Modalities:
An Open Letter to Walter Barbe, Michael Milone, and Raymond Swassing

We strongly support most of what you have written. Where differences exist, it is important for readers to understand that many of us are exploring an emerging theory based on new knowledge of how children actually absorb and retain information and skills. At this stage, no one is "right" or "wrong"; there are only differences among data that should be examined cooperatively by concerned researchers. It is with that belief that we share alternative findings and perceptions.

1. Your major premise—that it is important to teach students through their perceptual strengths—is so crucial to effective instruction that you should not diminish its impact by suggesting that teachers should initially lecture to their classes and then use modality based instruction for those youngsters who fail. That procedure promotes underachievement and reduced self-esteem for essentially tactual, kinesthetic, or visual pupils. Even when teachers lack the skills for teaching through individual learning styles, they can respond to perceptual strengths simply by organizing class and homework assignments so that new information is introduced through each youngster's strongest modality and reinforced through the second, and then the third strength.

2. Please identify the research that evidences that "personal preference is not very reliable," that "individual judgments will be inconsistent," and that "Few adults and almost no children have a clear picture of the conditions under which they learn best." Many well-designed and well-conducted studies verify the increased academic achievement that occurs when students are taught through their identified perceptual preferences.

An instrument, such as the Learning Style Inventory (LSI), which incorporates a reported Consistency Score on each respondent reveals the accuracy with which individuals answer its questions. Ohio State University's National Center for Research in Vocational Education published the results of its two-year study of instruments that identify learning style and verified that the LSI has "established impressive reliability and face and construct validity." That would have been an impossible task if students could not identify their preferences accurately.

3. The contention that primary grade children are more auditory than visual—and learn least well kinesthetically—is not supported by the studies you cited. Careful examination of the seven experiments on your chart reveals selected problems in design, control, and interpretation. For example, McKirdy and Rovee (1978), whose subjects were infants, did find signs of response diminution when the total auditory stimulus was removed; the visual reinforcer, however, was always in view and could have negated the findings. The authors themselves recommended a redesign of that aspect of the study. Both Perelle (1975) and Budoff and Quinlan (1965) required second graders to learn words by either listening or reading. The interpreted auditory superiority could have been the result of the comparative ease with which children can listen before they have learned to read well. When weighing modality strengths, a subject's ability to remember what has been seen should not be contingent upon reading ability.

Research clearly has demonstrated that both nonsense words and difficult material are learned more easily through the visual, rather than through the auditory, modality. Thus, Lockhard and Sidowski's presentation of nonsense words to fourth and sixth graders, Von Mondfrans and Travers' experiment with nonsense syllables with adults, and Many's findings that sixth grade students mastered complex learning most easily through the visual modality—all should have been anticipated.

The study by Cooper and Gaeth was incorrectly reported. The dominant modality of the fourth graders was visual, but the 12th graders learned better through the auditory presentation.

Figure 1 presents eight experiments that verify that younger children learn better through visual and kinesthetic presentations than through auditory.

Montessori's methods are based on observations that indicated that young children learn—and remember—most easily through manipula-

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FEBRUARY 1981
tive (tactile) and experiential (kinesthetic) activities. Price's study of students from psychomotor (tactile/kinesthetic) modalities were followed by the development of visual strengths and, to a lesser extent, auditory development to the extent that its importance demands.

Despite that data, researchers have not begun to examine modality development to the extent that its importance demands. Restak documented the auditory superiority of females over males and that boys tend to be more kinesthetic learners.

In that regard, note that most studies test primary children for visual or auditory abilities and rarely restrict to tracing over words (which is tactile) rather than to the use of tactile/kinesthetic resources such as task cards, electroboards, learning circles, body games, trips, and "real life" experiences.

The Review of Educational Research stipulated "...a lack of investigations into the relationship of the tactile and kinesthetic modalities to the reading process. Without such studies, conclusions drawn with regard to the visual and auditory modalities may be severely limited...." We would not state it better—only more strongly.

Editor's Note: Walter Barbe and his colleagues will reply in a future issue of Educational Leadership.


2 Marie Antonetti Carbo, "An Analysis of the Modality Preferences of Kindergarteners and Selected Reading Treatments as They Affect the Learning of a Basic Sight-Word Vocabulary" (Ed.D. dissertation, St. John's University, 1980).

3 Teaching Through Modality Strengths...p. 58, 62.


5 Teaching Through Modality Strengths...p. 4.


7 Patricia Kirby, Cognitive Style, Learning Style, and Transfer Skill Ac-quisition (Columbus, Ohio: The Ohio State University National Center for Research in Vocational Education, 1979), pp. 71-74.


