

## Book Review Column: Kryspin and Feldhusen Strike Again and Again and Again



The three books reviewed below were co-authored by William J. Kryspin and John F. Feldhusen. William J. Kryspin is a professor at Governors State University. His interests include the development of self-instructional materials and the identification of perceptual biases which affect instructional and educational materials. John F. Feldhusen, former President of APA, Division 15, is Professor of Education and Psychology at Purdue University where he also serves as the Director of Instructional Development.

Analyzing Verbal Classroom Interaction by William J. Kryspin and John F. Feldhusen. Minneapolis, Minn.: Burgess Publishing Co., 1974. Pp. v + 128.

The reviewer, Paula K. Horvatich, is a graduate student in instructional research and development and the Educational Consultant of the School of Veterinary Medicine at Purdue University.

The introduction of instructional methods such as Programmed Instruction, PLATO, Audio-Tutorial and CAI frightened many people into believing that teachers could be replaced. In time this initial misconception was clarified and educators now adopt what is useful when it is useful. The teacher has retained a significant position in classroom learning. Thus the need to analyze the verbal interaction between teacher and students is as important as ever.

Kryspin and Feldhusen employ the Flanders Interaction Analysis System (FIAS) as the content of a self-instructional text intended for undergraduates in teacher education programs. The purpose of the text is to make the reader aware of FIAS itself, as well as of its importance for the teaching-learning process and to provide the reader with an opportunity to practice using FIAS. The ultimate hope is, of course, that readers will then apply FIAS to their own teaching behavior and eventually improve it. It is what the authors do with the content to achieve those purposes that is of interest here.

Memorizing ten categories of verbal activity is a less than appealing task for most students. However, well-written segments interspersed with quizzes for review promote recall so the reader quickly masters the ten categories and their explanations. Reading segments are augmented and categories clarified using relevant classroom examples. Each section of categories precedes a quiz for which correct answers, explanations for those answers and a prescription for items missed are provided. The reader's attention is maintained with humorous illustrations, verbal reinforcement and the technique of frequent alternating from reading to doing.

Thus far the reader's opportunity to label examples of categories of verbal activity has been limited. Therefore, exercises in analyzing written dialogue are provided to improve the reader's skill in categorizing. Audio exercises emphasize the rhythm of coding every three seconds. Categories and timing mastered, analysis of filmed dialogue follows. Analyzing written, then audio and, finally, filmed dialogue sequentially prepares the learner to use FIAS realistically.

Positive aspects of the Kryspin and Feldhusen text have been mentioned but it is not without its drawbacks. As mentioned previously, exercises are supplied for analyzing audio and filmed dialogue. Unfortunately the audio tapes and films cannot be included with the text. However, an audio tape of exercises is available from the authors. Therefore, instructors who choose to use the text should get the audio tape and select films or video tapes to use with the text. An additional criticism is that the "cute" illustrative cartoons used as an attention getting device can, at times, prove offensive to mature students.

In sum, the content (FIAS) is clearly and well presented with activities to foster attention and retention suitably interspersed and selected. Logically sequenced practice exercises, both provided and intended (as in the case of the need for audio tapes and films) improve the learner's skill in correctly analyzing verbal classroom interactions.

Developing Classroom Tests by William J. Kryspin and John F. Feldhusen. Minneapolis, Minn.: Burgess, 1974. Pp. xi + 168. \$3.95

This review is by Robert S. Meier, who is a graduate student in

educational psychology at Purdue University. He has authored a number of professional articles and papers in the areas of educational measurement and evaluation.

Designing valid measures of student performance is an important task of the classroom teacher. Few texts are specifically designed to enable persons to master such a competency. Kryspin and Feldhusen have provided a useful guide which can assist teachers in this activity. Research done by the first author indicated that undergraduate students significantly increased their test development skills after working through this text.

Developing Classroom Tests is a self-instructional text. Objectives are stated at the beginning of the book and before each chapter. Questions and space for answering are provided throughout the text. The reader is often required to draw from passexperience and to synthesize information instead of returning verbatim information that has been presented. Rather than talking down to the reader, the authors seem to talk with the reader as he progresses through the text.

The book is divided into three units of instruction. The first chapter, "Purposes and Plans for Tests," covers the basic functions of classroom tests as well as steps to follow when constructing tests. Kryspin and Feldhusen briefly describe the diagnostic, motivational, self-evaluative, instructional, and improvement of teacher effectiveness aspects of tests. They also show how to ensure adequate content validity by means of the test blueprint. The second chapter, "Developing Test Items," is the real strength of the book. The advantages and limitations of free-, restricted-, and structured-response items are presented. Also included are guidelines for writing each type of item, examples of good and poor items, and exercises designed to make the reader a better item writer. The final chapter, "Improving Test Items," demonstrates how to use item analysis procedures for improving classroom tests.

It was easy to identify commendable features of this book. The authors'

objectives are prominently displayed. The language is clear and precise. The material is resented in a non-threatening manner with enty of encouragement from the authors. A detailed list of references is provided at the end of each chapter. Most important, there are a number of well-written exercises designed to help the reader to increase his own test development skills.

One has to look hard to find major deficits or problems. The reader who is not familiar with behavioral objectives or Bloom's Taxonomy will need some review before working through the first chapter. The section dealing with functions of tests is quite brief. The authors could have elaborated more on this topic. Some might consider devoting an entire chapter to item analysis as unnecessary. Although item analysis can be a useful tool for revising test items, it may be difficult to convince some readers that the time spent developing difficulty indices, discrimination indices, and response distributions is worth the effort for most classroom testing situations.

For the past two years Developing Classroom Tests has been used in undergraduate educational psychology courses at Purdue University with a great deal of success. Instructors who have used this text indicate that the book does more than simply describe important aspects of est construction. With the aid of this text, students are enabled to plan, prepare, and revise test items. This emphasis on skill development is well received by both instructors and students. These instructors did have some advice for those who plan to use the Kryspin and Feldhusen text in college classrooms. Make sure your own tests follow the guidelines suggested in the book as students will readily identify flaws wherever they occur.

Kryspin and Feldhusen have provided a helpful guide for the prospective and professional teacher. This text can serve as a vital supplement for textbooks used in many educational psychology and educational measurement courses.

Writing Behavioral Objectives: A Guide to Planning Instruction by William J. Kryspin and John F. Feldhusen. Minneapolis, Minn.: Burgess Publishing Co., 1974. Pp. ix + 95. \$3.95

This review is by Steven A. Mazzuca, who is a graduate student in educational psychology at Purdue University. He is also a member of the APA Division 15 Committee on Graduate Students.

If there is one topic which is thoroughly covered throughout the course of many teacher education programs today, it is the writing and use of behavioral objectives. Undergraduate education students are first,

and perhaps most appropriately, introduced to behavioral objectives in their introductory educational psychology course. Objectives are reintroduced in the various subject-area methods courses. They also find their way into the syllabi of many instructional media and testing/measurement courses.

The reason for such extensive coverage is simple. Despite the mixed research findings regarding the effectiveness of using behavioral objectives, training prospective teachers to stop and think about what has to be taught, to determine what behaviors in their students will tell them that they are learning, and to measure those behaviors is the best way to improve instruction in the schools.

Writing Behavioral Objectives is a programmed textbook that is sufficiently generalizable for potential use in a wide variety of education courses. In the book's introductory sections, Kryspin and Feldhusen first acquaint the reader with the programmed nature of the text. This is followed by a brief discussion of the function of goals and objectives in teaching. At this juncture, the authors address the problem that readers will differ in terms of their knowledge of content to which to relate behavioral objectives. Although such differences cannot be eliminated, they do offer cogent advice to those less advantaged readers by suggesting that they simply consider material from other subjects with which they have experience or interest.

The main body of the program itself is quite comprehensive. The reader is first instructed to recognize behavioral objectives and to distinguish them from goals and instructional objectives. Characteristics of objectives a la Mager are then introduced with implications for instructional activities and evaluational practices. The reader is then shown how to write objectives at all levels of Bloom's taxonomy for the cognitive domain. Finally, the authors describe a system for using a specification chart with two dimensions, subject matter content and levels of objectives, to write objectives for a unit of instruction.

As a programmed text, Writing Behavioral Objectives is instructionally effective. The first author's doctoral dissertation was a research evaluation of the text. He found that students who were instructed with the program learned a large amount about writing objectives and they liked the program.

The authors' writing style is informal and often conversational. Reinforcement, when warranted, is exuberant. The text contains numerous diagrams and illustrations. Some of the illustrations are line drawings of

children, animals, and one recurring Bigfoot type creature. These latter illustrations appear to be of lesser instructional value; nevertheless, they do contribute to the book's informal, fun character.

In summary, however, it must be emphasized that this is a programmed text for writing behavioral objectives for the cognitive domain. One criticism that can be introduced is that it only alludes to the affective and psychomotor domains and may suggest to the reader that feelings, attitudes, and physcial skills are not approached in this manner. In any event, for the limited purpose of teaching students to plan instruction in the cognitive domain, Writing Behavioral Objectives is highly recommended. For educators who either practice or plan to practice some degree of individualized instruction in this area, this text should be an effective tool to help students become more objective about their performance as teachers.

## The Editor Expands

If you are one of those who reads mastheads of journals, you might have noticed certain changes in this issue. These changes reflect the division of labor in bringing out each issue of the NSPI Journal.

You might not have noticed a subtler change in the masthead: This is the first issue of Volume 16! The beginning of this new volume means that the *Journal* has been in continuous existence since 1962. During these 15 years it has brought to the field of performance and instructional technologies clear and articulate statements about programmed instruction, behavior management, contingency management, front-end analysis, performance analysis, and other such innovations. It has published significant articles by almost all leaders in our field.

I am proud to be associated with such a journal, and I am a little bit frightened about what we are going to do for an encore. While I shall do my best to cajole old pros into contributing quality material to the *Journal*, I believe that our future depends upon identifying and encouraging emerging talent. Based upon your suggestions, I have been lucky in "discovering" a set of fresh talent. With your help, I shall continue to expand this search and to exploit people who have interesting ideas and effective ways of communicating them. Please let me know if you run across anyone who should be invited to contribute to the *Journal*.

By a remarkable coincidence, the two articles in this first issue of the new volume

are from "new" writers. Mike Nathenson and Euan Henderson are from the Institute of Educational Technology of the Open University of the United Kingdom, They will be doing a series of short, practical articles on different aspects of developmental testing (or formative evaluation or LVR). Diane Dormant is the exact opposite of what her last name suggests. She is one of those hyperactive, intelligent people whom I predict is going to do many nice things for NSPI and the Journal. In addition to her article on a quick-and-clean future-forecasting technique in this issue, Diane is coordinating a number of future issues of the Journal on specific themes. She has also taken over many of the routine editorial functions, releasing my time for an expanded talent search for young, articulate people.

By the time we move on to Volume 17, I hope that the *Journal* will have become the leading medium for communication, not only for our Society, but also for the entire field of performance and instruction technologies.

May I count on your help? Send me the name of someone who is doing exciting things, especially if it is your own name. Write to me at the following address:

Sivasailam Thiagarajan Editor, *NSPI Journal* 1220 North 78th Street Lincoln, Nebraska 68505

# ERIC Report Maxine Sitts

Among recent additions to the files of ERIC, the Educational Resources Information Center, are the following reports and publications:

Innovative Techniques for Management Development (ED 124 162) by Dominic J. Verda contends that innovative training techniques introduced in response to change in internal structure and external environment of organizations have produced positive results in their management's productivity and effectiveness.

A four-year study has been conducted on the use of innovative training techniques by Vanderbilt University's Graduate School of Management, Continental Advisors, and Shell International in Spain. A combination of innovative and traditional techniques meet the objectives of increasing managers' retention factor on cognitive material, raising the probability that managers will become self-motivated, and favorably affecting managers' attitudes and motives toward the organization.

This 11-page report, written in 1976, is available for 83¢ in microfiche and \$1.67 in photocopy from the ERIC Document Reproduction Service (EDRS).

Innovation and Improvement in Instruction. Monograph Series No. 4 (ED 124 289) edited by Douglas G. Mayo contains nine reports which describe in some detail projects to improve instruction initiated in 1974 at Memphis State University. The initial pages of the 1976 monograph describe the criteria used to select the programs for funding. The nine projects fall into five areas: (1) computer-based instruction; (2) video technology; (3) individualized instruction and competency-based instruction; (4) development of instructional modules; and (5) simulation and gaming.

This 88-page report costs 83¢ in microfiche and \$4.67 in photocopy from EDRS.

The two above reports are available for the listed price, plus postage, from: ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210. Always order by ED number. They also may be read at over 500 libraries across the country that house ERIC microfiche collections.

Expansion of Keller Plan Instruction in Engineering and Selected Other Disciplines: A Final Report (ED 122 723) by James E. Stice reports upon a comparison of PSI (Personalized System of Instruction) students and control students who took 17 courses in various fields developed by the Alfred P. Sloan Foundation and given at the University of Texas during 1973-1975.

It was found that: (1) PSI students learned as much or more than others; (2) higher PSI grades in the study were not justified; (3) PSI students did not do better in subsequent courses; (4) the majority of PSI students improved their study habits; and (5) knowledgeable teachers can utilize well-developed PSI material in other locales.

This paper is *not* available from ERIC. It can be ordered from: James E. Stice, Center for Teaching Effectiveness, Room 2404, Main Building, University of Texas, Austin, Texas 78712 (181 pages, 1975).

Two recent additions to ERIC—papers which were presented at the International Learning Technology Congress and Exposition on Applied Learning Technology for Human Resource Development, July 1976—deal with performance in instruction.

Robert E. Hoye examines instructional

technology as a means to achieve improvement of instruction and learning in his 16-page paper, *Methodology and Models fc Learning Systems* (ED 125 576).

He criticizes the recent emphasis of research on technical and mechanical aspects of instruction, because means and materials take precedence over learning objectives.

As he notes

Exactly what is the place of new methods and sophisticated media in the instructional systems approach? It is only after terminal performance objectives are defined and a task analysis performed—and maybe repeated—that we can address the problem of the selection of the most relevant practical method or media. Those who invest heavily in the "things of learning," whether it be computer, television, or audio tutorial laboratory equipment, and then address the problem of making the learner conform to the equipment, are destined to failure.

Hoye concludes that the entire educational system, not just the instruments of instructional technology, needs to be considered in order to make the best use of modern technology to improve learning.

This paper costs 83¢ in microfiche and \$1.67 in photocopy from the ERIC Document Reproduction Service.

Methods for evaluating the effectiveness of individual performance are discussed in Robert W. Swezey's 22-page paper, Toward the Development of Realistic Measures of Performance Effectiveness (ED 125 577)

Although domain-oriented and normreferenced tests are appropriate for some situations, the author notes, objectiveoriented and criterion-references tests must be used to gather additional information. Objectives for such tests must include a statement of the desired performance, the test conditions, and the standards of acceptance. When tests are constructed the following questions should be considered: (1) fidelity—the degree to which the test resembles the desired outcome; (2) objectivity of the measurement; (3) scoring problems; (4) emphasis on product or process; (5) reliability; and (6) content, concurrent, and predictive validity.

This paper costs 83¢ in microfiche and \$1.67 in photocopy from the ERIC Document Reproduction Service.

Each of the above two papers can be ordered for the listed price, plus postage, from: ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210. Always order by ED number.

Available from Box E: Dr. Lewis B. layhew, author of How Colleges Change: Approaches to Academic Reform, identifies over 20 elements of successful innovation, based on his visits to over 100 institutions. The 52-page paper covers: Conditions for Success, Unsuccessful Efforts, Implications for Successful Innovation from Theories of Organizational Behavior, Techniques for Promoting Change and Innovation, and A Summary of Elements of Successful Innovation.

How Colleges Change is available for \$3.00 from: Box E, School of Education, Stanford University, Stanford, California 94305. Checks must be included with orders and made payable to "Box E." Purchase orders cannot be accepted.

For information about ERIC, the Educational Resources Information Center, contact: ERIC Clearinghouse on Information Resources, Stanford Center for Research and Development in Teaching, Stanford University, Stanford, California 94305.



## Feedback

## Department Editor: Bill Brooks

### Concern About Criteria

Dear Bill: As President of the Health Sciences Chapter NSPI, the first nongeographic chapter, I am concerned about one of the 'Qualifying Criteria' for the Outstanding Chapter Award. Because of that concern I sent the enclosed letter to Sara Jane Radin who is responsible for that award this year. I would appreciate it if you would include that letter in your FEEDBACK column in order to apprise all of my NSPI associates of my concern.

The Letter: Dear Sara: Would have liked to see the Health Sciences Chapter eligible for the outstanding Chapter award—1976-77, but your second criterion wipes us out immediately. Being a non-geographic chapter, to hold six meetings a year is impossible.

Now that Don Bullock is attempting to organize a second interest based v. geographic chapter, I feel that this criterion should be reconsidered for future awards. A possible replacement criterion for interest based chapters might be the chapter's contribution to the national meeting.

In April of this year we were non-existent

as a chapter. We now have approximately fifty paid members and have distributed our first newsletter. A quorum of the Executive Committee will be meeting in San Francisco next month (Nov.) while at the annual meeting of the association of American Medical Colleges. We will finalize plans at that time for the 1977 Annual NSPI Meeting.

Please ask your committee to reconsider the qualifying criteria so as not to exclude from competition the Society's newest and most rapidly growing chapter. Sincerely, James L. Coole, President Health Sciences Chapter NSPI.

Editor's Note: Jim has told me that the Health Sciences Chapter now has a full day program slated for the 1977 NSPI annual meeting.

#### Another Guide To The Wilderness

Dear Bill: Re Lindsay Robinson's article on "Locating Other Voices in the Wilderness" (September, Journal): the author has done a fine job in suggesting multiple ways to contact colleagues with similar interest. But, she neglected to list the best source of all . . . the annual "Who's membership directory of the American Society for Training and Development. ASTD is the world's largest educational society for practitioners in adult training and human resource development-and has served as an international forum for idea exchange for over thirty years. The 1977 Who's Who in Training and Development will list more than 12,000 practitioners by name, address, and telephone number. For more information about the Society and our membership directory, fellow NSPI'rs should feel free to contact me at ASTD Headquarters, P.O. Box 5307, Madison, Wisconsin 53705. Kevin O'Sullivan, Executive Vice President, ASTD

Editor's Note: As we all know, Kevin is a long-time NSPI member and the Executive Vice President of our sibling organization, ASTD. He will be making the keynote presentation at the Chicago conference.

## A Subscription For The Man, Please!

Dear Bill: I've just read Dean Spitzer's piece on "The Instructional Developer as Behavioral Scientist." It's a very nice piece, one of the best statements on the personal and organizational role of the developer I have seen. I think I might have to subscribe to this journal of yours one of these days. Dave Forman

Editor's Note: Dave is a formative evaluator at the University of Mid-America, Lincoln, Nebraska. I presume he picked up a free copy from the other NSPI members at UMA.

# Membership News

## Department Editor: Mary A. Durland

#### Hot off The Press

John Wiley & Sons have recently published a new volume in their series of self-teaching guides. The recent edition is Interpreting Graphs and Tabies, authored by NSPI member PETER H. SELBY. The self-instructional book teaches how to interpret the major types of graphs and tables and how to extract the most useful information from them. Peter is Executive Vice President of Man Factors, Inc.

PHIL SEYER also has recent publications-a series of courses on real estate. The criterion-referenced, self-paced learning courses are for real estate brokers and salespersons. The courses are Real Estate Economics, Principles of Residential Appraisal, Real Estate Finance and Principles of Real Estate Law. For all you NSPI real estate types, Phil tells us that college credit is available for these courses. Another self-paced course, this one in Credit Union Management, will be ready in January 1977. Phil is an Instructional Technologist with the Independent Study Division of the University of California at Berkeley.

Charles E. Merrill Publishing Company has recently brought out a new book by DEAN R. SPITZER, one of NSPI's most prolific writers. Dean's book attempts to merge theory and practice in promoting intellectual development in preschool children and is entitled Concept Formation and Learning in Early Childhood. Dean is already busy at work on his next book tentatively titled Conflict and Complexity in Education

The British publishers, Hulton, recenlty released SIVASAILAM THIAGARAJAN's new book *Programmed Instruction for Literacy Workers*. The book is designed to train field workers in developing nations on how to design, evaluate and revise different types of programmed instructional materials for teaching basic skills to adults. Thiagi feels more reinforced by another publishing venture: the mass-circulation monthly, *Boy's Life*, has bought a piece by him on calculator games.

#### Movin' On, and Up

The Center for Educational Development in Health formerly at the Harvard School of Public health has moved as of October 1976 to Boston University where the staff will work with the Schools of Medicine, Dentistry, Nursing, Allied Health, Management and Education.

Two NSPI members, LORI VANDER-SCHMIDT, President Elect of the new NSPI Chapter for Health Professionals and JOHN MASSEY took part in the move. Lori is Associate Director of CEDH and has been appointed Associate Professor of Education, Boston University. John has been appointed Instructor in Education at Boston University. John is also a doctoral candidate in Educational Evaluation at Boston College. The Center's new address is:

53 Bay State Road Boston, Massachusetts 02215 (617) 353-4528

## Rogue's Gallery of Editors— Installment Three

Continuing our Who's Who of the Editorial Board, meet two people who take the NSPI Journal apart and put it together (hopefully in that order).



Joe Harless

Joe is currently the National President of NSPI. He has been active in the society for a

number of years—organizing national conventions, heading committees, making presentations, and writing articles. He was formerly the National Vice-President of NSPI

Joe worked with Rehabilitation Research Foundation, Center for Disease Control and TOR Education. He is currently the President of Harless Performance Guild, Inc. Joe has designed a number of learning systems and has conducted numerous workshops in the area of performance problem solving. He is well-known for having invented "front end analysis."



### James D. Russell

Jim is currently Associate Professor of Education at Purdue University in Indiana. He is also an Instructional Technologist for the Laboratory for Applications of Remote Sensing at Purdue. His past experience includes directing summer workshops in programmed instruction at Indiana University, coordinating minicourse development projects at Purdue University and directing summer institutes for junior college teachers. Jim is the author of numerous articles on instructional technology and a book on modular instruction.

Instead, most of the students left the school building, apparently mistaking the shelter drill for the fire drill signal or the bomb sca drill signal.

School officials met to discuss the shelter drill problem and to find an appropriate solution. One school official pointed out that when shelter drills were held on cold, rainy days, students hid under their desks. Thus, the official suggested that shelter drills should be conducted only on cold, rainy days. However, the suggestion was rejected on the grounds that enemy attacks are not likely to take place on cold, rainy days due to low visibility conditions. Another school official suggested that if students were positively reinforced when they did hide under their desks during a shelter drill, the students would be more likely to consistently hide under the desks when the shelter drill signal was sounded. The official's suggestion appeared wise, and thus the school officials decided to use positive reinforcement in order to alleviate the shelter drill problem.

M & Ms candy was selected as the type of positive reinforcement to be used. On the days when a shelter drill was planned, a bowl of M & Ms candy was placed under each student's desk. When the signal for a shelter drill was sounded, students who hid under their desks found the candy there and ate i' thus their behavior was immediately reinforced.

Initially, the use of positive reinforcement appeared to be quite successful; students quickly learned to hide under their desks when they heard the signal for a shelter drill. Unfortunately, however, students also started hiding under their desks when they heard the signal for a fire drill or bomb scare drill, apparently hoping to find candy awaiting them. Indeed, students' expectations of finding candy under their desks were so high that they even began hiding under their desks when they heard the bell signaling the end of the school day. Apparently, the use of positive reinforcement had created more problems than it had solved.

Once again school officials met. One school official suggested that the problems created by the use of positive reinforcement might be alleviated by the use of punishment. The other school officials were quick to agree; punishment was obviously the answer.

School officials established a plan designed to punish those students who hid under their desks when it was inappropriate to do so. In addition to placing M & Ms beneath the desks of students on shelter drill days, imitation M&Ms (the kind that melt in your hands, not in your mouth) were placed beneath students' desks on the days

## And on the Lighter Side . . .

# The Effects of Positive Reinforcement and Punishment on Student Survival Strategies Robert A. Reiser

In a large urban school district in the United States there is a phenomena called the "shelter drill." So as to protect themselves in case of enemy attack, students are taught that at the sound of two

long bells followed by a short bell, they are to hide underneath their desks. However, in one school in the district most of the students rarely hid under their desks when the signal for a shelter drill was sounded. that shelter drills were not scheduled. Thus, those students who hid under their desks when they heard a signal for something other than a shelter drill were still "rewarded" with candy. However, shortly after a signal for something other than a shelter drill was sounded, teachers conducted cleanliness inspections. Those students who had hidden under their desks and had eaten the imitation M&Ms had dirty hands and were easily identified. These students were then punished by their teachers for failing to understand a signal and failing to maintain clean hands. The punishment consisted of requiring students to wash their hands during a lesson and thus miss some vital instruction.

As a result of the reward and punishment system established in the school district, students still continue to hide under their desks at the sound of any signal, but now they wash their hands quite frequently. The school officials who instituted the reward and punishment program have labeled the program a total success. They state that the purpose of the program was to improve student survival strategies and point out that today pollution is a greater threat to survival than enemy attack.

## New Catalogue From The Health Sciences Consortium

A new catalogue of self-instructional

materials in the health sciences has been published by The Health Sciences Consortium. The catalogue lists 394 selfinstructional programs in medicine dentistry, nursing and allied health. Programs are peer-reviewed and validated by an interinstitutional testing process. Catalogue entries contain objectives and a synopsis of each program as well as evaluation data. Intended audience, average working time, and mean scores from field trial testing are included to provide a large amount of data to potential users. The Catalogue also contains information about the purposes and goals of the Health Sciences Consortium. The Catalogue is available for \$2.50 from the Health Sciences Consortium, 200 Eastowne Drive, Chapel Hill, NC, 27514.

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