the same cues as their students, but they weighted them differently. This was one reason for their low prediction accuracy.

Feedback about *how* someone uses or weights cues in making a judgment or prediction may, say Byers and Evans, significantly improve cue use which will in turn improve prediction accuracy.

For a more detailed explanation of the study's results, send for IRT Research Series No. 81, *Children's Reading Interests: A Study of Teacher Judgment,* by Joe L. Byers and Thomas E. Evans, $2.75. To order, send check, money order, or *prepaid* purchase order (payable to Michigan State University) to IRT Publications, 252 Erickson Hall, MSU, East Lansing, MI 48824. (Michigan residents should add a 4 percent state sales tax).

# Learning Styles

NANCY RECKINGER AND RITA DUNN

## ■ PERSONALITY STYLES

Understanding personality styles of teachers and administrators offers insights into why things happen as they do in schools. Jeffrey L. Hoffman and Marianne Betkouski have pulled together 41 pages of data in a "Summary of Myers-Briggs Type Indicator Research Applications in Education."

The predominant personality type found among male administrators, and especially among school principals, is extroverted, sensing, thinking, and judging in MBTI terms. These people are good at organization but may need help with human relations. They are most concerned with preserving the establishment and are practical, realistic, impersonal, swayed only by reasoning.

The majority of 1389 public school teachers in six studies consistently were extroverted, sensing, feeling, and judging. This type is described as responsible, dependable, systematic; supporting and preserving socially recognized institutions and expecting others to do the same. They are loyal, interested in people, work well within a hierarchy of authority, respect facts, do well with detail and routine, and are generally concerned with practical things that visibly affect people's lives.

## ■ READING CURRICULUM MISSES MANY STUDENTS

Although three-fourths of students prefer the sensing mode of acquiring knowledge (labeled S in MBTI terms) and one-fourth prefer the intuitive mode (N), reading is largely taught in the intuitive way.

Renee Golanty-Koel found significant differences between S's and N's in terms of their reading. Sensing types prefer television to reading while intuitives prefer to read. Sensing types see no relationship between stories read and life, never think about themselves when reading stories, do not identify with characters in books, and cannot recall characters they read about. Intuitives identify with characters and connect stories with real life. Intuitives like who and why questions, while sensing types prefer what and how questions and are more interested in knowing what "really happened" than in fiction.

Writers are mostly intuitives and that includes writers of textbooks, reading programs, and standardized tests. Without understanding learning styles and personality types, their biases are unintended. Nevertheless, they establish the criteria for success in school and that criteria does not work for extroverted sensing children who think best out loud and learn best by interacting with the real world rather than with words about actions.

Four studies looked at the most effective classroom teacher personality. Ryans (1960) identified the most effective teachers as being friendly, understanding, stimulating, imaginative, responsible, and systematic in their teaching behaviors, which in Jungian theory and MBTI terms would be called extroverted, intuitive, feeling, and judging. VonFange (1962), Wright (1966), and Keirsey and Bates (1978) each reached the same conclusion.

Authors Hoffman and Betkouski (1981) point out, however, that, "We do not all define the 'effectiveness' of a teacher in the same way. . . . Those who are intuitive, feeling, and those who are sensing, judging just represent opposite ends of the continuum in teaching philosophy . . ." (pp. 14-15).

The development of learning and teaching style research may lead us to question the assumption that any good teacher can teach any assigned group of students equally well.

Keirsey and Bates (1978) found that sensing, judging teachers outnumber intuitive, feeling teachers 56 to 32 percent, and that these two styles make up 88 percent of K-12 faculties but are only 50 percent of the total population. Such data are of crucial interest when we begin looking for ways of meeting the needs of other styles, particularly the active, sensing, doing, freedom-loving, independent sensing-perceptive type that makes up 38 percent of the population but fails to thrive in most schools and accounts for only 4 percent of teachers.

References:

Golanty-Koel, Renee. "The Relationship of Psychological Types and Mass Media Preferences to the Values of Non-Academic High School Students." Doctoral dissertation, University of California, Berkeley, 1977, *Dissertation Abstracts International* 38(1978):4683-A. For additional information: Renee Golanty-Koel, 373 Upper Terrace, San Francisco, CA 94117.

Hoffman, Jeffrey L., and Betkouski, Marianne. "A Summary of Myers-Briggs Type Indicator Research Applications in Education." *Research in Psychological Type* Volume 3, 1981.

Keirsey, David, and Bates, Marilyn. *Please Understand Me.* Del Mar, Calif.: Prometheus Books, 1978.

Ryans, D.G. *Characteristics of Teachers.* Mansha, Wis.: George Banta Company, Inc., 1960.

Von Fange, E.A. "Implications for School Administration of the Personality Structure of Educational Personnel." Doctoral dissertation, University of Alberta, 1961.

Wright, J.A. "The Relationship of Rated Administrator and Teacher Effectiveness to Personality as Measured by the Myers-Briggs Personality Type Indicator." Doctoral dissertation, Claremont Graduate School, 1966.

## ■ COGNITIVE STYLE MAPPING GROWS

Cognitive Style Mapping developed

by Joe Hill is continuing to be used and adapted for various levels.

916 Vo-Tech, a vocational technical institute in Minnesota offering 58 programs, makes the map available to all the school's interested students and instructors, with about 50 percent participating.

Bill Warner, Director of Instruction, follows a three-step process for mapping. The first step is the three and a half hour test from which a mathematical and narrative map is developed describing a person's style in 27 components that determine how the student gathers information, perceives what was gathered, and goes about making a decision.

The second step is called "empirical mapping" in which the student is observed by instructors and interviewed by a counselor to validate or change the findings on the test.

The third phase is prescription writing, in which the instructor determines instructional activities based on the student's strengths and weaknesses.

Warner has recently completed a dissertation (University of Minnesota, 1981) in which he tested two competency-based, self-paced learning modules for inservicing instructors to implement cognitive style mapping concepts with students.

For additional information contact him at 916 Vo-Tech, 3300 Century Avenue North, White Bear Lake, MN 55110.

At the junior high level, the counseling staff at Wilson Middle School in Plano, Texas, uses a form of Hill's Cognitive Style Mapping developed by Keith Taylor at Richland Junior College in Dallas.

Counselors first explain how to tally answers when they administer the map to groups of students. Then they read each item out loud to the group. Students respond by recording a tally under "usually," "sometimes," or "rarely" on forms given them. Students compute their own total scores.

Counselors then ask for a show of hands for majors and minors in their school curriculum for each item, reading descriptions and giving specific examples in school. Students then write letters to their parents describing the map and what the scores indicate about appropriate study habits.

The staff reports positive reactions from parents, teachers, and students to this schoolwide effort to help students understand their cognitive styles.

For additional information contact the Counseling Department, Wilson Middle School, 1001 Custer Avenue, Plano, TX 75075.

## ■ TOO QUIET TO LEARN?

We all know students who are easily distracted from their studies. Each time the classroom door opens or a pencil drops, they look up. But would you believe that some youngsters cannot concentrate in quiet?

All sixth grade students in a New York school district were tested for preferences for quiet or sound when "thinking." Ultimately, 32 boys and 32 girls revealed such preferences and were randomly and equally assigned either to an environment that matched or mismatched their indicated acoustic preference.

Students tested in an environment that matched their preference for sound or quiet achieved mean reading and comprehension and attitude scores that were significantly higher at the .01 level than their peers who were tested in a mismatched environment. In addition, a significant interaction at the .05 level was evidenced between learning style preference and sex. Both males and females tested in environments that matched their preferences scored higher than the boys and girls in the mismatched environment.

Thus, when we warn students to "be quiet!" because others are taking a test, we may inadvertently impose the wrong acoustic environment on a child who needs sound when concentrating.

Reference:

Pizzo, Jeanne. "An Investigation of the Relationships Between Selected Acoustic Environments and Sound, an Element of Learning Style, as They Affect Sixth-Grade Students' Reading Achievement and Attitudes." Ed.D. dissertation, St. John's University, 1981.

## ■ LEFT AND RIGHT BRAIN DIFFERENCES

Without realizing it, conventional schools make learning relatively easy for "left-brained" students and comparatively difficult for "right-brained" students.

Three hundred fifty-three biology students in a Midwestern high school were tested for both learning styles and hemispheric preference. When a subsample of 120 composed of the 30 most extreme male and female, right and left preferenced youngsters was compared, males were found to be "left" more often and females were "right" more often. In addition, the following statistically significant differences were revealed:

*Left-preferenced students*

Liked wooden chairs and desks when studying
Were highly teacher motivated
Were persistent
Were responsible
Liked learning alone.

*Right-preferenced students*

Liked mobility
Liked a warm study environment
Were less motivated
Liked dimly lit study areas
Liked learning with peers
Preferred learning tactually (rather than by listening or reading).

Doesn't the conventional classroom favor students who sit in their seats, want to please the teacher, are persistent and responsible, and, when the teacher is not available, like to learn alone? Don't we chastise students who need to move a great deal, wear their sweaters or jackets, seek dimly lit sections of the room, like to learn with peers, are unmotivated, and need to learn in other ways than listening or reading? If those are the differences between left- and right-brained students, and if those differences are biological in nature,[1] then haven't we arbitrarily made schooling "easy" for left-brained youngsters and "difficult" for their right counterparts?

[1] Richard Restak, *The Brain: The Last Frontier* (Garden City, N.Y.: Doubleday, 1979).

Reference:

Zenhausern, Robert, and others. "Do Left and Right 'Brained' Students Learn Differently?" *The Roeper Review*, Michigan: Roeper City and Country Schools (September 1981).

## ■ MIGRANT LEARNERS

The high mobility rate of migrant families often causes migrant children to fall behind in basic skills. In an effort to assist these children, Virginia's Department of Education and Section 143 Staff Development Advisory Committee are designing a computerized data bank that school systems across the country can plug

into for information about a child's last assigned objectives. Plans to add learning style data that would suggest resources and methods appropriate for each youngster are also being discussed. For information: George H. Irby, Supervisor, Title I and Migrant Education, Commonwealth of Virginia, Department of Education, P.O. Box 60, Richmond, VA 23216.

# Educational Resources

NANCY CARTER MODRAK

■ BAD CHILD — SAD CHILD

Childhood depression may be at the root of many student discipline problems. According to a new pamphlet from the National Institute of Mental Health, *Depressive Disorders: Causes and Treatments,* depression in children is difficult to diagnose because it often takes the form of hyperactivity, delinquency, psychosomatic complaints, and other forms of "acting out." The problem child may have severe feelings of hopelessness and despair that can ultimately lead to suicidal thoughts.

Of the 20 million Americans who suffer from depressive disorders, only an estimated 25 percent of those who need treatment seek help. Young mothers who are poor, single heads of households, and both girls and women who are inadequately prepared for a role in society may be especially vulnerable to depression. Up to the age of 65, twice as many women as men seek treatment. But men, too, are susceptible; three times as many men as women commit suicide, and after age 65, the percentage of men who ask for help is nearly equal to that of women.

The pamphlet discusses the symptoms of depressive disorders, their causes and treatments, and where to find assistance. Depression is caused by a variety of genetic, biochemical, and environmental factors, but remains the most readily treatable of all the mental illnesses. And the earlier the illness is diagnosed, the speedier the recovery.

Single copies (DHHS Publication No. ADM 81-1081) are available free of charge from the Alcohol, Drug Abuse, and Mental Health Administration, Printing and Publications Management Branch, Room 6C-02, 5600 Fishers Lane, Rockville, MD 20857.

■ SKILLS AND TRAINING IN THE FUTURE

Vocational education in the 80s will be aimed more at minority and adult students, cover a wider range of topics, and use more diversified methods. A study sponsored by the U.S. Department of Education, Office of Vocational Education, has resulted in a report titled "Vocational Education: A Look into the Future," which describes factors that will affect vocational education over the next ten years. State and local planners can benefit by the results of the study and the "futuring methods" employed by the researchers. The object of the study was not to predict the future but to use futuring techniques in planning worthwhile programs.

The 78-page report (RD 207) is available for $5.50, less discounts for quantity purchases, from the National Center for Research in Vocational Education, Box C, National Center Publications, 1960 Kenny Road, Columbus, OH 43210. Phone: (800) 848-4815. Please indicate the title and RD number when ordering; orders of $10 or less must be prepaid.

■ SUCCEED WITH EASE

Taking tests does not have to be traumatic, say Charles S. Gifford and John L. Fluitt, authors of a new book called *Test-Taking Made Easier*. Subtitled "How to Win the Testing Race," the book offers advice to students faced with college entrance exams, to people who are changing careers, and to those returning to work after being out of the job stream. It discusses mental and physical preparation for test-taking, understanding directions, how to develop speed in answering questions, the problem-solving process, shortcuts, guessing correct answers, and looking over tests before turning them in. The "pre-test warm-up" offers a preparation timetable beginning two to three months prior to a major examination. A special section on essay tests goes over the purposes and objectives of essay questions and techniques and strategies for answering them.

This 88-page paperbound book is available from The Interstate Printers & Publishers, Inc., 19-27 North Jackson Street, Danville, IL 61832, for $2.40, less a 10 percent discount for educators and a 20 percent discount when ordering two or more copies.

■ PUTTING POLICIES TO WORK

Social legislation and how the delivery of services can be strengthened is the topic of a booklet published in May by the National Institute of Education, *Complexity and Control: What Legislators and Administrators Can Do About Implementing Public Policy*.

In the book's foreword, Senator James A. McDermott, Chairman of the Senate Education Committee, writes, "A dark and secret thought that haunts a growing number of legislators and administrators is that no one seeems to have control over the system of delivering social services, no matter how specific the legislation nor how rigorous the regulations." But the book's author, Richard Elmore, assistant director of the University of Washington's Institute of Governmental Research, discusses just how legislators and administrators can influence the implementation of policy. Elmore has studied the literature on public policy implementation at the federal, state, and local levels since 1965 and offers his insights about the roles of different levels of government in light of new federal policies and legislation to deregulate federal funding.

In a hypothetical dialogue between a legislative committee chairperson and a state initiative to improve reading and math scores, he stresses that classroom teachers — the most direct deliverers of services — must retain control of their part of the implementation process. The more control exerted at the top of the hierarchy, says Elmore, the less likely the desired results at the bottom, where services are delivered.

Copies of the book are available at no charge while supplies last from the National Institute of Education, Publications Department, 1200 19th Street, N.W., Washington, DC 20208.