READING HORIZONS has been published quarterly since 1960 by the Reading Center and Clinic of Western Michigan University and the Homer L. J. Carter Reading Council, Michigan's oldest established IRA council. As a journal devoted to reading at all levels of educational endeavor, HORIZONS provides teachers, educators, and other interested professionals with the ideas, movements, and important changes in the ever increasing horizons of reading.

EDITOR:
Kenneth VanderMeulen

ASSOCIATE EDITOR:
William L. Holladay

EDITORIAL BOARD:
Diane Atkins
Kalamazoo Public Schools

Lorraine Beitler
New York City Community College

Joe R. Chapel
Western Michigan University

C. Hap Gilliland
Eastern Montana College

Lawrence Hafner
Florida State University

FEATURE WRITERS:
Ernie Adams
Eleanor Buelke
R. Baird Shuman
Kenneth VanderMeulen
READING HORIZONS

A professional journal of the Reading Center and Clinic of Western Michigan University and the Homer L. J. Carter Reading Council. HORIZONS is published quarterly by the Western Michigan University Press. Copyright 1976, 2nd class postage rate paid at Kalamazoo, MI.

SUBSCRIPTIONS AND CHANGE OF ADDRESS

Subscriptions are available to all persons interested in reading at $4.00 per year. Address all correspondence and change of address to READING HORIZONS, Reading Center and Clinic, Western Michigan University, Kalamazoo, MI 49008.

MANUSCRIPTS

Manuscripts, books, and any other materials for possible publication or review can be sent to Kenneth VanderMeulen, Editor, READING HORIZONS, Western Michigan University, Kalamazoo, MI 49008. Author's guides and publication policies are available on demand.

MICROFILM

Microfilm copies are available from University Microfilms, 300 Zeeb Road, Ann Arbor, MI 48106. Back issues, while available, can be purchased from READING HORIZONS, Western Michigan University, Kalamazoo, MI 49008.

ADVERTISING

Advertising rates, policy, and information can be obtained from the Advertising Manager, READING HORIZONS, Western Michigan University, Kalamazoo, MI 49008.

EDITORIAL POLICY

THE CONTENTS AND POINTS OF VIEW EXPRESSED IN THIS JOURNAL ARE STRICTLY THOSE OF THE AUTHORS AND DO NOT NECESSARILY REPRESENT THE OPINION OF THE EDITORIAL BOARD OF READING HORIZONS.

Copyright 1976
by Reading Center and Clinic
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Author</th>
<th>Pages</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>KENNETH VANDERMEULEN</td>
<td>213</td>
<td>The Enthusiasm Factor</td>
</tr>
<tr>
<td>CARL BRAUN</td>
<td>215</td>
<td>Instructional Practices Which Contribute to Sight Vocabulary Deficits</td>
</tr>
<tr>
<td>BEA MAYES</td>
<td>224</td>
<td>Micro-Simulation to Prepare Reading Teachers</td>
</tr>
<tr>
<td>HARVEY FROMMER</td>
<td>230</td>
<td>Advertising's Magic Language — A Primer for the Reading Blahs</td>
</tr>
<tr>
<td>VICTOR FROESE</td>
<td>234</td>
<td>The Interrelationship of 15 Conservation Reading Readiness, and Intellectual Maturity Measures in First Graders</td>
</tr>
<tr>
<td>LLOYD R. HAGAN</td>
<td>239</td>
<td>The Relationship Between Conservation Acquisition and First Grade Reading Achievement</td>
</tr>
<tr>
<td>GERALD ZINFON AND CHARLES R. DUKE</td>
<td>245</td>
<td>Write to Read; The Language Experience</td>
</tr>
<tr>
<td>BRUCE A. LLOYD</td>
<td>248</td>
<td>Reading to Write</td>
</tr>
<tr>
<td>WILLIAMS S. O'BRUBA</td>
<td>253</td>
<td>Remediation of Perceptual Difficulties</td>
</tr>
<tr>
<td>ELEANOR BUELKE</td>
<td>256</td>
<td>We Suggest</td>
</tr>
<tr>
<td>LOUIS FOLEY</td>
<td>259</td>
<td>Amateur Etymologists at Play</td>
</tr>
<tr>
<td>CATHERINE MORSINK</td>
<td>264</td>
<td>Development of “Reading the Want Ads” a New Informal Reading Inventory for Older Children</td>
</tr>
<tr>
<td>ERNIE ADAMS</td>
<td>271</td>
<td>Echoes From the Field</td>
</tr>
<tr>
<td>R. BAIRD SHUMAN</td>
<td>272</td>
<td>Professional Concerns</td>
</tr>
<tr>
<td></td>
<td>274</td>
<td>Ten Second Reviews</td>
</tr>
<tr>
<td></td>
<td>283</td>
<td>Author and Title Index, Vol. 16</td>
</tr>
</tbody>
</table>
EDITORS-AT-LARGE

STERL ARTLEY  Professor of Education  
Curriculum and Instruction  
University of Missouri-Columbia

EMMETT A. BETTS  Research Professor  
University of Miami

LEONARD BRAAM  Associate Professor of Education  
Reading and Language Arts Center  
Syracuse University

BEN BUTTERWORTH  Headmaster  
Higham-on-the-Hill  
C. E. Primary School  
Nuneaton, Warwickshire  
England

JEANNE CHALL  Professor of Education  
Director, Reading Laboratory  
Harvard University

WILLIAM DURR  Professor of Education  
Department of Elementary and Special Education  
Michigan State University

ROBERT KARLIN  Professor of Education  
Coordinator  
Graduate Programs in Reading  
Queens College

RUTH PENTY  Consulting Psychologist  
Battle Creek, Michigan

NILA B. SMITH  Professor of Education  
Los Angeles, California
EDITORIAL COMMENT

THE ENTHUSIASM FACTOR

Not long ago, I was privileged to meet an eighty-six year old lady in a retirement home, who told me she had been a reading teacher. In fact, she had once been a student of William S. Gray. Because enthusiasm about reading is a constant in her life, she is actively engaged in spreading the good news. The reading habits of those around her are being changed for the better, by her habit of carrying a book with her, and talking about it in a "charged-up" manner. Inevitably, someone asks to borrow it. Until she arrived, the library in that retirement home was itself in retirement. Her influence for the cause of reading has revitalized its circulation.

Enthusiasm is an ingredient in the teaching of reading which has not received adequate emphasis comparable to "new" methods and materials being publicized. It is so important that the whole educational process would be hopelessly crippled without it. Yet, in our eagerness to recruit enrollees for training to teach, diagnose, and give corrective help in reading, we may be overlooking a most necessary part of the qualifying test—the positive and energetic drive that comes from enthusiasm. We should make it our business to identify and reward this essential factor. We need also to develop an objective instrument to help screen out candidates who might otherwise become uninspired reading teachers.

There are many dangers inherent in classrooms where teachers who lack emotional interest in reading are working. Having the technical knowledge is only one of the requisites when teaching reading as a means of learning. Studies conducted through the past two decades are replete with evidence that young people are stunted in reading growth, are driven away from using reading for personal satisfaction, and are inclined to perpetuate an attitude of distaste for reading, because teachers failed to convey the excitement of discovery through reading.

It is not known in advance when one will be called upon to expend boundless enthusiastic energy. A prospective teacher seldom recognizes what emotional drain in this work can mean. When one is placed as a reading teacher or specialist, (s)he finds that the statistics of needs and deficiencies are translated into living human beings with accompanying frustrations. They need immediate doses of confidence. Many need splints or protective casts put on their self-concepts. All need gentle, supporting therapy. Other faculty members may be too wrapped up in correcting papers and writing reports to make themselves aware of the serious results that reading problems can cause in the youngsters' lives.

Enthusiasm will spell the difference between demonstrating what can be
accomplished if one has the will, and making a compromise with incompetence. Enthusiasm is the difference between naming the pages to be read, and telling the students where in the chapter to look for the answers to mysteries the whole class has been discussing. Enthusiasm is the difference between succumbing to an attitude of cynicism because it is popular, and trying out new ideas because they come from students and merit attention. Enthusiasm, finally, is the zeal that engenders excitement and activity in a classroom—it is a spirit that can breathe new life into books previously declared dead by the students.

Kenneth VanderMeulen
Editor
Introduction

In examining clinical reading records, one is struck with a number of learners whose problems relate in some way to a sight vocabulary deficit. The gravity of this can only be fully apprehended when one recognizes that a child with a sight vocabulary problem is not "just another reading problem." His is a limiting problem—a problem, which if uncorrected, stands the strong risk not only of crippling his total reading growth but, indeed, crippling his self-concept as a learner.

To neglect providing a child with a functional sight vocabulary deprives him of his prime resource for further work identification skill development. The child is limited not only in his ability to group words into thought units so necessary for fluency and comprehension, but he is also seriously handicapped in identifying new words. For example, if the child already recognizes "circus" as a sight word, he has a basis for a later intelligent examination of the word in terms of specific phonetic elements like the variant sounds of "c." Further, the learner is hampered in his ability to use structure clues, e.g., affixed words will be difficult to identify because the reader lacks the ability to identify root words. Perhaps the greatest restriction placed on the reader is the fact that without a basic sight vocabulary, it is inefficient, if not impossible, to develop strategies to employ context—a skill not only requisite to word identification but to comprehension generally.

Arguments about the relationship between self-concept and academic achievement bear predictable overtones of the "chicken" and "egg" arguments. There is, however, more than reasonable evidence that the relationship does exist. It is reasonable to advance arguments for taking every precaution to provide the beginning reader with as much input to enhance his image of himself as a learner as possible. The most potent input source is undoubtedly initial success as a reader. The most convincing rationale for teaching a basic sight vocabulary, then, is efficiency and quick success and confidence. This initial reading vocabulary provides the young learner with a quick ticket to the world of independent reading.

There is no dearth of literature explicating and indeed, lamenting the gamut of physiological and psychological correlates of reading difficulties. The most crucial source of causation, however, is that of instructional
practices that tend to produce or aggravate sight vocabulary problems. It is, in a discussion of the nature of these practices, that we meet the challenge not only of correction of existing problems but more importantly, the prevention of future problems.

This paper discusses in some detail certain practices that contribute to sight vocabulary deficits—practices concerned with word selection and materials, teaching-learning strategies and motivational considerations.

Word Selection and Materials

Failure to recognize the purposes of sight vocabularies. It appears that, in large measure, the problem in teaching sight vocabulary results from the confusion over the purposes of sight vocabularies. Petty\(^9\) points clearly to a distinction between:

- a sight vocabulary that is needed by the child in his first experience in reading to provide success to him, to keep him motivated, and to satisfy his needs. . . . It is an individual one which need not be limited as to size . . . and the sight vocabulary of words which do not fit into sound and symbol correspondence patterns. This is the vocabulary made up of the words referred to in the teachers' manuals as "needing teaching to recognize by sight." (pp. 24-25)

Expecting the child to learn words of low utility and low meaningfulness. If early success in reading is one of the key concerns, judicious selection of words becomes a critical issue. The need to employ words from real life experiences as grist for the sight vocabulary mill is hardly new. As early as 1908, Huey\(^6\) stated:

The best way to get a reading vocabulary is just the way that child gets his spoken vocabulary, by having the need words keep coming in a context environment that is familiar and interesting, and by trying to use them as they will serve his purposes (p. 4).

We are talking here about the first class of sight words referred to by Petty. These are the words that are grounded in meaningful experiences—words that are high in visual imagery as a result of the background of experience, real or vicarious. These are the words with concrete referents—words about things the child has laughed about, talked about, touched, kicked, smelled, savored, loved, and longed for. To reiterate, the most logical basis for concentration on this initial high meaningful sight vocabulary is to ensure quick success and to foster confidence.

Failure to select judiciously words for the slow learner or beginning reader which are readily discriminable. The reference here is more to Petty's class of words that need "teaching to recognize by sight" than to the very earliest high meaningful selection of words. Included in this class are many of the highly abstract structure and function words for which there are no concrete referents to evoke any degree of imagery. Recognizing this
limitation, then, places tremendous importance on cues within and between words for identification. Certainly, in the beginning stages, it is crucial that varying lengths and configurations are taught together to aid ease of discrimination. Singer concurs that teaching strategies that require children in the early stages of reading to struggle with too many high-frequency (and highly similar) words, invite inevitable frustration and early failure. Similar words, according to him, should be added gradually to focus attention on post-initial letters rather than initial letters only.

Closely related to this problem is that of providing practice materials with type sets that squeeze words too close together. Ample spaces between words to aid clear definition of words boundaries is of prime importance in beginning reading materials.

To illustrate some of the problems associated with word selection and materials, examine the following passage typical of many of the "phonic-linguistic" materials on the market:

NED CAN NOT GET UP TILL HE IS FED.
NED CAN NOT GET THE NUT TO THE HUT.

The passage illustrates dramatically the problem of similarity of word length and configuration. Equally salient is the problem of relative spacing of letters within words and spacing of word boundaries.

Continuing to submerge the child in materials at increasing levels of difficulty when sight vocabulary has not been fully mastered at earlier levels. It is difficult for adults to imagine the frustration resulting from building one unsuccessful experience upon another. The child who is finally able to stumble through "today's words" without ample opportunity to apply them in a variety of situations is hardly prepared for another "batch" tomorrow. Not only will he likely experience extreme difficulty with the new task, but the new words will also act as interfering agents on the words barely retrieved from the preceding day's lesson. This cumulative deficit tends to progress geometrically and would appear to account for many of the children who after two and three years of school can still be considered non-readers.

*Teaching-Learning Strategies*
*Technique*

Failure to develop prerequisite skills for effective sight vocabulary learning. Efficiency in sight vocabulary development assumes proficiency in some very basic prerequisite competencies, which, if not mastered, lay waste even the "best laid" efforts. Perhaps the most basic of these is a general disposition to "attend" to a task and then, more specifically, knowing where to focus special attention to achieve sight vocabulary acquisition. Vernon believed one of the foremost causes of reading disability to result from the child's introduction to reading while in a state of cognitive confusion. Subsequent research has produced evidence not only
to support her hypothesis but to define this state of cognitive confusion. Downing\textsuperscript{3} describes this as the child's confusion over what the purposes of reading are, what are words, what letters are in relation to words, etc.

It seems that inability to focus attention and cognitive confusion may be mutually inhibitive factors in early sight vocabulary acquisition. Knowing where to look and what to look for means "that the child can formulate some internal goal and method for checking to see when the goal has been reached" (15, p. 62). This, then, implies that attentive processes have progressed from the early exploratory, generalized alertness stage to selective attending where the learner knows what he is looking for (as in a typical problem solving task). The teacher directs the child to look at the word "happy." The child's task is to aud the message, comprehend what a word is, realize the word "happy" represents a feeling in the spoken language (knowledge that cannot be assumed of the young child), focus visual attention on the graphic display and recognize that the five letters (in particular order only) graphically represent the spoken word "happy." The abstractness of the whole task, of course, is confounded by the fact that an association has to be made between the temporal sequence of the phonemic display in the spoken language and spatial sequence of the graphic display in the written counterpart, "happy." Sticht\textsuperscript{15} summarizes aptly the resultant confusion:

The teacher-imposed task may completely bewilder the child, making looking an almost pointless activity. This may be especially important if the teacher at one time expects the child to focus on whole words and at other times on elements of words such as letters, digraphs, inflectional morphemes, and other word segments. A type of looking "confusion" could result in that the child would not precisely know where to direct his focal attention (p. 62).

To add to an already grim picture one need only imagine the child's encounter with the word "happy" in a new context when he, in fact, doesn't perceive the notion of word boundaries.\textsuperscript{5}

Another basic readiness concern has to do with the young learner's visual discrimination ability. The child who is thrown into a formal reading task before he has had considerable informal (and perhaps formal) experiences attending to likenesses and differences in concrete situations, pictorial tasks, geometric shapes, highly dissimilar and highly similar words, is likely not ready to "attend to" the fine discriminations requisite for efficient sight vocabulary acquisition.

Further, added to this basic competency in visual discrimination the child needs to acquire skills to hold in memory storage visual components of both gross and finer discriminations. It is essential to underline the fact that the same basic focal attention skills referred to earlier must be brought to the application level at the visual discrimination-visual memory readiness level.
A word of extreme caution is in order here. Efficient reading involves a balance of skills. It is possible, in fact, for a child to focus so much attention on visual aspects of words that this may impede reading progress. Serafica and Sigel, in fact, found male reading disability cases to be superior to normal males in visual discrimination. Downing attributes this seeming paradox to the fact that the normal reader needs not only to see that printed letters are different but also to know when to ignore differences. This knowledge is developed only through the process of categorization.

If one subscribes to need for high visual imagery of a word as a basis for sight vocabulary acquisition, then the need to develop meaning is crucial. Mickelson found a high positive correlation between the number of associations children had for words and their reading achievement. It is highly unlikely that the word “pollution” will be high in associative value for Eskimo children when the word is unrelated to their first-hand experience and, at best, have been given a dictionary definition of the word. The combination of high meaningfulness of a word plus ready access to the child’s listening-speaking vocabulary is not only desirable, but absolutely crucial, for efficient sight vocabulary development.

The discussion here has centered on only some of the readiness components. Further, the implicit focus has been on readiness at the pre-reading level. The important point to be stressed is that the child who is experiencing sight vocabulary problems at any level may well have a deficit in one of the readiness components. The skills and competencies outlined, then, suggest bases for diagnostic assessment and correction.

Failure to provide sufficient opportunities for practice and application of words in varying contexts to develop fluency and confidence. The practice of requiring children to read the same selection five or six times does little to promote efficient application of acquired sight vocabulary. The child knows where to expect particular words as a result of having encountered the word in his first reading so the focus of attention may be more on spatial dimensions than on featural aspects of words. The practice of providing limited practice situations can be criticized on another count—the purpose of developing a reading vocabulary is to gain information. By reading and re-reading the information dimension is played down, when by applying the new words in a new context the child can discover that the same words that provided information of its own kind before, in a new context, provide entirely new information.

Failure to employ a variety of practice techniques and strategies to develop a level of automaticity of response before the young reader becomes “bogged down” with a large repertoire of reading vocabulary that is accessible to him only with difficulty. While this problem is inextricably intertwined with the one discussed above, it involves specific emphasis from another standpoint—that of overlearning. It is commonly recognized that skill development typically involves three states, a) the initial development of the skill, b) application of the skill in new situations, and c) developing ease and automaticity in using the skill. It is this automaticity level of functioning which makes it possible for the reader to use the visual display
to get at implied meanings, read critically and, generally, interact with the material intelligently. Blumenthal\(^1\) has made the distinction between "focus of attention" and "margin of attention." Sticht et al have drawn an appropriate analogy between these two attentional stages and the act of searching a display with a spotlight:

"The point of focus of the spotlight is bright and clear, while the area surrounding the spot of light fades from brightness to dimness to darkness. The bright spot represents the focus of attention, while the dim area represents the margin of attention. In attending to one aspect of an internal display, we are also vaguely aware of non-attended information in the margin of consciousness or awareness (p. 53)."

Applying this analogy to the sight vocabulary acquisition-achievement of automaticity problem, the focal attention (spotlight) is necessary at the acquisition level. After extended practice, the "focus of attention" is freed for the performance of other higher level reading activities. The performance of the former activity has achieved "automaticity" and can be performed while focal attention is elsewhere.

This raises a crucial pedagogical question with respect to whether or not sequential strategies should go from presenting words in context and then in isolation shifting the emphasis from initially employing linguistic constraints and then shifting to intensive practice strategies. It is clear that giving attention to words in isolation to achieve automaticity is more efficient than practice in context.\(^1\) Perhaps, awaiting further research, the most logical approach would be to present words in highly meaningful contexts (giving the reader maximum benefit from semantic and syntactic constraints) extract some of the more troublesome words to be practiced in isolation and then to "re-cycle" these troublesome words in a novel contextual situation.

**Failure to focus on reading for ideas so that the accent on analysis is reduced in the early reading stages.** This statement implies somehow dovetailing the processes involved in focal and marginal attending. The crucial point to be made is that heavy emphasis on analytical techniques—drilling on isolated word parts becomes a conditioning process that tends to result in words falling to pieces before the young reader’s eyes. In fact, the child may experience so much success and satisfaction from the novelty of working out words that he fails to feel a need to build a sight vocabulary. The greatest hazard is, of course, that the focus is on saying words rather than on finding ideas.

**Failure to encourage and stimulate fairly rapid reading for specific purposes.** To achieve the complementary focal and marginal attention required for fluent reading, it would appear that fairly early emphasis should be given to rapid reading and reading for purposes other than finding out "what is on the page." Setting purposes, thus inducing a "mental set" on the part of the reader would appear to be one of the efficient means of achieving the automaticity level discussed earlier.
Failure to ensure that children focus on no more than the initial consonant fooling themselves and the teacher into believing that they have acquired a functional sight vocabulary. Children frequently appear to have developed a quick repertoire of sight words. However, after what appears like a spurt of success, they reach a plateau which is characterized by confusion in word identification. Research by Samuels and Jeffery has demonstrated that serious confusion arises from the child's focus on a single cue such as the beginning consonant to identify a word. When he encounters new words including some with the same initial consonant, he is confused because the initial consonant is not a sufficient basis for correct word identification. Clearly, programs must be designed to ensure that children discriminate on more than initial word features. This has some strong implications for the early visual discrimination-visual memory training tasks.

Teaching sight words without recognition of the fact that in order to make fine visual discriminations "non-exemplars" may be as important as the particular word to be learned at the moment. Learning theorists have long recognized the importance of presenting both exemplars and non-exemplars in a concept learning task to aid the learner in focussing on the necessary attributes to learn the concept. While learning a particular sight word is no way analogous to the acquisition of a concept, it seems desirable to have the young reader abstract certain properties of a word in terms of similarities and differences with other words. For example, if he already has mastered the word "black," and he now approaches the task of learning "back," it would seem practical to refer to the word black as a basis for focussing careful attention on the new word. On the one hand, "back" becomes a new element in the expanding set of words beginning with "b"; on the other hand, "back" forms part of a new sub-set that does not begin with "bl." In this sense, "black" is a non-exemplar of the new sub-set (or "concept") to be learned.

Motivation

Failure to condition the child early to develop a "set" or expectation that he recognize known words immediately rather than study each word encountered as though it had never been seen before. Many children, particularly those exposed to heavy phonic-oriented programs, develop the notion that reading is a ponderous code-breaking process and tend to break up words (or sound out) without even considering that the need is no longer there for many words. This has serious motivational implications. The novelty of being able to "crack the code" as a mature type of pastime will certainly sustain the child's motivation for a while. But with the heavy emphasis on the code, meaning is pushed to a secondary position and, before long, motivation begins to lag. When the child wishes to "read to learn" (either new facts or to experience new feelings), he is still so preoccupied with basic laborious "learning to read" processes that it is almost impossible to "focus attention" on the "reading to learn" task.
Part of the motivational problem harks back to the point made earlier about "goal directedness." Specific goals or objectives, to be met effectively, require "focus of attention" rather than "margin of attention." Two points must be made. First, if the goal is no more than "decoding," this goal will occupy the "focus of attention." Further, even if the teacher attempts to direct the learner toward goals of interpretation or inference, the "focus of attention" will not be available to achieve these goals because the "spotlight" has only one point of focus.

Failure to develop within the child a need early in his reading experience to establish a sight vocabulary by over-emphasizing analytical, rule-bound approaches to reading. The problem here is closely associated with the one just discussed. The distinction to be made, however, is that a child (as in the discussion preceding) may develop a highly analytical approach, and hence, a "set" to persist in analyzing, almost by accident. Here the problem is that of a deliberate programming to analyze and occupy the learner's "focus of attention" with rules and more rules. This results from approaches anchored in the very narrowest definitions of reading (if one can call them definitions).

Apart from the grave problem of attention ineffectively deployed, the motivational side-effects are further evidenced by the fact that, analyzing everything in sight, the child becomes a laborious reader, reads less and less, and eventually finds his place with the teacher "at the end of the hall."

REFERENCES

8. Mickelson, Norma I. "Associative Verbal Encoding (a/v/e): A Measure of Language Performance and its Relationship to Reading


MICRO-SIMULATION TO PREPARE READING TEACHERS

Bea Mayes
RICHMOND COLLEGE

What can pre-service teachers do to prepare themselves for classroom teaching? Micro-simulations!

What is Micro-Simulation?
A micro-simulation involves a 5-10 minute segment of a reading lesson. In the micro-simulation a teacher chooses and demonstrates a preferred approach to teaching reading. Other members of the group role-play public school students during the micro-simulation. The ten minute simulation allows the teacher a variety of moves and may include a major shift in activity. For the teacher, it provides a teaching situation with a live constituency. Student participants in the micro-simulation respond and react to the simulation teacher as group leader, much as they would in any classroom situation. The ten minute lesson presentation allows the participants to experience the trend of the lesson and to react to the simulation teacher as teacher. The lessons are effective in themselves as lesson presentations. They are satisfying for both the micro-simulation teacher and his or her students.

Simulations build in the cooperative aspect of real-life teaching situations. They allow the teacher to set up his or her own clearly defined teaching situation and to carry it through (Raser, 1969). When a teacher decides on a plan for a reading lesson, he or she is also making decisions that affect the tone of the lesson, the cognitive processes the students will engage in, the degree of active participation and involvement of the students, and in general, the manner in which he or she will teach the lesson. The teacher knowingly chooses a way or a combination of ways of teaching a lesson (Hyman, 1970). Similarly, the simulation teacher has a variety of methods and approaches from which to choose in presenting a micro-simulation. Since the micro-simulation teacher presents but a short 5-10 minute segment of a lesson, he or she must even more carefully choose certain aspects of the entire reading lesson to present in the simulation. Thus, the micro-simulation teacher must be highly selective in arriving at the final form of the teaching simulation.

Immediately following a micro-simulation, the leader replays the lesson on video tape. This video tape replay gives both the simulation teacher and the role-playing students the chance to view the lesson as observers. After the replay, the group discusses and critiques the lesson. The leader provides individual guidance and comments to the micro-simulation teacher immediately after the group session. The post-simulation discussion centers on
a particular set of teaching activities. The referents in the discussion are specific, shared teaching experiences which are clearly within the capabilities of the members of the group to understand. Teachers develop their own conclusions about teaching style and in future lessons build on, expand, and vary the patterns presented.

Such simulation activity is a valuable teaching experience for the simulation teacher. In addition, it provides the other pre-service or in-service teachers in the group the opportunity to critique the teaching they have experienced in the student role. By giving teachers the opportunity to discuss their first-hand experiences as teachers and students, the group leader builds an awareness of the concomitants of a variety of teaching patterns. Experience, awareness, and book knowledge are linked together in the teaching program based on micro-simulation, video observation, and guided critique.

Micro-Simulation in the Pre-Service Program

The appeal of simulations lies in their combination of reality and make-believe (Gordon, 1970). Participants enjoy exercising power and making decisions in spheres where their real world influence is very slight. Micro-simulation capitalizes on the pre-service teacher's desire to explore the teaching situation. It gives these new teachers a situation of short duration when new approaches can be tried out. Since the pre-service teacher creates the scenario, it is his or her own model of teaching that defines the interplay of the micro-simulation. The role-playing students react to the model of teaching the leader creates and projects. In this way the teaching simulation provides a unique opportunity to deal with the complex problems of teaching in very concrete ways.

It has been said that the knowledgeable teacher varies his or her ways of teaching to provide pupils with many ways of learning. If this is the case, micro-simulation provides the inexperienced teacher with the opportunity of experiencing many ways of teaching and learning. Pre-service teachers create lessons which show ways of helping pupils develop their reading vocabularies, ways that pupils can demonstrate general comprehension and interpretation skills, ways that help pupils develop specific comprehension skills, ways that allow pupils to use other cognitive processes—stating and justifying opinions, and divergent thinking, for example—ways of teaching reading through games, and ways to make use of a variety of questioning strategies (Ruddell, 1974). As the simulation program proceeds the pre-service teacher defines and expands his or her view of teaching and applies this new knowledge in the simulations.

Structuring Video Replays for In-Service Teachers

In-service teachers can and do use simulations to begin an in-service program in reading. After participating in simulations the teachers are ready to view and critique video tapes of actual classroom lessons. They follow up the in-service workshop by volunteering their own classroom tapes for viewing and critique by their colleagues. As with a pre-service program,
the core of the in-service program is the guided post-simulation critique. During this critique in-service teachers pool their knowledge of teaching in making realistic and constructive comment about a colleague's lesson.

In addition to the above benefits of micro-simulation, in-service teachers can make use of two other sources of critique. First, in-service teachers using video tape can ask honest comments about a lesson taught to his or her peers. This offsets the usual lack of comment an in-service teacher receives because students too often fear retaliation for negative remarks. Second, in-service teachers have the opportunity as a group or individually of viewing volunteered video tapes of their actual classroom lessons. They can then comment on real, on-going classroom lessons of their colleagues. The teacher who teaches the simulation lesson or volunteers the actual classroom tape makes use of his or her own reactions and colleague's reactions to close the gap between the performance given and what he or she sees as desirable teaching.

The administrator who institutes a program of micro-simulations among his or her teachers, or who has teachers observe and tape actual classroom reading lessons for group viewing and critique, fosters the self-development of teachers. By instituting an in-service program for teachers organized around classroom tapes or micro-simulations, an administrator allows his or her teachers to share a core of knowledge and awareness about the teaching of reading in a non-threatening way.

How To Organize the Simulation, Video Observation, and Critique

The use of video presentations in in-service work is relatively new. Its use in combination with lessons presented by members of the group is even less frequently observed. It is well then in setting up the group sessions to organize procedures that will take full advantage of both the lesson presentation and the video replay.

Some steps that help are:
1. A teacher is asked to prepare a 5-10 minute segment of a reading lesson. The group leader makes himself or herself available for help in planning if the teacher wants help. The simulation teacher is aware that he or she cannot present a complete lesson in the time allotted.
2. The simulation teacher presents the lesson as he or she would to grade school students. The simulation teacher does not describe what he or she would like to do. He or she actually does the teaching, giving the directions and asking the questions that would make up the lesson. The students in the simulation role-play grade school youngsters. The simulation teacher may specify the age of the students in the simulation.
3. The micro-simulation continues for 5-10 minutes. If the lesson goes beyond 10 minutes, the leader stops the simulation.
4. The leader replays the videotape.
5. The leader asks the simulation teacher to comment.
6. The leader asks the group to comment. The instructor guides the post-simulation critique.
7. Immediately following the group critique the leader meets with the simulation teacher to hear personal comments, to comment on the group critique, and offer his or her own comments and guidance.
8. Often it is necessary to replay only a portion of the videotape.

The Post-Simulation Critique: Feedback to the Micro-Simulation Teacher and the Group

Through the process of micro-simulation and critique, the simulation teacher receives feedback on five levels. The first kind of feedback occurs during the simulation itself. It takes the form of verbal and non-verbal clues from the role-playing students. The micro-simulation teacher who is receptive to these clues may be able to adjust the on-going lesson in response to the clues students give during the simulation. Even when on-the-spot adjustment does not take place, the simulation teacher becomes aware of the need for changes and can make provisions for flexibility in later lessons. The second level of feedback comes when the teacher views his or her own lesson on videotape.

The third level of feedback comes from the comments of the simulation teacher’s peers. After viewing the video replay, the other members of the group function as observers of the lesson. The group’s comments, therefore, reflect both their experiences as participants and their observations as outsiders viewing the lesson. The fourth level of feedback comes from the leader’s comments during the critique. The fifth kind of feedback takes the form of an individual conference between the simulation teacher and the group leader immediately following the session. During this conference, the leader listens to the teacher’s comments, comments on the critique session, and makes one or two suggestions about techniques which might improve the lesson. Together the leader and the simulation teacher may explore alternatives which will lead to the outcomes the teacher sees as desirable.

While a great deal of comment during the post-simulation critique is directed toward the particular lesson at hand, teacher remarks offer the leader an excellent opportunity to encourage discussion of elements of teaching in relation to a broader perspective. The leader makes use of the comments during the critique session to suggest alternative presentation techniques, to identify elements of teaching style, and to bring out teacher preferences in regard to teaching style.

Background for a Program of Micro-Simulation

The teachers apply and build on their knowledge of teaching in the micro-simulations. In acting out, observing, and critiquing reading lessons teachers work with four dimensions of teaching style. These four dimensions are classroom climate, or tone; cognitive processes which teachers and pupils perform; pupil participation and involvement; and general methods of teaching reading lessons. Based on their experiences and understandings
of these four dimensions of style, teachers are in a position to draw tentative conclusions about a variety of factors that affect reading lessons.

As teachers experience different ways of teaching reading lessons, they are in a position to consciously undertake development of their own personal teaching style. Their knowledge and basis for doing so comes from four separate sources. First, it develops from the first-hand experiences of the micro-simulations. Second, these first-hand felt experiences are verified through objective observation of the tapes. Third, the observations are shared and generalized in the group critique. Fourth, the leader and the group apply and use constructs developed by researchers in education.

The micro-simulation accompanied by video replay and guided critique represents a very strong element in the teaching program. While presenting specific and valuable information to the simulation teacher, it allows the group as a whole to react to a demonstration of teaching from the student perspective, to look at this same demonstration as outside observers, and to react verbally to what they have seen. It provides a concrete situation upon which the group leader can build an awareness of how the elements of teaching style intermesh to define the teaching act. The in-service or pre-service program, then, is based on experience, observation, guided critique, and knowledge from researchers in education.

Results and Significance

The use of micro-simulation gets instruction in teacher training off the level of abstract verbalization and puts it on the level of a case-in-point experience. The pre-service or in-service teacher becomes aware of himself or herself in the role of teacher. The video replay allows the simulation teacher to observe himself or herself in the act of teaching. It gives the teacher the opportunity to become aware of the things he or she is asking pupils to do. Micro-simulation and video replay make a very powerful combination. Once the teacher is aware of his own proclivities and a range of alternative ways of teaching, he or she is in a position to purposefully make changes and develop techniques he or she sees as desirable.

Teachers often have been implored to look to themselves for clues to improvement, without specific advice as to what to look at. By using the elements of style that have been identified in research in teaching, teachers now have specific categories and points of view from which they can observe their own teaching and that of their colleagues. By identifying a range of styles and modes of teaching, teachers can develop their own point of view from which to observe teaching. With the advent of the videotape, teaching is no longer an ephemeral performance which passes with the moment. The videotape lets us as teachers replay and scrutinize our own performances. It lets us become aware of the antecedents and consequences of the techniques we use—the tone we develop, the kinds of cognitive processes we ask students to perform, how much we allow our students to participate in a lesson, and the degree to which we employ a variety of ways of teaching.

For the pre-service teacher and the in-service teacher, the video replay allows self-observation. The teacher can see how closely he or she ap-
proaches what he or she believes is good teaching. By making use of specific elements of style to observe in teaching, the teacher sets up categories of concrete acts to which he can refer. As the teacher develops a framework upon which to build, he or she becomes aware of a range of teaching alternatives. If there is a difference between what the teacher desires in a reading lesson and what he or she sees in self-observation, the teacher with a framework for viewing teaching has very specific information about the kinds of changes he or she can make. The technique of micro-simulation and video replay is a potent means of bringing home realities of the teaching situation to pre-service and in-service teachers.

REFERENCES

Over the years, students have been bogged down and bored by reading comprehension exercises. Bracing themselves for the mad pencil-pointing scarring of (A), (B), (C), (D), and on occasions (E), it sometimes seemed that the skill being taught was the ability to eliminate the worst of a choice of answers. Exercise passages in texts, workbooks, manuals, also generally have concerned themselves with dated and dusty materials. Norse verse poets of the 12th century vied and still vie with lengthy tracts extolling the virtues of the onion as a very useful vegetable. It is not a distortion to affirm that the interest level for these reading comprehension materials has never been very high.

Yet it is not the intention of this writer to attack a method that has been tried and true for many educators and learners. It is however this writer’s motive to suggest an alternative approach—one that teaches reading sensitivity as well as efficiency, one that teaches vocabulary in connotation as well as vocabulary in context, one that enables the reader to read for awareness as well as comprehension.

The text book is one that does not have to be purchased in a book store and does not have to become dated. That is part of the charm of the method. The text book is the daily newspaper, the magazine, the world of signs, billboards, flyers, newsletters that assault our senses clamoring for attention.

It is a fact that more than half the space in all magazines is filled up with advertisements. Newspapers devote 60% of their pages to advertising. It has been estimated that people spend more of their time involved with newspaper and magazine ads than with the editorial content of these publications.

Educators can counter-attack the slick product of American ingenuity and verbal massage—advertising—to make for better consumers, citizens, and readers. The magic language of advertising in all its forms can be and should be picked apart and used as a primer for more efficient reading.

On a very basic level, the efficient reader can be taught to sweep through a list of the invented ailments and technological cure-alls that litter the magic world of advertising. Some of these include: NO FRILLS, TIRED BLOOD, THE BLAHS, UNSPOILED ISLAND, UNCOLA, DUAL FILTERS, RD-119, ACTIVATED CHARCOAL, CHLOROPHYLL, QUADRAPHONIC SOUND. ... The language of advertising and insights into reading result from analyses of the content of these nostrums and sales pitches. Does the content really exist? If it does
exist, what is it? How do these terms smokescreen the reading comprehension experience?

In context, the polysyllabic technical word works wonders on the careless reader: "NO PLAIN ANTACID CAN DO WHAT DIGEL CAN DO. IT CONTAINS SIMETHICONE, MEDICALLY PROVEN EFFECTIVE." Digel is not what the language claims has been proven medically effective. But the implication in a careless reading seems to be making such a claim.

Another useful method to demagicify the language of advertising is to learn to read intelligently for what is not said, for what is left out. Sometimes this verbal magic is accomplished with a strategically placed adjective or adverb. And in other cases, pure omission is the reading trick employed. Like the old time sing-a-longs, one must keep an eye on the bouncing ball to follow the words or the melody will sweep you off your reading feet. A few examples will demonstrate this:

THERE ARE MORE THAN A THOUSAND WAYS TO BLEND WHISKIES IN SCOTLAND, BUT FEW ARE AUTHENTIC ENOUGH FOR DEWAR'S.

The magic word is "few." How much is few? Are the few ways unique only to this brand of whiskey? Or do all the blenders of whiskey find these uncounted few ways the best method for their product? If this is the case, what makes the advertised brand the best aside from the fact that it is the advertised brand?

COULD BE A SYMPTOM OF PSORIASIS?

A question is posed and then the rest of the copy plunges into a lengthy discussion as to why the product should be consumed. If the reader intelligently comprehends the first word "could," the whole written seduction can be repelled. Once "could" is accepted, the combination of the medical problem, the resultant cure—reverence for the printed word—batter away at the reader to trigger careless and emotional reading. A healthy skepticism at the start of a reading experience easily defuses these magic timebombs.

Another variation on the theme is the statement: "EX-LAX CONTAINS PHENOPITHALEIN, MEDICALLY PROVEN EFFECTIVE." The magic touch of advertising blurs reading comprehension here. Again is the effectiveness claimed for phenopitthalein, for Ex-Lax, or both? Don't other laxatives contain the same ingredient? If they do, why Ex-Lax?

The reading comprehension sand-storm at its best—the blurring by omission and commission—is personified in this line: "DOMINO SUGAR 100% PURE ONE OF THE PUREST FOODS KNOWN." Affixing Domino to sugar is commission. It makes Domino Sugar generic as Bayer Aspirin has been made to appear generic. The reading comprehension omission sleight of hand is executed via the claim that the product is 100% pure. Is this true of all sugar or only Domino Sugar? Finally, the careful reader would probably question the word "known" at the end of the statement. "Known" by whom?

Perhaps the most famous of all the sugarless gum ads proclaims: "FOUR
OUT OF FIVE DENTISTS SURVEYED RECOMMENDED SUGARLESS GUM FOR THEIR PATIENTS WHO CHEW GUM." This has been repeated so often that most of us can repeat it by heart. Repetition has virtually bored the advertising message into our acceptance, but what the ad leaves out is more important than what it puts in.

Nowhere is it clear as to who conducted the survey. Perhaps Trident conducted the survey? Moreover, the dentists are not advocating the creation of a nation of gum-chewers, but simply opting for sugarless gum only if the patient chews gum. The patient in question is their patient, a gum chewing patient. This then is also not a recommendation for the American public at large. The real hook in the language is the weaving in the brand Trident. After the reading defenses have been battered away at, the next line zooms into the merits of Trident. There is no claim that the dentists promoted for Trident. But since it's around and the ad is selling it, why not Trident just as well as Brand X?

Two and two always add up to four except in the magic world of advertising, where there's no guarantee. Some special words for the efficient reader to look out for are JUST and ONLY and NOW. With these at work within the reading task, two and two can always just equal only five now.

Concern for detail, concern for language, concern for conclusions—all of these are skills that come through comprehending the fancy footwork of the adman or adwoman. A famous advertisement that sold a lot of beer read:

"IN NEW YORK CITY WHERE THERE ARE MORE GREEKS THAN IN SPARTA, MORE PEOPLE DRINK RHEINGOLD THAN ANY OTHER BRAND. HOW COME SO MANY GREEKS PREFER RHEINGOLD? WE DON'T KNOW. BUT WE MUST BE DOING SOMETHING RIGHT."

Broken down to a syllogism:

- There are lots of Greeks in New York City.
- Lots of New Yorkers prefer Rheingold.
- Lots of Greeks prefer Rheingold

we have a magical ad, but not a difficult reading comprehension exercise. The reading lessons that emerge would enable the efficient reader to ask who is the source for these claims? Why are they trying to link together more Greeks in New York than Sparta with the unrelated comment that lots of the Greeks in New York drink Rheingold beer? The gap is big enough to drive a Rheingold truck through.

The world of reading in advertising has created a world within a world of shaded meaning and subtle emotionalism, of good feeling and belonging. MILLERTIME, DODGE BOYS, MARLBORO MAN and MARLBORO COUNTRY, SCHAEFER PEOPLE, THE PEPSI GENERATION do exist for the careless reader, the one taken in by emotionalism and conformity and escapism. The efficient reader can analyze the copy of the DODGE BOYS in an attempt to analyze what is said that entices and promises the consumer, what distorts and distracts reading
comprehension into a written fog of connotative words screaming "Buy me, buy me!"

Doubtless the asterisk is the most obvious of the reading tricks existing in the magic world of advertising. A glittering generality is headlighted in large type and in the small body type all the exceptions to the rules are illegibly abbreviated. This is a good exercise in finding details and skimming. The reading sleuth can unravel the whole fabric of the fine point, concealing off-season, not equipped with extras, delivery charges extra, manufacturer's suggested retail price, one day only, batteries not included.

Those people who invented THE BLAHS and MARLBORO COUNTRY also have a way with words that seems innocent enough. Changed weekly or seasonally, the reader is often at a loss in deciphering the new from the newer, brand new, newest and now new. A variation on the theme is large size, family size, giant size, jumbo size and economy size, not to mention new and improved.

This article has only suggested a few of the varied approaches to make for a better reader and better consumer by probing the slick, sensuous, subtle world of advertising. Like frogmen diving into the world of print advertising, aggressive readers can discover much about the reading process and the ways of better consumerism.

In the famous story heard in the halls of academe, a student completed a month of schooling. His father, concerned about the learning of his offspring, decided to question the child on his acquired knowledge.

"Son," the father said, "may I ask you a question?"

"Sure," replied the youth.

"How do you spell cat?"

Thinking for a moment, the youth smiled, "What are the three choices?"

Perhaps through teaching reading efficiency and comprehension via the world of advertising, such a story will one day go out of style.
THE INTERRELATIONSHIP OF
CONSERVATION READING READINESS
AND INTELLECTUAL MATURITY
MEASURES IN FIRST GRADES

Victor Froese
UNIVERSITY OF MANITOBA

The developmental psychology of Piaget has had a profound effect on
education both in Britain (Central Advisory Council for Education, 1967)
and in America (Schwebel and Raph, 1973; Furth and Wachs, 1974;
Piagetian Theory and Its Implications for the Helping Professions, 1970-
1975).

This study focuses on the implications that Piagetian psychology has for
initial reading instruction. A number of investigations have considered the
relationships among selected reading variables and various Piagetian tasks,
conservation ability being the most common (Almy, 1967; Goldschmid,
1967; Dombrower and Marsh, 1972). But these studies have not specifically
considered the differential effect of “learning” and “development.”
Development here refers to the general mechanism of action and thinking
whereas learning deals with the acquisition of specific facts and skills. It is
further postulated that the general development of intelligence is the basis
on which specific learning rests (Furth and Wachs, 1974).

In this study learning is defined as a subject's score on selected subtests
of a readiness test, developmental level is the subject’s score on a drawing
test, and conservation ability is defined as a score on six conservation tasks.

The need for this type of study has been suggested by the literature and
statements such as the following:

To neglect providing many and varied concrete experiences in the
period of preoperational thought may hinder the adequate
development of abstract thinking and may possibly interfere with
the development of reading comprehension (Almy, 1967).

Such opportunities [concrete experiences] will likely influence
ultimate reading achievement to a greater extent than specific
perceptual discrimination training now offered in many nursery
schools and kindergartens (Raven and Salzer, 1974).

Framework For Study

In Piaget’s theory the acquisition of the schema of conservation is an

* Paper presented at the National Reading Conference, St. Petersburg, Florida,
December, 1975.
important indicator of the end of the second or preoperational stage. Goldshmid (1970) states that "conservation represents a pivotal construct in the child's transition from prelogical to a logical phase of development." Since many early reading experiences require logical processes, conservation should be a good indicator of the subject's ability to cope with these experiences.

A further consideration is Hathaway and Hathaway-Theunissen's (1975) factor analytic study indicating the uniqueness of Piagetian measures as compared to traditional psychometric measures. In order for optimal learning to occur a child's conceptual level should be matched to the required task and the above research indicates the superiority of Piagetian measures in providing for that match. The success of a number of conservation training studies (Goldschmid, 1970; Crutchfield, 1975) appears to confirm the matching hypothesis mentioned above.

Method

All sixty-one children in three first grade classrooms from one school in metropolitan Winnipeg were included in the study. Fifty-seven had complete protocols; approximately half were male (N = 27) and half were female (N = 30). For forty-five of these subjects PMA (SRA, 1962) results from one month earlier were also available. The specifics of the sample may be found in Table I.

To assess conservation ability the Concept Assessment Kit—Conservation (Goldschmid and Bentler, 1968) was administered by one examiner during the second week of April.

The effect of learning was established through the administration of three subtests of the Canadian Readiness Test (Braun, Downing, Evanechko, and Ollila, 1970). One subtest, Technical Language of Literacy, assesses the subject's knowledge of what a letter, number, and word is. The Letter Recognition and Word Matching subtests are comparable to conventional readiness measures.

For this study development was ascertained by means of the Goodenough-Harris Drawing Test (1963). The mean of the man and woman drawings was used in the analysis.

All tests were administered during the second and third weeks of April, 1975. The order of testing was predetermined to minimize possible order effects.

Results

This study sought to clarify the relationship of development to learning using conservation ability as the dependent variable. Three specific questions were asked:

1. Is there a significant relationship between learning and conservation ability?
2. Is there a significant relationship between development and conservation ability?
3. Is the development/conservation relationship higher than the learning/conservation relationship?

Table I presents the means and standard deviations for the various instruments used; Table II presents the correlation matrix for the tests and subtests used.

Question one was confirmed since a multiple correlation coefficient of 0.368, significant at the .05 level, resulted when the three readiness subtests and conservation test results were analyzed. In fact the Technical Language of Literacy subtest contributed most to the correlation coefficient whereas the Word Matching subtest did not contribute significantly.

The second question was not confirmed. The correlation between the drawing test and conservation ability did not reach significance. A second analysis examining the relationship of intelligence quotients from the Primary Mental Abilities test and conservation scores also proved to be non-significant.

When the third question was submitted to statistical analysis a significant critical ratio of 2.396 resulted but in the wrong direction. That is, the learning measures were more highly related to conservation than the development measures. Consequently the third question could not be confirmed.

Discussion

On first examination it appears that the results of this study do not support the Piagetian concepts of development and learning. However, it may be that the instruments used do not truly reflect the hypothesized variables.

For example, the Technical Language of Literacy subtest measures the rather difficult concept of word, letter and number. Mickish (1974) found that only 57% of readers at the primer level were able to mark correctly the six words in a simple sentence. It may be that the Literacy subtest measures a variable more closely related to development than to school learning since it is significantly related to conservation ability. No ceiling effect was noted for the Literacy test although this was observed for the other readiness subtests.

It is also obvious that the conservation test does not measure the same abilities as the measures of intellectual maturity used in this study. This is a promising finding although not completely in agreement with other studies (Goldschmid, 1967; Hathaway and Hathaway-Theunissen, 1975). These studies report only low positive correlations which still allows for a considerable amount of uniqueness of the Piagetian measures. It appears that it is difficult to partial out factors related to traditional psychometrics.

A further refinement of instruments to measure the concepts of development and learning will be required before more definitive results may be expected.
TABLE I
Means and Standard Deviations of Measures Used
(N = 57 except for PMA)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation</td>
<td>6.702</td>
<td>2.872</td>
</tr>
<tr>
<td>Literacy subtest</td>
<td>37.754</td>
<td>6.260</td>
</tr>
<tr>
<td>Letters subtest</td>
<td>27.842</td>
<td>2.389</td>
</tr>
<tr>
<td>Word Matching</td>
<td>19.404</td>
<td>2.078</td>
</tr>
<tr>
<td>Drawing test total</td>
<td>96.035</td>
<td>11.689</td>
</tr>
<tr>
<td>PMA (N = 45)</td>
<td>107.778</td>
<td>8.306</td>
</tr>
</tbody>
</table>

TABLE II
Correlation Matrix (N = 57 except PMA, N = 45)

<table>
<thead>
<tr>
<th></th>
<th>Conservation</th>
<th>Literacy</th>
<th>Letters</th>
<th>Word Matching</th>
<th>Drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td>0.28*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td>0.34**</td>
<td>0.55**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Matching</td>
<td>0.13</td>
<td>-0.03</td>
<td>0.15</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Drawing Test</td>
<td>-0.07</td>
<td>0.15</td>
<td>0.23</td>
<td>0.24</td>
<td>0.45** (men)</td>
</tr>
<tr>
<td>I.Q. (PMA)</td>
<td>0.07</td>
<td>0.17</td>
<td>0.47**</td>
<td>0.45**</td>
<td>0.28* (women)</td>
</tr>
</tbody>
</table>

* Significant at .05 level
** Significant at .01 level

REFERENCES
Braun, C.; Downing, J.; Evanechko, P., & Ollila, L. Canadian Readiness Test. Unpublished, 1970. (Permission for use was granted by authors.)


THE RELATIONSHIP BETWEEN CONSERVATION ACQUISITION AND FIRST GRADE READING ACHIEVEMENT

Lloyd R. Hagan
WESTERN MICHIGAN UNIVERSITY

Several reading specialists have suggested that there is a positive relationship between conservation acquisition and successful learning of reading (Winkeljohann, 1974; Schwebel and Raph, 1973; and Raven and Salzer, 1971). Although the intuitive appeal of these suggestions is great, there is little evidence to support them. The purpose of this study was to ascertain the relationship between these two important characteristics of children.

Conservation is "the realization that one aspect of something, e.g., quantity (length, area, volume, weight, etc.), remains the same while another aspect is changed (e.g., shape, position) (Gorman, 1972)." For example, water poured from a short, wide glass has the same quantity when poured into a tall, thin glass, or the number of checkers in a set remains the same independent of the set being stacked or placed in a row. The conserver employs a form of logic called reversibility—what has been changed can be put back in the original form, and/or another of the object’s spatial characteristics has changed to compensate for the spatial characteristic intentionally altered, thus conserving the quantitative characteristic (compensation).

According to Piagetian followers, determining a student’s level of conservation is significant during the period of the elementary grades because it best exemplifies intellectual behavior (Evans, 1971).

Schwebel and Raph (1973) state: “Piaget’s system also provides us with clues to use in discovering a child’s level of thinking and accordingly the adequacy of his preparation for reading.”

According to Piaget’s theory, the first conservation skills appear between the ages of six and eight (Piaget and Inhelder, 1969). This age span encompasses the mystical readiness age of six years-six months.

Raven and Salzer (1971) link Piaget’s theory to the reading act in the following manner: “Non-conserving children lack reversibility—undoing some operation and coming back to the starting point. The inference might be drawn that he (the student) should not be expected to succeed in decoding-emphasis reading programs which require him to convert graphemes to phonemes and then validate his transformation.” They further argue that the characteristic of “centration” (the inability to consider more than one aspect of a situation at a time) of non-conserving
students negates the ability to deal with words in two almost entirely unrelated but necessary ways: "as line puzzles to be deciphered (phonetically), and as messages to comprehend."

John Merritt (Reid, 1972) points out the need not only for reversibility skills, but for the ability to discriminate between when to apply the rules of reversibility and when not to, e.g., the graphemes "b-d" and "p-q" lose their original identity when reversed.

Isolated research reports tend to support the above associations. Almy (1966) found a significant positive relationship between reading readiness and conservation acquisition. Lepper (1966) had similar findings, and Brekke (1973) found a significant positive relationship between first grade reading achievement and conservation acquisition. However, Dombrower and March (1971), supporting Goldschmid and Bentler's 1968 study, reported no significant correlation between reading and conservation.

The hypothesized correlation warrants further investigation because a significant body of data has not yet been collected to either confirm or refute the claim.

Research Hypotheses:
1. There will be a significant, positive relationship between first grade students' numerical degrees of conservation acquisition and "Total Reading" scores on the Primer Battery of the Metropolitan Achievement Test.
2. There will be a significant, positive relationship between first grade students' numerical degrees of conservation acquisition and "Total Reading" scores on the Primary I Battery of the Metropolitan Achievement Test (MAT).
3. There will be a significant, positive relationship between first grade students' numerical degrees of conservation acquisition and "Total Reading" achievements.

Definition of Variables:
1. "Total Reading" Achievement is measured by the MAT Primary I Battery "Total Reading" scores, after the variance in common with the MAT Primer "Total Reading" scores has been removed. "Total Reading" achievement (learning performance) is the degree of learning during a period of time between two achievement tests (one academic year).
2. Conservation acquisition was assessed by the use of classic Piagetian tasks; basically the same as those described by Bybee and McCormack (1970). Their format was modified to make the test more appropriate for the primary grade subjects: 1) a classic number conservation task was substituted for the displacement of volume task (Piaget and Inhelder, 1969); and 2) the continuous quantity task (water) included a second identical small jar for comparison purposes. In essence the seven tasks determined, through transformation tasks, reversibility tasks, one-
to-one correspondence tasks, and seration tasks, the numerical degrees of the subjects' conservation understanding.

Subjects:
All first grade students in one Kalamazoo, Michigan area school were tested for conservation acquisition. The progressive, early elementary school's student population is primarily Caucasian from middle class home environments. The school has four first grade classrooms. (N= 62). The school uses the Houghton Mifflin reading series.

Method
The subjects were administered the MAT Primer Battery during the month of September, 1974, by the school staff. During the next four months the subjects were assessed for their degree of conservation acquisition; scores ranged from 0 to 7.

The researcher administered seven tasks: 1) conservation of matter (clay); 2) conservation of continuous quantity (water); 3) conceptualization of water level; 4) ordering events; 5) conservation of number; 6) conservation of length; and 7) conservation of area. Each subject's responses were judged as conserving if the child logically justified the correct answer through reversibility. If the subject's responses were not correct or they could not be justified by reversibility, the responses were recorded as non-conserving. Responses (conserving marked as 1, and non-conserving marked as 0) were recorded on a worksheet. The total number of 1's for the seven tasks constituted the numerical degree of a subject's conservation acquisition. Conservation assessment tests were conducted informally, individually, and with as little pressure as possible. Using cardboard screens for privacy, the testing was conducted in student study areas located in the hallways adjacent to the subject's classroom. All responses, verbally treated as correct, were followed with a brief positive verbal response with no further elaboration of the correctness of the subject's answer. If the subject's justification was not clear, he was asked to explain and/or demonstrate. A subject's decision to participate or not to participate was respected and adhered to.

The subjects were administered the MAT Primary I Battery during the month of May, 1975, by the school staff.

Data was analyzed by correlation procedures to obtain: 1) Pearson product-moment correlation coefficients; and 2) part correlation coefficient.

Results
The mean and standard deviation of the Primer Battery "Total Reading" scores, the Primary I "Total Reading" scores, and the conservation assessment test scores are presented in Table I.
TABLE I

Descriptive Data Analysis

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>S.D.</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Assessment</td>
<td>4.597</td>
<td>2.138</td>
<td>62</td>
</tr>
<tr>
<td>Primer &quot;Total Reading&quot;</td>
<td>18.823</td>
<td>6.562</td>
<td>62</td>
</tr>
<tr>
<td>Primary I &quot;Total Reading&quot;</td>
<td>60.984</td>
<td>15.134</td>
<td>62</td>
</tr>
</tbody>
</table>

The correlation matrix is presented in Table II.

TABLE II

Correlation Matrix (N = 62)

<table>
<thead>
<tr>
<th></th>
<th>Conservation Assessment</th>
<th>Primer &quot;Total Reading&quot;</th>
<th>Primary I &quot;Total Reading&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Assessment</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primer &quot;Total Reading&quot;</td>
<td>0.5696*</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Primary I &quot;Total Reading&quot;</td>
<td>0.4010*</td>
<td>0.5955</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

\[ r = .05 \quad \text{c.v.} = 0.211 \]

Positive, statistically significant from zero, correlation coefficients were obtained. The first and second research hypotheses were not rejected: 1) There is a significant positive relationship between first grade students' numerical degrees of conservation acquisition and "Total Reading" scores on the MAT Primer Battery; 2) There is a significant positive relationship between first grade students' numerical degrees of conservation acquisition and "Total Reading" scores on the MAT Primary I Battery. These findings may not be new or of great interest to the school practitioner. The value of conservation acquisition assessment as a predictor of reading achievement scores may be of greater interest to the classroom teacher.

Table III presents corresponding coefficients of determination.
The coefficients in Table III are interpreted as follows: 1) the conservation assessment test accounts for 32.4% of a subject's MAT Primer Battery "Total Reading" score variance, and 16% of a subject's MAT Primary I Battery "Total Reading" score variance; and 2) variables not examined in this study account for 67.6% and 49% of the subject's score variances respectively.

Part correlation analysis was used to test the third (null) hypothesis. This statistical procedure was used to obtain a coefficient of the relationship between the numerical degree of conservation acquisition and "Total Reading" achievement. A part correlation analysis, eliminating variance shared by both sets of "Total Reading" scores, produced a coefficient of 0.095. This coefficient is not statistically significant and accounts for less than one percent of the variance in reading achievement. Therefore, the third research hypothesis is rejected. There is no significant relationship between first grade students' numerical degree of conservation acquisition and "Total Reading" achievement.

Through part correlation analysis it has been demonstrated that conservation acquisition is not significantly correlated with first grade students' "Total Reading" achievement, when "Total Reading" achievement is measured as the degree of learning during a period of time between two achievement tests (one academic year).

Summary

Researchers have proposed the use of conservation acquisition assessment as an aid for predicting primary grade reading success. Piagetian theory has been applied to justify the proposal, and research findings have added support to the hypothesis.

The results of this study do not support the use of conservation acquisition assessment as a predictor of primary grade reading achievement. Although significant correlations were observed between conservation acquisition and MAT Primer Battery "Total Reading" achievement scores, and between conservation acquisition and MAT Primary I Battery "Total Reading" achievement scores, corresponding
coefficients of determination only account for approximately one-third, or less, of the scores' variance. Furthermore, a part correlation analysis (eliminating variance in common between the MAT Primer Battery “Total Reading” achievement scores and the MAT Primary I Battery “Total Reading” achievement scores) to assess the relationship between conservation acquisition and reading achievement (learning) revealed no significant correlation.

REFERENCES


WRITE TO READ: 
THE LANGUAGE EXPERIENCE

Gerald Zinfon, Charles R. Duke
PLYMOUTH STATE COLLEGE

Writing instruction at all levels of student development should focus on and nurture the individual’s confidence in using his native language. The teacher who provides students with opportunities to explore their own perceptions, their own experience in their writing and reading, can build language confidence and competence. To accomplish this, the teacher must look first at students as individuals with a wealth of interests and enthusiasm and a desire for expressing these to others. The teacher must listen and then provide the environment in which students can explore these interests using language—speaking it, writing it, hearing it, and then reading it.

The elementary student provides the clues for language learning that English teachers at the secondary and college levels should observe with greatest interest. When the child enters school and becomes socially adapted to his peers and to his responsibilities and opportunities as an individual in a learning, exploring community, he begins to display a distinctive identity. Soon he becomes comfortable in the school environment and wishes to share his identity with his peers and his teacher.

The elementary student often reveals this desire through a highly developed facility with experience-based oral language. Consider the following example.

At the close of school on Tuesday, the teacher reminds her students, “Please don’t forget to bring something for ‘show and tell’ tomorrow morning—make it something interesting for us to hear about.” As soon as Mark enters his home after school, he asks his mother to remind him to bring something for “show and tell” tomorrow. Before bedtime, Mark works on his bedroom floor among the rubble of wrinkled newspapers, model cement, small plastic spheres and angles, the printed directions (accompanied by diagrams) of his latest project—a model of a space missile. Using one of last summer’s saved popsicle sticks, he cements pieces together, reads, frowns, holds parts in place, kneels away from, moves toward, and, in general, assesses each step in the process of building the model spacecraft. Soon, bedtime is announced. He surveys his work approvingly and after he has boasted for a moment to his mother, his lights are turned out and he falls asleep.

In the morning as Mark is on his way out the kitchen door, holding his “Peanuts” lunch box and munching the last half of a piece of toast, his mother reminds him of “show and tell.” Two tense seconds pass while Mark stands with the toast poised against tight, thoughtful lips. Then, he bolts to
his bedroom and grabs a one-inch section of the plastic model from the floor. Returning, he peers up at his mother; “Got a bag?” he asks, grinning.

“You’re going to take that thing?—my heavens!” she frowns, but not too seriously. “What in the world can you say about that?” she asks, smiling. Mark places the small plastic piece into the bag and gulps down the last bit of toast. Smiling up at his mother, he says, simply, “Lots!” And he’s off to school, lunch box swinging from one hand and a little brown bag of his own experience in his other hand. He knows what he’ll talk about during “show and tell.” He’ll talk and talk and talk. Finally, his teacher will dismiss him politely, “Thank you so much, Mark—that is a wonderful project and you told about it in a really interesting manner.”

In this type of activity the alert teacher can capitalize on students’ motivation and interests and work on both writing and reading skills. The teacher can have the “show and tell” reports written by the students individually, if they are old enough, or recorded as each student delivers his report. Later, the teacher or an aide can type these into a class booklet for reading instruction. Whichever procedure the teacher chooses, the students will enter the experience of using language for discovery, and what they will discover is that language is within their reach as an effective tool of expression. Students also will discover that the written or printed word grows out of the spoken and heard word. As James Squire suggests:

... For too long our schools have neglected the importance of oral language and failed to recognize that ability in written language relates in no small measure to facility and command of oral forms. For too long school programs designed to teach our children to read have been separated from those designed to teach them to write and speak.!

Following through on the “show and tell”—or any other similar experience-oriented language activity—the teacher can bring students through the writing process and reap for the students additional, complementary language benefits. For example, students can be guided through the Prewriting, Writing, and Rewriting process as both writing instruction and highly motivated reading activity. If writing and reading together evolve from the student’s experience, the reading of the student is not viewed as alien material, cast immutably on the printed page for all time. Instead, reading material is understood to be human material, created by and for human beings—indeed, created by the student himself and his peers. It is not a great distance from this conception of reading by students to the broader, necessary conception of reading material as an essential academic and life-enriching medium. Carol Chomsky, commenting on this process, says, “... to expect the child to read, as a first

---

step, what someone else has written is backwards, an artificial imposition that denies the child an active role in the whole process."

When the student explores the writing process, using his own experience and his own language, the teacher can—at any level of instruction—offer stimulating and worthwhile reading instruction. The student of writing, for whom *Prewriting* becomes part of the process of producing the written, learns numerous concepts that are applicable to both writing and reading. He learns that there is no frightening magic in printed words, for each writer explores his own experience, knowledge, and perceptions, and makes choices of materials suitable to his point and suitable to his audience. The student involved in writing as a process receives the necessary feedback about these choices from his peers and his teacher, who constitute his audience of the moment. He gathers materials and tries a variety of language in efforts to express himself, to communicate his meaning. This constant search for the revealing fact, the revealing anecdote, and the process of selecting, trying, rejecting, adapting language—getting the words right—are invaluable insights for any reader of any reading material. The printed word becomes understandable as a final choice of the writer and not as a mandate from the adult world.

When the writing student is brought through the *Writing* stage in the process of creating a composition, he writes his rough draft to discover, through a preliminary exploration of his material, his own understanding and his own perceptions. He writes in his own words. Then he reads his draft. He sees the beginning of his meaning. He substitutes words, adjusts sentences, perhaps even adds a paragraph or two. He is learning to read with the maker’s eye, the eye of the producer. Rather than merely reading the products, i.e., the “reading skills” book, or, in more advanced levels, reading the “literature” book, the student engages in total, personal language activity. As a consequence, his reading and language skills are sharpened along with his writing skills.

During the *Rewriting* process the student sharpens his preliminary drafts and works toward his final product. When his statement is finished to his satisfaction, he has experienced both the writing process and a significant and valuable reading lesson. He has read as an editor reads.

This approach to synthesizing reading and writing instruction works with equal success on all levels, for the common denominator is the student’s own language and experience. Using the learner’s language and experience to build a bridge to other experiences that challenge but do not intimidate his use of language provides the key for unlocking the complex process of discovery leading to the mastery of the writing and reading processes.

---

The functions of listening, speaking, reading, and writing, should form a solid foundation from which students can learn as they grow toward maturity in their educational endeavors. Without a proper grasp of those functions, a language imbalance occurs. One might say that the foundation tilts because the base is not sufficiently solid in each direction. As a result one or more language functions are slighted and may not mature sufficiently or may atrophy because of disuse.

From birth to maturity, the language development of most individuals follows a similar pattern. Children learn to listen, then they learn to speak and soon learn to read, after which they learn to write. The related vocabularies develop apace. Usually the listening vocabulary is the largest of all, then comes the speaking vocabulary and the reading vocabulary. Smallest of all, or usually least developed of all, is the writing vocabulary. Moreover, the desire to write or to express one's thoughts on paper seems to be the least desirable way to communicate for most individuals. The typical person would rather speak than write if a choice were given. So the writer has two strikes against him at the outset. Not only is his vocabulary limited in relation to the other language functions, but his motivation to write is often lacking.

Writing is, without question, the most demanding of the language functions. It requires a high degree of inner discipline. It involves inspiration (an idea to be expressed) and "perspiration" (the tenacity to remain at the task until properly completed) in order to be effective and the writer's thoughts properly expressed. It also involves being accustomed to writing, that is to say, the writer needs considerable practice that is meaningful to him and purposeful. It is to these ends that the present discussion is directed.

Teachers frequently pose the questions, "How can I help my students engage in a meaningful writing situation?" "How can I motivate them to write well without applying undue pressure?"

The answer is relatively simple: have your students write a weekly letter to their parents, guardian, or the individuals caring for them. This learning experience, the weekly letter, utilizes all skills in the communication or language process and combines them in a sound educational activity. The letter has the advantage of combining all phases of the school curriculum, reading, mathematics, spelling, social studies, science, handwriting, the fine arts, as well as oral expression, and all facets of syntax. Moreover, it is meaningful and enjoyable from the student viewpoint and parents also like it. Typically, parents become keenly interested in what takes place in school because the letter explains this. Such an interest tends to foster a positive
school-community relationship. Furthermore, parents can see their children becoming more proficient in the various skill areas because there is visible evidence of learning and progress through the medium of the weekly letter.

**Initial Step.** The idea of the weekly letter to parents is best developed early in the school year, at the end of the first or second week. To set the stage, ask the students to name the learning areas on which they worked during the week. Write their responses on the chalkboard and then ask them to mention specific concepts they learned in each area. List these under each topic. This serves as the outline.

The sequence should begin with the reading program. Ask students to recall the story or stories read and the related reading skill activities. Summarize the story plot in a few concise sentences and describe the related developmental activities which evolved from the reading. Do the same for the other major learning areas such as math, social studies, and science. In each instance it is necessary for students to recall and describe the learning which resulted from their activities.

**The Second Step.** Helping students discover that a letter to their parents is the best way to convey the information comes next. Here it is necessary to set the stage for the desired outcome. The teacher should ask students their opinions regarding the best way to share the information with their parents. Most students will respond that the best way to do this is to tell them. At this point the teacher should explain that writing is also a good way of imparting information and thus help students realize the two major ways of communicating ideas, etc.

Most students will probably reject the writing idea and actually believe that they can remember and tell about all the various learning activities which took place during the week. So let them try because it is important to move slowly and have the students discover for themselves the value of writing rather than telling. Let them tell their parents about school activities and see how effective it was.

This can be checked at the beginning of the following week. On Monday the teacher should ask if everyone remembered to tell parents everything that happened in school the previous week. Many students will have forgotten, or had no time, or had parents who had no time. It is at this point that the teacher should explain that telling is not such a good idea and also ask students to suggest alternative procedures for imparting information.

On the ensuing Friday, repeat Step 1. Ask the students what they did during the week and also what they learned in the several disciplines. Write their responses on the chalkboard. Ask them the best way to share this information with their parents and see what suggestions are made. Sooner or later the letter idea will emerge and be accepted by most students.

The discovery approach begins with teacher questions. Ask the students if they always remember to tell everything that has happened in any given event. Then ask them if a listener (parent, friend, etc.) always has time to listen the moment each student is ready to tell about a happening. Another
question to ask is about their own memories: do they always remember everything that has happened to them? And a final point is concerned with the possibility of error in speaking or telling vs listening and comprehending. How many times have the students experienced problems because they did not understand the spoken word?

At this point many students will be receptive to the idea of keeping written records of them in class activities. This is a valuable reference device for future use in either writing or telling about school activities. Ultimately it can be used as a guide to writing the letter.

Step Three. Because writing is such a demanding activity it is wise for the teacher to write the first several weekly parent letters, putting them on the chalkboard for students to copy. Then, gradually, as the students mature in their familiarity with this process, the teacher will do less and less. Students will do more and more of their own work using their own outlines and notations. When this happens, the teacher is free to move about the classroom and check on each student's writing.

Suggested Outline. The letter outline given below should be used only as a guide and changes can be made as warranted.

1. Introduction to the Weekly Letter
2. Reading and Related Language Skills
   a. Stories read during the week
   b. Related language activities and learnings
3. Mathematics
   a. Concepts practiced during the week
   b. Problems illustrating the concepts
4. Social Studies Activities for the Week
   a. Materials read and concepts learned
   b. Current social studies project
5. Science Activities
   a. Resources used and ideas learned
   b. Science project underway
6. Spelling Lesson (or activities)
7. Fine Arts this Week
   a. Music and related activities
   b. Art and related activities
8. Health and Physical Education
   a. Games and skills learned
   b. Current health status
9. Concluding paragraph

A Final Point. Some teachers may feel that the suggested outline is too detailed and specific while others may believe that it is not specific or detailed enough. Whatever it is, it is a starting point. Most experienced teachers know that many students will be able to cope with and follow the outline. Others will not. Each student should do his best and the detail with which the individual writes is indicative of his general language proficiency and achievement as well as his thought processes.

The outline for the lower grades will be simpler to follow and for the
middle or high school it will be more detailed. In the primary grades, teachers will wish to follow the language experience process and let students dictate answers to the points posed in the outline. Students could copy the text if they have matured sufficiently to engage in writing. If not, the teacher should request help from a student in the upper grades and follow this procedure: Have the student helper write (or print) the letter on a ditto master as the dialogue develops and thoughts are put on the chalkboard. When the children have finished dictating their joint letter, the student helper will probably have finished the master. It should be duplicated and distributed to the children who will take it home and read it to their parents.

One kindergarten teacher tried this approach with the following result. Below is a copy of the actual duplicated letter:

Our School Week
We did many things this week.
We heard the story of the Three Bears.
We learned to count money.
We learned colors.
They are red, blue, yellow, and green.
School is where we learn.

Obviously not all kindergarteners would be able to read this letter to their parents, but the parents could read it and discover what is going on in school.

A third grade teacher had a student who wrote this letter:

Dear Mother and Father,

We worked on many skills this week. Our teacher helped us. It was fun to learn so much.

In my reading group we read the story, “Hoppy the Helicopter.” It was interesting. Hoppy was different from the other airplanes. They did not like him. They called him a bug. I don’t think that was nice. Just because he was different was no reason to make fun of him.

We worked on problem solving in arithmetic. There were written problems and we had to read them. I thought they were hard.

My practice spelling test was good. I missed only four words. I will study them over this week-end.

We did other things this week. I have no more time to write about them. I will tell you about them tonight.

Love,
A sixth grade teacher copied this letter from one of his pupils:

Dear Mother,

We have been really busy in school this week. It has been one of the busiest and one of the most interesting weeks yet.

In reading my group read three stories from the basic reader. During free reading time I continued to read my Homer Price book. That was during the USSR period. Remember what that stands for? Our teacher helped us learn about figurative language and idiomatic expressions. When I come home I will tell you what “The ship plowed the waves,” means.

Mathmatics was not easy this week. We tried to work on story problems. I had difficulty with the terms subtrahend and minuend. It is not much fun to work on these problems. We are now working on spelling lesson eight. This is a review lesson. I have had trouble spelling “embarrassed” and “spaghetti,” but I will try to learn them for our test on Tuesday.

In social studies we are learning about Canada. It is a very interesting country and needs more people. Our book tells us that Canada is sparsely populated. It has many natural resources that it sells to other countries. Tourism is a very important industry in Canada.

This is all I have time to write about.

Your loving daughter,

These sample letters are evidence indicating that students can write and write well if they are properly motivated and well guided. The writing ethic needs to be nurtured. Students should realize early on just how valuable effective writing can be. Through this process, writing as a medium of communication can be fostered, improved, and can become a vital force in the lives of most individuals. Such vitality seems to be lacking in the area of writing, but writing a weekly letter to parents can go far toward proving the value of written communication.

Try it. Once your students become accustomed to the idea, they are sure to like it.
Inability To Follow Lines of Print

Studies of eye movement during reading indicate faulty directional habits of children who display the following symptoms: repetition of words, omission of words, transposition of words, skipping lines of print, and jerky oral reading. The child's inability to follow a line of print from left to right can be caused chiefly by a lack of adequate experiential background. There may be little in the child's previous experiences to prepare him for this new, and for him, different situation. The child's concepts of up and down, left and right may have been inadequately developed. Incorrect responses may have been reinforced and faulty habits might have been established. Relearning must occur and new and correct habits must be implemented. When children begin to read, they must be taught correct directional orientation. They should be assisted to learn that words are to be observed from left to right and lines of print are to be read from left to right. The teacher must make certain that these directional habits are firmly established at the start of the reading process.

Faulty perception of direction may be modified by the utilization of the following procedures:

• Oral reading of experience charts with sweeping movement of a pointer from left to right.
• Choral reading so as to enhance perception and expression of ideas from left to right. The chorus of voices accentuates the left-to-right flow of ideas.
• Encourage the children to type sentences which they have written. This procedure will motivate and interest children and develop left-to-right movement.
• Tachistoscope exercises making use of words, phrases, and brief sentences. The teacher should show the children where to focus their eyes on the screen or surface used for projection. The teacher explains that the child should look at the projected image from left to right, attempting to get an eyeful at each exposure.
• Reinforce any and all correct responses with praise and commendation.

Faulty Perception of Words

Reversals are common among children at all ages and especially among severely retarded readers. Reversals are symptoms of an inadequate ex-
periential background and of severe eye defects in some cases; in many situations they have been found to be intensified by improper phonetic instruction and structural analysis techniques. Reversals do not cause poor reading but they are related to it.

A visual, auditory, kinesthetic, and tactual approach to word study can be helpful in the remediation of reversal tendencies. The following procedures are recommended:

• Have the child look at the word from its beginning to end. The analysis of the elements within words should be limited to those prefixes, roots, inflectional endings, and suffixes which transmit direct meaning.
• Have the children pronounce the word silently, making certain to associate each syllable with its corresponding sound and being careful that the correct sequence of syllables is maintained.
• Spell the word silently, making certain careful attention is given to each syllable.
• Trace the word with the index finger.
• Write the word.
• Compare the word written with the word selected for study.
• Repeat this process until the word can be spelled and written properly.

Words taught in this fashion should be used in context. The teacher may also use the sound-dictation technique. The child is asked to write words as the teacher dictates the sounds and then rereads those dictated. The technique works in this fashion:

• The teacher says to the children in preparation for the teaching of words, "The words are all short 'a' words."
• The word man is pronounced by the teacher.
• It is said slowly so that the child can hear the separate sounds.
• The child then says the word slowly as he writes the letters of each sound.

Some additional suggestions for the teacher include the following:

• Try using games with anagrams.
• Encourage the children to write or print words, phrases, and short sentences on the chalkboard or overhead projector.
• Use the dictionary to establish left-to-right habits.
• Alphabetizing.
• Typing.
• Word beginnings. At all times stress should be placed on word beginnings rather than word endings.
• Avoid analytic techniques. An undue stress on phonetic and structural analysis before the child is sufficiently mature may promote reversal tendencies.
• Visual examination. A possibility of a visual abnormality should be investigated by an ophthalmologist.

Loss of Place and Omission of Words

Some children lose their place when reading. They jump lines and
words, and their reading errors consist of omissions of words, omissions of sounds, reversals, and repetitions. Their perception of what is on the printed page is hindered.

Treatment, following careful diagnosis, may be enhanced by these suggestions:
- Exclude the possibility of an ocular difficulty with an examination by an ophthalmologist.
- Permit children who habitually lose their place to use a liner. This crutch should be eliminated as soon as possible.
- Make the child aware that he often omits words and loses his place by the use of a tape recording of his reading. This can be accomplished by having the child listen to his recording as he silently reads the text.
- Encourage the child to want to improve his reading ability. An awareness of the success he is experiencing can assist.
- Emphasize flexibility of reading rate and not speed. Encourage a slower rate of reading until accuracy is obtained. Some children think that a good reader reads rapidly, as a result, they rush and make mistakes they would not if they read with greater deliberation.
- Encourage the child to increase attention by asking questions and then having the child read carefully for specific answers.
- Demonstrate to the child the degree of progress he is making through the use of a graph. Progress can be shown by the increase in his correct responses. The child must know that he is succeeding.
WE SUGGEST

Eleanor Buelke

May, Rollo, The Courage To Create

America is in headlong retreat from its commitment to education. . . . This retreat ought to be the most pertinent issue in any examination of the country's condition in its Bicentennial year. At stake is nothing less than the survival of American democracy.¹

Great personal and professional courage is required of educators and their leaders in order to prevent what Fred Hechinger calls "Murder in Academe."² It must be the kind of courage that is described in The Courage To Create, a book written out of Rollo May's long experience as a therapist in observing and helping people to discover their creative possibilities. Facing major issues of concern demands sensitivity and awareness, without yielding to anxiety and panic. To influence the evolution of education, to preserve a sense of responsibility in the face of radical societal changes, to live into the future with conscious participation in the process of making it more equitable and human—all these require "a degree of courage for which there is no immediate precedent and which few people realize."

What is creative courage? According to this author, it is the capacity to move ahead, even when faced with despair. To be authentic, it must be centered within one's own being; it is not rashness, masquerading as courage to compensate for unconscious fear. It is the foundation for other psychological virtues, keeping love from becoming mere dependency, and fidelity from paling into colorless, even casual, conformism. Having creative courage implies making choices and decisions, acting upon them daily. Commitment is the ingredient essential to development of fully human beings who can help turn meaningless conflicts of the surrounding world into constructive confrontations furnishing creative vision for progress.

Traditionally, in our culture, courage has been thought of in such terms as physical courage, like that which takes its form largely from the myths of the frontier; moral courage, like that of political heroes who, abhorring violence, dare to stand alone against cruel, inhuman acts by bureaucracies; and social courage, like that required of any who invest and risk themselves

² Ibid., 11-18.
in intimate relationships with others. May adds another kind of courage to
the list. This he considers the most important kind of all; he calls it creative
courage: "the discovery of new forms, new symbols, new patterns on which
a new society can be built." To possess such courage, the writer suggests, the
physical self must be valued as a means of empathy with others, to be used
for the cultivation of sensitivity. He believes that moral courage has its
source in perception of the suffering of one's fellow human beings; here the
crucial factor is involvement. He warns that the challenges and fears that
face anyone who cares for another are dangerous and demanding, but
intimacy on many levels of the personality is necessary for self-realization
and production of work significant to the present age and for future
generations. Genuine, creatively courageous persons are so bound up with
their contemporary condition that their works and communications cannot
be separated from it.

How does one acquire courage to create? Some other modern writers
have approached this question with thinking similar to that of Dr. May.
Succumbing to comfortable, uncontrovertial certainty, as opposed to
enduring rejection and gambling with security, has been called a "dilemma
as old as man himself." It has been suggested that persons turn their minds
back into the past at the same time they look ahead to the future, neither
bound by the one, nor baffled by the other; join a group of others who share
their ideas and who affirm each other; avoid looking at others as "fixed or
static, as all this or all that." recognizing that change and complexity are
the nature of life; and persist day-by-day with the hard work of meticulous
observations, with honesty, acknowledging always that there are more
questions than answers. Another respected writer of today recognizes the
hidden aspect of man's nature that leads him to perform memorable deeds,
"entheos, a god within," enthusiasm in our language, as the true source of
creativity. This can be revealed and sustained only by repeated, volitional
verification of one's own personality.

During the past two centuries, since Thomas Jefferson first called for the
elite society of inherited power to be replaced by a new aristocracy of talent,
the forward thrust toward universal education in this nation has never long
deflected. Visions of each succeeding generation's capacity to do better
have been linked to education as the key to progress. But, now, political
confusion and economic insecurity shake declining confidence down further
as days go by. How can education's leaders, as change-agents, use the
courage to create to keep available educational options for all, to restore the
challenge of open horizons, to project a forward-looking agenda for the
nation's schools?

First, there must be recognition of, not railing about, limits of
education's capacities as a progressive social force; it is from the struggle

---


against limits that expansion of intelligence and creative solutions are born. Having accepted limits, educators as persons, and as a profession, need to keep “inventing themselves” repeatedly, consistently, by choosing responses toward which they wish to throw their weight. “Apathy is the fruit of interlocking aimlessness.” Further, to dare to disturb the status quo or to jolt the self-centered out of their preoccupation with their own troubles, or to threaten the prestige of political opinion-makers and policy-purveyors means to act with individual courage “to do something new, to confront a no man’s land, to push into a forest where there are no well-worn paths, and from which no one has returned to guide us.” At the same time, it means to act with awareness and responsibility to others, for creativity requires this kind of fine-honed sensitivity of those who are willing to let themselves be vehicles of a new, emerging vision.

Every profession can and does require some creative courage. . . . Whatever the sphere . . . there is profound joy in the realization that we are forming the structure of a new world.

---

5 Fred M. Hechinger, *op. cit.*, 18.
Still around are some of us who attended high school through the years 1906-1910. In my case that was in Zanesville, Ohio, which periodically over the years has been portrayed in magazine articles as “the typical American town.” In those days high school principals did not seem to be chosen primarily as administrators specially skilled in management. The principal of a school was the principal teacher, supposed to be something of a scholar, often addressed as “professor.” He was expected to be familiar with the subject-matter of the curriculum as a whole. If a teacher had to be absent for a day or two, in most cases the principal could step in and temporarily take over the class.

In our school the principal seemed rather especially interested in Latin. From time to time he would drop into our class for a few minutes and make some comment on the lesson of the moment. One day stands out particularly in memory. We were reading Caesar’s account of his wars in Gaul. A word which was becoming familiar to us was the verb educere, which Caesar commonly used for “leading out” his troops. Our principal told us that the word education had come from the verb educere. From this he drew the interpretation that education is a matter of “leading us out” from darkness into light, from ignorance to knowledge. Though it had nothing to do with the actual facts of word-derivation, the idea seemed to us to make sense. For armchair etymology it is about as good as you get.

Over a long period of time, there has been perennial repetition of specious argument in favor of certain methods of teaching on the basis of alleged derivation of the word education.

“Too often in the past,” writes a university administrator, “we have insisted on instruction rather than education, on that mode of teaching which piles up facts (the root meaning of the Latin instruere) instead of that which educes or draws forth, brings out, develops from a latent condition. We have expected the student to extract from a mass of unrelated materials . . . something which he will find pertinent . . .”

Along with educere for “leading out” his troops, Caesar often used instruere for “drawing them up” in battle formation. From instruere came instruct and the noun instruction. Instruct, which is related to construct, as it came into English had a general meaning of putting in order, forming, or guiding. Then it became specialized in the sense of imparting knowledge or

* The basic substance of this article, in much more condensed form, “A Little Latin is a Dangerous Thing,” by Louis Foley, was published in 1974 in The Journal of General Education, which has granted permission for its republication in the present more expanded version.
information, training in skill, teaching methodically. "Instruction has the imparting of knowledge for its object, but emphasizes more than teaching, the employment of orderly arrangement in the things taught." Surely it does not mean merely "piling up facts," or a hodge-podge of "unrelated materials."

It is amazing how the fanciful use of alleged etymology as a means of argument carries on year after year. In one aspect it may be a result of the much simplified glossaries of elementary Latin textbooks, with their apparent implication that each word has only one meaning. In reality, with a much smaller vocabulary than we have in modern languages, a given word in Latin might have many diverse meanings in different contexts. In absorbing a word from a foreign tongue, what English has commonly done has been to take the word in one of its meanings, ignoring all other significations it could have in the other language.

Argument from etymology also reflects the Stoic doctrine of a time several centuries before Christ. It was believed that discovering the original or "true" meaning of a word would naturally give a better understanding of the thing which the word represented. Etymology, "the science of true meanings," was conceived as something much more important than satisfying intellectual curiosity by tracing the history of a word's development. It was thought to be the reliable means of gaining insight into ultimate reality, the true nature of that for which the word stands.

Today any scholar should know better than that. Through association of ideas, a word may wander so far away from the signification of its ancient ancestor that one would never guess the connection if he did not happen to know. And this had already happened to many of our words of remote Latin ancestry before they were known in English. The overwhelming majority of the so-called "Latin" words in our language simply came into English from French (along with French words from other sources), with changes of meaning which had evolved through centuries. Sometimes the links of connection can still be seen, but often the steps in development—each understandable if one looks into it—have left the original connotation quite irrelevant to present-day usage.

An example, no better than many others, will illustrate the point. From the romances of the age of chivalry, we know of the "lists" or tournaments which were the great athletic events of the Middle Ages. This is, of course, only one of the various words list we have in English, completely different from each other in origin and meaning. This word list came from French lice, sometimes anglicized as lisse; the "t" probably got in by confusion with the totally different French word liste, as in a list of names. Its remote starting-point was the Latin licium, meaning thread. The plural licia came to mean rope, made by twisting many threads together. Through understandable association of ideas, it was used for the rope stretched around an enclosure, then the enclosure itself, and finally the contests which took place within it. Needless to say, the idea of "thread" is no great help in understanding the knightly combats of medieval tournaments.

As long ago as the turn of the century or before, more than one scholarly etymologist sought to dispose of the erroneous popular notion of the
derivation of the word education. The Century Dictionary and Cyclopedia of 1911 (first edition published in 1889) stated categorically: "There is no authority for the common statement that the primary sense of educate is 'to draw out or unfold the powers of the mind'." That notion which was a "common statement" in 1911 had already been deflated ten years before in a well-known book by two Harvard professors: "We may believe that the proper method of education is to draw out the latent faculties of the pupil, but we can find no suggestion of that method in the etymology of the word itself."4

Such clear statements by people who really knew their Latin appear to have had very little effect. The arbitrary popular notion was given great encouragement in 1923 by President Arthur Twining Hadley of Yale in his declaration that "to educate is to educe: to make something out of a man rather than to put something into him."5 The following year it was quoted with evident approval in the most widely read educational periodical.6 Year after year, on the strength of this alleged derivation, it has been urged that the efforts of a teacher should be devoted to "bringing out" the latent powers of children and youth, rather than injecting knowledge into them, because education signifies "drawing out."7 Again and again in pedagogical literature we have been given with varying turns of phrase the perennial message that "our word education comes from Latin educo, to draw out, implying the cultivation and systematic development of the natural powers."8 A recent article starts out by saying, "Education by hard, cold definition is a drawing or leading out process . . . from the Latin verb educo."9

At a Parent-Teacher Association meeting which received considerable newspaper publicity, the principal speaker was quoted as saying, "First you must distinguish between educating and rearing children . . . and leave the rearing to the adults."10 This assertion seems a good point at which to stop and consider the real etymology of "education" and see how our word got off the track.

Caesar's verb educre had other applications as well as his leading out of troops for warfare. One meaning, quite understandably, was to assist at birth as midwife or obstetrician. From that point on, however, the idea of "drawing out" had no bearing. The quite distinct verb educare, from which "education" comes, applied to what went on from there. Meaning to nourish, rear, bring up, it was used for the raising of plants or animals as well as children. So far as etymology is concerned, the would-be contrast between "educating and rearing" completely misses the point, for rearing was precisely what "education" originally meant.

The essential idea of "nurture" is the supplying of food, material which the body receives from without, which it digests and assimilates, and which enables it to support life and growth. Only with this nourishment can it develop strength and skill through exercise. One may well believe that good teaching results in the bringing out of latent abilities which the pupil did not realize he possessed. The teacher is not operating, however, on the principle of a vacuum-cleaner. The putting in of mental nourishment is
necessary to give the potential abilities something to work upon.

Long ago in the minds of English-speaking people "education" became inseparably connected with the idea of schooling. In French, on the contrary, the cognate word education has kept close to the Latin sense, and therefore is not at all interchangeable with our word "education." The French expression bien éduqué does not mean "well educated" in our sense (bien instruit); it means well brought up or "well bred." It conveys the idea which we express when we say that someone shows "good breeding." The French attitude appears clearly in the common remark that instruction is the business of the school, while education is the responsibility of the home. William James must have had much the same idea in mind when he defined education as "the organization of acquired habits of conduct and tendencies to behavior."11

Apparently for many people professionally involved in "education" in our everyday modern sense, "training" means something much less respectable. Here it seems that no one has thought of bringing up an etymological argument. The basic idea of train, to draw or drag along, which persists in the common French verb trainer, developed early in English the figurative meaning of leading by persuasion or enticement, and from that to the bringing up of children—in the Latin sense of "education." The Bible tells us that we should "train up a child in the way he should go . . ."12 This is clearly distinguished from instruction, which implies formal lessons taught in school: "Apply thine heart unto instruction, and thine ears to the words of knowledge."13 Of course in modern times we use the term "training" very often for various kinds of specialized instruction which may come after a person has finished his formal schooling or "education." College graduates commonly go through training periods with the companies for which they start to work. Similarly the professional educators who dislike the connotation of training are usually themselves products of "teacher-training" institutions and are familiar with "in-service training" for teachers, which they seem not to look down upon. Yet the unfavorable attitude toward anything called "training" persists in educational circles. Thus a recent letter to a newspaper from a concerned reader culminates with the lapidary declaration: "Animals can be trained. People should be educated."14

In this reference to animals we may safely infer that what the writer had in mind was the teaching of them to do what we want them to do for our service or amusement (le dressage), as we do with domesticated animals. Suppose, however, we think of training—synonym of education in the Latin sense of bringing up or rearing—from the point of view of animals themselves, considering the ways of wild creatures in their natural state. Very little thought or observation is needed to realize that countless higher species of animals accomplish marvels in the bringing up of their children, in an extremely short span of time compared to what people require. Certainly they succeed remarkably well in teaching their young the things they need to learn. Not only are their offspring taught what they must know to survive in their environment, but they are imbued with a code of conduct
in dealing with others of their kind. And this code, naturally varying with the species and its way of life, is thoroughly inculcated. Occasional rascals who violate it generally meet their comeuppance.

Contemplation of some of the real facts of etymology may lead to conclusions rather different from the interpretations which have been wearisomely overworked. Our modern schools are not lacking in well-developed means and methods of instruction. Surely the greatest cause of frustration and discouragement for many devoted teachers of our time is their having to deal with considerable numbers of pupils who have not had the proper prerequisite preparation which education originally implied.

REFERENCES

8. N. Allworth Beach, *The American Citizen*, May 1940, p. 44.
DEVELOPMENT OF "READING THE WANT ADS:"
A NEW INFORMAL READING INVENTORY FOR OLDER
EXCEPTIONAL CHILDREN

Catherine Morsink
UNIVERSITY OF KENTUCKY

AUTHOR’S NOTE

This article describes the procedures used in the development of a new reading test for older remedial readers, particularly those in special education classes. The purpose for publication of this description is to solicit feedback from professionals in the field of reading regarding the validity and utility of this concept. Four questions are of major concern:

1. Can/should an IRI based on vocabulary from several basals be used to estimate instructional level in any one of them?
2. Is it appropriate to apply a readability formula to text written in a format which approximates telegraphic speech?
3. In the opinion of those who work with older remedial readers, would a reading inventory using Want Ads content be of sufficient motivational appeal to justify its development?
4. If developed further, would this instrument be of more value if its range were extended through grade six and/or if it were normed?

Readers are invited to respond to these questions prior to the author’s decision on continuation of the project.

Catherine Morsink, Ed.D.
Department of Special Education
University of Kentucky

Purpose of Informal Reading Inventory

The teachers have long used the informal reading inventory (IRI) for diagnosing the reading needs of pupils in their class. The IRI gives the teacher an opportunity to listen to the child reading aloud, to determine his reading level, and to make observations about the way in which he attacks words and comprehends ideas.

There are three generally accepted levels of functioning which can be determined by administration of the IRI (Harris, 1962; Johnson & Kress, 1965). They are as follows:

* This material was developed while the author was Training Director at the University of Kentucky Regional SEIMC.
1. The independent level at which the child can read without assistance. Word recognition errors are less than 2% and comprehension is 90% or better.

2. The instructional level at which the child can satisfactorily read when the book is used for systematic reading instruction. Word recognition errors are between 2 and 5% and comprehension is at least 75%.

3. The frustration level at which reading is too difficult for the child. Errors in word recognition rise above 5%, and comprehension drops to 50% or less. (The child should not be asked to read anything at this level.)

The teacher may, if she desires, also use the IRI to determine a fourth level:

4. The hearing comprehension level, the highest level at which the child can understand at least 75% of the material which is read to him. This level gives the teacher an estimate of the student's potential, and may be especially useful in cases where a child's oral reading is poor but his comprehension of language is good. And, in cases where the child's hearing comprehension level is equal to or lower than his oral reading level, it cues the teacher to concentrate on language development rather than word recognition skills.

Need For A New IRI For Exceptional Children

Most informal reading inventories are made by teachers from old basal readers. When the objective of the inventory is to place the child appropriately in the series used in his classroom, this material can be effective in guiding the placement decision. If, however, the child is tested in one basal series and placed in another, the vocabulary may be quite different. With the exception of the Dolch words (Dolch, 1951), each basal series beyond the primer level selects its own vocabulary in its own sequence.

Another major difficulty arises when the special education teacher attempts to measure the reading level of older exceptional children who are reading at primary levels. These students are understandably "turned off" by materials written for children of primary age level. Imaginary animals and stories about cute little kids just don't interest them.

Development of Materials

The classified ads from the newspaper were suggested as a possible source of reading materials for students of this age and reading level. Classified ads are appropriate in interest and reading level. Classified ads are appropriate in interest for this group, and are already being used in many special education classes for teaching language or career education.

The classified ads, however, do have some limitations and present some problems in the writing of an IRI. They are as follows:

1. Selection of vocabulary
2. Sentence length
3. Sentence structure
4. Ad length

Selection of Vocabulary was a major issue. An analysis of four basal reading series (Scott Foresman, 1965; Bank Street Readers, 1965; Harper-Rowe, 1966; Betts Basic Readers, 1963) pre-primer through book two, revealed that there was a wide discrepancy among them in the vocabulary presented. Because of this, two other sources were used most heavily as a word pool from which to compose the ads. They were the Dolch 220 words (Dolch, 1951) and the "Functional Basic Word List for Special Pupils" (Tudyman & Groelle, 1963).

Sentence Length was also considered. In order to determine the correct number of words per sentence, it was necessary to investigate the average number of words per sentence used by children in their oral language. Loban (1963) has studied the oral language of children K-6 by measuring the number of words they use per "communication unit" (not necessarily complete sentences). He sampled between 236 and 338 children in each of the age groups. The words per unit in the lowest group at each level were of most interest for this study, since large numbers of exceptional children have language difficulty. At the kindergarten level, Loban found that the lowest group averaged 4.18 words per communication unit. The average for grade one was 4.89 per unit. At grade two the average was 5.49, and at grade three it was 6.08. These findings were used to estimate the appropriate number of words per sentence in the IRI.

These estimates of oral language were then compared with the numbers of words per sentence in the basal readers at equivalent grade levels. A survey of the four aforementioned basal series revealed that although they began with two or three words per unit in the pre-primers, they rapidly accelerated to as many as seven in the primer, twelve in book one, and fifteen in book two. Standardized oral reading tests (Gray, 1967; Gilmore, 1968) presented three to four words per sentence in the grade one selections, and five to six words per sentence in grade two. Actual sentence length used in the IRI was based on a combination of these oral and written estimates.

In order to check the appropriateness of the reading level for each sample, a test of readability was applied to the material after it was written. (Spache, 1966) The Spache formula estimates grade level by determining the number of words per sentence and the number of words used which are not found in the "Dale List of Easy Words" (Dale, 1931, revised: Stone, 1956).

Sentence Structure was a final consideration in the writing of individual ads. In keeping with the concept that children should read the same kind of language that they speak, studies which investigated the structure of children's oral language were consulted. O'Donnel, Griffin, & Norriss (1967) found that the highest percentage of structural patterns in main clauses of speech for children K-5 was the subject-verb or subject-verb-object (over 90% at all age levels). These structural patterns were therefore repeated as frequently as possible in the construction of the IRI. However, the format of the classified ads and the restraints imposed by limited
vocabulary and sentence length were also factors in the construction of sentences. As a result, a more abbreviated form, in which the sentence begins with a verb, was also used.

*Ad Length* was typically short in order to maintain the reader's interest and to more nearly resemble the real ads in a newspaper. Because a single ad was too short to provide an adequate sampling of words at any given grade level, several were combined in each selection. In each case, a sample of approximately 100 words was used. This made it easier for teachers to compute the child's reading level from his errors, and to find the rate in words per minute when desired.

*Use and Misuse of IRI*

The major value of this new IRI will be in its use by special education teachers to determine the reading levels of exceptional children who are of intermediate, junior, and senior high school ages and reading at primary levels. This information can be used for instructional grouping and for determining correct grade level of placement in reading. The inventory can also serve as a tool for obtaining diagnostic information concerning specific skill deficits of the child. Comprehension questions which follow each ad focus primarily on the recall of factual information, although they include a few questions of an interpretive nature.

The user should be aware, however, that an IRI has at least 3 limitations: 1) it is an informal estimate, and should not be considered a standardized test, 2) its estimates of rates and levels are based on very short samples and 3) it is a single observation of reading performance. Its results should be compared with other diagnostic data on a continuing basis.

*Information Available In IRI*

Most teachers will want to use this IRI primarily as an oral test in which the student reads the ads as he would read other printed material in the context of sentences and paragraphs. From this type of reading the independent, instructional, and frustration levels are determined. A complete IRI, however, also measures silent reading ability, listening comprehension, reading speed, and word recognition skills in addition to oral context reading.

When it is desirable to compare the child's comprehension of material read aloud with that of similar material read silently, the teacher can ask him to read the selection "to himself." She can time his reading with a stopwatch, observe difficulties such as frowning and finger-pointing, and use the comprehension questions to check his understanding. The estimate of "level" in this case would come entirely from the comprehension score, since no direct observations of word attack skills would be made.

In the case of listening comprehension, the child listens as the teacher reads aloud to him. When the selection is finished, he responds to the comprehension questions. He must answer with 75% comprehension. It is important that he responds to the questions in language equivalent to that
used in the ads, avoiding non-specific answers such as “it,” “that place” or “a thing.”

The measure of reading speed can be computed from any total grade-level (1, 2, or 3) sample below the child’s frustration level. Record the total number of words in the sample, and divide it by the time (in seconds) required by the child to read the sample. Multiply this answer by 60 to obtain the rate in words per minute. Durrell (1955) provides some useful averages (silent and oral rates) against which to compare the child’s reading speed. They are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Reading</td>
<td>55</td>
<td>80</td>
<td>110</td>
<td>135</td>
<td>150</td>
<td>170</td>
</tr>
<tr>
<td>Silent Reading</td>
<td>45</td>
<td>78</td>
<td>125</td>
<td>156</td>
<td>180</td>
<td>210</td>
</tr>
</tbody>
</table>

If, for example, the child reads the Book 3 selection with 100% accuracy, but reads at the rate of only 50 words per minute, this would cue the teacher to work on rapid sight recognition rather than phonetic word-attack skills.

Finally, the child’s word recognition skills can be observed by using the record of errors from the want ad selections in conjunction with the word lists which follow the ads. The word lists, based on random selections from the graded Dolch list (1951), are a supplement to the inventory. By administration of the grade level word lists, the teacher can observe the child’s ability to attack words in isolation and compare this skill with his ability to read words in context. She can also note whether the child recognizes these important words instantly by sight, or whether he tries to “sound them out.” Recognition only by sight would indicate the need for systematic instruction in word attack skills, while too much “sounding-out” would suggest an emphasis on extended practice to facilitate more rapid recognition. All of these observations have implications for the child’s remedial program.

**Future Development**

Development of grade level selections at fourth, fifth, and sixth grades is suggested. These upper levels may be useful in placing children who read above the primary range, or whose listening comprehension exceeds their ability to read written symbols. The upper levels might be read to the child, with comprehension questions serving as a measure of his listening comprehension. Alternate forms of the test would also increase its flexibility.

**Need For Further Study**

Development of this IRI led to several possible questions as to why large numbers of children in special education classes fail in reading. If the vocabulary of basal readers is so varied, then a child who moves frequently would hardly begin to learn the words in one series before being put into a whole new selection and sequence of sight words. While needing more than the usual repetition to master words, he would be receiving less.
If, as it appears, the average length of sentences in basal readers far exceeds the length of sentences which children use in speech, this poses an added problem for the exceptional child. And, when the materials are designed for children of a lower chronological age, their interest level and content may be entirely inappropriate for older students. Further controlled studies, which investigate the relationship between the vocabulary, sentence length, and interest level of materials and the success of older exceptional children in acquiring skills in reading, are needed.

**FIGURE 1**
**SAMPLE AD FROM LEVEL THREE (THIRD GRADE) BOOK**

**WANT TO FIX CARS?**
Wanted—high school student to work in car shop. Can work after school and on Saturdays. Must be able to change tires and willing to learn about how cars work. 386-9357

35 words

Time __________________ Seconds

Questions

_____ 1. Where is this job?
_____ 2. When could you work on this job?
_____ 3. What would you have to be able to do?

Answers

_____ Car shop
_____ After school, on Saturdays
_____ Change tires, learn about how cars work

**REFERENCES**

Dolch, Edward W. *Psychology and the Teaching of Reading*. Champaign,
Illinois: Garrard Press, 1951. Chapter VI, pp. 149-184 and Appendix A.


THE GOLDEN RULE

In search of an Echo from the Field, a great voice from beyond the grave (McGuffy's I think) boomed forth saying—

...7 in the beginning God created three reading groups saying "Let there be no other reading groups before these or after these. 8 Let the superior readers be called the Blue Bells and the average readers should be labeled the Liberty Bells. 9 And Woe is the poor reader for he shall be given the title DUMBELL ...

13 The greatest command of all is this—"Teachers take unto thyself daily each group and command that each child recite orally from his reader." 14 Do not call upon each child in an orderly fashion, but select them at random lest they be alert and ready. 15 Keep them confused. 16 For the scriptures teach "Don't let thy right hand know what thy left hand doeth."

17 As the recitation continues, take heed lest any transgress those sacred words LOOK, SEE, STOP or GO. 18 If a reader appears anxious or terrified, let him read a difficult passage, one that is beyond his skill. 19 This will add unto his embarrassment. 20 If the educator is careful to scold him as he turns crimson, he may add unto his embarrassment fear, and unto his fear hurt, and unto his hurt trembling, and unto his trembling a hate for reading. 21 Thus, he will be well on the path toward that blessed disease of all non-readers—Dyslexia.
Most teachers of reading have realized the necessity of providing situations in which disabled readers can practice their reading skills without the embarrassment of letting other people know that they have deficiencies in these skills. One of the ultimate tasks of the teacher of reading is to provide situations in which students can work toward improving their skills while at the same time retaining their dignity and not jeopardizing their self-images.

Barbara Bliss, a counselor in the Barneveld Public Schools in Wisconsin, has devised a means by which students can work in a somewhat private situation toward increasing their reading speed and efficiency.

Ms. Bliss has enlisted the help of people in the community to record on cassettes materials which the reading students in her school are working with. Her report should be of considerable help to teachers who are seeking to find a means of individualizing instruction in reading while at the same time making the process one of self-instruction.

SIGHT/SOUND READING PRACTICE

At best, learning to read is a long, slow process. The more successful a child is at reading, the more he reads. The less successful he is, the greater the chance that he will stop trying to read and engage in other, more rewarding activities. Lack of reading practice causes a widening intellectual gap between the non-reader and the avid reader. By eighth grade, students may be reading and comprehending anywhere between 120 and 400 words per minute. Obviously this creates problems for teachers as well as students.

To attempt to narrow this gap, a recorded reading practice program is being undertaken in a small rural Wisconsin school. The overall objective is to make reading a successful, pleasantable, rewarding experience rather
than a frustrating, humiliating, negative experience. We ask non-readers, 7th-12th grade, to practice reading with a recording at least one period a day. We provide an attractive room with tape recorders, record players, and study pillows. The available books are exciting, interesting, and sophisticated. Students make their own choices and need not finish a book if it seems to be too juvenile, too difficult, or "boring." After several weeks we explain that a good way to check one's reading rate is to turn down the volume and read silently for awhile, then turn up the volume to see whether the student or the narrator is ahead. Narrators average 175-200 words per minute on recordings. No one fails or is embarrassed if the reading rate is still slower than the recording. The student continues recorded reading practice as long as he needs it.

What happens? Restless students settle down to reading each day for a full class period. Simultaneously, they hear words correctly pronounced and phrased. Gradually, they realize that they can understand the content and thus are not "retarded." With audio aid, they soon read a book a week. (We keep score on a wall chart.) Soon they ask to come in during study periods or lunch hour. As their self-confidence grows, they request more sophisticated books. Eventually, most are able to appreciate and enjoy their high school English classes. Drop out rate decreases. Reading rate and school effort increases.

This daily sight/sound reading practice program does not take the place of reading instruction. It is not meant to teach reading. It is merely a way to make certain that inadequate readers continue to learn through books. The necessity for such a program has probably come about because TV has replaced reading as the way to spend hours of unstructured time. Reading skills learned in elementary school are not practiced enough. While learning to read is probably the single most important skill in the educational process, blind students have successfully used recorded books for many years. We must not lose sight of the fact that reading is a tool not the goal of education. Anyone who cannot use this tool must be allowed another tool which will insure continuing education. Recorded books used with accompanying text can do a great deal to insure enjoyment of books for slow readers and provide the necessary intellectual input that they need.

Barbara Bliss

Here are some old-fashioned cautions based on very modern advice from highly qualified sources, to teachers of difficult children at almost any age. Don’t be the soft, patronizing teacher who actually isn’t paying much attention. Be firm, be positive, and be well-organized. Classroom control, says Bachner, is a matter of “strength with sensitivity,” of being able to fill the atmosphere with respect for the subject without losing the warmth of feeling between student and teacher. Although the author addressed his article to teachers of disadvantaged children, his ideas apply equally well to us all.


If we trace to their beginnings the various movements to reform the spelling of our language, we should find ourselves reading in Chaucer’s time, or shortly thereafter. In this article, Betts contents himself to enumerate and cite those spelling reformers of the past forty or fifty years. Invariably, as occurs in this article, the conclusion is reached that the changes would be more confusing than leaving the language alone.


Avoiding the usual objections to speed of reading for its own sake, this article suggests that students need to raise their sights. Brown gives teachers conclusive proof that counseling away the self-limiting attitudes and carefully organizing student practices may result in dramatic rate increases without losses in comprehension. Since these increased rates are being attained on the campus at the University of Minnesota, the ideas merit serious attention.

Here is convincing evidence that teachers' low expectations of students have led to lowered achievement levels. The article inveighs against grouping as "social and academic stigmatization." I.Q., is regarded as a measure of student potential, is equally guilty of hurting students' educational opportunities.


This article includes a host of practical ideas for helping students become well acquainted with word elements, especially those derived from Latin and Greek. Most important is the practical suggestion that content teachers at all levels can find interesting ways of familiarizing students with prefixes and roots which make up much of today's standard written language.


True to the title's pledge, the author presents the readers with thirteen ways of looking at the importance of reading for children. Expressing her ideas in language as fresh and as full of imagery as her subject, Ruth Carlson emphasizes the influence every book wields in the lives of the young. Teachers of young children don't need to be told, but may need reminding, and this is an exquisite reminder.


Reference is made to middle schools in this article, but the reader may adapt these practical ideas about teaching the neglected skill of listening to almost any level. Furnishing students with practice lectures and cloze procedure type notes obviously offers great possibilities. The self-teaching potential is immense.

Early, Margaret, "Important Research In Reading and Writing," *Phi Delta Kappan*, (January 1976) 57:298-301.

Viewed as an assignment—describe the changes and directions
in a fundamental area of education—the article sounds impossible of accomplishment. Yet the author has managed to explain movements and methods with such lucidity that all readers, from the uninitiated to reading teachers themselves, will doubtless feel rewarded with new perspectives. However, as we may have anticipated, the article's message is that no new methods or theories are working startling changes in the ways reading and writing are taught.


There has been considerable confusion about ranges and limits in what is called *instructional* level in IRI's. Ekwall describes experiments to show the amount of emotion elicited by reading challenges at lower "instructional" levels. He states that errors in placement of children can drive them away from reading for life.


This important new concept in the analysis of oral reading is described from the point of its origin a decade ago, to the new perspective and taxonomy of questions used as a diagnostic tool today. Included are basic definitions in psycholinguistics, the study of interrelationships of thought and language.


This article reviews the special educational needs of children whose cultural background is different from that being taught in the school. Usually through ignorance of other cultural values, teachers may do more harm than good in working with such children. Many important ideas relative to the needs which must be met are succinctly expressed here by the author. Publishers and parents, as well as teachers, should read this article.


In reviewing the several relatively new approaches to treatment of reversal tendencies, the author judges the therapy which employs perceptual-motor training as "apparently effective." However,
because children are very different, we cannot expect uniform results. Several suggestions for future experiments in this area are included.


This article is intended for teachers who recognize the organization of developmental reading, but hesitate to tackle organizing lessons for teaching remedial reading. Using basic stages described by Betts and Stauffer, the author develops an organizational pattern which provides for the most important needs of remedial readers in all lessons.


Harris compares the impact of bandwagon slogans and publicity on the teaching of reading, with the amount of attention valid research results receive from the teachers of reading. In this informative article many important research studies and their authors are listed and evaluated. Moreover, Harris tells the reader how to avail himself of the real helps to effective teaching, thereby avoiding the temptation to climb on the bandwagon.

Harris, Theodore L., "Reading Flexibility: A Neglected Aspect of Reading Instruction," *New Horizons in Reading*, Newark, Delaware: International Reading Association, 1976, pp. 27-35.

To make a dramatic case in favor of ability to change rates of reading rather than speed per se, Harris restates basic research results, quotes humorous passages on speed reading, but cites Buswell's standard of 500 words per minute as a realistic goal for high school students. The implication is that secondary teachers can help students set efficient rates as they state their purposes in reading assignments.


The unusual appeal this topic has for people of all ages has led many excellent writers to create mini-works of art about dinosaurs and other creatures. Excellent background, both for children with scientific bent and for those whose imaginations need a little "freeing-up," this article lists many titles and describes books teachers might note for future reference. A few, however, may need to be put on the "last resort" page of the notebooks, as being too scary for teachers.

This article recalls the surveys of twelve years ago which indicated the great promise of paperbacks in education, but shows that teachers generally have not made use of the potential. To hasten the trend, author Larrick lists sources of available titles, suggests methods, and cogently argues for extensive use of paperbacks in content courses and at all levels.


Here is a terse treatment of a topic of great concern to teachers of children with serious learning difficulties. The steps and the approaches are described in detail. As a specific learning disabilities consultant, the author has outlined a practical set of ideas in teaching certain skills, methods which have doubtless undergone much pragmatic testing.


What makes this workbook in reading improvement stand out from the usual or commonplace are three important ingredients. It is a realistic book which makes no false promises of immediate or dramatic change; the drills and practices indicate that results are preceded by real effort. Second, a great deal of human understanding and insight went into choosing selections for reading exercises; a student will read closest to his upper limits of ability when he is reading timely material of the highest caliber. Finally, all aspects of reading improvement are given adequate attention, according to the best known methods of treatment. This review only questions the workbook's effectiveness if used much below college level, as suggested in the early pages, since high school students often lack the self-discipline to profit from such drills.


Fifteen years after their major study of teacher-preparation in reading, Morrison and Austin are taking a second look at progress in fulfilling recommendations originally made. In the areas of courses required, field experience, and availability of reading
courses, there was much progress reported. A few recommendations still needing implementation are: all preparing secondary teachers have reading training; that students be exposed to children sooner and more often; and, that screening of students entering elementary education be stringent.

Robinson, Helen M., "Identifying and Planning Reading Research," *Improving Reading Research*, Roger Farr, Sam Weintraub, and Bruce Tone (Editors), Newark, Delaware: International Reading Association, 1976, pp. 8-12.

Because so many well-intentioned research studies fall short of making a contribution to the body of knowledge in reading, this article is offered to help those interested to systematize their approach. Many practical suggestions are made to neophytes, not the least important of which are the ideas of enlisting in a cooperative project to gain experience, and to continue studying a particular field of focus so that the deeper implications may be unfolded. "One shot" research studies merely "scratch the surface," Robinson says. Needed research topics in several categories are named, and steps to follow are given to assure that study results may constitute a plus value.


Here is a workbook to meet the needs of the inadequately prepared college student, if one happens to be a teacher of college freshmen. While it is not self-instructional, the book is designed in a pattern of sequential goals and objectives which lead to self-reliance in expository writing. *The Writing Process* does not assume a level of proficiency at the beginning. Students may move at their own pace through the steps, from recognizing a sentence and its parts all the way to developing style in writing about timely topics. The range of practical use doubtless begins with the secondary level and extends to adults who need to refurbish their communication talents.


After investigating the kinds of communication skills required in 37 occupations, Smith gives us a number of ideas as to how those skills might be measured and taught in schools. He would, for example, replace the teaching of sentence and paragraph structure with listening and conversation skills. His suggestion that we de-
emphasize the study of literary art in favor of literal comprehension is sure to startle many readers.


In times of accelerating change and increased accountability demands all around, a need for closer informational exchange between classroom teachers and publishers becomes essential. The author, former president of NCTE, shows the trend in materials development to be away from the textbook concept, and toward tested learning programs which are both timely and widely varied.


This compilation of best books is the result of work by the advisory committee of the Bulletin of the Center for Children's Books, which has been in operation since 1945. Every one of the 1400 books listed and described in some detail has been carefully analyzed and evaluated by education experts. In addition, each book represents the best of several looked at in the category of age-group. The members of the committee considered many more factors than level of difficulty in making their choices, attempting to meet the needs of rapid changes in children's growth and taste patterns. Especially important to the value of this compilation is the fact that book choices were made on the basis of good style, well-constructed plot, and characterization that avoids stereotyping.


In this comprehensive account of an experimental study, the author sought to answer the following: Do we reconstruct meaning from what we read with more complete comprehension than from what we hear? The hypothesis, that we recreate the message from written material with more precision than from spoken ideas, was borne out by the study. However, the author feels much more work needs to be done to identify the factors that make the differences in processing so great.


This kit of thirty-seven mastery lessons and nine experience
assignment booklets has been incorporated for individualized practice and learning in basic composition skills. The problems that face a high school student or beginning college student in writing an essay or even a paragraph are anticipated by the authors, and arranged in alphabetical order on instruction cards. If commas are confusing, one turns to card 5 to find complete and sequential information.


Using criteria assembled from a dissertation on teaching literature and literary criticism by I. A. Richards, the researchers conducted a study of secondary students' comprehension of and response to two poems. Because the study attempted to examine the entire spectrum of students' attitudes and achievement through the general questionnaire following the readings, the results were a potpourri of implications. Especially important here was the strong suggestion that a teacher's appreciation of that form of literary art throughout life.


Sometimes teachers who feel the pressure of time in trying to produce efficient business and secretarial students miss a good opportunity for improvement if they neglect reading skills. Described here is a happy combination of skills in both fields being used and practiced in "Draft a News Release." The versatile assignment may serve purposes from pre-test to remedial practice.
AUTHOR INDEX, VOLUME 16, 1975-76

Allington, Richard, 1:18
Axelrod, Jerome, 3:150
Ball, Howard G., 2:87
Barth, Rodney J., 3:188
Braun, Carl, 4:215
Canney, George, 3:177
Criscuolo, Nicholas P., 3:195
Cummings, Elmer J., 1:27
Duke, Charles R., 4:245
Foley, Louis, 4:259
Froese, Victor, 4:234
Frommer, Harvey, 4:230
Garvelink, Roger H., 3:154
Gray, Mary Jane, 1:36
Groff, Patrick, 3:160
Hagen, Lloyd R., 4:239
Hughes, Robert D., 2:
Johns, Jerry L., 2:102
Jones, Karen, 2:117
Lloyd, Bruce A., 4:248
Lowrie, Jean, 1:9
Mayes, Bea, 4:224
Merritt, John E., 2:80
Moe, Alden J., 1:23
Morsink, Catherine, 4:264
Narang, H. L., 1:50
Noland, Ronald, 3:157
O'Bruba, William S., 4:253
Shuman, R. Baird, 1:23, 3:170
Thompson, Mark E., 3:143
Warner, Dolores, 2:97
Zike, Elizabeth Jane, 2:85
Zinfon, Gerald, 4:245
Amateur Etymologists at Play, 4:259
Administrators Can Help Meet Reading Improvement Objectives, 3:154
Advertising’s Magic Language—A Primer for the Reading Blahs, 4:230
Cryptograms, 2:85
Development of “Reading the Want Ads” a New Informal Reading Inventory for Older Children, 4:264
The Enthusiasm Factor, 4:213
ERIC/RCS Report: Retrieving Information from ERIC, 3:183
Evaluating Prospective Teachers of Reading in CBTE, 1:18
Field Based Teacher Education: Promise or Problem, 1:36
Four Strategies for Teaching Reading in Content Areas, 1:23
High School Teachers and Research in Reading, 1:45
How Johnny Can’t Learn, 2:87
Humanism in Teaching, 3:141
Individual Student Resource Unit, Reading and the Curriculum, 2:80
Instructional Practices Which Contribute to Sight Vocabulary, 4:215
The Interrelationship of Conservation Reading Readiness, and Intellectual Maturity Measures In First Graders, 4:234
Making a Dent in the Content: Reading That Is, 1:27
Meaningful vs. Meaningless Utterances in Phonics Inventories and Their Effects on Pupil Performance, 3:150
Micro-simulation to Prepare Reading Teachers, 4:224
A New Study Habits Inventory: Description and Utilization, 3:143
Pupilization of the Instructional Program, 2:97
The Quest for Competency in the Teaching of Reading: A Librarian’s Point of View, 1:9
Reading and the Bicentennial Celebration, 3:195
Reading Programs in the Secondary School: A Checklist for Evaluation, 1:50
Reading to Write, 4:248
Rededication, 1:7
The Relationship Between Conservation Acquisition and First Grade Reading Achievement, 4:239
Remediation of Perceptual Difficulties, 4:253
1776-1976: Looking Back, 2:69
Some Reasons for Oral Reading, 3:170
Some Semantics of Basic Word Lists, 3:160
Studying Spelling Successfully, 3:197
Sustained Silent Reading (SSR) as in Let Them Read, 3:157
Take a Reading Vacation—Go DRP (Directed Reading Plan), 3:177
The Taming of the Crew, 2:117
Turning Kids on to Language, 2:71
Updating the Dolch Basic Sight Vocabulary, 2:104
Using the Child’s Oral Language in Beginning Reading Instruction, 1:32
Write to Read: The Language Experience, 4:245
Walter Loban, one of the leading researchers in the language development of children, will address the 29th Language Communications Conference at the University of Pittsburgh slated for October 1 and 2 in David Lawrence Auditorium on the University of Pittsburgh campus.

Other major speakers include Dorothy Strickland, professor and chairperson of the Early Childhood Department at Kean College, New Jersey; Alan C. Purves, professor of English education at the University of Illinois; Delores Minor, Assistant to the Superintendent of the Detroit Public Schools, and Charles Cooper, Associate Professor, State University of New York at Buffalo.

Following the major addresses there will be workshops and small group sessions conducted by leading area educators in reading and English.

Those attending the conference, which is open to students, parents, and teachers, will have the opportunity to earn one workshop credit by participating in a course that will begin early Friday, October 1.

Further information about the overall conference can be obtained from Allen Berger, Rita Bean, or Anthony Petroskey, Conference Coordinators, 1017 Cathedral of Learning, University of Pittsburgh, Pittsburgh, Pennsylvania 15260.