when a specific and rather severe deficiency, in a given area of the learning process, is seen. As a result the youngster finds it impossible to progress. In some instances, however, he may reach a plateau and then "go backwards". This may be caused from the next step being entirely too difficult, and results from a long standing, chronic deficiency which he has been fighting for many years.

Following the assessment of the regressive versus the fixated type of reading behavior demonstrated by a youngster, the teacher must specifically focus on the area of defect. This refers to sorting out the actual area where the deficiency exists and then working on that area in remedial fashion.

In addition, at this point the teacher must assess by one means or another what areas she feels are the child's area of perceptual choice and/or area of specific perceptual impairment. For example some children learn better and prefer visual learning techniques while others learn best by and prefer auditory techniques. The same can be applied to the kinesthetic and tactile. If a child is noted to fall in one of these categories, this is termed his area of perceptual choice. Area of perceptual impairment simply refers to a physiological disability such as poor hearing, poor eye sight, etc.

When the teacher has arrived at this position, then he has, in fact, already assessed the deficiency and is prepared to apply remedial techniques to it. In arriving at this stage, however, it is suggested that teachers note that by using a step-by-step method – ruling in certain known factors (areas of proficiency or mastery) and ruling out other factors (areas of specific disability or deficiency) – they will be more objective than if merely observing or conjecturing. A good step-by step method has been found which works quite well with teachers.

Specific Assessment Techniques:

The first step in analyzing the youngster's reading and looking for his deficiency involves a gross analysis of background and ancillary material which could directly or indirectly, affect the reading process. To do this the teacher should refer to the cumulative folder of the child and generally check the following areas: a) *Educational.* This refers to the time when the problem was discovered, what was done about it, what the teacher's reaction was at that time, what the child's reaction was at that time, and how the parents felt about the problem. b) *Physical.* The medical history or the school nurse notes are reviewed. "Red light" areas for special notation are: special birth problems, visual problems, alergic and/or glandular problems and hearing problems. c) *Social.* This refers to what kind of a child this is to live with at home, at school and in the neighborhood; how he gets along with adults, at home, at school and in the neighborhood; how he gets along with other children at home, at school, and in the neighborhood; what his relationship is with the teacher; and how he feels about school in general. d) *Emotional.* This refers to observations of tensional behavior in this child's everyday school life. Such

behaviorisms as thumb sucking, nail biting, and other habit patterns are noted. When this has been concluded, the teacher can peruse the data and draw a general conclusion which may be extremely obvious and/or astute at this point.

If the data is still inadequate, we proceed with *step two* which involves attaining a rapid survey of growth and/or I.Q. from the child. This can be gained from group intelligence and/or ability tests, using the above-mentioned cautions necessary.

Step three in the process involves noting whether or not there is any confusion of handedness (left-right) and/or whether there is any obvious clumsiness in the hand writing process. If so, then a perceptual problem with a physical root (muscle incoordination) may exist. Or there may be a problem of lateral dominance confusion (which is generally coming to be considered less and less of a specific problem in and of itself). This latter could create a directional problem in the directional movement of the eye from left to right in running reading sentences. This type of child can do much better with abstract word lists than with actual paragraphs or sentences themselves.

The *fourth step* in the reading assessment involves the process of determining the actual reading level at which the child is found to be functioning. The simplest way to do this is by means of an *informal reading inventory.* The informal reading inventory involves simply guessing of the child's level of reading, placing him in a graded reader at that level, and having him read about 100 running words. If the child misses more than one out of twenty of these words, we must proceed to the next lower level and proceed as before. When we have reached a level at which he misses no more than one out of twenty running words, we can assess comprehension. This must involve a 75 percent or better accuracy.

Comprehension can be assessed simply by a four-question-test involving some details and some inferences. When the 75 percent comprehension accuracy and 95 percent mechanical accuracy is attained, we have then placed the child at his *instructional* reading level. This is the maximum level at which a child can be taught reading and at which reading deficiencies can be dealt with without a great deal of stress and secondary symptoms occurring.

At this point *step five* (and the final step) is undertaken in assessing the reading deficiency. In this step the child is placed under instructional reading conditions and asked to read aloud. Both his eye movements in the reading process and the types and frequencies of errors are then noted in the first part of this process.

If the child is a virtual non-reader, then experimentation can be made with the manner with which he can learn to read. For this a passage is read to him while he reads silently to himself. If he cannot repeat the passage, even after several tries, then the problem is too great for a teacher to handle in the classroom. At this time the problem should be referred for specialized remedial reading diagnosis. If he can learn, the method by which he learns (phonic, sound, movement or kinesthetic, feeling or tactile, sight or visual, or any combination of methods are used) then becomes the teacher's remediation.

If the child is hesitant in his reading, reads jerkily or with staccato movement, or skips or repeats words, then the use of a stylus or a pointer above the word can be used as a temporary "crutch". If the child improves markedly with this, then we may have a simple directional problem which will be improved by having the child read (at his instructional level at all times) with a stylus. He should learn to use the stylus proficiently and at a latter date gradually "weaning" of the child from the stylus should be accomplished. If the child responds in this manner, then the problem has not only been assessed adequately but also corrected at the same time.

If the child does not improve by the use of the stylus, directional problems can be ruled out and the teacher must then assess areas of perceptual problems. In order to do this the teacher must print (copy) all missed words on separate cards, then experiment with one simple perceptual method of helping the child learn these missed words. This method consists of printing the word on a card with a black pencil but substituting the actual letters or parts of the word which the child missed with red pencil. This then should be used as a running-working-vocabulary until the child masters it. Then the child should be switched to the same words, all in black, and finally the words should be placed into meaningful sentences and paragraphs. If the child learns in this manner, then we have a simple perceptual disorder which was correctly assessed and corrected. If he does not learn, then the directional or perceptual disorder is far more complicated than what an average classroom teacher can or should have the time, patience and knowledge or skill to undertake.

If it is noted that there is a repeated confusion of certain critical words, then the sight vocabular, with red for the critical letters, method should be utilized again. Again if correction is adequate, the problem has been corrected by the teacher and needs no further emphasis; but if the problem has not been corrected, the child should be referred for remedial reading.

If recall or memory appears to be a problem in the reading process, then diversion activity can be used to see if the problem is an anxiety or tension problem (if the diversion activity lessens the problem, then it likely is anxiety and tension) or if it is more severely emotional. The matter should then be directed to the attention of the visiting teacher or other appropriate mental health source for the ultimate welfare of the child.

If the child is extremely erratic and shows peculiar performance, with a great deal of variation from time to time, either a severe emotional problem or possible glandular problems are probably at the root of the reading deficiency. This area again falls outside of the teacher's realm and should be referred for specialized help.

At this point the teacher has probably exhausted her own resources, and if the problem is a relatively simple one she should have mastered it. If the problem is a complicated one, she should have assessed this fact and "referred it out".

More specialized techniques than those outlined are generally considered to fall within the realm of the remedial reading teacher and require a great deal of experience in knowing where to start and when to cease utilization of particular techniques before creating emotional problems or doing other harm. Dangers arising from misuse involve adding permanent crutches to the child's reading process, slowing down the child in what ordinarily would have been a normal speed reading process with a few deficiencies, or in some cases creating sufficient anxiety for the child to cease to read or to read highly irrationally.

Summary and Conclusions

Basically the teacher is the key person and key element in helping children with reading. It does not fall within the realm of the specialist or of the psychologist to teach the child normal reading. However, when the teacher finds herself "against the wall" and unable to proceed with known methods, then a step-by-step assessment, with the proper knowledge of reading problems, is certainly in order by the teacher.

It is hoped that the "art" and skills a teacher maintains by virtue of being a teacher will help her apply some of the techniques that have been outlined above. If not, then the teacher should make use of referring. If so, then the only other aspects that are involved are those of caution, not proceeding too fast or too slowly or too far in the wrong direction. Constant surveillance, constant self-critique of one's own methodology and approach, and constant assessment of the outcome of what one is doing are the simple answers to this problem. This, of course, presumes basic intellectual honesty and sincerity.

If professional assistance, apart from the teacher's resources, is required, this should be available to the teacher. Any office of the local Chapter of the International Reading Association can readily offer such information as can also the heads of reading departments of state universities, the reading consultants in various public schools, and special educational consultants. It should be emphasized, however, that as in other new fields there are many "quacks" in remedial reading. Only competent help should be diligently sought if the child is to be helped rather than harmed.

Although most of the problems that children present in school should be those that the classroom teacher is capable of handling, some will not be. Identifying problems that go beyond the teacher's scope of ability does not require special training it requires good judgment, knowledgeable thinking, and lack of egotism. Recognizing the need for referral requires only acute observation and the ability to learn quickly when a child does not respond to special classroom techniques for the alleviation of his difficulty. Time, experience, and training will help.

Needless to say, the developing of greater proficiency in assessing children's difficulties in reading and the gradual developing of special techniques by the classroom teacher will certainly be a boon to the future increasing number of youngsters who attend school and among whom will be found many who have reading problems. It will also be an answer to the acute need that exists because of the lack of adequately trained reading specialists.

SELECTED REFERENCES FOR LOW VOCABULARY-HIGH MOTIVATION MATERIAL FOR CHILDREN'S READING

Reading Skill Builders ..... Reader's Digest
Vocabulary level – 2-6; Interest level – 2-12

Inter American Readers ..... Macmillan
Vocabulary level – 3-6; Interest level – 3-12

Read People Series ..... Row Peterson
Vocabulary level — 4-6; Interest level — 3-9

Way of Life Series (Vocations) ..... Row, Peterson
Vocabulary level — 5-6; Interest level — 5-12

Deep Sea Adventure ..... Harr Wagner
Vocabulary level — 1-6; Interest level — 3-9

Childhood of Famous Americans ..... Merrill
Vocabulary level — 4-5; Interest level — 3-12

Wonder-Wonder Series ..... Steck
Vocabulary level — 1-3; Interest level — 1-6

Core Series ..... Macmillan
Vocabulary level — 1-3; Interest level — 1-6

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S R A READING LABORATORY

*Cecilia H. Mereness

The S R A Reading Laboratory Program is a method of teaching reading developed by the Science Research Associates, Inc. It is directed by Donald H. Parker, a psychologist, teacher, reading consultant, and college professor. Introduced into the classroom four years ago, the S R A Program has helped to individualize reading in grades four through thirteen, and now materials are available beginning in grade one.

Underlying Philosophy

In order to understand the S R A Reading Laboratory, one should know something of the philosophy on which it is based. First of all, Parker believes that individual differences exist both in learning capacity and in learning rate. Most classrooms contain a group of students which distribute themselves normally on a curve of individuality. Therefore, the learning experience must be unique for each child. The student should be able to start at a place where he can be reasonably successful and move from that point as fast and as far as he is able. It is possible, says Parker, to find out where the student should begin. Children then should be allowed to feel and see their own progress and to find satisfaction in the learning activity itself, rather than in the end result alone. Finally, the author of this program feels that "immediate and long-range feedback" of the learned material is essential.

*Mrs. Cecilia H. Mereness, A.B. Calvin College, formerly taught in the Sheboygan Christian School.

The Materials Used

Based on this philosophy, each S R A Reading Laboratory contains a number of materials in a wide range of reading levels. Each day's work provides for three kinds of activity. There are power builder selections, interesting and appealing stories with comprehension exercises in which the child learns to remember details, look for the main idea of the story, and learn new vocabulary. Then the student improves his speed and concentration by reading a rate builder story. The exercises for this story are timed and teach thinking clearly and under pressure. Third is the listening skill builder to be read by the teacher, after which tests are taken and corrected by the pupil himself in his own Student Record Book. Grades one and two do not have a rate builder, but a phonics and word game activity instead.

Each laboratory is made for a class of about 40 pupils. However, it can be used in classes of 50 or more simply by ordering extra answer sheets and pupil record books. The stories are in separate booklets or sheets, and the levels are designated by color. There are several stories in each level. One day's work can be completed in a 40 minute class period; individual children usually finish the work in 25 to 40 minutes.

The student moves from one level to another when he averages 90 to 100 percent comprehension on his tests, and should be encouraged to evaluate his own work. The teacher, however should check the pupils' records daily at first and spot check from then on to keep himself informed as to the students' progress. The teacher also helps the child with his difficulties when she believes it is wise to do so. The only time she works with the class as a whole is when she reads the listening builder selection to them.

The Program

Now that I have explained the daily program of the Reading Laboratory, you may ask how it fits into the schedule for the whole semester or year. The Lab is set up to operate best when it is used four or five days a week for the first five or six weeks of school. According to Donald Parker, a more spread-out program would defeat itself because there would be no daily reinforcement of the learning. He thinks practice is most valuable when closely spaced. I have seen the Lab used four days a week with one day of supplemental reading.

After observing the S R A Reading Laboratory in practice and studying its literature, I thing it is worth examination by all teachers of reading who wish to improve their methods. It teaches all of the necessary skills for successful reading; the stories are extremely interesting, and contain information about scientific facts, famous people, and well-known events in history; thus they are highly motivating. The children correct their own work and in this way reinforce their learning experiences immediately. After the program is begun, it is operated largely by the students, and this gives the teacher more time to help individuals; also no special teacher-training is needed.

The Lab materials have been printed in order to make the cost reasonable, and extra parts are always available. For more information of details in operation and cost you may write to:

Science Research Associates, Inc.
259 East Erie Street
Chicago 11, Illinois

ANATOMY OF A UNIT — GRADE 4

*Nella Snapper

"Well, I have to start a new unit on Monday."

This commonly heard remark means different things to different teachers. For some it means quite simply that they are going to start a new chapter in a textbook. Some think of science, others of social studies, and occasionally some other area of the curriculum. For some it involves a rather distinctive pattern of teaching. For others there is nothing distinctive about it other than the fact that the chapter, or group of chapters, bears the title "unit" in the textbook. Some think of subject-matter units, others think in terms of problem-centered units involving knowledge from a wide variety of fields brought to bear on a problem or set of problems.

Although it is true that there are many kinds of units and many different patterns of teaching a unit, all *true* units, as the term is understood in educational theory and practice, share certain characteristics. But I think that unit teaching is first of all a way of thinking and planning, and the best way to illustrate this is to go through the steps which were involved in teaching a science unit on the Universe to fourth-graders.

A. Planning

A good share of the work involved in teaching a unit must be done in advance. Faced with the prospect of teaching a unit to fourth graders on the Universe, the following questions had to be answered:

What resources are available for teaching this unit? What is in our school library?[1] Is there a wide variety of books, pictures, audio-visual aids? What materials are available from film libraries, the city or county library? Are there other resources in the community such as people who are experts (there are a lot of amateur astronomers), a planetarium? Much of this material must be ordered well in advance since one of the difficulties in using audio-visual aids is that they so often come "just too late" for use. Early ordering is insurance against this.

What are the abilities, interests, and needs of the pupils in my class? Knowing this is necessary to do a good job of selecting and ordering the resource materials. A fourth grade class commonly has a range in reading ability from second grade level to seventh grade level. This means that there must be materials appropriate for children of widely different abilities. Some children are not gifted in reading but are good artists. Others in the class learn quickly when they have concrete visual aids while some learn easily from the more abstract written page. Knowing each individual learner in the class, the gifted ones and the slow learners, serves as a conscious guide while selecting materials. This is the first step in providing appropriate learning experiences for each child in spite of individual differences. It is the first step toward insuring that each child, with the gifts God has given him, will find the learning experience to be rewarding.

What objectives should I seek to achieve in teaching this unit? This is the most important question. In the answer must be found that which makes a school Christian. This is the crux. As we face the prospect of teaching about sun, moon, stars, planets, space, Colonel Glenn, and satellites, we must first sit down and ask ourselves, "What goals, in terms of understandings, attitudes, and skills, should guide us as we study all this material? What purposes should give coherence, wholeness, and direction to all of these facts and activities?" Unless we think this through with care the unit is likely to be a grab-bag of interesting but unrelated facts, haphazardly Christian in their impact.

I think that each teacher has to write out her own objectives. Some of them are the same as for others; but some must always be different because the resources are different, the teacher is different, and the pupils are different.

This unit on the Universe was guided by the following objectives:

I. A deepened understanding and appreciation of:
   - A. The fact that the Heavens declare the glory of God, and the firmament showeth forth his handiwork.
   - B. God's act of creating and sustaining the universe.
   - C. Men's place in the universe, his smallness, his responsibility to God (his greatness).

II. A knowledge and understanding of: (appropriate to fourth graders)
   - A. The names of the more familiar stars, planets, and constellations.
   - B. The solar system, its planets and their relationship to the sun.
   - C. How to study the heavens and find the more familiar bodies.
   - D. The magnitude of the universe.
   - E. How man is exploring space (satellites, astronauts, etc.)
   - F. What is the proper purpose of space exploration.

B. Teaching the Unit

Introducing the unit. How shall we stimulate an interest in studying the universe? How can we achieve the important objectives we have set up and at the same time share with the children the planning and purposing? How can we draw out of them those areas of personal interest and understanding which always serve as the best starting point?

The Television (MPATI) study lesson on the solar system provided a ready-made starting point. Upon returning to the room after the viewing, some of the books and other resource material were displayed; and then the children were encouraged to discuss the subject. At the outset they were encouraged to contribute, to raise questions, to share what they already knew. It is a temptation to answer the children's questions, but the purpose is to arouse interest, not to supply information. A child's question was responded to something like this:

"That is an interesting question, Jimmy. Perhaps if we study this subject more we will be able to find the answers to these questions."

[1] This is a good way to build a school library. A check of a school library is a quick way to discover whether the teachers in a school are enriching their classroom teaching by the use of boks other than the textbook.

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With this aroused interest, with the feeling the children have that they are involved in determining what they are going to study, the suggestion is made that we should list the questions they would like to study. Their questions were written on the chalkboard. Some which did not come out but which were important to the unit were not hard to elicit by a little guidance and prompting.

The next step was to organize the questions into categories. This was homework. The next day their questions were posted in charts in the room:

OUR QUESTIONS ABOUT SPACE

A. The Earth and Sky.
   1. When did men first guess that the earth was round?
   2. What can we see in the sky?
   3. What did primitive people believe about the sky?
   4. What is astrology?
   5. What do myths tell about the sky?
   6. When did people not believe the myths and legends about the earth and the sky?

B. The Sun.
   1. Why doesn't the sun burn up?
   2. How big is the sun?
   3. What is the sun made of?
   4. How hot is the sun?
   5. How far away is the sun?
   6. What are sunspots?
   7. How does the sun help us? Why did God create it?
   8. Does the sun move?
   9. What causes day and night?

C. The Moon.
   1. Why can we see only one side of the moon?
   2. What is the moon made of?
   3. How big is the moon?
   4. Why can't we always see the moon?
   5. Why did God create the moon?
   6. Does the moon move?
   7. Could people live on the moon?
   8. Are there moonquakes on the moon?
   9. What is an eclipse?
   10. What causes the ocean tides?

D. The Stars.
   1. What are the stars?
   2. How far away are they?
   3. What are stars made of?
   4. What is their shape?
   5. Why are some stars brighter than others?
   6. Are some stars bigger than the sun?
   7. Why do stars twinkle?
   8. What is the Milky Way?
   9. What are constellations? What are their names?
   10. Do stars move?

E. The Planets.
   1. How were the planets named?
   2. What is the difference between planets and stars?
   3. How do planets shine?
   4. How do they move?
   5. What can we learn about each planet?

F. Space Ships.
   1. What keeps them up and in the right direction?
   2. How could rockets land on the moon?
   3. What are space stations?

The children were then organized into six committees, each committee dealing with one of the six areas into which the questions had been organized. So far as possible each student was given his choice of topic. This was not their first experience in working together in groups, so they understood how to organize themselves; but, of course, they still need a lot of help and guidance. Getting six committees going at the same time is sometimes a bit trying, but well worth the effort.

Books and other resource materials must be distributed. Some children need continual guidance in learning how to work with others.

Others need help in developing such research skills as using an encyclopedia, organizing information obtained from multiple sources, how to take notes from reading. There is nothing mechanical about teaching skills in this situation. The children are engaged in activities which have meaning to them.

Some of the activities and work planned by the committees were:

The Earth and Sky. Reports were given about early myths and fables concerning the sun, moon, and stars. They wrote stories about primitive people and told about how men first came to believe that the earth was round.

The Sun. They wrote poems and stories. A panel discussion was held in which the members talked together about the sun, its size, heat, distance away, how it helps us, etc. The rest of the class listened and had opportunity to question the panel for further information.

The Moon. In addition to reports, they wrote and presented a fascinating play on how life might be lived on the moon.

The Stars. The group made diagrams (maps) of the heavens and explained to the class how to find the stars in a Michigan winter sky. A review was given of the book, *God's Stars* (by Fritz A. Callies, Augsburg Publishing House, 1959).

The Planets. The committee planned and developed an art display using paper mache planets and a chart to explain the size and orbit of each of the planets in the solar system. They also "published" an interspace newspaper containing information for tourists about each planet – whether life might be found there, whether you would "fry or freeze." Each member also contributed a riddle about each planet. The class had to guess which planet was referred to.

Space Ships. One of the most fascinating projects was carried out by this group. They presented the class with an amazingly thorough explanation and dramatization of a manned-rocket launching, space stations, moon travel, and survival on the moon.

There were many other activities such as singing, listening to records, working problems in arithmetic dealing with space travel and distance, memorization of selected Scripture passages, spelling mastery of a list of new words, a space news bulletin board which was kept up-to-date.

C. Culmination

This is crucial. Using selected activities, some of them a repeating of certain reports and activities, the strands are pulled together. In this we were guided by the objectives that had been set. Many children go into considerable depth but in a narrow area. The culmination is a review, an assurance that there is a common core of learning, that the objectives which served as our guide have been clearly achieved.

As a final activity we visited the planetarium and listened to and watched a demonstration of "The Night Sky."

As part of the final evaluation, the children concluded that:

1. We had answered our questions and many more. But there were many questions which had arisen which we did not answer.

2 We learned much from working with each other. Some of us still find it difficult to share, to take turns, to listen to others.

3. We would like to do more studies of this kind.

There are a number of advantages in the unit approach. I believe the most obvious and important are:

1. It is much easier to provide for individual differences. There is a wide range of activities and materials and something appropriate can be found for each child. Even the slow learner makes a positive contribution to the class effort.

2. Daily motivating anew is not necessary. There are ongoing activities and the problem quite likely becomes, "May we work on our science unit when we finish with - - -?"

3. The learning is more permanent. The children have been active learners. They have been ego-involved. They set their own goals. The learning has been multisensory—reading, observing, listening, feeling, acting-out, talking.

4. Although it involves hard work it is a rewarding experience for the teacher because she sees children learning to love an area of study, learning to love and appreciate the endless wonders which study reveals in God's creation. Gardner Murphy has expressed this beautifully:

> "Perhaps the mind which gluts itself indiscriminately upon thousands of facts is itself a mind which loves reality but little. There is an intrinsic sense, or order and system, in the world of meaning, which—just because the world itself is ordered and the human intellect likewise ordered—can lead from one love of reality to a still more comprehensive love of reality. The role of the teacher will not be fulfilled by turning over a thousand stones, but by enabling the child or youth to see in the stone which arouses his interest the history of this world—of its waters, atmospheres, soils, and rocks, prying into deeper meanings 'just because they are there.'" *(Freeing Intelligence through Teaching,* Harper, 1961. p. 27)

And I must add, "just because God, too, is there."

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