

Research in Review

Beginning with this issue the research column is being conducted under the auspices of the ASCD Research Commission with its chairman as column editor. The content will be related to each month's Educational Leadership theme and the format will vary from reports of interesting research projects to descriptions of needed research in the area.

Studies of Instruction

James B. Macdonald

THERE is today a considerable amount of instructional research activity going on throughout the nation. In this issue three examples were selected to provide a taste of the kinds of studies that are being conducted. Each represents a general approach to the problem of instruction.

A DESCRIPTIVE STUDY: "Feedback in Classrooms: A Study of Corrective Teacher Responses"

Waimon (1961-62) assumed that feedback to the teacher can provide information about the failure of learning to take place; and he studied the teachers' corrective responses (i.e., attempts to bring about learning by further manipulation of students or the environment). To do this, Waimon developed an analysis of teacher-pupil interaction which attempted to answer the following questions:

1. What proportion of teacher behavior is corrective?
2. What proportion of the teacher's cor-

rective behavior is directed toward changing the environment?

3. What proportion of teacher behavior is directed toward changing the learner's readiness?

4. Which aspect of the environment is most frequently manipulated?

5. Which aspect of the learner's readiness is most frequently manipulated?

Teams of four observers, each member of a team responsible for a critical aspect of the classroom interaction (i.e., behavioral setting, teacher and pupils), used time sheets marked off at five-minute intervals to record their data. The data were coalesced immediately after each thirty-minute period. Observations were made in a total of nineteen classrooms.

Of a total of 865 behavior episodes approximately 50 percent showed no evidence of lack of readiness on the part of the learners. Of the remaining 50 percent, teachers showed no awareness in terms of corrective responses about 20 percent of the time. In the

remaining 80 percent of the instances showing lack of pupil readiness, the teacher attempted to change the environment approximately once to every four times he attempted to change something about the pupil. Procedures were most often changed rather than content or goals in the environment; and change in pupil needs, goals and learned ideas and skills was most often attempted within the pupil.

Waimon concluded that classroom interaction could be analyzed by this procedure, and that it was a useful tool for developing understanding among students in preservice programs.

Accepting the theoretical background and practical categorization of data, Waimon's study represents one of a large number of attempts today to describe what is taking place in the classroom setting. Although value implica-

tion may be present, no attempt is made in the study to predict relationships.

RELATING INTERACTION TO A CRITERION VARIABLE: "Classroom Conditions and Self-Direction in Learners"

Wolfson, Ingalls and Nash (1963) have utilized a modified Flanders (1960) interaction analysis procedure in an attempt to relate interaction patterns to the development of self directive behavior on the part of first grade children.

A first grade classroom judged by "experts" to show the development of an unusual amount of self direction on the part of students was observed and taped eight times throughout a school year. Further supplementary data on plans and activities as well as pupil abilities were collected.

The eight sessions were transcribed and categorized into Flanders' categories

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of direct, indirect teacher behavior, etc. High reliability coefficients were obtained by the judges categorizing the units of the transcriptions.

The study has reached a point where the patterns of teacher behavior are being identified and related to the other variables in the study. No definite results are reportable at this time. It is hoped that this exploratory study will provide further hypotheses for testing as well as one initial insight into the problem of developing independence and self directive behavior in first grade classrooms.

This study represents an attempt to go beyond description and to introduce a relationship between descriptions of behavior and some criterion of worth (goal of instruction). This represents another category of research attempts which may be identified. At this stage there is no attempt to posit causal relations, but primarily to identify hypotheses for later studies of causal relation.

USING AN EXPLANATORY PRINCIPLE DERIVED FROM THEORY: "A Study of Openness in Teaching"

Zaret and Macdonald (1963) are engaged in the early phases of an exploratory study which posits a predictable relationship between the personal "openness" of the teacher's behavior and the behavior of pupils in the classroom. It is posited that when teachers' behavior is characterized by stimulation, support, clarification, facilitation, etc., then pupil behavior will be characterized by discovery, exploration, experimentation, counter-teacher stimulation, etc. On the other hand, when teachers can be characterized by direct, judgmental, reproving, rejecting, ignoring, etc., behavior, then pupil behavior will be characterized by confirming, acquiescing, following, parroting, counter-teacher judgmental, etc., behavior.

Transcriptions of classroom verbal

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teacher-pupil interactions concerned with planning behavior in social studies are being collected throughout the elementary school grade range. The specific analysis techniques are being developed at this time for the future collections of systematic data with which to examine the basic hypothesis.

The explanatory principle involved may be characterized by the open-closed continuum. The open end represents teacher behavior in direct contact with pupils through increased perception of the pupils' actual readiness for learning which is more likely to result in an effective spontaneous decision in direct response to the learner. The closed end represents teacher behavior resulting from distorted perceptions of the pupil, resulting from introjection of factors relating to the teacher's concept of his teaching role. In its extreme form, this end represents a defense of the conceptualized role.

The open-closed continuum as an explanatory principle has generality for teacher-learner behavior in all curriculum areas and thus is put forth as a hypothesis of broad predictive value.

This type of study is based on a theoretical framework and is illustrative of a number of conceptual frameworks which are being proposed at this period in our growth in understanding the nature of instruction. The basis of these types of studies is the attempt to discover predictive bases for behavior, rather than descriptive analyses or descriptions related to criterion variables. All avenues of research are valid and needed at this stage in our awareness of the nature of instruction.

The best single reference for research on instruction is the recent *Handbook of Research on Teaching*, edited by N. L. Gage (1963). This volume is literally

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"worth its weight in gold" for those interested in a scientific approach to problems of instruction.

Although focused on the teacher as its central concern, the vast majority of material is relevant to the teacher in the process of instruction. The quality of the contributions is consistently high with perhaps the chapters on History, by Brondy; Theory, by Gage; Teaching Methods, by Wallen and Travers; and Social Interaction, by Withall and Lewis, and the whole of Part IV, "Research on Teaching Various Grade Levels and Subject Matters," of most direct concern for instruction. This volume represents a milestone in our quest for an understanding of the knowledge, procedures and problems relevant to the study of instruction.

References

N. L. Gage, editor. *Handbook of Research on Teaching*. Sponsored by A.E.R.A. Chicago: Rand McNally & Co., 1963.

N. A. Flanders. *Interaction Analysis in the Classroom*. Minneapolis: College of Education, University of Minnesota, 1960.

Morton D. Waimon. "Observing the Classroom Action System." *Journal of Teacher Education* 12: 466-70; December 1961.

Morton D. Waimon. "Feedback in Classrooms: A Study of Corrective Teacher Responses." *Journal of Experimental Education* 30: 355-57; June 1962.

Bernice Wolfson, Lucille Ingalls and Shirlyn Nash. "Classroom Conditions and Self-Direction in Learners." Campus School, University of Wisconsin-Milwaukee, 1963. (In progress, 1963.)

Esther Zaret and James Macdonald. "A Study of Openness." Exploratory grant from the National Institute of Mental Health. School of Education, University of Wisconsin-Milwaukee. (In progress, 1963.)

—JAMES B. MACDONALD, *Professor of Education, University of Wisconsin, Madison.*

Programed Instruction

—Krumholtz

(Continued from page 33)

one type of person than another? Are they more acceptable to certain types of personalities than others? Do programed materials motivate slow learners better than fast learners? How can programed materials be modified to those types of persons for whom the conventional programed format produces less than optimum results? How can programed materials be constructed to meet variations in the way boys and girls respond to different types of teacher behavior?

Needed Experiments

Experiments are needed in combining the use of programed instruction with other instructional methods such as laboratory experiments, field trips, homework of various types, classroom discussions, drill, and motion pictures.⁷ There may be optimum combinations of instructional methods best suited to various types of individuals. The various combinations of variables to be studied are innumerable.

In summary, the method of programed instruction offers a unique opportunity to experiment under controlled conditions in realistic settings. The goal is to find that combination of materials and procedures which enables each individual to attain the most important objectives for himself and for his society.

⁷ See *The Use of Programed Instruction in U.S. Schools, Report of a Survey of the Use of Programed Instructional Materials in the Public Schools of the United States during the Year 1961-62*. Compiled by the Center for Programed Instruction, Inc., in cooperation with the U.S. Office of Education, Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1963.

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