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ABSTRACT

The purpose of this study was to investigate whether or not infants who had experienced different types of naturally-occurring, significant separations from an attachment figure during the first year of life differed in their response to separation at 12 months of age. Thirty-three 12-month-old Caucasian infants from middle class, intact families were divided into three groups on the basis of the frequency/duration patterning of brief, nontraumatic separations from the mother during their first year. One group of infants had experienced separation only when their parents left them occasionally with a babysitter (as for an evening); a second group had experienced one or two separations of relatively long duration (when parents went on vacation); a third group had experienced frequent regularly-scheduled separations of short duration (when mothers worked or attended school). Subjects' response to separation from and reunion with the mother was assessed at 12 months of age. No differences between groups in mean response were found. The data suggest that brief separations from a primary attachment figure need not have deleterious effects if an infant is provided with high-quality substitute care. (Author/MS)

Patterning of Infants' Prior Separation Experience in Relation to Later Separation Reaction[1]

Joan T. Durfee

Robert P. Klein

For the past thirty years, since the publication of Goldfarb's and Spitz's studies of young children in institutions, there has been widespread concern about the effects of separation upon early social and cognitive development. It is now recognized, as Yarrow (1964), Rutter (1972) and Bowlby (1973) have pointed out, that separation is not a single variable. Both the immediate and long-term behavioral correlates of separation experiences vary depending upon many different factors, including characteristics of the child and the quality of prior relationships as well as the circumstances coincident with and following the separation. Nonetheless, it is now well documented that young children are stressed by traumatic or prolonged separation from an attachment figure, particularly if the separation occurs between the ages of six months and five years. During separation, a sizeable proportion of children display a progressive reaction of, first, protest, second, apathy, and, finally, detachment. Furthermore, after being reunited with their families many children display disturbances in functioning for varying periods of time, including a decreased ability to tolerate subsequent separations. These findings have been broadly and rather indiscriminantly generalized to separations which are shorter and less traumatic in nature, such as those that occur when a mother returns to work and leaves her baby with a substitute caregiver. However, there is very little experimental data specifically addressed to this latter issue, and the data that exists is contradictory. Caldwell (1970), for example, found no

[1]Paper presented at the Fourth Biennial Southeastern Conference on Human Development, April, 1976.

disturbances in mother-infant attachment in a group of twelve-month-old day-care infants. She even suggested that the daycare experience may have facilitated social relationships with persons other than the mother. Blehar (1974), on the other hand, found a correlation between daycare experience and anxious attachment. She attributed this disturbance to the effects of frequent daily separations. Likewise, Moore (1969) found that babies who had been regularly separated before two years of age displayed heightened dependence on mother at six years of age. Bowlby (1973), too, has cautioned that even very brief separations have some potential for harm. It seems clear, particularly when one considers the increasing numbers of mothers of infants and very young children who are entering the work force, that we need additional research in this area.

In the present study we were interested in whether or not infants who had experienced different types of naturally-occurring, significant separations during the first year of life differed in their response to separation at twelve months of age. By way of contrasting these babies' experience with that of children in hospitals or residential nurseries, we would characterize all of their separations as non-traumatic in nature.

The sample consisted of 33 twelve-month old Caucasian infants from middle-class, intact families seen in a larger study of attachment behavior. These infants were divided into three groups on the basis of the frequency/duration patterning of separations from mother during the first year (See Table 1).

The first group, the minimally-separated group, contained eighteen babies. The only type of separation that these babies had experienced was when the parents had left them with an occasional babysitter as, for example,

when they went out in the evening. The second group, the infrequently-separated group, contained seven infants. These babies had experienced one or two separations of relatively long duration. All of these separations had occurred when the parents went on vacation. They averaged five consecutive days in length, with a range from fifteen hours to twelve days. All of the separations involved at least one night spent away from the parents. The third group, the frequently-separated group, contained eight infants. These babies had experienced regularly-scheduled frequent separations of short duration. Most of the separations occurred because the infant's mother was working or going to school. Over the course of the first year, this third group had been separated an average of 139 times for an average of five and one half hours each time. All of them had been separated at least two and usually five times a week for at least eight consecutive weeks. There were no overnight separations. The babies in the infrequently- and frequently-separated groups had, like the minimally-separated group, also been left with occasional babysitters. For that reason, the minimally-separated group can be considered to be a control-group.

These three groups of babies were compared on four measures of response to separation and six measures of response to reunion with the mother. All of the measures were obtained during a maternal interview and a short staged separation sequence in our laboratory when the baby was twelve months of age. Following their arrival in our playroom, the mother was interviewed for approximately thirty minutes with respect to various aspects of the baby's social experience during the first year. The baby was present during the interview and was free to play with an array of toys on the floor. Immediately

following the interview, mother left the baby in the playroom with the interviewer, closing the door behind her as she went. Three minutes later, she returned, greeting the baby in a natural fashion as she came in the door. During the separation, the interviewer attempted to console the baby if he was distressed and attempted to initiate mutual play with the toys. The entire session was videotaped and, at a later time, the baby's behavior was scored by independent observers using behavior scales adapted from those used by Ainsworth in her Strange Situation. Two of the dependent variables, % of separations from mother during the twelfth month accompanied by baby distress and % of reunions with mother during the twelfth month accompanied by a positive greeting from the infant were derived from the interview data. The remaining dependent variables were measures of the baby's response to the laboratory separation. They included his reaction to the interviewer during mother's absence, the amount of distress at separation and reunion, and greeting and proximity-promoting and maintaining responses to mother upon her return.

Results of the data analysis are presented in Table 2. Using analysis of variance, we found no significant differences in means among the three groups on any of the ten dependent variables. However, for eight of the variables, the variances for the infrequently-separated group were smaller than for the other two groups. Using Bartlett's test for homogeneity of variance, we found that in the case of two of these variables, Duration of Distress during the laboratory separation and Duration of Distress during the laboratory reunion, variances were significantly smaller at the .01 level or beyond. That is, as a group, babies who had been previously separated once

or twice for a relatively long period of time reacted more homogeneously to separation at twelve months of age than did the other two groups. These babies showed little, if any, distress at separation. In contrast, the responses of infants in the other two groups ranged from no distress to so much distress that the laboratory procedure had to be terminated early.

In view of the fact that the separation histories of these three groups of babies were clearly very different, our finding of no mean differences in response to separation at twelve months of age was surprising. One could predict that idfferences would be found. For example, with respect to frequency of separations, one might predict that repeated separations would represent a cumulative stress for the infant, particularly during the first year when the concept of the permanent object is being consolidated, and result in increased sensitivity to subsequent separations. Ainsworth (1973) found significant increases in both attachment behavior and distress when she retested a group of one-year-old infants in her Strange Situation after a two-week interim period. Bowlby (1973) has suggested that any experience which leaves the child with the feeling that his attachment figure is inaccessible to him can contribute to later anxiety.

One could also predict a subsequent sensitivity to separation for the infrequently-separated group on the basis of the relatively long duration of their separations. In a study of ten children placed in a residential nursery for periods ranging from twelve days to twenty-one weeks, Heinicke & Westheimer (1966) found that half strongly protested subsequent separations for up to three months following reunion with mother. Schaffer (1958) found that, among infants seven to twelve months of age who had been hospitalized for about two weeks, a reaction of excessive crying when subsequently

left by mother continued in some cases for as long as eighty days.

Since there was reasonable basis for believing that differences among the groups might exist, how do we account for the fact that they did not? First, of course, it is possible that our brief laboratory separation situation was not stressful enough to elicit existing group differences in sensitivity. However, this explanation seems unlikely in view of the fact that we obtained an appreciable range of response on all of our dependent variables.

Another possibility is that it is not how often or for how long a baby is left that is of critical importance, but where and with whom. Many writers have stressed the importance of familiar surroundings and consistent caregiving from a familiar figure in mitigating negative separation reactions. For this reason, we took a closer look at the circumstances surrounding the separations of the babies in the infrequently- and frequently-separated groups (See Table 1).

All of the babies in both groups had been left in familiar settings, either their own home or that of the caregiver. The mean number of different caregivers was very low for both groups. Only one infant had been left with more than two different adults, whereas 67% of them had received all of their care from a single substitute caregiver. It appeared that, in all cases, the babies were either familiar with their caregivers prior to being left with them or had ample opportunity to become well-acquainted. In the case of three babies, for example, the father provided some or all of the substitute care, and for seven babies, grandparents were caregivers. Moore (1969) found that children who had been left with relatives while parents vacationed showed

little later disturbance, Brazelton (1974) has suggested that grandmothers, aunts and siblings may be particularly likely to reproduce a mother's patterns of caregiving. If that is the case, it may be that these babies experienced a particularly subtle type of continuity in care during separation. Rutter (1972) has suggested that separation from an attachment figure need not involve disruption of the attachment bond. It's interesting to speculate that the experience of babies left with relatives may be particularly effective in sustaining the relationship with mother during her absence. Although we have no data on this point, it seems very likely that some of these caregivers already were or became attachment figures in their own right. Finally, only two of the infants, both in the frequently-separated group, were in the position of having to share the caregiver's attention with other children. In one of these cases, group care had been replaced by substitute care in the baby's own home at the age of six months because the parents felt that the baby had not been receiving enough individual attention. In this sense, the experience of our frequently-separated group was not comparable to that of a daycare sample.

Thus, overall, it is clear that most of the sources of stress accompanying brief separations in hospitals, residential nurseries, and perhaps even daycare centers--such as illness, family discord, abrupt discontinuities of care or the necessity of adapting to strange features of the environment--were absent for the babies in our groups. Indeed, it is difficult to imagine separations occurring under more supportive conditions. Although we cannot tell which of these contextual dimensions were of the greatest influence, it seems probable that most or all contributed jointly to optimizing these babies'

experience. While we appreciate the problems of Type II errors when dealing with very small samples, our data do suggest that the separation experiences of our groups were all within "normal limits." That is, given nontraumatic circumstances and the thoughtful provision of substitute care the one-year-old human infant appears resilient enough to tolerate a considerable range of mother-infant separation.

Further evidence that the circumstances surrounding a separation experience can shape a baby's response to it comes from our data on the group variances. As mentioned earlier, the variances for our infrequently-separated group were smaller than for the other two groups of many of the dependent variables. When we looked more closely at the experience of this group of babies, we found that the context in which their separations had occurred was also very homogeneous for the group as a whole. Six of the seven babies had been left with their grandparents in the grandparents' home while parents vacationed. While it is true that these dimensions of care are almost totally confounded with frequency/duration patterning for this group, we feel that it is at least plausible to attribute the restricted variances to this common experience.

In conclusion, our data offer support for the argument that brief separations from a primary attachment figure need not have deleterious effects. They suggest that, within a surprisingly broad range of experience, it is the quality of substitute care that is important rather than the sheer frequency or duration of separations. What is needed now is further work elucidating just which contextual variables are of particular importance.

We would like to suggest that one potentially fruitful way of accomplishing this would be an interventionist approach. Efforts might be directed towards finding ways of helping parents to arrange for quality substitute care and assessing the results of such efforts, rather than in trying to determine the effects of such complex and heterogeneous variables as either maternal employment or daycare per se.

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Table 1

Aspects of Naturally-Occurring, Non-Traumatic Separations During the First Year

	Minimally-Separated (Occasional baby-sitters only) (n=18)	Infrequently-Separated (A few separations of long duration) (n=7)	Frequently-Separated (Many separations of short duration) (n=8)
% of Mothers Employed Part- or Full-Time	11.00	29.00	75.00
Mean Frequency of any type of separation during the twelfth month	8.06	12.00	19.00
More-than-Minimal Separations			
Frequency/Duration Patterning			
Mean number of separations during the first year	----	1.86	139.00
Mean number of hours of separation during the first year	----	219.00	737.38
Mean number of hours per separation during the first year	----	123.43	5.61
Substitute Caregivers			
Mean number of different substitute caregivers	----	1.14	1.75
% of babies cared for by more than one caregiver	----	14.00	50.00
% of babies cared for by:			
Grandparents	----	86.00	13.00
Father	----	0.00	38.00
Non-relative living in baby's home	----	0.00	13.00
Non-relative living elsewhere	----	14.00	75.00
Location of Substitute Care			
Mean number of different caregiving locations	----	1.14	1.75
% of substitute care given in baby's home	----	3.14	75.63

Table 2

Means and Variances for Dependent Variables Assessing Response to Separation from and Reunion with Mother at Twelve Months of Age

	Mean Response				Variance			
	Minimal Separation (n=18)	Infrequent Separation (n=7)	Frequent Separation (n=8)	ANOVA (F)	Minimal Separation (n=18)	Infrequent Separation (n=7)	Frequent Separation (n=8)	Bartlett's Test (Chi-Square)
Separation								
of separations in the home during the twelfth month accompanied by distress	42.59	13.57	33.13	1.88	1335.17	407.23	1206.87	2.40
uration of distress (in seconds) (in the laboratory)	50.61	9.14	43.50	1.12	4208.84	260.14	6348.57	11.07*
earch for mother (in the laboratory)	3.47	3.07	3.13	0.12	4.34	6.04	5.55	0.30
ocial interaction with interviewer (in the laboratory)	4.22	5.43	3.69	1.39	5.33	2.29	3.50	1.45
Reunion								
uration of distress (in seconds) (in the laboratory)	20.22	0.71	11.00	0.98	1703.21	2.25	242.11	36.10**
reet mother (in the laboratory)	0.97	2.36	0.94	3.52	1.60	1.89	1.03	0.61
ocial interaction with mother (in the laboratory)	2.47	2.36	2.94	0.26	3.10	2.81	2.89	0.03
egain proximity to mother (in the laboratory)	3.58	2.50	3.75	0.63	6.45	4.25	5.29	0.37
aintain contact with mother (in the laboratory	3.78	2.00	3.38	1.13	8.42	3.67	6.84	1.26
of reunions in the home during the twelfth month accompanied by greeting from the baby	76.12	85.29	87.50	0.51	935.14	203.92	1250.33	4.42

*p<.01

**p<.001

DOCUMENT RESUME

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ABSTRACT

This dissertation study examined the hypothesis that kindergarten teachers in Rockville, Maryland, perceive that they can identify children with potential or actual learning disabilities as effectively by informal observation techniques as by the use of the structured Maryland Systematic Teacher Observation Instrument (MSTOI). A survey instrument was developed for the collection of data. Analyses were made of the information in the responses for frequency, percentages, and significant differences. The findings indicated that 95 percent of the teachers perceived themselves as competent to identify children with learning problems by informal observation. The study compared attitudes toward the effectiveness of the two methods of identification. A chi-square of 2.53 was found, which was not significant at the .05 level of significance, with 1 degree of freedom. Thus, the major hypothesis was supported. Analysis of related factors revealed perceptions of advantages and disadvantages of the two methods. It was recommended that resources be redirected toward delivery of services to children and that the structured observation instrument be revised. The document includes a review of literature related to learning problems and the role of the kindergarten teacher in diagnosis and remediation. Appendixed are materials and instruments used in the study, an example of the chi-square analysis, and a selected bibliography.

A COMPARISON OF TEACHER ATTITUDE TOWARD TWO METHODS OF IDENTIFYING CHILDREN WITH LEARNING PROBLEMS: INFORMAL OBSERVATION AND STRUCTURED OBSERVATION

By

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The purpose of the study was to determine the attitudes of kindergarten teachers in Montgomery County, Rockville, Maryland, toward two methods of identifying children with learning problems.

The problem was to ascertain if teachers perceived themselves to be competent in identifying children with learning problems by informal observation.

The major hypothesis stated that teachers perceive that they can identify children with potential, or actual, learning disabilities as effectively by informal observation techniques as by the use of the structured Maryland Systematic Teacher Observation Instrument (MSTOI).

A survey instrument was developed for the collection of data. Analyses were made of the information in the responses for frequency, percentages, and significant differences.

The findings indicated that 95 percent of the teachers perceived themselves as being competent to identify children with learning problems by informal observation. The study compared attitudes toward the effectiveness of the two methods of identification. A chi square of 2.53 was found, which was not significant at the .05 level of significance, with 1 degree of

freedom. Thus, the major hypothesis was supported. Analysis of related factors revealed perceptions of advantages and disadvantages of the two methods.

It was recommended that time and money not be spent needlessly on a task which teachers perceive that they can perform just as effectively without the structured instrument (MSTOI). Instead, these resources should be applied to the delivery of effective services to the child with a learning problem. Another recommendation was that the structured observation instrument be drastically revised, and that the Maryland State Department of Education seek other methods of complying with the state mandated requirement for universal screening of all entering kindergarten students. In addition, recommendations were made for further study.

DEDICATION

This study is dedicated to

my husband,

my children,

and my mother.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The failure of children to learn successfully in school is a serious problem. For a variety of reasons children are not realizing their potential to become competent in the reading, writing, and mathematical skills required by society.

An eminent authority in the field of learning problems, Katrina deHirsch, stated in 1966:

> One of today's major social problems is the enormous number of children who, as a result of severe reading, writing, and spelling disabilities, are unable to realize their educational and intellectual potentials. The incidence of reading difficulties has been reported to be as high as thirty percent of the school population. More conservative estimates put the figure between five and fifteen percent.[1]

One teacher of first grade children found that the percentage rate for potential failures, using a version of deHirsch's Predictive Index, varies from seventeen percent in some schools to as high as seventy percent in other schools.[2]

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[1]Katrina deHirsch, Jeanette Jansky, and William Langford, Predicting Reading Failure (New York: Harper & Row Co., 1966), p. xi.

[2]Mary Lu Kost, Success or Failure Begins in the

Apparently, regardless of the cause, there are many children in the schools who have learning problems.

Evidence of potential learning problems becomes obvious to the classroom teacher. Kost noted that the disabilities wave like red flags.[1] The teacher should therefore be in a good position to identify these children. However, Wickman, in a classic study in 1928, found that teachers tended to have biases which hindered them in accurately identifying children with learning problems.[2] Gradually, teachers' opinions were disregarded on this matter. A host of practitioners of other disciplines rose to fill the gap and assume an active role in the identification of learning disabled children. These professions included neurologists, psychologists, optometrists, ophthalmologists, and speech pathologists.[3] In addition, nutritionists, anthropologists, and sociologists have all been involved as experts in identifying some aspect of learning disabilities.

The findings of recent research appear to put the classroom teacher again in the forefront when it comes

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Early School Years (Springfield, Ill.: Charles C. Thomas Publisher, 1972), p. 10.

[1]Ibid., p. 11.

[2]E. H. Wickman, Children's Behavior and Teachers' Attitudes (New York: Oxford University Press, 1928).

[3]Selma Sapir and Ann Nitzburg, eds., Children with Learning Problems (New York: Brunner/Mazel, 1973), p. xv.

to identifying children with learning difficulties.[1] However, this new elevation of the teacher to a position of prominence in the matter of learning problem identification appears to be accompanied by requirements for many time-consuming procedures for clerical and computer preparation of observational data. These include formalized structured instruments such as the one discussed in this study.

Since teachers will be responsible for providing the basic input to the observational program, it becomes important to ascertain their reactions to the new requirements. For example, it is possible that teachers may consider the additional paper work worthwhile. They may infer from the institution of the program that increased help will be available for working with learning disabled children. On the other hand, they may consider the time spent on observational forms excessive and an interference with their regular teaching program. Furthermore, they may consider that they can perform the observational process just as well without resorting to time-consuming, clerical forms.

The recent introduction of a structured observational instrument in the state of Maryland offers an excellent opportunity to investigate these, and other

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[1]Thomas Evaul, Director, "The Development and Validation of Screening Instruments for the Early Identification of Learning Disabilities" (Merchantville, N.J.: Curriculum and Evaluation Consultants, n.d.), p. 3. (Mimeographed.)

perceptions, in relation to structured, formalized observation for the identification of learning disabled children.

This instrument, explained in greater detail in Chapter II of this paper, is the Maryland Systematic Teacher Observation Instrument, hereafter referred to as the MSTOI. (Appendix D.)

The situation provides a highly suitable juncture at which to elicit teachers' opinions of their expectations of benefits from participation in the structured program. Additionally, before the structured instrument becomes institutionalized, this may be the optimum moment to ascertain teacher perceptions on a number of related items, such as what kind of help they consider beneficial to learning disabled students. Finally, the basic information to be obtained is to determine teachers' perception of the usefulness of this instrument.

Thus, a crystallization of the problem to be investigated is made.

Statement of the Problem

The problem posed in this dissertation is whether teachers perceive that they can identify children with potential or actual learning disabilities as effectively by informal observational methods as by the structured formal techniques exemplified in the MSTOI.

The Purpose of the Study

The purpose of the study is to determine the attitudes of kindergarten teachers as they are expressed in terms of their confidence in their own competence in identifying children with learning problems. The study investigated the principal question posed in the statement of the problem. Do teachers perceive that they can effectively identify children with potential or actual learning disabilities by using informal observation? Are these informal techniques as effective as the structured instrument, the MSTOI? The study compared the teachers' attitudes toward the two methods.

Related questions include teachers' perceptions of variables that contribute to their attitude toward the informal and structured methods.

The questions investigated were:

1. Do more teachers with over five years' kindergarten teaching experience perceive that they are effective in identifying children with learning disabilities by informal observation than do teachers with five years, or less, experience?

2. Does teacher attitude toward the MSTOI change after the instrument is administered?

3. Do teachers view the adoption of the MSTOI as an indication that special support will be available in dealing with children identified as having learning disabilities?

4. How much class teaching time do teachers estimate is required to administer the MSTOI?

5. Do teachers believe, after the administration of the MSTOI, that the use of this structured device is a beneficial expenditure of time?

6. Were teachers, in the past, reluctant to use their skills in identifying definitely children with learning problems or potential learning problems?

Research Hypotheses

This dissertation was based on the following principal hypothesis: Teachers perceive that they can identify children with potential or actual learning disabilities as effectively by informal observational techniques as by the use of the structured MSTOI.

Sub-hypotheses were:

1. More of the experienced teachers, with six years or more of kindergarten teaching experience, perceived that they were effective in identifying children with learning disabilities by informal observation techniques than did the teachers with five years, or less, kindergarten teaching experience.

2. Teachers viewed the use of the MSTOI in the same way after using the instrument as before using it.

3. Teachers viewed the adoption of the MSTOI as an indication that special support would be available in dealing with children who had learning disabilities.

4. Teachers estimated that a week or more of teaching time was required to administer the MSTOI.

5. Teachers considered class time used for the administration of the MSTOI as an infringement on teaching time.

6. Prior to the use of the structured instrument, the MSTOI, teachers were reluctant to identify definitely children with learning disabilities, for a variety of reasons.

Definition of Terms

The following definitions of terms, listed alphabetically, are applicable to this study:

Aide: A teacher assistant who, under general supervision, performs a variety of tasks relating to the operation of the classroom or other instructional area.[1]

Competence: The quality of being competent. (Competent: Having suitable or sufficient skill, knowledge, experience, and so forth, for some purpose.)[2]

Confidence: A firm belief, trust, reliance; the

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[1]Montgomery County Public Schools, Rockville, Md., Personnel Directive, Job Description.

[2]Laurence Urdang, ed., Random House Dictionary of the English Language, College ed. (New York: Random House, 1968), p. 274.

fact of being or feeling certain, assurance; belief in one's own abilities.[1]

Diagnostic-Prescriptive Services: A service to identify educational strengths and weaknesses through formal and informal assessment procedures. Once learning styles have been identified, the diagnostic-prescriptive teacher will recommend teaching strategies and programs which have been found effective through diagnostic teaching.[2]

Early Childhood: A reference to kindergarten education. Although the term generally refers to nursery and kindergarten classes, in the school system studied, it designates kindergarten through third grade classes. However, in this study, the term is confined to kindergarten classes.

Educational Management Team (EMT): A standing team composed of resource personnel who will consult with and advise on students who appear to have special needs.[3]

Informal Observation: A purposeful watchfulness of a student's actions and behaviors in a variety of

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[1]David Guralnik, ed., Webster's New World Dictionary, 2nd College ed. (New York: World Publishing Co., 1972), p. 297.

[2]Montgomery County Public Schools, Rockville, Md., Thomas J. O'Toole, Director of Supplementary Education and Services, in letter to the writer, 20 February 1976.

[3]Montgomery County Public Schools, Rockville, Md., Directive, 1 October 1975.

situations encountered during the normal course of normal kindergarten procedures.

Learning Problems: A condition found in children which renders them in need of special assistance.[1] In this paper the term is used interchangeably with "learning difficulties," "learning disabilities," "learning disorders," and "educationally handicapped." "High Risk" is a somewhat related term to designate potential learning problems.

One Session Teacher: A teacher who teaches only one kindergarten class each day, usually during the hours of nine to eleven-thirty in the morning.

Resource Room: A room staffed by resource teachers. This room is used by students who are assigned to regular classrooms and need supplementary instructions in a small group. The resource teacher is a special education teacher who is able to plan and implement a program to meet the students' specific needs.[2]

Structured Observation: A formal examination of a student's actions and behaviors in accordance with a listing on a designated check-list, requiring specific notations. In this study the structured observation instrument used was the MSTOI. (Appendix D.)

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[1]Robert H. Bruininks et al, Prevalence of Learning Disabilities: Findings, Issues, and Recommendations (Bethesda, Md.: ERIC Document Reproduction Service, ED 071 232, 1971), p. 2.

[2]Thomas J. O'Toole, letter.

Two Session Teacher: A teacher who teaches two kindergarten classes each day, one in the morning and one in the afternoon.

Limitations of the Study

This study was confined to kindergarten teachers in Montgomery County Public Schools, Rockville, Maryland, during the 1975-76 school year, who were selected as subjects by random sampling.

Significance of the Study

The significance of this study is found in the proposition that teacher attitude is a critical element in the success or failure of any program in which teachers are required to play an important role.[1] In this instance, the whole structured observation process is based on the teacher's report regarding her perception of the child's behavior. It is therefore important to measure that attitude, especially as expressed in terms of the teacher's belief in her competency to identify students with learning problems as effectively by informal observation as by a structured instrument.

The role of the kindergarten teacher in launching a child's school career is crucial. The teacher stands at the threshhold of the great philosophic debate between

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[1]Carolyn Stern and Barbara Rosenquist, The Development of an Instrument to Measure Teacher Attitudes toward Evaluation (TATE) (Bethesda, Md.: ERIC Document Reproduction Service, ED 043 655, 1970), p. 1.

the rights and needs of the individual and those of the society. The teacher's task is to perfect an accommodation of the unfettered, energetic, curious mind and body to the demands of a social institution such as the school, and the acquisition of cognitive and behavioral skills necessary for effective operation in the broader society. On the one hand, the task requires understanding of the child and his developmental needs and, on the other hand, the societal institutions and their requirements. To this end, the kindergarten program has been conceived as a stimulating, flexible curriculum in an adaptable, prepared environment with the active, energetic teacher as an important participant and facilitator.[1] The personal contact with the teacher is an essential ingredient in the early education of the child. The nature of the professional role requires total involvement. In this context it is important to ascertain whether or not the administration of the MSTOI is perceived as a help or hindrance to the student and the teacher.

Recent educational developments have impinged, to some extent, on the role of the kindergarten teacher.

For example, pressure to include more cognitively-oriented academic skills in the kindergarten program has created some conflict because most teachers are committed to a basic pholosophy of a program that encourages

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[1]Millie Almy, The Early Childhood Educator at Work (New York: McGraw-Hill Book Co., 1975), p. 27.

experiences for which the child is developmentally ready or which will advance him to the next stage of attainment. Widmer stated it this way: "The early childhood program is one remaining oasis in an educational desert in which readiness-for-learning of the child is most likely still taken into consideration in determining the program of activities."[1] With this concept in mind, it is enlightening to determine the attitude of the teacher toward the assessment of the student on items in the MSTOI for which the child may not yet have reached an adequate level of maturity.

Accountability is another recent development. Since this is often tied to improvement on test scores, it has been difficult to introduce this into the substantially non-paper-and-pencil program of the kindergarten. Accountability has brought in its wake a proliferation of paperwork. The setting of assessable objectives has multiplied the record-keeping demands on the teacher's time. Finally, and of special significance to this study, is the pressure of educators and citizenry to seek new ways of detecting and remediating learning disabilities.

This study investigated just one aspect of the factors which denote the changing role of the early

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[1]Emmy Louise Widmer, The Critical Years: Early Childhood Education at the Crossroads (Scranton, Pa.: International Textbook Co., 1970), p. 145.

childhood teacher. That was, specifically, the teacher's attitude toward a structured method of identifying children with learning problems in light of her perception of her own competence to accomplish the same goal by less time-consuming methods. However, it may have repercussions affecting some of the other factors. If it is determined that teachers are confident in their own competence regarding effective identification of children with problems, then the various demands on their time appear to be reasons enough for encouraging them to do so. They should not be burdened with the unnecessary administration of a structured instrument. Teachers should be free to make maximum use of their time to expand and augment the teacher-student relationship. Thus, this study will represent a small signpost in pointing to the direction that early childhood teaching should take.

This research investigated the attitudes of teachers in just one school system in the state of Maryland. There are, however, twenty-three other school jurisdictions in the state, with 59,286 kindergarten students, and all of these school systems are mandated to administer the MSTOI. The others may find the conclusions of this study of interest to them.

The problems of learning disabilities are nationwide. Therefore, the findings of this examination of teacher attitudes may have relevance elsewhere and may

serve as an impetus for devising new methods of identification or revising existing methods in other school systems in the nation. In addition, it may serve to indicate the type of assistance teachers deem most effective in the intervention aspect of the program.

Lastly, this investigation may provide the basis for further investigation to determine if the teachers' attitudes are founded on the actual facts regarding their ability to make effective identification of learning problems without a structured observation instrument.

CHAPTER II

LITERATURE REVIEW

Introduction

This chapter presents a survey of literature related to learning problems and the role of the kindergarten teacher in diagnosing and remediating those problems. The literature search was divided into four specific areas: learning problems; the teacher's role in relation to learning problems and early childhood education; legal mandates and directives; and relevant material concerning teacher attitudes.

A thorough search of the literature was made to locate studies specifically related to the nature of this investigation. No literature was found that compares teacher attitudes toward identifying children with learning problems by informal observation and structured observation.

References used in this research included: Dissertation Abstracts; Education Index; Encyclopedia of Educational Research; Educational Resource Information Centers (ERIC); Reader's Guide to Periodical Literature;

and Research in Education; and the facilities of the following libraries and research services: Association for Childhood Education International; Council for Exceptional Children; Florida Atlantic University; George Washington University; Library of Congress; Maryland University; Montgomery County Public Schools, Rockville, Maryland, Professional Library; Maryland State Teachers Association; National Education Association; National Library of Medicine; and Walden University.

The literature reveiw provided the theoretical rationale for the survey instrument. The methodology is discussed in the next chapter. However, where appropriate, reference is made to indicate the relationship between the literature reviewed and specific items in the survey instrument.

The following section is concerned with the learning problems that the teacher is required to observe and identify.

Learning Problems

The field of learning problems is filled with conflicting and confusing definitions of terminology, etiology, diagnosis and treatment. The experts in learning disorders include neurologists, psychologists, educators and sociologists. Each views the problem from his own field.[1]

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[1]Gladys Natchez, Foreword to Children with Learning Problems, by eds., Selma Sapir and Ann Nitzburg, p. vii.

The broad scope of the definition of learning disabilities is indicated by several examples. Dunn defined the learning disabled child as one who "shows discrepancy between capacity and performance in a specific learning process involving perception, conception or expression associated with the areas of oral and written language, and mathematics."[1] Other researchers, for example, referred to learning disabilities as a deficit in the presence of basic integrity and described it as a condition found in children of average or near average intelligence with certain learning or behavioral deficiencies, ranging from mild to severe.[2] Cratty emphasized the relationship between inadequate perceptual motor development and learning disabilities.[3]

The terminology for identifying the condition has been varied, ranging from simple "learning problems," "learning disabilities," "learning difficulties," and "learning disturbances," to "minimal cerebral dysfunction," "minimal brain damage," "soft signs of brain damage," and "perceptual problems." All of these are now being used interchangeably. Sapir and Nitzburg stated, "The situation

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[1]Lloyd Dunn, Exceptional Children in the Schools (New York: Holt Rinehart and Winston, 1973), p. 542.

[2]Doris Johnson and Helmer Myklebust, Learning Disabilities (New York: Grune & Stratton, 1967), p. 9.

[3]Bryant J. Cratty, Some Educational Implications of Movement (Seattle: Special Child Publication, 1970), p. 20.

is further complicated by individual use of terms, alternately as a diagnosis or as a descriptive label, although it is commonly acknowledged that most terms are neither precise nor prescriptive for treatment methodology."[1] All these terms have grown out of an effort to define and extend understanding of why children do not learn.

The United States Office of Education, in recognition of the seriousness of the problem, has defined learning disabilities as follows:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic.
> They include such conditions which have been referred to as perceptual handicaps, brain injuries, minimal brain dysfunction, dyslexia, developmental aphasia, etc.[2]

The World Federation of Neurology has adopted this definition of dyslexia, one of the numerous designations for problems in learning:

> A disorder in children, who despite conventional classroom experience, fail to attain the language skills of reading, writing and spelling commensurate with their intellectual abilities.[3]

The World Federation of Neurology has also defined specific developmental dyslexia as:

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[1] Selma Sapir and Ann Nitzburg, eds., p. 157.

[2] Ibid.

[3] Ibid., p. 158.

> A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence, and socio-cultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin.[1]

The Maryland Association for Children with Learning Disabilities (ACLD) gave its definition of learning disabilities as:

> Educationally significant discrepancies among sensory-motor, perceptual cognitive, academic or related developmental tasks which interfere with learning: not necessarily a demonstrable deviation in central nervous system functioning: not secondary to mental retardation, sensory deprivation or emotional disturbance.[2]

This pamphlet went on to list twenty-four learning disability terms and explanations, including:

> Acalculia: loss of the ability to perform mathematical functions; agnosia: inability to identify familiar objects through a particular sense organ; distractibility: inability to fix attention on any one thing for an appropriate time; disgraphia: inability to copy or write symbols or words; hyperactivity: excessive mobility, motor function or activity; and perservation: continued behavior or response in a certain way when no longer appropriate.[3]

Clements indicated the difficulty of communicating about learning problems when he said, "Few subjects have occasioned such wide multidisciplinary concurrence and collaboration while simultaneously provoking professional disjunction and discord." He listed ten characteristics most frequently cited by various authors, in order of

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[1] Ibid.

[2] Association for Children with Learning Disabilities, "A Guide for Parents," Maryland, n.d. (Pamphlet.)

[3] Ibid.

frequency. They are: hyperactivity, perceptual-motor impairments, emotional liability, general coordination deficits, disorders of attention, impulsivity, disorders of memory and thinking, specific learning disabilities, disorders of speech and hearing, equivocal neurological signs and electroencephalographic irregularities.[1]

Some of the terms from Clements' listing were included in the survey instrument used in gathering data for this study. (See item #8 as found in Appendix E.)

In addition to the above characteristics which seem to be neurologically oriented, there are other authors who deal with disabilities from other etiological points of view.

For example, Cravioto approached disability from the basis of nutritional deprivation.[2] The United States Senate's Select Committee on Nutrition devoted a section of the report on malnutrition and gave as a possible cause of learning problems as manifested in brain damage, inability to develop proper cognitive skills and inability to attend to the school program effectively.[3]

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[1]Sam Clements, "Minimal Brain Dysfunction in Children," in Children with Learning Problems, Sapir and Nitzburg, eds., p. 172.

[2]Joaquin Cravioto, "Nutritional Deprivation and Psychobiological Development in Children," in Children with Learning Problems, Sapir and Nitzburg, eds., p. 218.

[3]U.S., Congress, Senate, Committee on Nutrition and Human Needs, George McGovern, Chairman, Nutrution and Health (Washington, D.C.: Government Printing Office, 1975), pp. 74-75.

Another author among the etiology-oriented learning disability researchers ascribed the origin of the problem to psychosocial deprivation. Richardson defined the problem anthropologically as "whether the child is able to perform at a given age within the level of expectations and demands that are common to his tribe, society, or national group."[1]

All the above should indicate, for the present study, the complexity of the subject that teachers are required to deal with in making observations for the purpose of identifying children with learning problems.

In addition, theories and practices of learning disability remediation have been equally plentiful, varied, confusing, and contradictory.

Perceptual motor training programs were devised by some investigators. These include Frostig[2] and Kephart.[3] However, Junkala indicated that problems occurring at a higher cognitive level have been blanketed under the perceptual motor cover.[4] But Mann stated that perceptual

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[1]Stephen Richardson, "Psychosocial Factors Contributing to Deprivation in Child Development," in Deprivation and Psychobiological Development, Report of the Pan American Conference of the World Health Organization, 1966.

[2]Marianne Frostig and David Horne, The Frostig Program for the Development of Visual Perception (Chicago: Follett Publishing, 1964), pp. 10-11.

[3]Newell Kephart, The Slow Learner in the Classroom (Columbus: Charles E. Merrill Publishing Co., 1960), p. 16.

[4]John Junkala, "Task Analysis and Instructional Alternatives," Academic Therapy, 8(1), pp. 33-40.

training has become a fad and there is no evidence of its effectiveness in alleviating learning disabilities.[1]

The complications of nomenclature and etiology have caused some authors to call for dispensing with the confusion by just treating the symptoms.[2] For example, Knoblock said that the open education class is the solution to learning disabilities because it gives each child a choice of what to learn, when and for how long. It permits each child to find his own learning modality. It also gives the teacher more opportunity for observation.[3] Peter has advocated individual instruction which permits a prescriptive teaching whereby each child can have his needs remediated by a specific prescriptive program.[4] Piers observed that play can solve learning problems because it enables children to experience learning and gives opportunity to master problems of identity.[5]

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[1]Lester Mann, "Perceptual Training, Misdirection and Redirection," Journal of Orthopsychiatry, 40 (1970): 30-38.

[2]S. Alan Cohen, "Causes Vs. Treatment in Reading Achievement," Journal of Learning Disabilities, 3 (March 1970):163-166.

[3]Peter Knoblock, "Open Education for Emotionally Disturbed Children," Exceptional Children, 39 (February 1973):358-365.

[4]Laurence J. Peter, Individualized Instruction: Prescriptive Teaching System (New York: McGraw Hill Book Co., 1972), p. 85.

[5]Maria W. Piers, "Play and Mastery," in Children with Learning Problems, Sapir and Nitzburg, eds., p. 622.

Bateman concluded that etiological truths do not necessarily have educational implications. She saw a necessity for changing the educational environment so that learning occurs, is retained, and is worthwhile to the child.[1]

More significantly, Bateman pointed to the teacher as the prime operator in the educational environment for the learning disabled. Others agree.

For example, Zukow stated, "Teachers can be important partners in identifying hyperkinetic children and in carrying out the proper therapy with them."[2] In general terms, he indicated how teachers can deal with impending temper tantrums. However, in typical theorist fashion, he did not say how this can be managed by the teacher without assistance. This failure by an expert to recognize the requirements of reality as the teacher experiences them suggested the inclusion of several items on the survey instrument for this study. (See items #3, #15, and #25, as found in Appendix E.)

Now, there is a need to examine the role of the teacher in early childhood education to ascertain if the normal program already incorporates many instances of

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[1]Barbara Bateman, "Educational Implications of Minimal Brain Dysfunction," paper presented at Conference on Minimal Brain Dysfunction, New York, 20 March 1972.

[2]Arnold Zukow, M.D., "Helping the Hyperkinetic Child," Today's Education, November-December 1975, p. 41.

identification and remediation of learning disability problems.

The Teacher's Role in Relation to Learning Problems in Early Childhood Education

At the center of all this describing, defining, and prescribing, stands the teacher. If the welter of interdisciplinary professionals agree on anything, it is that all seem to point to the teacher as the most responsible operator in the identifying, diagnosing, and remediating of learning disabilities.

Thus, Clements stated:

> The educators and, in particular, the elementary classroom teachers, must provide programs for such individuals, regardless of the exact cause of their disability. They cannot defer dealing with the educational disabilities of these children or the behavioral disturbances they frequently display pending scientific clarification of the issues.[1]

Sapir and Nitzburg believed that diagnosis and remediation go hand in hand and advocated "clinical teaching." They noted, "One must understand and observe what process the child uses, his hierarchy of strengths and weaknesses and what happens when you teach him."[2]

Childers and Matusiak saw ". . . the school system as an institution that affects all children and as an agency with established procedures for regular and continuous contact with the child and his parents over a

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[1] Sam Clements, p. 160.

[2] Sapir and Nitzburg, p. 549.

long period of time."[1] Therefore, the school, and, more specifically, the classroom teacher are seen as the logical contact for helping the child who is more vulnerable to emotional disorders.

Kappelman also focused on the teacher. He discussed the task-oriented, interdisciplinary, multiprofessional team which assesses the individual child who suffers from an obstructed educational pathway. He said, "It is a process in which the team functioning together writes a practical, thorough, and meaningful educational prescription for each child."[2] The teacher gets much advice, but as Kappelman stated, the ultimate responsibility for the remediation falls on the shoulders of the classroom teacher in whose domain much of the therapy must take place.

More evidence that the authorities rely heavily on teacher performance in remediating learning problems is given by Cline and Ishee. They listed and defined various learning disabilities and then continued to advise teachers to use

> . . . a multisensory approach as a means of stimulating all possible areas of development. The starting point is at the visual-motor level at

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[1]Perry Childers and Itzak Matusiak, "Social-Emotional Maturity Correlates of Achievement and Adjustment in Kindergarten and First Grade," Psychology in the Schools, 9 (October 1972):396.

[2]Murray Kappelman, M.D., "Learning Disabilities: A Team Approach to Diagnosis and Prescription," Educational Leadership, 30 (May 1975):515.

> which the child is competent. . . . If the pupil is extremely hyperactive, he may require a one-to-one teacher-student relationship.[1]

Unfortunately, the teacher with many in her class has little time for a one-to-one teacher-student relationship, much as it is needed. In this matter specifically the teacher needs assistance in the classroom. Here is further substantiation that the subject of help should be included in the survey instrument of this study. (See items #3, #15, and #25 as found in Appendix E.)

Thus, we see that there is great agreement on the essential nature of the teacher's role in identifying and remediating learning problems. The question now arises as to whether or not the teacher is capable of assuming this role.

An early study by Wickman seemed to indicate that teachers were not very effective in recognizing children with learning problems. Wickman found that they tend to identify hyperactive boys as learning-disabled, whereas clinicians, such as psychologists and psychiatrists found symptoms of withdrawal as more serious problems.[2] This classic investigation seems to have denigrated the reputation of teachers as a factor in identifying learning problems.

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[1]Betty Smith Cline and Bert Ishee, "Specific Learning Disabilities," Today's Education, January 1972, p. 22.

[2]E. K. Wickman, Children's Behavior and Teacher's Attitudes (New York: Commonwealth Fund, 1928).

However, most recent research has contradicted Wickman's findings. Although they observed that teachers are capable of identifying learning disabilities, Bussis and Chittenden appeared to indicate that they may have lost confidence in their ability to recognize problems. When the field of learning disabilities was taken over by other disciplines, it became obvious that the psychologist and teacher often spoke on different wave lengths and communication became difficult. The report of Chittenden and his associates stated, "The teacher seems to fluctuate between vague romantic terms and trivial concreteness, while the psychologist seeks some middle-level abstraction which can be transformed into measurable operations."[1]

Raskin and Taylor are concerned that teachers may be overwhelmed by etiological nomenclature and therefore may be reluctant to discuss or refer cases. They saw that the role of the teacher as a primary identifier of symptomatic behavior has gradually decreased as school systems have come to employ more and more specialists. They said, "This function has gradually been given to reading therapist, school psychologist, speech therapist, and guidance counselor. The writers believe that teachers have no lack of expertise in reporting learning

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[1]Anne M. Bussis and Edward A. Chittenden, Analysis of an Approach to Open Education: Interim Report (Bethesda, Md.: ERIC Document Reproduction Service, ED 050 125, 1970), p. 7.

disabilities symptoms. They want to help teachers organize and describe behavior patterns of "incident clusters." They noted, "For example, reporting that a child got out of his seat an average of sixteen times in several ten-minute periods communicates much more than does the (perhaps inaccurate) label of 'hyperactive'."[1]

Although this is a commendable attempt to recognize and restore the importance of the teacher's position in identifying learning disabled children, it does reveal the non-practitioner's disregard for the practicalities of detailing numerous observations. Apparently, Raskin and Taylor have forgotten that the teacher is at the same time teaching a class full of other children and not clinically observing this one child through a one-way mirror, with checklist and pencil in hand for ticking off sixteen tally marks.

However, it should be noted that Raskin and Taylor went on to say, "Often teachers with years of experience make rapid judgment about children's learning with singular success. They have learned or 'built-in' a personal checklist." But the authors thought that the "built-in" items may not be easily communicable.[2]

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[1]Larry Raskin and William Taylor, "Problem Identification through Observation," Academic Therapy, 9 (February 1973):86.

[2]Raskin and Taylor, p. 86.

Other researchers and writers appeared to accept teachers' generalized descriptions of learning problems. They continued to reaffirm emphasis on the importance of early childhood teachers, specifically the kindergarten teacher.

Thus, Freeman pointed out the necessity of early detection of the child with learning disability in order to avoid greater difficulty in remediating the problem later. He stated:

> The first step is detection . . . detection is based upon observation. No person is more readily qualified for this task than the classroom teacher. She is exposed to the child . . . in a variety of sampling situations. Therefore, she is in the key position to help identify what is one of education's most serious problems.[1]

The observable characteristics listed by Freeman include generalizations such as, easily distracted, short attention span, repetitive, and hyperkinetic. It should be noted that these are not descriptive of specific behaviors, but are to some extent judgmental.

Keogh, et al., in a survey that individually interviewed kindergarten and first grade teachers, found that the teachers were using the same judgmental characteristics to describe children with learning problems. The researchers listed the following in order of frequency reported: hyperactive, aggressive, short attention span,

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[1] Stephen Freeman, "Detection of Learning Disabilities, A Guide for the Classroom Teacher," The Tennessee Teacher, November 1972, p. 23.

disruptive talking, and lack of responsibility.[1] The first six items were the same as those mentioned by Freeman and were included in the survey instrument for this study, to ascertain whether or not the sample population agree that these terms, as used by both Freeman and the Keogh group, are significant designations. The data gathered from this survey item might also indicate what terms the sample population found comfortable for describing learning problems. (See item #8, found in Appendix E.) A follow-up question was also presented concerning whether or not the MSTOI addressed itself, in behavioral terms, to these judgmental characteristics. (See item #9, in Appendix E.)

It appeared from the literature that teachers are aware of the children who are failing to fulfill their educational potential. Even if they do not use the same nomenclature for identifying them, they discerned disabilities similar to those found by other professionals of the multidiscipline group referred to earlier in this chapter.

What is more, they have demonstrated a high degree of accuracy.

Becker affirmed this finding. He found in a study of the records of third grade children who were having

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[1]Barbara Keogh, Cheryl Tchir, and Adele Windeguth-Behn, "Teachers' Perceptions of Educationally High Risk Children," Journal of Learning Disabilities, 6 (June-July 1974):367-74.

learning problems, that most of their kindergarten teachers had noted inadequate attention skills and inability to work independently.[1]

The findings of Ferinden, Jacobson and Linden support the conclusion that kindergarten teachers play an important role in early identification. They found teachers are 80 percent accurate in identifying high risk children. Sixty-seven kindergarten students were screened for potential learning disabilities. Test profiles verified that teachers' observations were useful in the selection of potential learning problems.[2]

These results led to the inclusion, in the survey instrument, of questions regarding teachers' perceptions of their own accuracy and effectiveness in identifying children with learning problems. The survey instrument presented these as three related items. (See items #5, #6, and #7, found in Appendix E.)

Wang also verified that teachers are accurate in identifying learning disabled children. Wang found teachers to be 68 percent to 76 percent accurate in

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[1]Laurence D. Becker, "Predicting Learning Disabilities" (manuscript, Los Angeles: University of California, 1971), cited by Barbara Keogh and Laurence Becker, "Early Detection of Learning Problems," Exceptional Children, September 1973, p. 9.

[2]William E. Ferinden, Serman Jacobson, and N. J. Linden, "Early Identification of Learning Disabilities," Journal of Learning Disabilities, 3 (November 1970):48.

their informal appraisal of children's ability.[1] She suggested that at least some formal testing may be replaced by teacher observation.

Before continuing to the rest of this section in the literature review, mention must be made of Keogh and Becker's observation on teacher efficacy in learning problem intervention. They stated that the early childhood teacher may be so successful in identifying learning disabled children that her accuracy cannot be measured in longitudinal studies. They noted,

> If early identification and intervention were insightful and remedial implementation successful, the preschool or kindergarten high-risk child would receive the kind of intervention and help which results in successful performance. . . . Having identified a child as high risk, the researcher is obliged to intervene. . . .[2]

The next step is to consider the nature of early childhood education and teaching to see why it offers such an advantageous opportunity for early identification and intervention in learning problems.

Leeper said that a good early childhood curriculum may be described as "streams of experiences beginning early in life."[3] Seefelt agreed and stated that the early

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[1]Mary Wang, "The Accuracy of Teachers' Prediction on Children's Learning Performance," Journal of Educational Research, 66 (July 1973):465.

[2]Barbara Keogh and Laurence Becker, "Early Detection of Learning Problems: Questions, Cautions, and Guidelines," Exceptional Children, September 1975, p. 7.

[3]Sarah H. Leeper et al., Good Schools for Young Children (New York: Macmillan Co., 1963), p. 118.

childhood curriculum "is neither a place for formal education in rigidly separated segments of teaching, nor a place where learning is an accident."[1] Kindergarten is a place where experiential and developmental growth opportunities are provided in an especially prepared environment. Authorities also emphasize the affective domain in the kindergarten's non-competitive atmosphere. Weinstein and Fantini wrote that "unless knowledge is related to an affective state in the learners, the likelihood that it will influence behavior is limited."[2]

One obvious reason why kindergarten teachers, who operate in large classrooms filled with materials used for building, painting, sculpting, cooking, writing, reading, sewing, splashing, observing, and so forth, are so well situated for early identification of learning disabilities, is given by Hawkins:

> . . . if you operate a school . . . in such a style that the children are rather passively sitting in neat rows and columns . . . then you won't get much information about them, you won't be a good diagnostician of what they need. Not being a good diagnosticial, you will be a poor teacher. The child's overt involvement in a rather self-directed way, using the big muscles and not just the small ones, is most important to the teacher in providing input of information wide in range and variety.[3]

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[1]Carol Seefelt, A Curriculum for Child Care Centers (Columbus, Ohio: Charles E. Merrill Publishing Co., 1974), p. 113.

[2]Gerald Weinstein and Mario Fantini, eds., Toward Humanistic Education (New York: Praeger Publishers, 1970), p. 28.

[3]David Hawkins, "I, Thou, It," paper presented at the Primary Teachers' Residential Course, Loughborough, Leicestershire, England, 3 April 1967, p. 5.

The kindergarten teacher, because of basic kindergarten philosophy, provides these necessary experiences. The students can select self-choice opportunities that are consonant with their physical, social, psychological, behavioral, and cognitive needs. In recognition of the possibility of diagnosis in such a situation, the Maryland State Guidelines for Early Childhood Education listed "purposeful observation of children" as the first qualification required of the staff.[1]

Other authors pointed out additional characteristics of early childhood education that enable the kindergarten teacher to be effective in the process of identifying children with learning problems.

For example, Bussis and Chittenden noted that the early childhood teacher is an experimenter and inventor. "Personal involvement and 'messing around' with materials, as well as exercise of imagination, are also critical."[2] Not only is the early childhood teacher involved with the students, but an important part of her duties is "provisioning," preparing herself and the environment for optimum learning activities.[3]

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[1]Maryland School Bulletin, Guidelines for Early Childhood (Baltimore, Maryland: Maryland State Department of Education, September 1972), p. 18.

[2]Bussis and Chittenden, p. 17.

[3]Ibid., p. 36.

Thus, this review revealed that the kindergarten is uniquely the place for maximum effectiveness in early identification of learning problems.

Brief mention will now be made to show that the kindergarten teacher is already carrying out much of the remediation program in her regular program.

Thus, Kost devoted a large portion of her book to prove that remediation can be, and currently is, part of the early childhood program.[1]

The elements of the open classroom have long been an integral part of the kindergarten curriculum. Perceptual-motor activities are the daily meat of the kindergarten program. Play is the business of the young child's day in school. The alert teacher prepares the kindergarten environment to meet the needs, as she prescribes for them, individually for each child and collectively for the group. Most remediation suggestions, found in the literature, appear to be already part of the program.

It may therefore be obvious that the preservation of this unique and salutary situation should be given educational priority. Vigilance may be required to keep from altering the kindergarten teacher's role detrimentally.

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[1]Mary Lu Kost, pp. 97-462.

Keeping this in mind, the introduction of legal mandates for universal, structured screening of all kindergarten students should now be examined in the light of possible effect on the kindergarten teacher's role.

We now proceed to review the relevant legal developments.

Legal Mandates and Directives

It is reported by Cruickshank that previous methods of identifying children with learning disabilities have been struck down by the courts. He stated: "In 1967 Judge Skelly Wright held illegal, in Hobson v. Hanson, the method of achievement and ability testing of the Washington, District of Columbia, Public Schools which were used to place children in both special and regular classes."[1]

The judge ruled that standardized aptitude tests such as the California Test of Mental Maturity, the Stanford Achievement Test and the Frostig materials were standardized on a white middle-class group of students and therefore produced inaccurate and misleading scores when given to lower-class and Negro children. Therefore, children were being classified by socio-economic or racial status, rather than by ability to learn.

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[1]William Cruickshank, "Some Issues Facing the Field of Learning Disability," Journal of Learning Disabilities, 5 (August/September 1972):380.

Cruickshank continued, "In a center city elementary school in one of the large metropolitan systems 73 percent of the children were classified 'learning disability' by group testing."[1]

In an effort to find a better way, to identify and eventually to remediate learning problems, the Federal Education of the Handicapped Act was passed. (P. L. 91-230, The Elementary and Secondary Education Act Amendments of 1969:Title VI.) It related to specific learning disabilities such as "a disorder of one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.", as previously mentioned on page 17 of this paper where definitions were discussed.

Congressman Albert Quie (Minnesota) said in connection with the law: "We have all known the child who seems to have normal intellectual and physical capabilities, and yet, for some unknown reason, has failed to learn to read and write effectively."[2]

On the state level, a Maryland legislator to the Maryland House of Delegates, Delegate Richard Rynd, introduced House Bill 234 of the 1973 legislative session.

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[1] Ibid.

[2] Edward Martin, et al., "Law Review," Exceptional Children, September 1970, p. 55.

In a letter to this researcher, he stated:

> The reason for my putting in the bill and my intent of the bill are as follows. I felt at the time, because of personal experiences, that children were not being property tested before getting into the public educational system. Many of the children who are now behavior problems and children with low reading capabilities, are simply those children who at an early age were never determined to be children with learning disabilities.
>
> Again--the intent of this bill was to call to the attention of the professionals of the public school system those children at an early age who have learning disabilities and to provide proper programs to care for those disabilities.[1] (Appendix C.)

This bill, when passed by the legislature and signed by the governor, became Section 98C of Article 77 of the Annotated Code of Maryland reading as follows:

> The State Board shall develop and implement a program to be administered by county and Baltimore City school boards to evaluate each student entering his first year in any primary grade for the purpose of identifying learning disabilities, regardless of how such learning disabilities were caused.[2]

In compliance with the legislative directive, the Maryland State Department of Education appointed an Early Identification and Intervention Project Team. The team, in conjunction with the firm of Curriculum and Evaluation Consultants of Merchantville, New Jersey, developed and validated a screening instrument called the Maryland Systematic Teacher Observation Instrument (MSTOI). This

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[1]Delegate Richard Rynd, Maryland State House of Delegates, letter to the writer, 23 December 1975.

[2]Maryland, Laws of Maryland. Annotated Code. Section 98C of Article 77.

contained thirty-six items on which the teacher was to rate each child in accordance with the frequency of the observed behavior--always, often, sometimes, seldom, and never.

"All students in kindergarten scoring 138 or lower and all students in first grade scoring 153 or lower should be further screened for learning problems."[1]

The first year after the law became effective, as stated in a directive from the State Superintendent of Schools, was spent on selecting, developing, and validating screening instrument and developing program materials. "We are ready to implement this program statewide and plan a three-year phase-in cycle," he wrote.[2]

Montgomery County Public Schools, Rockville, Maryland, was scheduled to initiate the early identification project by administering the MSTOI in the school year of 1975-76.

It was planned that the program would consist of three parts: (1) Screening (MSTOI), (2) Educational Assessment, and (3) Comprehensive Services.[3]

In connection with parts 2 and 3, and the expectation of how they would be implemented, it was decided to add

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[1]Thomas Evaul, p. 12.

[2]Maryland State Department of Education, letter from James A. Sensenbaugh, 23 May 1974.

[3]Montgomery County Public Schools, Rockville, Md., "Early Childhood Education News and Views," February 1975. (Newsletter.)

questions on the survey instrument which would yield data concerning this matter. (See items #13, #14, #15, #24, #25, and #26 of the survey instrument, found in Appendix E.)

In the fall of 1975 the first phase of the MSTOI was administered to the 8,166 kindergarten students and all first grade students. Thereafter, only kindergarten students and any new first or second grade children would be screened annually.

A supplemental appropriation of $9,025 of state funds was listed in the Notice of Public Hearing, 19 August 1975. The purpose of this appropriation was "For the Early Identification and Intervention Project for in-service training of teachers and administrators to implement universal screening of kindergarten and first grade students beginning with the 1975-76 school year."[1]

The in-service workshop took place during already scheduled in-service days for personnel of Montgomery County Public Schools, Rockville, Maryland. Therefore, these funds were used for the payment of substitute teachers, at a salary of thirty-three dollars and fifty cents per day, for one-half day to free teachers. This time was utilized in filling out the final computerized MSTOI forms.[2]

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[1] Montgomery County Sentinel, Rockville, Md., 31 July 1975. (Weekly Newspaper.)

[2] Montgomery County Public Schools, Rockville, Md.,

At the in-service meetings teachers were given a booklet prepared by Montgomery County Public Schools, Rockville, Maryland, to assist teachers with program planning for individual students.[1] The teachers were also presented with the computerized version of the MSTOI which was developed by the Montgomery County Public Schools. The reading supervisors, who were supervising the program from each area administrative office, informed the teachers that "It is anticipated that the computerized form will save the teachers thirty minutes per student over the manual form designed by the State Department of Education."[2]

The implementation of phase one proceeded as follows:

> The thirty-six items on the data collection form were completed during the week of November third by the classroom teacher for each student in the class. The computer will analyze and summarize the data and return to the teacher during the week of December first the results for each student and a class summary sheet.[3]

Edythe Adams, Coordinator of Early Childhood Education, telephone interview, 12 February 1976.

[1]Montgomery County Public Schools, Rockville, Md., Early Identification of Learning Disabilities and Suggestions to Assist Classroom Teachers in Program Design, Summer 1975.

[2]Montgomery County Public Schools, Rockville, Md., "Early Childhood Education News and Views," Fall 1975. (Newsletter.)

[3]Montgomery County Public Schools, Rockville, Md., "Early Childhood Education News and Views," Fall 1975. (Newsletter.)

Thus, the history and background of the MSTOI is presented. Within this setting it is necessary to review the literature which pertains to the factors involved in attitude formation, especially as they may influence teachers' perceptions toward the structured instrument, the MSTOI.

Relevant Material Concerning Teacher Attitudes

This section of the literature investigation examined the various implications of the term "attitude." It appeared most useful to consider the evaluative aspects of attitudes and thus to permit the survey instrument to assess teachers' attitudes as they are influenced by their expectations concerning the MSTOI outcomes.

Ball asserted that "an attitude is an implicit cue and drive producing response to socially salient characteristics and that it possesses evaluative properties."[1] This definition supplied the overall basis for the design of the survey instrument in its attempt to gather data on teachers' reaction to the various aspects of the structured instrument. Attempts were made to word questions on the survey to ascertain teacher evaluations of the MSTOI as a positively useful instrument in contrast to any negative factors it may produce.

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[1]Samuel Ball, Assessing the Attitudes of Young Children toward School (Bethesda, Md.: ERIC Document Reproduction Service, ED 056 086, 1971), p. 5.

The technical information required in designing a questionnaire for measuring attitudes was provided by a reading of Oppenheim.[1] Also consulted was a text by Edwards.[2] They provided helpful details which were incorporated in the construction of the survey instrument.

In an investigation of teachers' attitudes, Harvey's observation should be noted. In his study of "abstract" conceptual systems, as contrasted with those that are "concrete," he and his colleagues found that teachers with an abstract attitude are warmer, more perceptive and more flexible in meeting children's needs, and more ingenious in improving teaching and playing materials, than fellow teachers who think more concretely.[3]

The MSTOI, with its necessity for observation of concrete behaviors may, thus, engender conflict of belief systems for the successful kindergarten teacher.

Stern and Rosenquist found that teacher's attitude may affect the validity of the data collected. Their study concluded that information and feedback reduced threat, increased reception to the program, and helped

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[1]O. N. Oppenheim, Questionnaire Design and Attitude Measurement (New York: Basic Books, 1969), pp. 49-50.

[2]Allen L. Edwards, Techniques of Attitude Scale Construction (New York: Appleton-Century Crofts, 1957), pp. 10-11.

[3]O. J. Harvey et al., "Teacher Belief Systems and Preschool Atmospheres," Journal of Educational Psychology, 57 (1966):373-378.

teachers distinguish between fact and fiction.[1] This study by Stern and Rosenquist suggested the inclusion of items in the survey instrument to determine whether teachers' participation in the MSTOI formulation affected their attitude. (See items #18 and #28 of the survey instrument, found in Appendix E.)

On the possibility that teachers' attitudes toward the MSTOI may be influenced by reservations that they had about "labeling" children, literature on that subject was investigated. Kappelman discussed this hazard of early identification of children who, as every educator knows, develop at different rates to maturity.

> There is a justifiable cry against "labeling" a specific child with an adynamic and unchanging singular diagnosis which will permanently "brand" his or her educational records. The labeling early in the child's educational career does not, in any way, take into consideration the dynamic nature of every child's intellectual growth and development during the evolutionary educational years.[2]

Although Kappelman went on to refute this "justifiable cry," his initial statement served to suggest the survey item about teachers' past reluctance to definitely identify a child as having a learning problem. (See items #16 and #17 of the survey instrument, found in Appendix E.)

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[1] Stern and Rosenquist, p. 1.

[2] Kappelman, p. 514.

Keogh and Laurence[1] see still another concern that lent support to the inclusion of the above two items in the survey instrument. They discussed the possible relation of early identification to the "Pygmalion Effect" of the Rosenthal and Jacobsen study (updated in 1973).[2] The Rosenthal study described the effect of teacher expectancy on pupil performance. Apparently, teachers tend to treat children identified as learning disabled in such a way that the student fulfills the prophecy and does eventually become the creature of the label, whether or not he started out that way. As this concerns early identification, Keogh and Laurence stated:

> Effects may be particularly insidious in that preschool or kindergarten children have not yet developed the deficit conditions for which they were identified. . . . Thus, the act of predicting learning problems may, unfortunately, have a built-in expectancy phenomenon. . . . Because effects of parent and teacher anxieties upon a child are uncertain and the possibility that the effect of an expectancy involved in prediction may be harmful, the ethical issues relating to programs of early identification require consideration.[3]

Keogh and Laurence also mentioned recognition of compensatory abilities. Here the Pygmalion effect may persist because it is down on paper and the child may be compensating adequately in another area so that the deficit is not a liability at all. Yet, once committed

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[1]Keogh and Laurence, p. 8.

[2]Robert Rosenthal, "The Pygmalion Effect Lives," Psychology Today, September 1973, pp. 56-63.

[3]Keogh and Laurence, p. 8.

to a form, especially where responses are forced or the form is rejected by the computer, the child may become disadvantaged by designation of the inability.[1] Although these observations by Keogh and Laurence contributed to the formulation of several items on the survey instrument, the nugget of the idea did not readily lend itself to questionnaire form. It was hoped that this subject would be discussed in comments responding to item #30 of the survey instrument.

It is obvious that teachers' perception of time and money involved in administration of the MSTOI would be variables in influencing their attitude.

On this matter Keogh and Laurence observed: "Too often, however, a major portion of time and funds are spent on extensive diagnosis and evaluation so that neither time nor money is left to modify educational programs in light of the identification data."[2] This observation led to the inclusion of items regarding time spent on the identification process. (See items #12 and #22, found in Appendix E.)

The teacher's need for time was very succinctly expressed by Kabisch, when she stated, "What the kindergarten children and teachers do not have, is time to

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[1] Ibid.

[2] Keogh and Laurence, p. 10.

implement the programs."[1] This added support for the inclusion of item #12, #22, and #23 in the survey instrument to investigate the possibility that the kindergarten teachers' attitudes toward MSTOI may be influenced by the factor of time required for its administration.

Wolfensberger noted that early identification is irrelevant if it does not lead to help in intervention.[2] This statement suggests the need to include items #13, #14, and #15, as well as items #23, #24, and #25 in the survey instrument to establish teachers' expectations of assistance with learning disabled children and how this expectation might affect their attitude toward the time spent on administering the MSTOI.

Since this study is involved with attitude, it included the perception of the teacher's professional role. Linton stated, ". . . the more perfectly the members of any society are adjusted to their statuses and roles the more smoothly the society will function."[3]

Kelman stated that it is important to the individual's own self-concept to meet the expectations of his

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[1]Montgomery County Public Schools, Rockville, Md., Dorothy Kabisch, Kindergarten Teacher Spokeswoman, statement before Board of Education, 18 November 1975.

[2]W. Wolfensberger, "Diagnosis Diagnosed," Journal of Mental Subnormalities, 11 (1965):65.

[3]Ralph Linton, "Status and Role," Human Relations: Concepts, eds. Hugh Cabot and Joseph A. Kahl (Cambridge, Mass.: Harvard University Press, 1953), pp. 98-110.

friendship role, for example, or those of his occupational role."[1] Since the MSTOI has repercussions upon the professional role of the teacher, it may now be useful, at this point, to examine briefly the self-concept literature. Purkey commented:

> A basic assumption of the theory of the self concept is that we behave according to our beliefs. If this assumption is true, then it follows that the teacher's beliefs about himself and his students are crucial factors in determining his effectiveness in the classroom.[2]

In this present investigation, the teacher's belief about her professional competence, in this case, competence to identify children with learning problems by informal methods, is at the root of the study. Teachers' attitudes about themselves, and the perceived attitudes of others toward them, play an important function in professional self-confidence.

Purkey continued, "There are times when the self-image appears to shift abruptly . . . graduation, marriage, retirement . . . ."[3] In this connection, it may be relevant to speculate if the institution of the MSTOI on an annual basis, with its possible consumption of valuable professional time, both in the classroom and

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[1]H. C. Kelman, "Three Processes of Social Influence," Attitudes, eds., Marie Jahoda and Warren Neil (Baltimore, Maryland: Penguin Books, 1966), p. 154.

[2]William Purkey, Self Concept and School Achievement (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 45.

[3]Ibid., p. 11.

outside of the classroom, is just such a crisis or landmark situation that may alter the teacher's whole professional self concept.

This appears to be the basic underlying consideration upon which many of the items on the survey instrument are formulated. Whether teachers view the MSTOI as professionally beneficial to themselves and their students, or whether the MSTOI administration causes them to be unduly pressed with clerical and computer preparatory work, is of great importance. Of even more far reaching effect, will be the perceptions that teachers have of how they are regarded by educational administrators. Additionally, the MSTOI may be a factor in the conflict between the educational philosophy of the importance of self concept as motivation, and the behavioristic theories of emphasizing observable behavior as fit characteristics for identifying and remediating learning disabilities.

It may be enlightening to include one more mention of professionalism as it relates to teaching. Almy stated, "The professional renders a service directly to a client whose needs he appraises and treats accordingly."[1] Of relevance to this study is the teacher's attitude as it involves time spent rendering a service (teaching) and time spent accounting for that service to parents, administrators, and now, legislators. Almy touched on this

[1]Almy, p. 29.

when she said, "Unfortunately, the teacher is frequently caught between her obligations to the child and parent and to her employers--the school system and the taxpayers."[1]

Support for the survey instrument's question on class size as a variable in teachers' expectations of the type of assistance that may be required for effective remediation of learning disabled students, came from several articles. To mention one, The Philadelphia Reserve Bank Study which concluded: "Smaller classes fostered achievement for disadvantaged students."[2] This was confirmed by a National Education Association poll of 1600 classroom teachers, which found lower class size to be the most critical element in providing quality education.[3] (See items #15 and #26 of survey instrument, found in Appendix E.)

Still more literature in the review lent support to survey instrument items. The conclusion of an Office of Education Task Force was that teachers must be involved in decisions that affect the teaching and learning process. "The . . . position of the Teacher Task Force underlies the belief that teaching is the business of

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[1]Ibid.

[2]Anita Summers and Barbara Wolfe, "Schools Do Make a Difference," Today's Education, November-December 1975, p. 25.

[3]Today's Education, January-February 1975, p. 109.

teachers."[1] This prompted the survey instrument items on teacher involvement in the formulation of the MSTO. (See items #18 and #28 of the instrument, found in Appendix E.)

The final contribution offered in this literature review may delineate the purpose of this whole investigation.

Hawkins stated that educational research is conducted in a situation "where the best practice excels the best theory in quite essential ways." From this he concluded, "that educational research should look to the practitioner more seriously, rather than the other way around . . . as is the more usual advice."[2]

Thus, Hawkins appeared to give justification for the present research as an attempt to ascertain attitudes of the practitioners, the teachers, toward an instrument, the MSTOI, imposed mainly by the non-practitioners--the theorists.

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[1]Department of Health, Education and Welfare, Office of Education, Inside-Out: The Final Report and Recommendations of the Teachers National Field Task Force on the Improvement and Reform of American Education (Bethesda, Md.: ERIC Document Reproduction Service, ED 093 863, 1974), p. 44.

[2]David Hawkins, "Learning the Unteachable," in Learning by Discovery: A Critical Appraisal, ed., L. Shulman and E. Keislar (Chicago: Rand McNally, 1966), p. 8.

Summary

The review of the literature revealed that the area of defining and remediating learning problems is very complex and confusing. Most experts, from many disciplines, agreed that the teacher should be in the best position to identify and remediate learning problems in her classroom. Because of the nature of the early childhood program, the kindergarten teacher has already incorporated identifying and remediating learning problems into the class program. She has had marked success in this process.

The legal mandates from the state of Maryland, and the State Department of Education's instrument for compliance with the law, have imposed additional, and perhaps unnecessary, requirements. These involve the teacher in a time-consuming, structured procedure for identifying children with learning problems. The success of this new screening program is closely related to the teacher's attitude toward it. Therefore, variables which may affect this attitude were examined in order to perfect a suitable survey instrument.

The next chapter will discuss the details of that instrument which, based on the literature and the investigator's professional experience, was designed to compare the attitude of kindergarten teachers toward two methods of identifying children with learning problems: informal and structured observation.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to give a brief description of the setting in which the present investigation was undertaken and to describe the procedures that were used in developing the survey instrument. An extensive amount of literature was reviewed to ascertain the dimensions of the learning problem situation, the teacher's role in identifying and remediating the problems, the teacher's attitude toward this role, the teacher's attitude in somewhat similar situations, and the general concepts of attitude formation. After attendance at many meetings of concerned teachers and interviews with effected personnel, a survey instrument was developed in the form of a questionnaire. This instrument was distributed to a panel of experts in lieu of a pilot sample. It was then refined and revised, as necessary, and then distributed to a random sample of Montgomery County Public School, Rockville, Maryland, kindergarten teachers. Arrangements were made for collecting, tabulating and analyzing the data.

The next section contains a chronological listing of the sequence of procedures and techniques which were used in conducting this study.

Procedures and Techniques

The procedures for this study included the following steps:

1. Informing various Montgomery County Public Schools administrators and other personnel of plans for this study and asking for information and advice.
2. Reviewing the literature to provide current knowledge concerning learning disabilities, the role of the early childhood teacher, and Federal and State legislation regarding learning disabilities, and the development of teacher attitudes, as a basis for providing the theoretical justification for identifying major areas of investigation to be included in the survey instrument.
3. Arranging conferences, interviews and correspondence with appropriate school personnel and others for the purpose of soliciting specific information needed for various aspects of the study.
4. Developing the survey instrument in accordance with the literature and with recommendations from teaching colleagues and research advisors.

5. Testing the instrument through a pilot consideration by selected representative kindergarten teachers and others involved with learning disabled children.
6. Revising and refining the instrument before sending it to the recipients.
7. Selecting a random sample.
8. Telephoning sample population informing the recipients of the study and asking for their consent to participate. (Appendix A.)
9. Mailing of survey questionnaires to each member of the survey population by United States Postal Service.
10. Organizing the returned instrument for data analysis.
11. Analyzing the data to find the frequency and percentage of the response to specific items and combinations of items. Also, determining the significance of relationships for the hypotheses through the use of chi square, as presented by Tuckman, at the .05 level of significance, with 1 degree and 4 degrees of freedom.[1]

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[1]Bruce W. Tuckman, Conducting Educational Research (New York: Harcourt Brace Jovanovich, 1972), p. 378.

12. Interpreting the findings as a basis for making recommendations.

The Locale in Which the Study Originated

Montgomery County is one of twenty-three counties in the state of Maryland. A brief review of its history indicates that it was established in 1776 and named for Richard Montgomery, an Irishman who served in the British Army and later became a brigadier general in the Colonial Army. He was the first American general to die in the Revolutionary War. Eighteen other counties in the United States also bear the name Montgomery. From 1850 to 1950, the population of the county grew from 15,860 to 164,401. In the following ten years, it had more than doubled to 340,928. The exodus from nearby Washington, the Federal Capitol, to suburban Maryland brought an influx of white-collar workers. Research and development centers were established and by 1970, more than one hundred firms specializing in physical sciences, life sciences, social and psychological sciences, research and computer software were operating. However, now in 1976 two-thirds of the 500 square miles that the county encompasses remain open land or in agricultural use. "Today Montgomery County is an attractive suburban community of 580,000 people facing the future with nearly 300 years of rich

heritage behind them."[1] Estimates for the year 2000 indicate a possible population of one million.

The school system covers the entire county. There are about 205 schools. (Several small schools have recently been closed and their students consolidated with nearby schools in the same cluster.) With 122,000 students, Montgomery County Public Schools is among the nation's twenty largest school districts. State law requires every youngster between six and sixteen to attend school. Children who will be five years old on or before January first may attend kindergarten. The professional staff of about 7,400 consists of highly qualified personnel. Nearly 43 percent of the staff possess Master's degrees and above among their educational credentials.[2] The kindergarten teachers number 199, with an average salary of $13,694 per annum. "The class size in the elementary schools has averaged about twenty-seven pupils."[3] Every one of the 147 elementary schools has at least one kindergarten class. Schools in the area of recently expanded housing development have four or five kindergarten classes. The kindergarten population consists of 8,166 students.

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[1]Montgomery County, Rockville, Md., "Annual Report on Activities of the Government," 1975.

[2]Montgomery County Public Schools, Rockville, Md., pamphlet for New Residents about Education Opportunities, n.d.

[3]Montgomery County Public Schools, Rockville, Md., pamphlet.

Although a high percentage of the present population is middle class, the county operates nearly fifty Head Start classes and nineteen elementary school programs are supplemented by Title I funds. The Federal School Lunch and School Breakfast Programs also operate in some schools. There are three special schools for moderately retarded. Special support systems are provided for teachers to work with exceptional children in their regular classroom, mainly speech and hearing specialists.[1]

It is within this local setting that the present investigation was conducted.

The Survey Instrument

The survey questionnaire was designed to provide data for a comparative study. It examined reported teacher attitudes toward the use of the MSTOI, a specific structured instrument for identifying "high risk" students, in the light of teachers' perceptions of their competence to attain the same objectives through the use of their informal observations. Thirty questions were framed to elicit descriptive differences between groups of teachers. Some items addressed the major hypothesis and the sub-hypotheses directly. Other questions were inserted to further the logical development of pertinent points and to permit the respondent to complete the expression of attitudes toward factors related to the

[1] Ibid.

observational instrument. Each item was worded to permit data treatment in finding the frequency and percentage of responses and combinations of responses, and to determine significant relationships through the use of chi square techniques. The data were organized for analysis and interpretation to provide a basis for conclusions and recommendations.

The survey items were constructed in accordance with the rationale described in detail below.

Items #1, #2, and #3 sought to obtain the equivalent of demographic information, such as, years of experience as a kindergarten teacher, size of class, whether the teacher is a one-session or two-session teacher, and the type and amount of assistance the teacher usually has in the classroom. Items #4, #5, and #6 asked general questions about teacher's perceptions toward the MSTOI, with items #4 and #5 specifically focusing on the major hypothesis. Items #20, #21, and #22 requested information about perceptions toward selected aspects of the MSTOI, such as, were more children with learning problems identified, was the nature of their problem more accurately pinpointed, and how long did it take to fill out the MSTOI for each child. These three items were included to explain, at least in part, and to help verify the consistency of the teacher's response to items #4, #5, and #6. Items #7 and #8 gave the teacher some information from current research. Teachers were asked how their own experiences compared to

the researchers' findings in estimates of accuracy in identifying high risk children. They were also asked if they agree with the descriptive terms that researchers found were used by teachers in characterizing learning disabled children. Item #9 asked if the teachers in this study perceived that these characteristics, described in the research in judgmental terms, were included in behavioral terms on the MSTOI. Items #10, #11, #12, #13, and #14 requested information about factors related to identifying children with learning problems before the MSTOI was introduced in the school system. These related to the average number of children identified in the past, how much time was required, and how much help was given to the teacher in the remediation task. Item #14 was practically an alternate form of item #13 and was used to verify the reliability of the response. Items #22, #23, #24, and #25 covered the same factors for the teacher's post-MSTOI perceptions. They were inserted for the purpose of comparing the teacher's responses and determining how post-MSTOI expectations may relate to the major hypothesis.

Items #15 and #26 were designed to compare the differences between type of assistance preferred by the teacher in pre- and post-MSTOI administration situations. The data from these questions would help determine how the teacher perceived that the learning disabled child would be benefitted by the institution of the MSTOI

program. Items #18 and #28 related directly to research concerning acceptance of change if the participants had been involved in the change mechanism or vehicle. Items #16 and #17 were included to elicit information on teachers' perceptions concerning their own role in identifying learning disabled children and the reasons why that role may have been restricted.

Items #19 and #29 requested information regarding general attitude toward the MSTOI before and after the use of the instrument, to determine whether or not participation and administration of the instrument, as well as greater understanding, may have influenced a change in attitude. Item #27 was inserted to give the teacher an opportunity to express an opinion concerning a possible compromise in the administration of the MSTOI.

Although the researcher would have wanted to include questions on the developmental and experiential nature of the kindergarten program, as planned in the original proposal for this study, it proved too difficult to refine the concept appropriately for exact meaning and valid interpretation. Therefore the item was abandoned. However, item #30 served as a possible vehicle for expression of responses to this elusive question. Item #30 was included at the end of the survey instrument in order to permit and encourage comment on the specific questions asked or any factors not easily adaptable to survey form.

"Yes" and "No" responses were required by sixteen items. Two items asked that specific numbers be written in the appropriate spaces. The circling and checking of desired choices were required in nine items, and two items requested the ordering of listed possibilities by preference. The final item was an open-ended request for comments.

In the construction of the survey instrument, due consideration was given to the basic concept of attitude surveys by embedding the major question, namely, teachers' perceptions of their own competence in identifying children with learning problems by informal observation, among other pertinent and related items of high interest to the participants. It was decided to limit the choices of response, where possible, in order to force teachers to examine their own attitudes and make a decisive expression of their perceptions.

As stated previously, this research was designed to report on teachers' attitudes toward two methods of identifying children with learning problems. It was not the intention of this study to include the results of the print-out and follow-up activities of the MSTOI. This obviously, is a next step in refuting or fulfilling teachers' expectations, and remains for a future study to investigate. The conclusions of this study may conceivably be used as a base line in that future study. However, for the purposes of this study, it was essential that all

questionnaires be returned to the researcher after the MSTOI was administered and before the MSTOI computer print-out was delivered to the teacher.

For this reason, there was not enough time to give the survey instrument a true pilot testing. Therefore, the questionnaire was sent to a panel of experts who represented experienced and inexperienced teachers, those known to the researcher and those with whom the researcher had had no previous personal contact.

The pilot panel consisted of seven teachers. This number constituted 10.0 percent of the sample population. Included were four kindergarten teachers, a special education teacher, and a speech and language teacher. All are actively engaged in working with young children in a teaching situation in Montgomery County. All have M.A. degrees. The four kindergarten teachers possess four to fourteen years of kindergarten teaching experience. Their advanced degrees are in the field of early childhood education. Three of the kindergarten teachers have been active in professional organizations, one having served as a member of the executive board of the Association for Childhood Education International, Montgomery County Branch. The special education teacher has fifteen years of experience in teaching in her field in Montgomery County and elsewhere. She is an active member of the Council for Exceptional Children. Her Master's degree is in special education. The speech and language teacher has

considerable experience in working with young children who have learning disabilities. In addition to her work in the county school system, she has also served as a speech therapist consultant while living abroad. Her advanced degree is in speech therapy.

After responding to the questionnaire, the pilot panel was encouraged to give a critical appraisal of the survey instrument, either orally or in writing. All members of the panel expressed interest in the project and were unstinting in offering time and comments to aid in the success of this study.

The pilot panel suggested the need for a definition of the words "learning problems." Acting on this suggestion, the researcher included this amplification in the transmittal letter to respondents. (See Appendex B.)

For item #19 and #29, one member of the pilot panel suggested that the term "negative" be included in the continuum. This suggestion was not followed by the researcher in order not to unduly bias or influence the respondents. However, the respondents who felt strongly on this matter were free to write the word in on the line marked "other." The pilot panel also made some suggestions for word rearrangements.

On the basis of this advice from the expert panel, the survey instrument was revised for greater clarity and printed in its final form.

The Sample

At the time of the study, there were 147 elementary schools in the county school system. They were all listed in alphabetical order and numbered. By the use of a random table, eighty useable numbers were obtained. This constituted 40.2 percent of the total kindergarten teacher population of 199. Where there were two kindergarten teachers in the same school, a coin was used as a basis for randomly selecting which teacher would receive the survey questionnaire. A total of sixty-nine of the eighty teachers in the sample, or 86.25 percent, responded to the survey. Thus, 34.7 percent of the total population was included in the survey. All except one member of the total population were female. The lone male kindergarten teacher in the county school system was included in the randomly selected sample.

Distribution

Each member of the sample population was contacted by telephone, told of the survey, and asked if the researcher might send a survey form. The text of the telephone message is found in Appendix A. All indicated their willingness to participate. Care was taken by the researcher, and helpful secretaries, to read only the message in order not to bias the survey results by any expression of opinion.

The survey forms were sent to the participants via the United States Postal Service. A stamped, addressed

envelope was enclosed for the return of the survey questionnaire to the researcher. Inter-office mail was not used to further assure unbiased responses and avoid any possibility of prejudicing the results by the appearance of administrative pressure. A copy of the transmittal letter that accompanied the survey questionnaire is Appendix B.

The mailing of the survey instrument was timed to reach the respondents a day or two after the forms for the MSTOI were completed. An immediate return was requested. By the end of the first week, sixty percent of the survey forms were returned. The remaining responses arrived during the following week.

Processing the Data

As the survey instruments were returned, the data from each questionnaire were tabulated for each of the twenty-nine items and the comments for item #30 were transferred to cards for possible future categorization. The tabulated data were listed in verbal and numerical form, whichever was appropriate. The data were also coded in accordance with a computer tabulation scheme for ready transfer to computer analysis, if necessary. Thus, preparation was made for treating the data for the computation of frequency distributions, percentages, and for chi squares test for statistical relationships and significance.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The purpose of this chapter was to discuss the data obtained in the survey and demonstrate how they support or reject the major hypothesis and the sub-hypotheses. The related pertinent data was also examined for indications of their significance in conjunction with the hypotheses. Percentages were calculated for all items and, where appropriate, the chi square test for significance was administered to the data.

A demographic profile was developed and then examination was made of the hypotheses. Other survey items were discussed in the order in which they appeared in the description of the survey instrument in Chapter III. The information was presented in narrative as well as tabular form.

Data for Demographic Variables

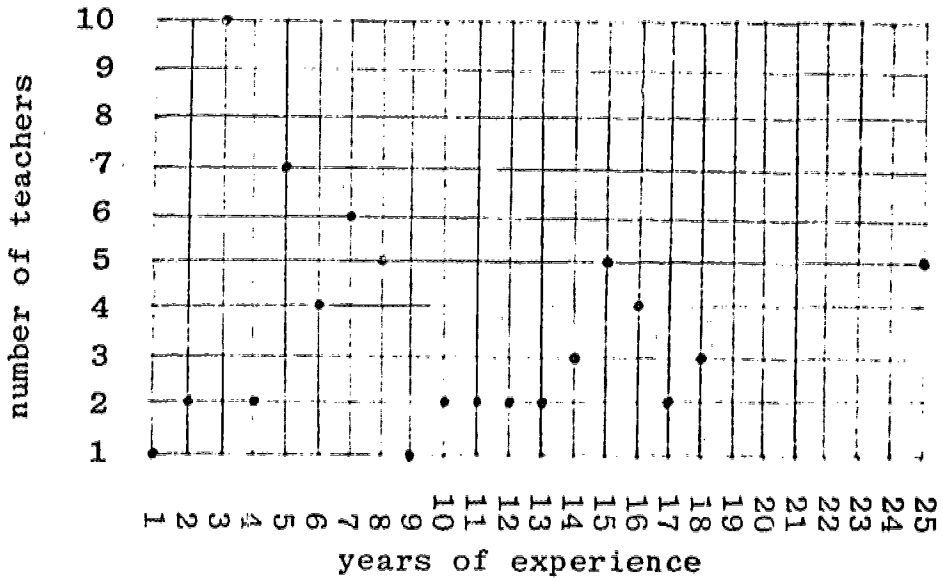
First a profile of the sample kindergarten teacher population was developed from the demographic data of the

survey instrument. This provided a background and a framework for the major analyses made in this chapter.

The following data were obtained from item #1 of the survey responses. The kindergarten teaching experience of the sample population ranged from one year to over twenty-five years. The largest number of teachers were found at the mode with three years teaching experience. There were ten members in the mode. The five year level had seven members. The seven year level had six members. Twenty-two teachers had five years or less of teaching experience. The remaining forty-seven kindergarten teachers in the sample had six years or more of teaching experience, as shown in Table 1.

TABLE 1

A SCATTERGRAM DEPICTING TEACHER EXPERIENCE



The median number of years of teaching experience was eight. The average number was nine years. (See Table 2.)

TABLE 2

TEACHING EXPERIENCE (TYPICAL)

	Years	Number
Range	1-25+	68 (1 omission)
Median	8	4
Mode	3	10
Average	9.05	1

The following information was obtained in answer to item #2 of the survey instrument.

The total number of students in the classes of the sample population was 2,851. The one session kindergarten teachers had 468 students in their classes. The two session teachers had 1,249 students in their morning classes, and 1,134 students in their afternoon classes.

Twenty teachers in the sample population taught one session. They had one class each day and saw their students for two and one-half hours daily. Forty-nine teachers in the sample population taught two sessions. They taught two classes daily. They had a class of students for two and one-half hours each morning and then another class of students for two and one-half hours each afternoon, as shown in Table 3. The one session

TABLE 3

NUMBER OF STUDENTS TAUGHT BY SAMPLE POPULATION

Number of Sessions		A.M. Students	P.M. Students	Total
one session	20	468		468
two sessions	49	1249	1134	2383
				2851

teachers ranged in experience from three years to over twenty-five years.

The sample teachers taught 118 classes. The class sizes ranged from fifteen to thirty-three students. The median class size was twenty-five. The mode was twenty-seven with fifteen members. The average class size was twenty-four and two tenths, as shown in Tables 4 and 5.

The following information was obtained from responses to item #3 of the survey instrument.

Teacher assistance included paid classroom aides, parent volunteers, high school student volunteers, college student volunteers and Diagnostic-Prescriptive teachers. The amount of time varied from one hour a week to full time, as shown in Table 6.

Demographic material usually includes sex differentiation as one of the variables. In the case of this total population, there was one male teacher and he happened to be included in the random selection of the sample

TABLE 4

SCATTERGRAM DEPICTING CLASS SIZE

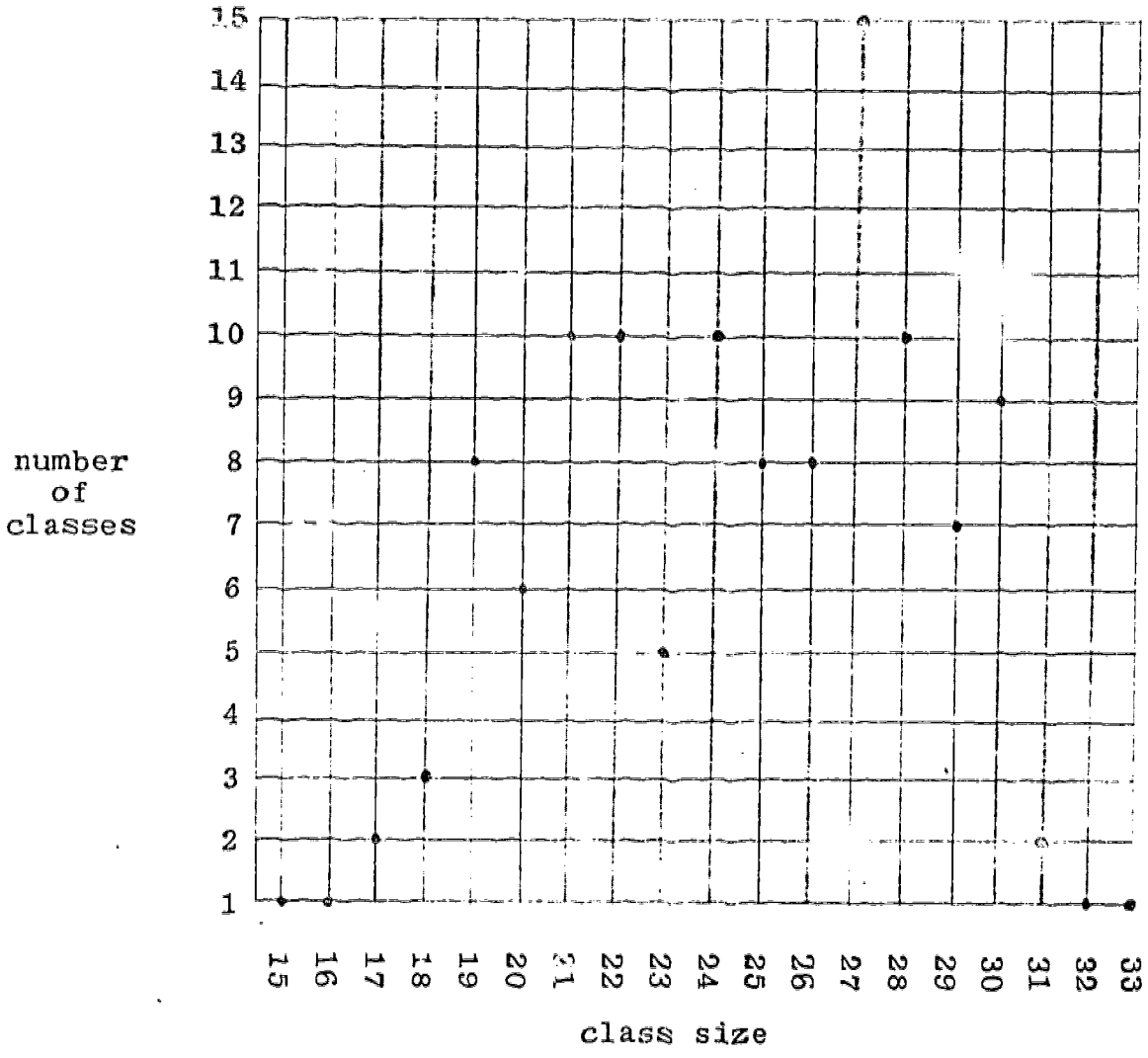


TABLE 5

CLASS SIZE (TYPICAL)

	number of students in class	number of classes
Range	15-33	118
Median	25	8
Mode	27	15
Average	24.2	10

TABLE 6

ASSISTANCE TO THE TEACHER IN THE CLASSROOM

	N
Aides	34
Parent Volunteers	27
High School or College Volunteers	20
Diagnostic-Prescriptive Teacher	6

population. However, this constitutes too small a sample to yield significant data for the sex variable.

Data for Hypotheses Testing

Major Hypothesis: Teachers perceived that they can identify children with potential or actual learning disabilities as effectively by informal observational techniques as by the use of the structured MSTOI.

The "yes" response to item #5 revealed that 95.6 percent of the teachers had confidence in their own competence to identify children with learning problems by the use of informal techniques. The remaining 4.4 percent responded "no" and indicated that they did not believe that they could be effective in identifying children with learning disabilities by informal observational techniques. This small proportion of negative responses constituted too scanty a sample to reveal any significant data concerning variables. Therefore the tabulation for computerization was not required.

The data from responses to item #5 of the survey instrument is shown in Table 7.

This data summarizing teachers' perceptions concerning informal observation was compared to the data obtained in answer to survey item #4 (Table 8), which asked about teachers' perceptions regarding the

TABLE 7

TEACHERS' PERCEPTION THAT THEY CAN IDENTIFY CHILDREN WITH LEARNING PROBLEMS EFFECTIVELY USING THEIR OWN INFORMAL OBSERVATIONS

	N	Percent
yes	66	95.65
no	3	4.35

TABLE 8

TEACHERS' PERCEPTION OF THE MSTOI'S EFFECTIVENESS AS AN INSTRUMENT FOR IDENTIFYING CHILDREN WITH LEARNING PROBLEMS

	N	Percent
yes	59	85.5
no	8	11.6

effectiveness of the structured instrument, the MSTOI. The comparative data is shown in Table 9.

TABLE 9

COMPARISON OF TEACHERS' PERCEPTION CONCERNING EFFECTIVENESS OF INFORMAL OBSERVATION AND STRUCTURED OBSERVATION (MSTOI)

	Yes		No	
	N	Percent	N	Percent
Informal	66	95.6	3	4.3
MSTOI	59	85.5	8	11.6

Fifty-nine teachers (85.5 percent) reported that they perceived the MSTOI as an effective instrument for identifying children with learning problems. Eight teachers (11.6 percent) stated that they did not believe the MSTOI to be an effective instrument. This data is shown in Table 8.

The data from responses to items #4 and #5 of the survey instrument were compared using chi square analysis. Using the formula

$$\chi^2 = \Sigma\frac{(fo-fe)^2}{fe} ,$$

a value of χ^2 equals 2.63 was obtained, which is not significant at the .05 level of significance with 1 degree

of freedom. Thus, since there was no significant difference between teachers' perception of the effectiveness of informal and structured observation, the major hypothesis was supported. This hypothesis stated: Teachers perceive that they can identify children with potential or actual learning disabilities as effectively by informal observational techniques as by the use of the structured MSTOI.

Analysis of the six sub-hypotheses follows. These were related to the major hypothesis and deal with specific aspects of the study.

Sub-hypothesis 1: More of the experienced teachers, with six or more years of kindergarten teaching experience, perceived that they are effective in identifying children with learning disabilities by informal observational techniques than did teachers with five years, or less, of kindergarten teaching.

The data for this sub-hypothesis were obtained from answers to items #5 and #1 of the survey instrument. In the sample, experienced teachers made up 69.1 percent of the population. Inexperienced teachers made up 30.9 percent of the sample population. Of the experienced teachers, 93.6 percent answered "yes" to item #5 and 6.4 percent answered "no." The inexperienced teachers answered 100 percent "yes" to item #5 of the survey instrument. A chi square of 1.49 with 1 degree of freedom was reported, which was not significant at the .05 level of significance. Thus sub-hypothesis 1, which stated that a greater number

of experienced teachers perceived that they are effective in identifying children with learning disabilities by informal observational techniques than the number of less experienced teachers, was not supported. The data for this response is summarized in Table 10.

TABLE 10

EXPERIENCE AND INEXPERIENCED TEACHERS' PERCEPTION OF THEIR ABILITY TO IDENTIFY CHILDREN WITH LEARNING DISABILITIES BY INFORMAL OBSERVATIONAL TECHNIQUES

	N	Percent of Exp. Category	Percent of Total Sample
5 Years or Less			
yes	22	100	32.4
no	0	0	0
6 Years or More			
yes	43	93.5	63.2
no	3	6.5	4.4

Sub-hypothesis 2: Teachers viewed the use of the MSTOI in the same way after using the instrument as before using it.

The data for this sub-hypothesis were obtained from answers to items #19 and #29 of the survey instrument. Item #19 asked respondents to check one of four words to describe their attitude toward the MSTOI before they had actually administered it. The four descriptive

words were, "reluctant," "neutral," "pleased," and "enthusiastic." An additional line was added for "other." The responses to item #29 are summarized in Table 11. This data and similar information from item #29 concerning attitudes after the MSTOI was administered are compared in Table 11.

TABLE 11

ATTITUDE TOWARD MSTOI BEFORE AND AFTER ACTUAL USE

Reluctant		Neutral		Pleased		Enthus.		Other		Total
N	%	N	%	N	%	N	%	N	%	N
Pre-MSTOI										
29	43.9	24	36.4	4	6.0	3	4.5	6	9.0	66
Post-MSTOI										
27	40.3	20	29.8	6	9.0	0	0.0	14	20.9	67

Of the six respondents who checked "other" for pre-MSTOI attitude, one replied "negative" and two said "too much time." Of the fourteen who checked "other" in the post-MSTOI attitude, two replied "negative" and each of the following comments were made by each of ten other respondents: "inaccurate," "wait and see," "dislike intensely," "disgusted," "too time consuming and

expensive," "can now return to regular program and have new experiences," "willing," "satisfied," "unenthusiastic," and "content."

The chi square test for significance was applied to the responses for items #19 and #29 of the survey instrument.

A chi square of $\chi^2 = 5.49$, 4 degrees of freedom, was found. The reported chi square of 5.49 with 4 degrees of freedom was reported which was not significant at the .05 level of significance. Thus, the sub-hypothesis 2, which stated that teachers viewed the MSTOI in the same way after using the instrument as before using it, was supported.

Sub hypothesis 3: Teachers perceived the adoption of the MSTOI as an indication that special support will be available in dealing with children who have learning disabilities.

The data for this hypothesis were obtained from responses to items #13 and #24 of the survey instrument. Table 12 summarizes the responses to these items and indicates the percentage of response in each category.

It appeared that only 26 percent of the respondents expected that they would now, after the institution of the MSTOI program, receive more help and special support in working with children who have learning problems than they did in previous years.

TABLE 12

SPECIAL SUPPORT WITH CHILDREN WHO HAVE LEARNING DISABILITIES

	Received Help Pre-MSTOI		Expected More Help Post-MSTOI	
	N	%	N	%
Yes	23	33.3	18	26.0
No	45	65.2	44	26.0
No Ans.	1	1.4		
Don't Know			7	10.0

The chi square test was applied to the data to determine if any significant differences existed. A chi square of .34, computed with 1 degree of freedom was reported, which is not significant at the .05 level of significance. Thus, sub-hypothesis 3 which stated that teachers perceived the adoption of the MSTOI as an indication that special support would be available in dealing with children who have learning disabilities was not supported.

Sub-hypothesis 4: Teachers estimated that a week or more of teaching time was required to administer the MSTOI.

Data for this sub-hypothesis were obtained from answers to item #22 of the survey instrument. Respondents were asked to estimate the amount of time that was

required to gather information and to fill out the MSTOI for each child in the class. The number of minutes reported was multiplied by the number of children in the class. Information was requested for both in-class and out-of-class time spent. However, for the purposes of this sub-hypothesis, only the class time was tabulated.

This sub-hypothesis was supported, on a percentage basis, by forty-two respondents (60.86 percent). The responses are summarized in Table 13.

Further analysis was made to determine if any significant differences existed between inexperienced and experienced teachers concerning the time they spent on MSTOI administration. Chi square analysis yielded a value of 1.42 which was not significant at the .05 level of significance with 1 degree of freedom. Thus, additional support was given to this sub-hypothesis which stated: Teachers estimated that a week or more of teaching time was required to administer the MSTOI.

Five respondents did not answer this item. The data revealed that 31.8 percent reported between 43 percent and 96 percent of a week of classroom time was required for MSTOI administration. The remaining 60.86 percent of the respondents reported that more than a week of classroom time was required for MSTOI administration.

TABLE 13

AMOUNT OF CLASSTIME REQUIRED FOR MSTOI ADMINISTRATION
(TEACHER ESTIMATE)

Minutes Per Student	Number of Teachers		Percentage Using Less Than Week	Percentage Using More Than Week
	Less Than Week	More Than Week		
0	0	0	0.0	0.0
15	9	0	13.0	0.0
30	13	5	18.8	7.2
45	0	5	0.0	7.2
45+	0	32	0.0	46.3

Sub-hypothesis 5: Teachers considered class time used for the administration of the MSTOI as an infringement on teaching time.

The data for this sub-hypothesis were obtained from responses to item #23 of the survey instrument. This sub-hypothesis was supported by 79.9 percent of the respondents who answered "yes" to the question. A "no" answer was given by 15.9 percent of the respondents. The information is summarized below in Table 14.

TABLE 14

TIME REQUIRED FOR MSTOI ADMINISTRATION VIEWED AS AN INFRINGEMENT ON TEACHING TIME

	Number of Teachers	Percentage
yes	55	79.9
no	11	15.9
don't know	3	4.3

Additional analysis was made to determine whether there was a significant difference between inexperienced and experienced teachers in their perception regarding time required to administer the MSTOI as an infringement on teaching time. Chi square computation resulted in a value of .24, which was not significant at the .05 level of significance, with 1 degree of freedom. Thus, additional support was given to sub-hypothesis 5 which

stated: Teachers considered class time used for the administration of the MSTOI as an infringement on teaching time.

Sub-hypothesis 6: Prior to the use of the structured instrument (MSTOI), teachers were reluctant to identify definitely children with learning disabilities.

Data for this sub-hypothesis were obtained in answer to item #16 of the survey instrument. This sub-hypothesis was not supported. Only 36.2 percent of the respondents indicated that they had refrained from definitely identifying learning disabled children in previous years. The information is summarized in Table 15.

TABLE 15

TEACHERS' REPORT OF RELUCTANCE TO IDENTIFY DEFINITELY LEARNING DISABLED CHILDREN IN PREVIOUS YEARS

	Number of Teachers	Percentage
yes	25	36.2
no	40	58.0
don't know	4	5.8

Chi square computations on the data for this sub-hypothesis revealed that it was rejected by both experienced and inexperienced teachers. The chi square of .23 at the .05 level of significance with 1 degree of freedom

was not significant and indicated that teachers, regardless of experience, rejected this hypothesis, which stated: Prior to the use of the structured instrument (MSTOI), teachers were reluctant to identify definitely children with learning disabilities.

In addition to the major hypothesis and the six sub-hypotheses, data were gathered to augment the meaning and implications of the study. Some survey items were designed to explore the rationale behind teachers' attitudes. This information follows.

Data for Other Variables

Item #6 of the survey instrument asked if the teachers believed that the MSTOI had confirmed the teachers' identification by informal techniques.

A "yes" answer was given by 55.1 percent of the respondents. A "no" reply was checked by 36.2 percent and 2.9 percent failed to respond. Also 5.8 percent indicated a "don't know" answer. These responses are summarized in Table 16.

Item #7 of the survey instrument asks teachers to estimate their perception of their own accuracy in identifying children with learning disabilities in the past.

The data indicated that 59.4 percent had accurately identified learning disabled children 75 percent of the time. Accurate identification was made 76-99 percent of

TABLE 16

TEACHERS' PERCEPTION OF THE MSTOI AS CONFIRMING THEIR OWN IDENTIFICATION OF LEARNING DISABLED CHILDREN BY INFORMAL TECHNIQUES

	Number of Teachers	Percentage
yes	38	55.1
no	25	36.2
no answer	2	2.9
don't know	4	5.8

the time by 10 percent of the respondents and 26 percent of the replies indicated that these teachers had 100 percent accuracy in their identification. This information is summarized in Table 17.

TABLE 17

TEACHERS' PERCEPTION OF THEIR OWN ACCURACY IN IDENTIFYING CHILDREN WITH LEARNING DISABILITIES

	Number of Teachers	Percentage
75% Accuracy	41	59.4
76-99% Accuracy (write in)	7	10.0
100% Accuracy	18	26.0

In item #8 of the survey instrument teachers were informed of some research in observed behavior patterns of learning disabled children. These bore generalized judgmental descriptions. The teachers were asked to indicate by checks in the blanks those behaviors which, in their experience, they had found to be characteristic of children with learning problems.

All teachers (100 percent) reported that they observed two or more of these characteristics in learning disabled children. All six of the characteristics were observed by 33 percent of the respondents. Table 18 presents these findings in tabular form.

TABLE 18

TEACHERS' PERCEPTION OF LEARNING DISABLED CHILDREN IN TERMS OF JUDGMENTAL CHARACTERISTICS

	Number of Teachers	Percentage
Withdrawal	52	75.3
Hyperactivity	55	79.7
Aggressiveness	42	60.9
Short Attention Span	64	92.8
Disruptive Talking	43	62.3
Lack of Responsibility	38	55.1

Item #9 of the survey instrument asked if the judgmental characteristics frequently observed by teachers were adequately identified in the MSTOI.

A "yes" reply was indicated by 22.2 percent of the respondents. A "no" reply came from 75.4 percent of the teachers and 4.3 percent failed to answer. Table 19 summarizes this finding.

TABLE 19

TEACHERS' PERCEPTION THAT GENERALIZED JUDGMENTAL CHARACTERISTICS ARE IDENTIFIED BY MSTOI

	Number of Teachers	Percentage
yes	14	22.2
no	52	75.4
no answer	3	4.3

Item #10 of the survey instrument solicited from teachers their estimate of the number of children with learning disabilities whom they identified in their class in previous years.

This proved to be a difficult question. Some teachers commented that the average number depended upon the school and they had taught in several different types of school populations. It was uncertain whether the response referred to one or two classes taught by the teacher in previous years. All teachers reported an average of

480 children identified as learning disabled each year. If the kindergarten student population previously was about the same as that current during the year of this study, the percentage of learning disabled came to 16.83. The various permutations are given in Table 20.

TABLE 20

TEACHERS' ESTIMATE OF AVERAGE NUMBER OF CHILDREN CONSIDERED LEARNING DISABLED EACH YEAR IN THEIR PREVIOUS CLASSES

	Average No. of L. D. Students in Past	Present Student Population	Percentage
One-session Teacher	74	468	15.81
Two-session Teacher			
A.M. Classes	203	1249	16.25
P.M. Classes	203	1134	17.90
All A.M. Classes	277	1717	16.13
All Classes	480	2851	16.83

Item #11 of the survey instrument asked teachers if any additional time was required for identifying children with learning problems after they had observed them during their regular classroom program.

The responses to this item indicated that 52.2 percent of the teachers spent additional time in identifying their learning disabled students. This information is presented in tabular form in Table 21.

TABLE 21

TIME SPENT IDENTIFYING LEARNING DISABLED STUDENTS (PRE-MSTOI)

	Number of Teachers	Percentage
yes	36	52.2
no	28	40.6
invalid response	5	7.2

Item #12 of the survey instrument deals with the average additional classroom and out-of-class time required for identifying each child with learning disabilities.

Presumably this time was spent only on the average number of learning disabled children previously identified, as indicated in the responses to item #10 above.

Of the twenty-nine teachers who reported that in previous years they spent additional classroom time to identify children with learning problems, five stated that they averaged fifteen minutes per learning disabled child. Nine stated that they averaged thirty minutes per learning disabled child. Three teachers reported forty-five minutes per learning disabled child and twelve stated that they spent an average of more than forty-five minutes of classroom time per learning disabled child.

Of the twenty-one teachers who reported that in previous years they spent out of classroom time to identify

children with learning problems, three stated that they averaged fifteen minutes per learning disabled child. Two stated that they averaged thirty minutes per learning disabled child. Four teachers reported forty-five minutes per learning disabled child and thirteen stated that they spent an average of more than forty-five minutes of out of classroom time per learning disabled child. Table 22 presents the information for classroom time spent in previous years in identifying children with learning disabilities and Table 23 shows similar information for out of classroom time.

TABLE 22

ESTIMATE OF ADDITIONAL CLASSROOM TIME SPENT BY TEACHERS IN IDENTIFYING CHILDREN WITH LEARNING DISABILITIES PER CHILD (PRE-MSTOI)

Minutes	Number of Teachers Reporting	No. of Children Identified by Reporting Teachers as Average No. of L. D. (Pre-MSTOI)
15	5	40
30	9	43
45	3	14
45+	12	108

TABLE 23

ESTIMATE OF OUT-OF-CLASSROOM TIME SPENT BY TEACHERS IN IDENTIFYING CHILDREN WITH LEARNING DISABILITIES PER CHILD (PRE-MSTOI)

Minutes	Number of Teachers Reporting	No. of Children Identified by Reporting Teachers as Average No. of L. D. (Pre-MSTOI)
15	3	22
30	2	11
45	4	23
45+	13	131

Item #22 in the survey instrument requests similar information about classroom and out-of-classroom time required to administer the MSTOI per child. This data had already been interpreted in terms of weeks for the support of sub-hypothesis 4. The information is here summarized for purposes of comparison with the data obtained from item #12 of the survey instrument to indicate time spent in identifying children with learning disabilities, pre-MSTOI and post-MSTOI.

Of the sixty-four teachers reporting on this item, nine estimated the expenditure of fifteen minutes of classroom time per child for administering the MSTOI. Eighteen teachers reported thirty minutes per child, five teachers reported forty-five minutes per child and thirty-two teachers reported an average of more than

forty-five minutes per child. Table 24 expresses this information in tabular form.

TABLE 24

ESTIMATE OF CLASSROOM TIME SPENT BY TEACHERS IN ADMINISTERING MSTOI PER CHILD

Minutes	No. of Teachers Reporting	Number of Children in Class (MSTOI Administered to All Students)
15	9	403
30	18	656
45	5	190
45+	32	1306

Fifty-nine teachers reported on their estimate of average time spent out of class on the administration of the MSTOI per child. Twenty-six spent fifteen minutes per child. Eight expended thirty minutes per child. Three spent forty-five minutes per child and twenty-two reported that they spent an average of more than forty-five minutes of out-of-class time for administering the MSTOI per child. Table 25 summarizes this information.

NOTE: For further comparison purposes, it should be noted that the Montgomery County Public Schools administration estimated that the computerized form of the MSTOI would save teachers thirty minutes per child.

TABLE 25

ESTIMATE OF OUT-OF-CLASSROOM TIME SPENT BY TEACHERS IN ADMINISTERING MSTOI PER CHILD

Minutes	No. of Teachers Reporting	Number of Children in Class (MSTOI Administered to All Students)
15	26	1002
30	8	341
45	3	112
45+	22	931

Although this aspect of administering the MSTOI represents a small proportion of the total time required for MSTOI administration, it does total 1,425.5 hours for the 2,851 children taught by the sample population of sixty-nine teachers.

Item #13 of the survey instrument has been reported and analyzed previously in support of sub-hypotheses 3.

Item #14 of the survey instrument asked teachers to indicate whether or not they perceived that they were almost solely responsible for remediation of the learning disabled during pre-MSTOI days, in so far as they could fit the remediation into their regular classroom program. This information was compared with data obtained from item #25 which requested similar information in regard to post-MSTOI expectation. The data from these two items

were analyzed by percentages and the chi square was computed to determine if any significant differences existed.

Of the sixty-eight teachers who responded to this item regarding pre-MSTOI help, 76.8 percent perceived that they were almost solely responsible for working with their learning disabled students and 21.7 percent reported that they did receive help. As to post-MSTOI expectations, except for advice from the Educational Management Team, 68.1 percent reported that they perceived that they would still be almost solely responsible for the remediation of their learning disabled students and 24.6 percent expected to receive help in working with their learning disabled students. This information is presented in tabular form in Table 26 and Table 27.

TABLE 26

TEACHERS' PERCEPTIONS THAT THEY ARE ALMOST SOLELY RESPONSIBLE FOR REMEDIATION FOR LEARNING DISABLED STUDENTS (PRE-MSTOI)

	Number of Teachers Reporting	Percentage
yes	53	76.8
no	15	21.7
no answer	1	1.4

TABLE 27

TEACHERS' EXPECTATION THAT, EXCEPT FOR ADVICE FROM THE EDUCATIONAL MANAGEMENT TEAM, THE TEACHER WILL BE ALMOST SOLELY RESPONSIBLE FOR REMEDIATION OF LEARNING DISABLED STUDENTS (POST-MSTOI)

	Number of Teachers Reporting	Percentage
yes	47	68.1
no	17	24.6
don't know	5	7.2

A chi square .238 was computed for these reported figures on Tables 26 and 27, to determine if any significant differences existed. The chi square of .238 with 1 degree of freedom was reported, which is not significant at the .05 level of significance. Thus, the percentage figures indicating the expectations of most teachers that they will be solely responsible for remediation of learning disabled children in the future, as they were in the past, were supported.

Item #15 of the survey instrument asked teachers what type of assistance they would have preferred, in pre-MSTOI days, to help them in their remedial work with learning disabled children. The data from this item was then compared to the data received in reply to item #26 which asks for the same information post-MSTOI.

There were six arrangements listed and teachers were asked to rate them on a one to six preference scale with number one designating the most desired arrangement. In the pre-MSTOI data, 26 percent preferred an "aide" as their number one choice. A "crisis teacher" was desired by 10.1 percent. Only 1.0 percent chose more materials as number one choice. "Resource teacher" was rated number one by 15.9 percent. The highest percentage, 31.9 percent preferred "smaller classes." "Other" preference category, all of whom referred to Diagnostic-Prescriptive Teacher (D.P.T.), was rated number one preference by 7.2 percent of the respondents. This information is summarized in Table 28.

TABLE 28

TEACHERS' PREFERENCE FOR TYPE OF ASSISTANCE ARRANGEMENTS TO HELP IN WORKING WITH LEARNING DISABLED STUDENTS (PRE-MSTOI)

Type of Assistance	No. of Teachers Reporting	Percentage
Aide	18	26.0
Crisis Teacher	7	10.1
More Materials	1	1.0
Resource Teacher	11	15.9
Smaller Classes	22	31.9
Other (D.P.T.)	5	7.2

The post-MSTOI preference for assistance, item #26, revealed that 30.4 percent of the teachers would now prefer an "aide." A "crisis teacher" would be the number one choice of 8.7 percent and "more material" would be desired by 7.2 percent as first choice. "Resource teacher" was chosen number one by 10.1 percent. "Smaller classes" was still the first choice of the largest percentage of teachers with 31.9 percent choosing it. The "other" choice again was chosen number one by 7.2 percent, with Diagnostic-Prescriptive Teacher written in as the preferred type of assistance. This data is summarized in Table 29.

TABLE 29

TEACHERS' PREFERENCE FOR TYPE OF ASSISTANCE ARRANGEMENTS TO HELP IN WORKING WITH LEARNING DISABLED STUDENTS (POST-MSTOI)

Type of Assistance	No. of Teachers Reporting	Percentage
Aide	21	30.4
Crisis Teacher	6	8.7
More Materials	5	7.2
Resource Teacher	7	10.1
Smaller Classes	22	31.9
Other (D.P.T.)	5	7.2

The data from these two items of the survey instrument were analyzed for percentage preference and then chi square computations were made to determine if any significant difference existed between the pre-MSTOI and post-MSTOI preferences for assistance arrangements to help in working with learning disabled students.

A chi square was computed to determine if any significant differences existed. A chi square of 3.776 was obtained. A chi square of 3.776 with 1 degree of freedom was not significant at the .05 level of significance. Thus, the percentages, which showed that there was no significant differences in the kind of help teachers preferred pre-MSTOI and post-MSTOI, were supported.

Item #16 of the survey instrument was analyzed in connection with the testing of sub-hypothesis 6 and is reported earlier in this paper.

Item #17 of the survey instrument was designed to determine the reasons why teachers who in previous years refrained from definitely identifying children as learning disabled did so.

Of the 36.2 percent of teachers who said that in previous years they did refrain from definitely identifying children as learning disabled, 66.7 percent checked "possible immaturity" as the reason for refraining, 38.9 percent of the teachers noted that "the child's unfamiliarity with a new situation" caused them to refrain, 27.8 percent of the teachers said that "the difficulty in

getting remedial help" caused them to refrain, and 13.8 percent of the teachers checked "other," two of these specified "hesitancy to label" as the reason for refraining to definitely identify children with learning disabilities. This information is summarized in Table 30.

TABLE 30

TEACHERS' REASONS FOR REFRAINING FROM DEFINITELY IDENTIFYING STUDENTS WITH LEARNING DISABILITIES

Reasons	Number of Teachers Reporting	Percentage of 36 Teachers
Possible Developmental Immaturity	24	66.7
Child's Unfamiliarity with New Situation	14	38.9
Difficulty in Getting Remedial Help for the Child	10	27.8
Other	5	13.8

Item #18 of the survey instrument solicited information about teachers' participation in the formulation of the MSTOI.

Data from this item yielded the following information. Only 5.8 percent of the teachers had had an opportunity to contribute ideas or suggestions concerning the formulation of the MSTOI and 73.9 percent had had no such opportunity. The item was left blank by 20.3 percent of

the teachers. The data from this survey item was compared to the information obtained in the responses to item #28 of the survey instrument. Item #28 asked the respondents if they would have wanted to contribute ideas and suggestions to the formulation of the MSTOI. A "yes" response was received from 76.8 percent and a "no" response came from 14.5 percent. The item was left blank by 8.7 percent of the teachers. Table 31 below summarized the responses to the question of opportunity to participate in the formulation of the MSTOI. Table 32 presents a tabular picture of the responses showing the nature of the teachers' desire to have had an opportunity to participate in the formulation of the MSTOI.

TABLE 31

TEACHERS' REPORT OF OPPORTUNITY TO CONTRIBUTE TO THE FORMULATION OF THE MSTOI

	Number of Teachers Reporting	Percentage
yes	4	5.8
no	51	73.9
no answer	14	20.3

TABLE 32

TEACHERS' REPORT OF DESIRE FOR OPPORTUNITY TO CONTRIBUTE TO THE FORMULATION OF THE MSTOI

	Number of Teachers Reporting	Percentage
yes	53	76.5
no	10	14.5
no answer	6	8.7

Item #19 was discussed previously in support of sub-hypothesis 2 on page 77.

Item #20 of the survey instrument asked if teachers perceived that more children with learning problems were identified through the MSTOI than they believed they could have identified by the use of informal classroom observation.

Only 2.9 percent of the respondents believed that more children with learning problems were identified through the MSTOI than would have been identified if the teachers had used informal classroom observation. However, 87 percent answered this question in the negative and 10.1 percent indicated that they did not know. This information is summarized below in Table 33.

Item #21 of the survey instrument asked teachers for their perception of whether the nature of the learning

TABLE 33

TEACHERS' PERCEPTION AS TO WHETHER MORE CHILDREN WITH LEARNING PROBLEMS WERE IDENTIFIED THROUGH THE MSTOI THAN WOULD HAVE BEEN IDENTIFIED THROUGH THE USE OF INFORMAL CLASSROOM OBSERVATION

	Number of Teachers Reporting	Percentage
yes	2	2.9
no	60	87.0
don't know	7	10.1

problem was more accurately pinpointed through the MSTOI than through their own informal classroom observation.

There were affirmative replies from 23.2 percent of the respondents. Negative responses came from 69.6 percent of the teachers and 7.2 percent said that they did not know if the nature of the learning problem was more accurately pinpointed through the MSTOI than through informal classroom observation. This information is tabulated below in Table 34.

The following items have been discussed previously in connection with other survey items.

Item #22 -- see item #12, with which it was compared.

Item #23 -- see sub-hypothesis 5 on earlier page.

Item #24 -- see item #13, with which it was compared.

TABLE 34

TEACHERS' PERCEPTION AS TO WHETHER THE NATURE OF THE LEARNING PROBLEM WAS MORE ACCURATELY PINPOINTED THROUGH THE MSTOI THAN THROUGH TEACHERS' INFORMAL CLASSROOM OBSERVATION

	Number of Teachers Reporting	Percentage
yes	16	23.2
no	48	69.6
don't know	5	7.2

Item #25 -- see item #14, with which it was compared.

Item #26 -- see item #15, which which it was compared.

Item #27 asked the respondents if they would have preferred to administer the MSTOI only for those children who are not within the broad norms of acceptable kindergarten behavior.

The data indicated that 87 percent replied in the affirmative, 11.6 percent responded negatively, and 1.4 percent of the respondents failed to reply to this item. The summary of responses is presented in Table 35.

The following items have been discussed previously in connection with other survey items.

Item #28 -- see item #18, with which it was compared.

Item #29 -- see item #19, which which it was compared.

TABLE 35

TEACHERS' PREFERENCE TO ADMINISTER MSTOI ONLY TO THOSE CHILDREN IDENTIFIED BY TEACHER INFORMAL OBSERVATION

	Number of Teachers Reporting	Percentage
yes	60	87.0
no	8	11.6
no answer	1	1.4

Item #30, the final one on the survey instrument, invited the respondents to put any comments that they wanted to make on the back of the page.

Spontaneous comments were supplied by 55.1 percent of the respondents. The comments varied and discussed a number of concerns. Most of the comments amplified the survey responses made by the teachers. Many related several concerns in their comments. The comments can be grouped in 5 categories. Most of the comments revealed reactions to the MSTOI. These included general reaction to the MSTOI, reaction to specific items, relation to the teachers' professional self-concept, expressions of self-competency and pilot testing of the MSTOI. A second category of comments related to data bank accumulation on students. A third category of comments expressed opinions relating to how much help will actually be given the learning disabled child. A fourth category commented

on the survey instrument and a final category contained miscellaneous comments. Although some of the responses were quite lengthy, the short, representative descriptive excerpts may serve to indicate the nature of the concerns and reactions.

Expressions concerning the MSTOI: "time consuming," "too much work," "saw no sense to MSTOI," "tedious job," "more paper work," "did not justify time and pressure created on teachers," "classifications of 'always' and 'never' are useless and not workable," "a waste of time and money if specific help will not be available for problem children," "great desire to see MSTOI changed," "MSTOI needs revisions," "MSTOI should be revised," "MSTOI is subjective," "MSTOI not valid," "waste of time," "evaluator must make subjective judgments." On the positive side regarding the MSTOI were such general comments as, "good for beginning teachers," "O.K. but too general, should be more specific and detailed," "gives a standard of judgment for county and state," "good in some cases, but amiss in others," "teachers should be helped to have uniform marking of code," "MSTOI should have a listing of possible alternative tasks for each disability," "MSTOI effective in some ways," "MSTOI helps spot child who might otherwise be overlooked," "MSTOI goes far toward establishing uniform statewide system," "MSTOI lacks the depth of methods now used in MCPS." There were also some comments on specific

aspects of the MSTOI such as, "given too early in the kindergarten year," "many items are extremely advanced for the early months, e.g. story in sequence and writing," "some items ambiguous," "school adjustment period may interfere with child's true ability performance," "items did not apply to all children," "many questions could not be answered because child is seen only two and one-half hours daily," "many items demand a one-to-one situation, which can't work in the classroom," "MSTOI does not consider children who lack English," "all items must be filled out even those that do not apply to child," "half the kindergarten curriculum is tested on the form," "testing had to start from day 1." As indicated above, several teachers objected to the time of MSTOI administration as being too early. Others said, "some K children too immature," "MSTOI does not take adequate consideration of differing maturation rates," "MSTOI should be given in first grade," "kindergarten children are supposed to score only fourteen points less than first grade children," "difference between kindergarten and first grade are not considered." Teachers further commented that the administration of MSTOI interfered with the proper performance of their professional duties, as shown in these examples, "lost teaching time," "too much time taken from the children," "interfered with teaching time," "program suffered," "interfered with normal kindergarten program and as a result my program was weak," "so little teaching

in two months because of the MSTOI," "been a highly paid secretary," "I'm a teacher, not a secretary," "it takes time to fill in thirty-six times sixty little circles." Regarding teacher competency relative to the MSTOI, teachers indicated, "my informal techniques fit me and my children better," "with competent observation, teachers can identify learning disabled children without MSTOI," "MSTOI is a good idea, but teachers can predict the same results without all this work and expense," "teachers can be more effective, not just as effective as MSTOI," "MSTOI to be given only to children who show some difficulties," "MSTOI only for non-norm K children." There were comments relative to the pilot testing of the MSTOI, such as, "inconceivable that the program was pilot tested in several schools," "so many weaknesses in facilitation of the program," "had MSTOI input, but naturally many suggestions were not used."

In the second category of comments teachers expressed concern regarding the data bank information and indicated their disinclination to label children, as indicated by these representative comments: "unfair to label as 'high risk' after only eight weeks," "against computer labeling," "MSTOI can be used as an early track system," "MSTOI is a means of labeling children," "data bank is a civil liberties violation," "fear of child labeling," and "children may end up being labeled for a good long time."

Category three centered about expressions of concern regarding help for the learning disabled child. Here are some examples: "rarely received satisfactory or prompt follow-up on identified children," "felt as if I was making a nuisance of myself," "did not like techniques used by Pupil Personnel Worker," "received 'run-around' previously when asking for help," "Educational Management Team (EMT) won't be more than present staffing," "without additional help, the teacher is still hard put to find adequate time for individualization to meet special needs," "the burden will still be upon the teacher to meet the needs of the child," "need more psychological testing and follow-up therapy," "cannot work individually with every child identified as having a learning problem," "would like to see help in form of smaller classes, longer day, one class for each teacher, planning time and more supportive services with learning disabled children," "in reality no more help available for the child after the use of the document (MSTOI) than there was before," "EMT consists of one teacher, one principal, who has never taught a primary grade, one psychologist, who takes three months to arrive for an appointment and has never taught primary, and a speech therapist who has so many problems that she can't take kindergarten children." Other comments on the same matter were, "anxious to see if more help comes," "anxious to see what kind of help,

if any, will be given to potential L.D.," hope results will be helpful to verify feelings or help me take a closer look at child." Several teachers noted that they were teaching in a Title I school and had high praise for the services of a Diagnostic-Prescriptive teacher.

The fourth category of comments related to the survey instrument. They included: "well-organized survey," "survey excellent and pretty much covers it," "hope this questionnaire results go to those parties involved in giving this extra workload to teachers," "idea valid, but 'yes-no' format does not give enough options," "survey questionnaire could be filled out more accurately after return of computer print-out," "questionnaire should have been sent after print-out and chance to see if help is to be offered," "survey invalid, smacks of pessimism and premature nagativism, because MSTOI results have not been tabulated and teachers have not yet experienced any follow-up," "some questions difficult to answer because I have not received the supposed 'results' of the MSTOI."

The miscellaneous category included comments such as: "someone other than the kindergarten teacher should check children not within norms of acceptable kindergarten behavior," "substitute time inadequate for filling out MSTOI," "forms in hands of teachers too short a time," "parents pleased with results of informal observational techniques used by teacher."

Summary

This chapter discussed the data generated by the survey instrument and analyzed them in relation to the major hypothesis, the six sub-hypotheses and other variables designed to solicit differentiating data to indicate the basis for attitude formation by the respondents. The data were analyzed for majority support or rejection of the hypotheses and changes and comparisons were tested for significance by the chi square computations of pertinent factors.

Table 36 summarized the data reported for each item of the survey instrument. It presented, in concise form, the tabular information for each item and indicated the table number where more detailed data can be found.

Chapter V, which follows Table 36, discusses the findings from the study and the conclusions derived from an examination of the data.

TABLE 36

SUMMARY OF SURVEY INSTRUMENT RESPONSES

Survey Items	Comments	Tables Referenced
#1 yrs. of exp.	range, 1-25+ years	1, 2
#2 class size	range, 15-33 students	3, 4, 5
#3 assistance reported	aides--34, parent vol.--27 high school students--20, D.P.T.--6	6
#4 MSTOI effective	yes--85.5% no--11.6%	8
#5 informal observation effective	yes--95.65% no--4.35% χ^2 = 1.49, compare to #1 χ^2 = 2.63, compare to #4	7 9
#6 MSTOI confirmed informal obs.	yes--55.1% no--36.2%	16
#7 teachers' perception of own accuracy	75% accurate--59.4% 76-99% accurate--10% 100% accurate--26%	17
#8 judgmental characteristics	withdrawal--75.3%, hyperactive--79.7% aggressive--60.9%, short attention--92.8%, disruptive talking--62.3%, lack of responsibility--55.1%	18

TABLE 36 (Continued)

Survey Items	Comments	Tables Referenced
#9 above characteristics in MSTOI	yes--22.2% no--75.4%	19
#10 previous average no. L.D. children	16.83%	20
#11 additional time needed to identify L.D. children, pre-MSTOI	yes--52.2% no--40.6%	21
#12 time spent, pre-MSTOI	class time (compare #22) out-of-class time	22, 23 24, 25
#13 support for L.D. students, pre-MSTOI	yes--33.3% no--65.2% (compare #24) $\chi^2 = .34$	12
#14 solely responsible for remediation, pre-MSTOI	yes--76.8% no--21.7% (compare #25) $\chi^2 = .238$	26
#15 assistance preferred pre-MSTOI	aide--26%, crisis teacher--10.1% more materials--1%, resource teacher--15.9% smaller classes--31.9%, D.P.T.--7.2% $\chi^2 = 3.776$ (compare #26)	28 29

TABLE 36 (Continued)

Survey Items	Comments	Tables Referenced
#16 refrain from identifying L.D., pre-MSTOI	yes--36.2% no--58.0%	15
#17 reasons for refraining	immaturity--66.7%, new situation--38.9%, difficulty in getting help--27.8%	30
#18 input to MSTOI	yes--2.9% no--73.9% (compare #28)	31
#19 attitude toward MSTOI before use	reluctant--43.9%, neutral--36.4%, pleased--4.6%, enthusiastic--4.5% $\chi^2 = 5.49$ (compare #29)	11
#20 more L.D. identified with MSTOI	yes--2.9% no--87.0%	33
#21 nature of L.D. more accurately pinpointed	yes--23.2% no--69.6%	34
#22 time used for MSTOI	more than week classtime--60.8% less than week classtime--31.8% (compare #12)	22, 23, 24, 25
#23 classtime infringement	yes--79.9% no--15.9%	14

TABLE 36 (Continued)

Survey Items	Comments	Tables Referenced
#24 expect more help with L.D. post-MSTOI	yes--26.0% no--63.7% χ^2 = .34 (compare #13)	12
#25 solely responsible for remediation, post-MSTOI	yes--68.1% no--24.6% χ^2 = .238 (compare #14)	26
#26 assistance preferred post-MSTOI	aide--30.4%, crisis teacher--8.7%, more materials--7.2%, resource teacher--10.1%, smaller classes--31.9%, D.P.T.--7.2% χ^2 = 3.776 (compare #15)	28 29
#27 use of MSTOI only with non-norm students	yes--87.0% no--11.6%	35
#28 desire for MSTOI input	yes--76.5% no--14.5% (compare #18	32
#29 attitude toward MSTOI after use	reluctant--40.3%, neutral--29.8%, pleased--9.0%, enthusiastic--0.0% χ^2 = 5.49 (compare #19)	11
#30 comments		

CHAPTER V

CONCLUSIONS

Introduction

This study was undertaken for the purpose of determining the attitudes of teachers toward two methods of identifying children with learning problems: informal and structured observation. To this end, and based on information obtained in the review of the literature, a survey instrument was constructed.

The responses to the survey instrument yielded much data to indicate teachers' attitudes on their ability to identify children with learning problems by the use of their own informal methods as compared to using a specific structured instrument (MSTOI). The survey instrument also provided information to indicate the basis of their attitudes, as well as factors which might tend to influence a change in attitude.

The selected sample of kindergarten teachers responded to the survey instrument and sent in their responses very promptly, eliminating the need for a follow-up mailing of questionnaire forms.

Findings

The first problem was to find out if teachers had confidence in their own ability to identify children with learning problems through informal observation in their classrooms. All teachers reported their estimate of 75% to 100% accuracy in identifying children with learning problems by the use of informal classroom observation. The teachers by an 81.2 percent majority indicated that they perceived the structured instrument (MSTOI) was an effective instrument for identifying children with learning problems. The major hypothesis, namely, teachers perceived that they can identify children with potential or actual learning disabilities as effectively by informal observational techniques as by the use of the structured MSTOI, was overwhelmingly supported by 95.65 percent of the respondents. A chi square computation of 2.63 was found not to be significant at the .05 level of significance with 1 degree of freedom. This verified that teachers perceived no significant difference in the effectiveness of their own informal methods and the structured instrument as a method of identifying children with learning problems. The response indicated that irrespective of other variables such as years of teaching experience, size of class, amount of classroom and out-of-classroom assistance, teachers felt confident in their own competence to identify children with potential or actual learning problems by informal observational techniques.

The six sub-hypotheses were supported or rejected in the following manner:

1. More of the experienced teachers perceived that they are effective in identifying children with learning disabilities by informal observational techniques than did the less experienced teachers. As cited above, the variable of experience had no effect on the perception of self-confidence in regard to competence in identifying children with learning problems by the use of informal observational techniques. The chi square test for significance was 1.49, with 1 degree of freedom, which at the .05 level of significance was not significant. Therefore, this sub-hypothesis was rejected.

2. Teachers viewed the use of the MSTOI in the same way after using the instrument as before using it. A chi square was computed to determine if any significant differences existed. A chi square of 5.49 was obtained, which, with 4 degrees of freedom, was not significant at the .05 level of significance. Thus, this sub-hypothesis was supported.

3. Teachers viewed the adoption of the MSTOI as an indication that special support will be available in dealing with children who have learning disabilities. A chi square was computed to determine whether any significant difference existed between teachers' report of support received in the past and expected support after administration of the MSTOI. A chi square of .34 was

obtained, which, with 1 degree of freedom, was not significant at the .05 level of significance. Therefore, this sub-hypothesis was refuted.

4. Teachers estimated that a week or more of teaching time was required to administer the MSTOI. The response indicated that this hypotheses was supported by 60.86 percent of the teachers. A chi square computation of 1.42 at the .05 level of significance, with 1 degree of freedom, was found to be not significant when analyzed for differences between inexperienced and experienced teachers.

5. Teachers considered class time used for the administration of the MSTOI as an infringement on teaching time. The response indicated that this sub-hypothesis was supported by 79.9 percent of the teachers. A chi square of .24, which is not significant at the .05 level of significance with 1 degree of freedom, was computed to compare the perceptions of inexperienced and experienced teachers regarding time used for MSTOI administration as an infringement on teaching time.

6. Prior to the use of the structured instrument (MSTOI), teachers were reluctant to identify definitely children with learning disabilities. The response indicated that this sub-hypothesis was rejected by 58.0 percent of the teachers. When the data was analyzed for differences between inexperienced and experienced teachers, a chi square of .23 at the .05 level of significance,

with 1 degree of freedom, was found. This was not significant and indicated that the sub-hypothesis was rejected by teachers regardless of experience level.

In addition to the major and sub-hypotheses findings, the study revealed the nature of teachers' perceptions which may serve to illuminate the bases for teacher attitude in the area under investigation. These findings can be listed as follows:

1. Teachers responding to this survey ranged in teaching experience from first year teaching to more than twenty-five years of kindergarten teaching.

2. Class sizes varied from fifteen children to thirty-three children.

3. The major type of assistance reported by thirty-four teachers was classroom aide. Twenty-seven teachers reported parent volunteers and twenty teachers had high school or college student help. Six teachers reported diagnostic-prescriptive teachers as helpers.

4. Teachers perceived that the MSTOI confirmed their own accuracy in identifying children with learning disabilities. The response indicated that 81.2 percent supported this statement.

5. Teachers perceived learning disabled children in terms of judgmental characteristics, such as "withdrawal," "hyperactivity," "aggressiveness," "short attention span," etc. All teachers reported that they had

observed at least two or more of these characteristic behaviors in learning disabled children. All six characteristics listed in the survey instrument were observed by 33 percent of the teachers. The characteristic listed by the least number of teachers was nevertheless noted by 55.1 percent of the respondents. This appeared to indicate that teachers are comfortable with these judgmental designations.

6. Teachers did not find that these behaviors, designated by judgmental terms, were adequately identified in the MSTOI. The response indicated that 75.4 percent of the teachers found that these characteristics were not adequately identified in the MSTOI.

7. When asked about the average number of children in their previous classes whom they considered learning problems, the respondents estimated about 16.83 percent of their total class population, if their class size had been about the same as the size of their present classes.

8. Additional class time for verification of learning disabled children was required in the past by 52.2 percent of the teachers.

9. Teachers spent much less classroom and out-of-classroom time in previously identifying learning disabled children than they were required to spend in administrating the MSTOI.

10. Teachers reported that in the past they were almost solely responsible for remediating learning problems

and this had to be done within the context of their regular classroom program. This was the response of 76.8 percent of the respondents. As to their post-MSTOI expectations, 68.1 percent expected that the same situation would prevail, in spite of all the time and expense expended in the administration of the MSTOI. The chi square computations indicated the level of significant difference between pre-MSTOI report and post-MSTOI expectations as .238 with 1 degree of freedom at the .05 level of significance. This showed no significant change in expectations of help. Most teachers still expected to be solely responsible for remediation in their classrooms.

11. Teachers' report of the type of assistance they would prefer to have in working with learning disabled children indicated great agreement in their pre-MSTOI and post-MSTOI preference. Smaller classes were the first choice of 31.9 percent of the teachers in response to both pre- and post-MSTOI preferences. A classroom aide was listed by 26.0 percent in the pre-MSTOI question and increased to 30.4 percent of the teachers for the post-MSTOI preference. The chi square computations indicated the level of significant difference between the pre-MSTOI and post-MSTOI preferences.

12. Only 36.2 percent of the teachers reported that in previous years they had refrained from definitely identifying a child as having a learning problem. Of this percentage, 66.7 percent reported that they refrained

because of possible developmental immaturity, 38.9 percent refrained because of child's unfamiliarity with a new situation and the need for time to adjust, 27.8 percent refrained because of difficulty in getting remedial help for the child, and 13.8 percent listed "other" as the reason for refraining.

13. Concerning teacher contribution of ideas or suggestions to the formulation of the MSTOI, only 5.8 percent had had any input, with 73.9 percent reporting that they had no opportunity for input and 20.0 percent leaving the item blank. A 76.8 percent of the teachers reported that they would have wanted to contribute ideas and suggestions to the formulation of the MSTOI.

14. Teacher reponse indicated that 87.0 percent did not believe that more children with learning problems were identified through the MSTOI than through informal classroom observation.

15. Teacher response indicated that 69.6 percent did not believe that the nature of the learning disability was more accurately pinpointed through the MSTOI than through teachers' informal classroom observation.

16. Teacher response indicated that instead of filling out the MSTOI for all their students, 87.0 percent would rather have filled it out just for the children who are not within the broad norms of acceptable kindergarten behavior.

17. Open-ended comments were made by 55.1 percent of the teachers. They lend themselves to classification in five categories. Several teachers made comments fitting into more than one category. The majority of the comments were general and specific expressions of concern regarding the MSTOI. The time-consuming aspect of MSTOI received the most comment. Other comments indicated unhappiness with the loss of teaching time. Some expressed objection to the increased clerical and secretarial burden required by administration of the MSTOI. There were objections to child labeling and data bank storing of information. Some teachers regarded the MSTOI as an asset in producing state uniformity in identifying learning disabled children and some expressed opinions concerning the survey instrument used in this investigation.

Finally, the findings indicate that the teachers are involved and committed to the task of identifying children with learning disabilities and are eager to express their opinions regarding the matter.

Conclusions

The findings justified the following conclusions:

1. Teachers perceived that they could identify children with learning problems as effectively by their own informal methods as by use of the structured instrument.

2. There was no difference in this perception between inexperienced and experienced teachers.

3. The administration of the structured instrument did not serve to sway the teachers to change their attitude toward it.

4. The institution of the structured observation program did not serve as an indication to teachers that they would have more help in working with children who have learning problems.

5. A majority of inexperienced and experienced teachers spent more than a week of classroom time in administering the structured instrument and this time was considered as an infringement on teaching time.

6. A majority of inexperienced and experienced teachers reported that they had previously not refrained from definitely identifying children with learning problems.

In addition to conclusions relating to the major and sub-hypotheses, the following conclusions were justified concerning related factors:

1. Teachers preceived that some behaviors, designated in judgmental terms, were omitted from the structured instrument.

2. The administration of the structured instrument was more time-consuming than successful informal methods previously used.

3. Additional assistance is needed for the busy teacher to successfully remediate learning problems. Teachers perceived smaller classes and classroom aides as a help in working with the learning disabled child.

4. A majority of the teachers would have wanted to contribute ideas and suggestions to the formulation of the structured instrument, although very few had actually been involved.

5. A majority of the teachers perceived that the structured instrument, when compared to informal methods, did not aid in identifying more learning disabled children, nor did it pinpoint more accurately the nature of their learning disability.

6. A majority of the teachers indicated that, if the structured instrument must be used, they would prefer to fill it out just for the children who are not within the broad norms of acceptable kindergarten behavior.

7. Finally, the high percentage of comments, many of them lengthy, and the remarkable promptness in responding to this purely voluntary survey, is indicative of teachers' concerns relating to the MSTOI.

Recommendations

The attitudes of teachers are a strong force in molding the educational programs of any school system. It is especially important for teachers to have a positive attitude toward a program, such as the screening

of kindergarten students for possible learning disabilities, which assigns them such a vital and fundamental role. The attitudes of teachers will, to a large degree, determine the success of the early identification program.

School administrators and officials should be cognizant of teacher concerns in this matter. While the MSTOI is based on the observations of the teacher, as a competent professional, it burdens that same teacher with many time-consuming, non-professional tasks. This is a blow to the teacher's professional self-esteem and also interferes with the teacher's execution of her professional duties.

Based on the literature, the findings from this investigation, and the professional experiences of the researcher, the following recommendations are made:

1. It is recommended that time and money not be spent needlessly on a task which teachers perceive they can perform just as effectively without the structured instrument (MSTOI). Instead, these resources should be applied to the delivery of effective services to the child with a learning problem.

2. It is recommended that the structured instrument be drastically revised, and that the Maryland State Department of Education seek other methods of complying with the state mandated requirement for universal screening of all entering kindergarten students.

3. It is recommended that a follow-up study be undertaken to ascertain if teachers' perceptions and expectations have been accurate.

4. It is recommended that a follow-up study be made to determine if any change in teacher attitude occurs after the computer print-out is returned and remediation support is made available, if indeed such help does materialize. The data from this present study can serve as a base line for that future investigation.

5. It is recommended that this research be repeated in other counties to see if the findings are universal and not merely applicable to the specific population in the specific county.

APPENDIX A

TEXT OF TELEPHONE MESSAGE TO RANDOM SAMPLE

TEXT OF TELEPHONE MESSAGE

I am writing a paper for a university degree program on teacher attitude toward methods of identifying children with learning problems. You are included in my random sample. My I send you a survey questionnaire? . . . . It will come to you via United States Postal Service during the first week in November. The data will be reported anonymously and in aggregate form.

Thank you for consenting to participate in this study.

APPENDIX B

TRANSMITTAL LETTER TO SURVEY RESPONDENTS

November 1, 1975

Dear

As you know from our telephone conversation, I am writing a paper about attitudes of teachers toward methods of identifying children with learning problems for a course in a university program. (In this paper, the term "learning problems" refers to difficulties, regardless of etiology (cause), which interfere with the child's functioning and progress within the broad norms of expected kindergarten behavior.)

Thank you for consenting to complete the enclosed survey questionnaire which is needed in my study. Please fill it out as soon as possible and mail it to me in the enclosed stamped, addressed envelope by November 15.

All data will be anonymous and will be used in aggregate form only. If you are interested, a summary of the findings will be sent to you.

I appreciate your efforts in taking time from a busy schedule to participate in this survey.

Many thanks for your cooperation. I hope that I can reciprocate and assist in any study that you may be doing.

Sincerely,

Beatrice R. Metalitz

Beatrice R. Metalitz
Kindergarten Teacher
Oakland Terrace
Elementary School

APPENDIX C

LETTER FROM DELEGATE RICHARD RYND

Richard Rynd
3222 MIDFIELD ROAD
BALTIMORE, MARYLAND 21208
484-0426

December 23, 1975

Ms. Beatrice R. Metalitz
11202 Newport Mill Road
Kensington, Md. 20795

Dear Ms. Metalitz:

I received your letter regarding HB234. Let me answer your questions first as you have asked them.

1) There was no Federal legislation regarding this particular bill, nor was there any threat of withdrawal of funds if this bill was not passed.

2) I have no knowledge as to the contract to "develop and validate the instrument" in relation to a Merchantville, New Jersey, firm. I have no idea now, nor then, that there was any contract to be let to anyone; in fact, testimony at the time gave me the impression that testing would be entirely in the hands of the State Board of Education and they would take charge of making sure the subdivions followed through on this testing.

The reason for my putting in the bill and my intent of the bill are as follows. I felt at the time, because of personal experiences, that children were not being properly tested before getting into the public educational system. Many of the children who are now behavior problems and children with low reading capabilities, are simply those children who at an early age were never determined to be children with learning disabilities.

Again - the intent of this bill was to call to the attention of the professionals of the public school system those children at an early age who have learning disabilities and to provide proper programs to care for those disabilities.

I hope this answers your questions relating to HB234.

Sincerely,

Richard Rynd

RR/rs
cc: Senator Margaret C. Schweinhaut

APPENDIX D

MARYLAND SYSTEMATIC TEACHER OBSERVATION INSTRUMENT (MSTOI)

MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

PUPIL NO	NAME	GRADE	SCHOOL	BIRTHDATE	SECTION	DATE
⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ④ ④ ④ ④ ④ ④ ④ ④ ② ② ② ② ② ② ② ② ① ① ① ① ① ① ① ①						

In which type of class has this child been placed?

- ○ Regular Classroom
- ○ Special Classroom
- ○ Classroom in a Continuum School
- ○ Resource Room

MARYLAND SYSTEMATIC TEACHER OBSERVATION INSTRUMENT

	ALWAYS	OFTEN	SOMETIMES	SELDOM	NEVER
1. Says "huh" or "what" after he has been told something or asked a question.	○	○	○	○	○
2. Finishes task late.	○	○	○	○	○
3. Can tell about a picture while looking at it.	○	○	○	○	○
4. Names and locates at least five parts of his body.	○	○	○	○	○
5. Knocks over things when reaching for them.	○	○	○	○	○
6. Fumbles for words, uses a wrong word, or says he forgot what he was trying to say.	○	○	○	○	○
7. Cringes or pulls away when approached by others.	○	○	○	○	○
8. Can recognize own name in print.	○	○	○	○	○
9. Stays with the activity at hand.	○	○	○	○	○
10. Can tell about a recent school activity (i.e., field trip).	○	○	○	○	○
11. Follows directions.	○	○	○	○	○
12. Can repeat sentences such as "I like to play outside" in correct order.	○	○	○	○	○
13. Drowsy, sleepy, or sleeps.	○	○	○	○	○
14. Names common objects such as chair, desk, table.	○	○	○	○	○
15. Fights, shouts, or shakes his fist as a preferred means of solving problems.	○	○	○	○	○
16. Identifies likenesses and differences in pictures, objects and forms.	○	○	○	○	○
17. Gives own name and age when asked.	○	○	○	○	○
18. Stares into space.	○	○	○	○	○
19. Can identify colors (i.e., red, yellow, blue, green) by name.	○	○	○	○	○
20. Says, "I can't" when presented with school tasks.	○	○	○	○	○
21. If child prints he prints words, letters and/or numbers backwards.	○	○	○	○	○
22. Hurts children and/or animals for no apparent reason.	○	○	○	○	○
23. Speech is understandable.	○	○	○	○	○
24. Works and solves problems independently.	○	○	○	○	○
25. Destroys or damages things, breaks toys.	○	○	○	○	○
26. Matches objects to pictures (i.e., toy truck to picture of truck).	○	○	○	○	○
27. Gets along with other children in various situations.	○	○	○	○	○
28. Can tell about a story after listening to it.	○	○	○	○	○
29. Stumbles, trips or falls.	○	○	○	○	○
30. Can copy a circle, square, and triangle so that it is recognizable.	○	○	○	○	○
31. Can tell how many objects up to five.	○	○	○	○	○
32. Classifies objects by categories, such as food or clothing.	○	○	○	○	○
33. Speaks in sentences of more than three words.	○	○	○	○	○
34. Discriminates between fine differences in sounds heard (i.e., boy, toy).	○	○	○	○	○
35. Arranges a three part picture story in correct sequence.	○	○	○	○	○
36. Retells story in correct sequential order.	○	○	○	○	○

Signature of Teacher (Use No. 2 Pencil) _____

MCPS FORM 340-17, July 75

NCS Trans Optic F2919 54321

APPENDIX E

SURVEY INSTRUMENT

SURVEY QUESTIONNAIRE ON TEACHER ATTITUDE TOWARD IDENTIFICATION OF CHILDREN WITH LEARNING PROBLEMS.

Comparison of teacher informal methods with the Maryland Systematic Teacher Observation Instrument (MSTOI).

1. How many years have you taught kindergarten (including the current semester)? _____

2. How many children are in your present class? A.M. _____ P.M. _____

3. What assistance do you have? (Specify number of hours per week.)
   aide _____ parent volunteer _____
   crisis resource room _____
   other (specify) _____

4. Do you believe the MSTOI is effective in identifying children with learning problems? yes _____ no _____

5. Do you believe that you, as a teacher, can be effective in identifying children with learning problems by using your own informal observations?
   yes _____ no _____

6. Do you believe the MSTOI has confirmed your identification by informal techniques? yes _____ no _____

7. Some educational research studies say that early childhood teachers are very accurate in identifying children with potential learning problems using informal classroom observation. Other studies conclude otherwise. Please circle at the right the percentage figure which most closely indicates your estimate of your own past accuracy.

%
25
50
75
100

8. A study by a researcher found that teachers most frequently describe children with learning problems as exhibiting the behavior patterns listed on the right. Please indicate by checks in the blanks those behaviors which, based on your experience, you have found to be characteristic of children with learning problems.

withdrawal ___
hyperactivity ___
aggressiveness ___
short attention span ___
disruptive talking ___
lack of responsibility ___

9. Do you believe the MSTOI adequately identifies behaviors for the above characteristics? yes _____ no _____

Survey questionnaire/identification of children with learning problems. Page 2.

10. In past years, what was the average number of children in your class whom you considered to have learning problems? (Please circle the appropriate number at the right.)

1 2 3 4 5
6 7 8 9 10

11. In previous years, after you had observed children during your regular classroom program, was additional time required to identify these children who had learning problems?

yes _____ no _____

12. If additional time was needed, what was the average time required for each child? (Circle the best response in each of the two columns at the right. The columns show time in minutes.)

classroom time	outside of class
0	0
15	15
30	30
45	45
more	more

13. Did you receive a significant amount of help in working with your children who had learning problems?

yes _____ no _____

14. To the extent that you could fit the remediation into your classroom program, were you almost solely responsible for working with your learning problem children?

yes _____ no _____

15. What arrangement for assistance would you have preferred? Please rank the alphabetically arranged items at the right from 1 to 6, with 1 as the most desired. Please specify and rank any other item below.

aide	___
crisis teacher	___
more materials	___
resource teacher	___
smaller classes	___

Other _____ ___

16. In previous years, did you refrain from definitely identifying a child as having a learning problem?

yes _____ no _____

17. If you did refrain, were any of the following your reason for doing so? Indicate by check mark.

a. possible developmental immaturity ___
b. child's unfamiliarity with new situation ___
c. difficulty in getting remediation help for the child ___
d. other (specify)_____ ___

18. Did you have an opportunity to contribute any ideas or suggestions concerning formulation of the MSTOI?

19. What was your attitude toward the MSTOI before you actually used it? (Please check one choice at the right.)

reluctant	___
neutral	___
pleased	___
enthusiastic	___

Other (specify)_____ ___

Survey questionnaire/identification of children with learning problems. Page 3.

20. Do you believe that more children with learning problems were identified through MSTOI than you would have identified through informal classroom observation? yes ____ no ____

21. Do you believe the nature of the learning problem was more accurately pinpointed through MSTOI than through your informal classroom observation? yes ____ no ____

22. On the average, how long did it take you to gather information and to fill out MSTOI for each child? (Please encircle the best response in each column at the right.)

	classroom time	outside of class
	0 min.	0 min.
	15 "	15 "
	30 "	30 "
	45 "	45 "
	more	more

23. Does the class time used for MSTOI represent an infringement on kindergarten teaching time? yes ____ no ____

24. Do you believe that you will now (since MSTOI) have more help in working with children who have learning problems than you have had in previous years? yes ____ no ____

25. Now that you have used the MSTOI, do you believe that, except for advice from the Educational Management Team (EMT), you will be almost solely responsible for dealing with remediation of children with learning problems? yes ____ no ____

26. Now that you have used the MSTOI, which of the kindsof help listed on the right would you prefer to have in your remediation program for children with learning problems? (Number from 1 to 6; No. 1 is most desirable.)

aide	___
crisis teacher	___
more materials	___
resource teacher	___
smaller classes	___
other (specify)	
_____	___

27. Rather than fill out the MSTOI for all your students, would you prefer to make it out just for the children who are not within the broad norms of acceptable kindergarten behavior? yes _____ no_____

28. Would you have wanted to contribute ideas or suggestions to the formulation of MSTOI? yes _____ no_____

29. Now that you have used the MSTOI for each child in your class, what is your present attitude toward it? (Please check one.)

reluctant	___
neutral	___
pleased	___
enthusiastic	___
other (specify)	
_____	___

30. If you have comments, please put them on the back of this page. Thank you.

APPENDIX F

AN EXAMPLE OF A CHI SQUARE ANALYSIS

CHI SQUARE ANALYSIS FOR SUB-HYPOTHESIS 1

(Items #1 and #5. Data shown in Table 10)

$$\chi^2 = \Sigma\frac{(fo-fe)^2}{fe}$$

	yes	no	Totals
5 years or less	22	0	22
6 years or more	43	3	46
Totals	65	3	68

1. for 5 years or less--yes $\frac{22 \times 65}{68} = 21.03$

2. for 5 years or less--no $\frac{22 \times 3}{68} = .97$

3. for 6 years or more--yes $\frac{46 \times 65}{68} = 43.97$

4. for 6 years or more--no $\frac{46 \times 3}{68} = 2.03$

Then substituting the above numbers from the 2 x 2 table into the formula, computations can be made for χ^2 .

fo		fe		
22	-	21.03	=	.04
0	-	.97	=	.97
43	-	43.97	=	.02
3	-	2.03	=	.46

$\chi^2 = 1.49$, with 1 degree of freedom was reported, which was not significant at the .05 level of significance.

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