

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN TEACHERS'
ATTITUDES AND THEIR CURRICULUM PLANNING DECISIONS IN
PRIMARY READING INSTRUCTION: AN APPLICATION OF THE
FISHBEIN MODEL

by

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ABSTRACT

The purpose of the study was to predict and explain elementary teachers' curriculum planning intentions and behaviours from a knowledge of their personal and professional characteristics. The particular planning behaviours investigated involved recommending the instructional use of basal reading programs with different ability groups of primary level students. Three classes of antecedent variables were considered in the prediction: formative, relating to the possession of situational information relevant to primary reading instruction and indexed in terms of prior classroom teaching experience at the primary level; academic, relating to the possession of theoretical information relevant to primary reading instruction and indexed in terms of prior preservice or inservice preparation in elementary reading instruction; and psychological properties, involving the beliefs, motivations and attitudes held toward the planning task. Relationships between curriculum planning intents and behaviours and

antecedent variables, as well as among antecedents, were investigated in the context of Fishbein's Behavioural Intention Model. Basic to the definition of the Model is the notion that intention and behaviour may be predicted primarily from attitudinal and normative factors. Specifically, the Model proposes the variables of Attitude Toward the Behaviour and Subjective Norm as the necessary and sufficient predictors of intention and hence, behaviour. Other variables such as traditionally measured attitudes and individual difference factors are presumed reflected in the attitudinal and normative components of the Model.

The subjects included 112 elementary teachers from the New Westminster School District (School District 40, Province of British Columbia). Data collection instruments were composed of questionnaire items, Semantic Differential-type instruments and a Behavioural Record Instrument. Descriptive statistics, correlational analyses and regression analyses were used to examine the empirical relationships among variables.

The results of analyses indicated that subjects' curriculum planning intentions and behaviours could be usefully predicted from psychological properties variables and that formative experiences and academic learnings were

largely reflected in those psychological properties; specifically, subjects' attitudes toward the behaviour and their normative beliefs regarding performance of the behaviour. While the effect of teaching experience and formal learning on subjects' intention and behaviour was largely mediated by attitude and norm, the former exerted some influence on the empirical relations found between behavioural criteria and the Model's predictors.

It was concluded that application of the Fishbein Model to antecedent-process studies in teaching research offers a useful tool for making quantitative and visible the relationships between instructional processes and antecedent variables as well as among antecedents.

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CHAPTER ONE

THE PROBLEM

1.1 Introduction

An important aspect of research on teaching concerns the search for systematic relationships between process variables which express the events of teaching and antecedent variables which presumably determine those events. A review of the teaching research literature, however, demonstrates an emphasis on either the descriptive analysis of instructional procedures or their consequences rather than an elaboration of antecedents (to instructional behaviour) (Averch et al, 1972; Gage, 1972; Getzels and Jackson, 1963). Moreover, that research which has given attention to antecedents relates primarily to the actions of teachers in classrooms; much less has been recorded of the elements that influence their behaviour in the preactive setting. According to Morine (1973), the planning and preparatory activities of teachers occurring prior to the interactive situation with students constitute a significant but neglected problem area in teaching research.

The need to examine the basis for teachers' preactive planning behaviour arises from the fact that, in large measure, decisions regarding the instructional use of professionally developed curricula are made at the school and classroom level.

In this regard, the teacher has been acknowledged an important agent. Professional teacher organizations for example, have long endorsed an increased emphasis on the teachers' role as curriculum planner (BCTF, 1968) as have provincial departments of education, although less consistently (Torgunrud, 1974; McDonald and Werker, 1976). Professional curriculum developers have also recognized the influence that teachers exert on the effectiveness with which curricular goals are realized through their decisions regarding instructional means (Gallagher, 1967; Herron, 1972). Further support for a curriculum decision-making role for teachers may be found in the curriculum literature. Lavatelli et al, (1972) maintain that the teacher "has become the central figure in content matters and in the selection of materials" (p. 164). Similarly, Connelly (1972) has stated that "Teachers are highly autonomous agents with respect to externally developed materials" (p. 164). This assertion is reinforced by a recent international study of curriculum decision making (Garry and Connelly, 1975) which found substantial agreement among curriculum development authorities that teachers are critical actors in the deliberation and choice that curriculum planning activities involve.

While much opinion has been expressed about the teachers' prerogatives in curriculum matters, there is a lack of empirical evidence relating to curriculum decision-making at the classroom level (Connelly, 1975; Maclure, 1973). Where teachers are allocated responsibility for deciding the relative merit of

professionally developed materials and activities, there is a need to determine those factors which influence their responses to problems of curricular choice. In Shulman's (1974) view, successful implementation of new curricula or effective operation of existing plans and programs requires a research-based knowledge of teachers' planning behaviour; not only a descriptive account of their responses to curriculum related tasks but also an understanding of the basis for practical judgements regarding the selection, adoption, support or worth of curricula.

1.2 Background

In their recent review and analysis of research on teaching, Dunkin and Biddle (1974) have proposed a conceptual scheme for the prediction and explanation of instructional behaviour which appears relevant to the study of antecedent-process relationships in curriculum planning. According to these writers, where instructional tasks are under the volitional control of teachers, their behaviour may be accounted for by reference to what are termed "presage" variables. These include formative and academic factors associated with teachers' practical classroom experience and formal learnings acquired during preservice or inservice preparation. As well, Dunkin and Biddle posit a third presage factor of psychological properties -- the attitudes, beliefs and motivations that teachers hold toward the instructional process.

Basic to the definition of this predictive framework is the notion of teacher autonomy. While many instructional tasks are proscribed for teachers, and others are subject to constraints over which they have little or no control, there remains much of teaching which offers and requires certain initiatives on the part of the teacher. A general acceptance of teacher prerogatives in curriculum matters as these pertain to classrooms has already been indicated; the allocation of decision-making responsibility, however, further assumes that teachers employ this authority with professional and presumably expert judgement (Kirst and Walker, 1974). MacDonald (1970) has referred to both facets:

In all vocations, including teaching, practitioners have to make decisions; the essence of professionalism is to be found in the nature of decisions professionals make, and are allowed to make (p. 32).

MacDonald has further described the desired nature of professional decisions in terms of rational choice making. Specifically, the attribution of rationality to the teachers' choice behaviour requires first, that such judgements reflect the right of the decision-maker to apply his knowledge as he sees fit and secondly, that decisions be made not only because they appear to lead to the most attractive outcome but also can be seen to emerge from a body of professional knowledge (i.e. theory). Similarly, Tyler (1973) refers to the necessary conditions for teacher autonomy as the availability of choice and a rational response to choosing. According to Tyler, a rational response to a problem of educational choice depends upon a knowledge of

the probable consequences of each alternative course of action. The possession of such knowledge, however, extends beyond an awareness of the specific features of a given problem situation; resolution of practical problems of choice must be informed by theory as well. A requirement for theoretical and practical knowledge by teachers in planning has also been indicated by Turner and Fattu (1961) who viewed planning tasks in terms of problem solving and decision-making. Drawing on the earlier formulations of Bruner, Goodnow, and Austin (1956), Turner and Fattu identified the appropriate basis for curriculum planning as the information inherent in the problem situation and information deriving from relevant accepted theory. They maintained that a curriculum plan could be considered valid if it were consistent with both these kinds of information. Green (1975) has provided a succinct summary of the notion of teacher autonomy in planning as the "freedom to make practical judgements on the basis of what they know and believe" (p. 203). Under such conditions, Dunkin and Biddle assume that teacher behaviours are primarily a function of personal and professional characteristics which may be characterized in terms of presage variables.

1.2.1. Presage Variables: Formative and Academic

As a prescription for autonomous curriculum planning, the criterion of rationality clearly relates to the teacher's willingness and ability to engage in activities assumed to accompany a deliberative thought process. According to Jackson

(1968) these activities may be seen as 'manifestations of orderly cognition':

... activities such as the identification of alternative courses of action, the conscious deliberation over choice, the weighing of evidence (and) the evaluation of outcomes (p. 151).

A brief description of planning as an essentially intellectual task for teachers will suggest the relevant formative and academic variables for predicting their responses to planning problems.

Johnson (1975) has described the processes of effective planning by teachers as involving the employ of judgemental skills and abilities such as translation, inference, prediction, analysis, synthesis and evaluation for which Bloom (1965) gives the following operational definition:

... the individual can find appropriate information and techniques in his previous experience to bring to bear on new problems and situations. This requires some analysis or understanding of the new situation; it requires a background of knowledge or methods which can be readily utilized; and it also requires some facility in discerning the appropriate relations between previous experience and the new situation (p. 38).

The curriculum planning behaviours of teachers may thus be understood, in part, from their particular interpretation or understanding of the problem situations they face. This is consistent with contemporary views among psychologists regarding the relationship between the cognitive processes of an individual involved in formulating a complex problem and his

responses to it. Specifically, individuals are seen to form cognitive representations or simplified models of the external world which then serve as mediators for experiencing and responding to reality (Simon, 1957).

The parallel between these notions of problem solving or decision making and educational problems has been drawn by Fattu (1965):

A teacher facing a classroom has an extremely large range of possible situations to cope with. What he chooses to do depends, in large measure, on what he sees as his task. The task then becomes the problem to be solved. Any educational activity involves goals, pupils, content, facilities, and organizational structure. The teacher combines these ingredients in a way compatible with his perception of the task at hand. Skill in acting, or solving the problem, depends upon command of the processes that are useful in attaining various goals (p. 77).

Although considerable debate exists as to the applicability of a rational model to the activities of teachers in classrooms (eg. Cronbach, 1967; Gage, 1972), the attribution of rationality to preactive behaviour appears more plausible. In his analysis of the elementary teacher's role in the instructional process, Jackson (1968) observed that while teachers did not appear analytic or deliberative during the moment-to-moment exchanges with students in the classroom setting, their preactive planning and preparatory behaviour suggested that here "the teacher often seems to be engaged in a type of intellectual activity that has many of the formal properties of a problem solving procedure" (p. 151). The application of a

cognitive model to curriculum planning problems of choice has been made by Connelly (1972) who describes a primary planning task of teachers to be a deliberative process involving the generation of a cognitive map. Specifically, the role of teachers in curriculum decision making or 'user-based curriculum development' is as follows:

The function of user-based development is to construct images of particular instructional settings by matching a variety of theoretical conceptions with the exigencies of these particular settings, and to translate these images into a curriculum-in-classroom use. In this translation, teachers choose from among available curriculum materials those that best suit their images. Intelligent choosing is guided by the theoretical and practical considerations from which images are constituted (p. 169).

It may be concluded that with respect to formative and academic factors in curriculum planning, the appropriate variables to consider relate to the possession of situational and theoretical information. These may be seen as manifest in an awareness of the practical constraints of classroom instruction (Teacher Experience) and the possession of relevant concepts and principles (Teacher Preparation).

1.2.2 Presage Variables: Psychological

While the inclusion of formative and academic factors as logical antecedents of teachers' autonomous behaviour is consistent with prevailing perspectives on "teacher autonomy" in the educational literature, a consideration of psychological factors is seen by Dunkin and Biddle (1974) to be of central

importance to their predictive framework. Where teachers' attentions are focused on coping with problems concerning the curriculum, the nature and objectives of the teaching task, expectations for pupils, and norms of instructional behaviour, Dunkin and Biddle propose that responses to these problems may best be explained by reference to teachers' evaluative, normative and conative beliefs. Specifically, they suggest that the immediate determinants of instructional behaviour are what teachers' "think they prefer to, ought to, and will do" (p. 410). Although Dunkin and Biddle consider norm and behavioural intention they refer particularly to the evaluative or affective element of teachers' belief systems:

Training and formative experiences cannot affect the teacher's performance unless she retains traces of these experiences in her attitude... (p. 40).

A conception of attitudes as learned and as guides to behaviour is consistent with traditional definitions of the attitude construct which view attitude as a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to some object (eg. Allport, 1935).

The notion that attitudes reflect prior learnings is well established and may be seen in the accepted definitions of attitude which consider affect and cognition jointly (Bloom and Broder, 1950; Johnson, 1955; Russell, 1956; Wertheimer, 1945). Typical of this view is that of Asch (1952):

Attitude contains a more or less coherent ordering of data ... an organization of experiences and data with reference to an object (p. 580).

Similarly, Rosenberg (1956) has argued that a tendency to respond to an object with positive or negative affect is "accompanied by a cognitive structure made up of beliefs about the potentialities of that object for attaining or blocking the realization of valued states" (p. 367). It should be noted that the term 'object' is most general, referring to any individual, group, issue or situation (eg. Rosenberg and Hovland, 1960). Thus Conklin (1971) has noted the relationship between cognition and affect with respect to a problem situation:

Virtually every problem has both emotional and cognitive aspects ... Problems are perceived simultaneously in both an emotional and cognitive framework (p. 261).

The assumption of a consistent relationship between expressions of attitude toward an object and behaviour with respect to that object underlies most, if not all, educational research which has considered this variable. The predictive utility of the response consistency assumption may be seen in Dunkin and Biddle's (1974) conception of inner dispositional states such as attitude:

(These) properties have two features in common; they are hypothetical constructs in psychology, thus they are presumed to characterize the individual teacher in a consistent fashion, over time, and serve to explain her behaviour in response to a number of situations (p. 40).

In education, as in most applied areas, it is the particular, situation-specific behaviours that are of interest in prediction. For example, in the preactive instructional phase it is important to predict the specific curriculum choices of teachers rather than general behavioural tendencies or sets of related behaviours assumed to express curricular preference. However, recent reviews of the very few educational studies which have directly examined the relationship between attitude and particular behaviours demonstrate a lack of empirical support for this view (Crocker, 1974; Loree, 1971). In his analysis of research on teachers' attitudes toward various aspects of the 'teaching-learning process', Loree indicated that teachers' actions will be consonant with their expressed attitude only under certain conditions relating to situational and individual difference factors. He suggested that these qualifications were necessary in view of the research findings in related areas of social science, principally social psychology. Wicker's (1969) summary of the state of attitude-behaviour research in this area is illustrative:

The present review provides little evidence to support the postulated existence of stable underlying attitudes within the individual which influence both his verbal expressions and his actions (p. 75).

Although Dunkin and Biddle accept the traditional interpretation of attitude as a trait, an inner dispositional state that acts as both determinant and mediator of teachers' responses to instructional problems, their inclusion of normative and conative

beliefs indicates an awareness that affective dispositions may not be the necessary and sufficient psychological predictors of instructional behaviour. This position would reflect the results of more recent investigations of the functional relationship between attitude and behaviour by attitude theorists. Calder and Ross (1973) for example, concluded their review and analysis of the relevant research with some optimism in the reliability of an attitude-behaviour association but cautioned that the relationship is not a simple one. As a result of the current search for systematic links between attitude and behaviour, two distinct points of view are apparent. The first retains the assumption of consistency while the second questions the basic conception of attitude as the primary determinant of a person's responses to an object.

The consistency view assumes that reliable predictive and causal links exist between attitude and behaviour but are often attenuated or even obscured by the influence of other factors. These include other attitudes, competing motives, verbal, intellectual and social abilities, individual differences, actual or considered presence of other people, normative prescriptions of proper behaviour, alternate behaviours available, expected or actual consequences of various acts, and unforeseen or extraneous events (Ehrlich, 1969; Keisler, et al, 1969; Rokeach and Kleijunas, 1972; Wicker, 1971). This 'other variables' approach preserves the notion that traditional measures of attitude are related to behaviour but that additional variables must

be considered in order to predict behaviour accurately.

The second point of view questions the basic utility of the trait concept in prediction. That is, human behaviour is seen to be sufficiently sensitive to variations in situational and individual difference factors to preclude the existence of reliable links between behaviour and inner dispositional states such as attitude (e.g. Endler, 1975; Mischel, 1973). In the area of attitude research, perhaps the leading exponents of this second approach are Fishbein and his colleagues (1967, Fishbein and Ajzen, 1975). According to these writers, traditional measures of attitude assess a general disposition that may or may not be manifest in a particular behaviour. Their research, reviewed most recently by Fishbein and Ajzen (1975), lends support to this contention. In summarizing their findings they conclude:

Traditional measures of attitude toward an object do not provide an adequate basis for the prediction of specific behaviours with respect to that object (p. 364).

As a corrective to the low correlations typically found between traditional measures of attitude and specific behaviours, Fishbein (1967) had earlier proposed the development of an attitudinal theory for behaviour prediction based on the work of Dulany (1968). In large measure, the increased confidence in the possibility of establishing a systematic relation between attitude and behaviour expressed by Calder and Ross (1973) may be attributed to the success of Fishbein and his associates in conceptualizing and validating their theory for the prediction of single-act behavioural criteria. Specifically, Fishbein (1967;

Ajzen and Fishbein, 1973) constructed a regression model for the prediction of behaviour and behavioural intention from a personal or attitudinal factor and a social or normative factor. In its most recent form (Fishbein and Ajzen, 1975) the model may be expressed as follows:

$$B \sim I = (Ab)_{w_0} + (SN)_{w_1} \quad (1)$$

where B represents the specific behaviour or act of interest; I refers to the intention to engage in the behaviour under specified conditions; Ab and SN, as the predictors of I, represent the attitude toward performing the behaviour in a given situation and the social norm perceived to govern the performance of the behaviour in that situation. w_0 and w_1 are empirically determined (regression) weights.

Fishbein (1973) has shown the model capable of accurate prediction of behaviour and behavioural intention under controlled (laboratory) conditions and with individuals who varied widely in the characteristics they brought to the validation tasks. The predictive utility of the model he attributed in part to its inclusion of a normative component and in part to its emphasis on specificity of measurement; that is, each component of the model is assessed with reference to the same clearly defined act as opposed to a more general object. As well, it is claimed that variables not explicitly included in the model such as situational conditions or personality attributes, can affect intentions and behaviour only to the extent

that they are related to the attitudinal or normative components. However, predictive ability and economy are but one aspect of the model's total utility. As formulated, the model provides considerable explanatory power as well. First, relationships among the terms in the model are specified. Fishbein has elaborated the general factors which may influence the relationship between intention and behaviour and between intention and the attitudinal and normative components of the model. Secondly, the model allows the addition of external variables and accounts for any effect they might have on intention and behaviour through their influence on the attitudinal or normative components or the relative weights. Although the model has received strong empirical support principally in controlled, experimental situations, when utilized in more applied settings the claims for its predictive and explanatory utility have been generally substantiated (eg. Jaccard and Davidson, 1972; Ryan and Bonfield, 1975).

1.2.3. Summary

The problem of better understanding preactive instructional behaviour has been presented as one of predicting and explaining teachers' responses to curriculum planning tasks in terms of the personal and professional characteristics indicated by Dunkin and Biddle (1974). In view of the functional relationship among presage variables proposed by Dunkin and Biddle, development of a systematic approach to understanding teachers' behaviour requires examination not only of the empirical

relationships between process and presage variables but also among presage variables. Particularly, the emphasis given the psychological factor of attitude suggests that the problem of prediction and explanation may be conceptualized in terms of the more general attitude-behaviour issue. From this perspective, the relationships of interest are seen to be best examined within the quantitative framework provided by the Fishbein Model.

1.3 Statement of the General Problem

The general problem investigated in the study was: what are the determinants of elementary school teachers' curriculum planning intentions and behaviours?

The particular planning behaviours investigated in the study involved recommending the classroom use of professionally developed curricula in primary reading. At the primary level, a relevant planning decision required of teachers is the selection of a basal reading program for instructional use with children who vary in their capabilities to acquire basic reading skills. Since these individual differences are typically recognized by forming instructional groups of like ability students, the planning task is one of making the best match between the developmental needs of each group and the characteristics of alternative basal programs (Alpert, 1975; Harris, 1970; Wolfe, 1971). Teachers currently may elect from among programs which offer unique configurations of content, learning activities, teaching procedures and evaluation techniques. Recommending

behaviours, in this context, are seen as behavioural expressions of preference for certain instructional courses of action. Where teachers are allocated responsibility for deciding the curricular merit of each program and their preferred choices reflect a deliberative process of considering and weighing the alternatives, recommending behaviours may be considered as instances of autonomous, preactive instruction.

Consistent with the proposals of Dunkin and Biddle (1974), the antecedent variables considered in the study related to the personal and professional characteristics of elementary teachers. The formative and academic variables of interest were teaching experience (TE) and teaching preparation (TP). It was assumed that recommending a particular instructional course of action as appropriate to the requirements of a group of students depends, in part, on how the teacher interprets or understands the task. The previous experience of teachers may be expected to influence their perception of the problem situation. Specifically, teachers who have had prior practical experience and formal training in primary reading instruction are likely to view the task somewhat differently than those who have had neither or only one of these experiences and consequently, make rather different recommendations.

According to Fishbein and Ajzen (1975), behaviour and behavioural intent with regard to performing a particular act in a given situation is related to the individual's attitude toward^q performing the act in the situation (Ab) and his subjective norm

concerning what he believes he is expected to do in that situation (SN). In the context of the proposed study, recommending behaviours and intents were assumed to be functions of learnings acquired in the classroom and in formal preservice and inservice preparation, reflected in attitudes toward recommending a certain instructional course of action and in normative beliefs as to whether or not the recommendation should be made.

1.4 Purpose of the Study

The purpose of the study was to predict and explain elementary teachers' responses to curriculum planning tasks in primary reading. More specifically the study undertook to determine the relationship between teachers' intentions and behaviours with respect to recommending the instructional use of basal reading programs and selected formative, academic and psychological properties variables suggested by the proposals of Dunkin and Biddle (1974). In this context, the regression model of Fishbein and Ajzen (1975) was advanced as an appropriate methodology for making quantitative and visible the relationships between teachers' planning behaviours and their personal and professional characteristics. A consideration of the Fishbein Model required investigation of the following relationships:

1.4.1. The Relationship Between Intention and Behaviour

In the model proposed by Fishbein, intention is viewed

as the immediate determinant of behaviour. The strength of this relationship is, however, contingent upon a number of factors: 1) the degree of correspondence in the levels of specificity at which intention and behaviour are measured; 2) the stability of intention over time; 3) the degree to which performance of the behaviour is under volitional control. Although Fishbein (Ajzen and Fishbein, 1973; Fishbein and Ajzen, 1975) has shown that intentions are predictive of behaviour over a variety of conditions and persons, he has repeatedly emphasized that an empirical relationship is dependent upon the above conditions. Assessing intention and behaviour at the same level of specificity is essentially a methodological matter of defining the appropriate correspondence between the object or target of the behaviour, the nature of the performance and the situational context and time of performance. Of greater interest to the proposed study are the factors of stability and volitional control. Stability of intention, like specificity, may be seen as a methodological matter involving the temporal proximity of intentional and behavioural measures. Since it is possible that new information may either influence the strength of a previously held intention or lead to the formation of a new intention, discrepancies between intention and behaviour may be reduced simply by minimizing the time span between measures. However, in a more important sense, stability of intention may be related to the degree of volitional control that the individual exercises over performance of the behaviour. Fishbein has

pointed out that the formation of intention is based on the attitudinal and normative beliefs held by the individual regarding performance of a behaviour. It seems reasonable to assume that teachers who differ in their skills and resources with respect to primary reading instruction will also differ in terms of the strength and accuracy of their attitudes toward making particular program recommendations and their perceptions of normative expectations regarding the recommendation. To the extent that intention is the product of attitude and norm, teachers with prior experience and learnings relevant to primary reading instruction will likely form and hold intentions which are more enduring and more consistent with subsequent behaviour.

1.4.2 The Relationship Between Intention and Variables Internal and External to the Model

It may be seen from equation (1) that the immediate concern of the model is the prediction of intention from a personal or attitudinal factor and from a social or normative factor. This follows from a desire to not only predict but also understand behaviour. For the purpose of behavioural prediction, the most direct procedure is to obtain an appropriate measure of intention; however, an understanding of a person's behaviour requires specification of those factors which determine intention. Fishbein has provided strong empirical support for the prediction of intention from the attitudinal and normative components of the model (Fishbein, 1973; Ajzen and Fishbein, 1973; Fishbein and

and Ajzen, (1975). According to Fishbein, the attitudinal and normative components, i.e. the variables internal to the model, are the necessary and sufficient psychological variables with which to predict intentions and thereby behaviour. It is claimed that the addition of external variables will not improve this prediction and will affect intention and behaviour only as they relate to attitude and subjective norm. Particularly, it is expected that the relative importance of the attitudinal and normative terms will vary with the kind of behaviour that is being predicted, with the conditions under which the behaviour is to be performed, and with the individual differences among persons who are to perform the behaviour. In the proposed study, differences among persons were of central concern. Here, a consideration of the novelty of the planning task for teachers leads to the expectation that prior experience and learning will affect the components of the model differentially. That is, variation in the relative importance of the predictors will reflect the amount of exposure to and information about a given instructional course of action (i.e. basal reading program). It may be expected that the greater a teacher's exposure to a particular program in classrooms and the greater the amount of information possessed about that program with respect to the reading requirements of children, the more favourable or unfavourable and the stronger or weaker are likely to be his attitudes and normative beliefs respectively, to recommending the use of a particular program.

In summary, the objectives of the study were to first, assess the applicability of the Fishbein Model to the problem of predicting preactive instructional behaviour and secondly, to examine the impact of prior experience and learning on the predictive relationships assumed by the model.

1.5 Specific Problems to be Investigated

The specific problems investigated in the study involved the prediction and explanation of elementary teachers' intentions and behaviours with respect to recommending the selection of basal reading programs for instructional use with primary-level students. The particular planning tasks are detailed in Section 3.2.1.

- 1) Do the variables specified in the Fishbein Model provide the necessary and sufficient predictors of behaviour and behavioural intent?
- 2) What is the effect of teachers' prior experience and learning on the relationship between intention and behaviour?
- 3) What is the effect of teachers' prior experience and learning on the relationship between intention and variables internal to the Fishbein Model?

1.6 Definition of Terms

1.6.1 Criterion Variables

a) Intention (I): Behavioural intention refers to the individual's stated intent to perform an act under specified conditions. In the study, the relevant acts concerned recommending the instructional use of basal reading programs. Operationally, intention to recommend was defined in terms of the subject's willingness to recommend a particular basal reading program for instructional use with a given ability-group of primary-level students. It should be noted that intention functions as both a predictor and criterion variable.

b) Behaviour (B): Behaviour refers to the performance of the particular act toward which the behavioural intention is assessed. In the study, behaviour was recorded by asking subjects to make actual recommendations for the use of particular basal reading programs with given ability groups of primary-level students.

1.6.2 Presage Variables Internal to the Fishbein Model

a) Attitude toward the Behaviour (Ab): Consistent with Fishbein's conception of attitude as the evaluative aspect of a set of beliefs concerning a psychological object, a unidimensional definition of the attitude construct as the amount of affect for or against an object will be adopted (eg. Thurstone, 1931). However, from Equation (1) it may be seen that the object of interest refers to the performance of a particular act.

Attitude is thus assessed in terms of the subject's amount of affect for or against performance of the behaviour. In the study, attitude toward the behaviour (Ab) was measured by asking subjects to indicate their degree of favourableness or unfavourableness toward recommending the use of a particular basal reading program with specific groups of primary students.

b) Subjective Norm (SN): The normative component of Fishbein's model deals with the influence of the social environment on the formation of intention and the performance of behaviour. Specifically, Subjective Norm (SN) refers to the subject's perception that most people who are important to him think he should or should not perform a particular behaviour. In the study SN was assessed as the perceived expectations of significant referents regarding the subject's recommendations for the instructional use of basal reading programs.

1.6.3. Presage Variables External to the Fishbein Model

a) Teacher Practical Experience (TE): This variable refers to the possession of situational information relevant to reading instruction at the primary level. 'Situational' or 'practical' information is the specific, descriptive data inherent in a planning situation including facts about a school system, a school or a particular classroom; a group of students; and relevant curriculum materials and activities. Since student developmental level and curricula are assumed to be the critical data in a planning decision, an awareness of these elements is

indexed in terms of prior classroom experience at the primary level. Specifically, TE is dichotomized to indicate elementary teachers who have had primary-level experience and those who have not.

b) Teacher Preparation (TP): This variable refers to the possession of theoretical information relevant to reading instruction at the primary level. Most generally, the bodies of theory traditionally considered necessary to inform educational practice and included in teacher education programs, i.e. educational history, philosophy, sociology and psychology, bear on any planning task. However, in the context of the present study the concepts and principles of learning and instruction in early reading are seen to be of primary importance. This is consistent with Shulman's (Shulman, 1974; Shulman and Elstein, 1975) findings that the background learnings necessary for resolution of practical problems are domain specific. The possession of this information is indexed in terms of prior preservice or inservice preparation in developmental reading. Specifically, the TE variable is dichotomized to indicate elementary teachers who have had such preparation and those who have not.

1.6.4. General Terms

a) Curriculum Planning: This term refers to the processes used by a classroom teacher in determining an instructional course of action for a particular group of learners

in a particular setting. In a comprehensive sense, curriculum planning includes diagnosing student needs, formulating instructional objectives, and generating, selecting, and organizing lesson content, learning activities, resources, and evaluation procedures (eg. Taba, 1962). The actual processes of planning are unobservable, although they may be inferred from observable procedural behaviours. They are assumed to be essentially rational and deliberate. In the study, curriculum planning refers to teachers' recommendations regarding selection of professionally developed curricula with a view to their use with groups of students who vary in terms of learning needs and requirements.

b) Curriculum Decision Making: Recommending the use of a particular basal reading program with a particular group of students is construed as a problem of choice, of decision making. A curriculum decision is seen to be the outcome of a rational process employed to deal with a problem of selection. Generally, such problems exist whenever the most appropriate course of action is not immediately evident. With respect to matching programs with student groups, there exist no explicit, prescriptive guidelines (Barr, 1974; Cohen, 1975). Evaluation, deliberation, and judgement thus devolve upon the classroom teacher.

c) Curriculum Planning Tasks: The planning tasks to be examined in the study will be defined in terms of two

dimensions or conditions; alternative curricula and student groups.

c1) Curriculum Alternatives: The specific curricula recommended by subjects were the basal reading programs prescribed by the province for use in the primary grades. These are the Canadian Reading Development (Copp-Clark) Series, (McIntyre, 1962) and the Language Patterns Reading Series (Linn, 1967). Each is designed to impart a basic reading competence in a progressive sequence. However, they differ in their instructional strategies. Copp-Clark emphasizes the initial acquisition of word meaning skills while Language Patterns fosters initial sound-symbol discrimination accuracy. As perceived by practicing teachers, these programs differ also on a number of other dimensions including story and illustration interest, rate of skill development and instructional directiveness (Sweet, 1975). However, a basic difference between 'meaning' and 'code' emphasis is the typical distinction applied to basal reading programs in the literature (eg. Chall, 1967).

c2) Student Groups: As indicated, students differ in the capabilities considered as prerequisites for learning to read. Although each student is thus unique and may best learn under conditions of individualized instruction, the constraints of class size dictate that these differences be accommodated by the formation of instructional groupings of like ability students. Such groupings are only estimates of any given pupil's status. However, by the end of one year of instruction those

students who are experiencing little difficulty or marked difficulty are identifiable with some reliability on the basis of testing and observation. Thus, the particular groupings and grade level selected to define the instructional situation for planning were the 'high' and 'low' ability groups at the second year primary level.

1.7 Delimitations

a) Decisions regarding the classroom use of curricula represent but one of the many planning activities engaged in by teachers. For example, the actual design and construction of curriculum materials is occasionally undertaken by teachers. However, their role in this aspect of planning is usually limited to participation in larger committees composed of a number of persons who represent different areas of expertise such as subject-matter and curriculum specialists, educational psychologists, and media technologists (Merrill, 1968; Schwab, 1973). More typical of the function of teachers in planning are activities involving the adaption, modification and interpretation of professionally developed curricula (Ben-Peretz, 1975). Here, the relevance of teachers' selection behaviour may be seen in the assertion of Connelly (1972) that "interpretation should be preceded by intelligent choice among externally developed materials (p. 169)." It is to the prediction of this choice-making aspect of planning, referenced by teachers' recommendations, that the proposed study was addressed.

b) Recommending behaviours were studied in relation to a single grade-level and subject-matter area and with reference to particular groups of students.

c) The recommending behaviours examined relate only to the preactive phase of instruction. Instructional strategies and evaluation procedures associated with the implementation of curricula were not the concern of the study.

d) The study focussed on a particular instance of practicing teachers planning rather than their potential for participation in planning. Although the question of teacher effectiveness in planning has centered on their use of theory to inform practical judgements (Broudy, 1972; Glass, 1970; Hayes, 1975; Maclure, 1973), it was not the aim of the proposed study to resolve this important issue. Under the conditions of the study the actual utilization of either theoretical or practical information could not be traced. Rather, the relevance of differences in teachers' possession of these knowledge sources to their planning responses is assumed and the association of prior experience and learnings to recommending behaviours was examined through the agency of the psychological variables included in the Fishbein Model.

e) Many contextual elements may influence teachers' planning decisions including for example, aspects of the school and community (Herrick, 1971; Taylor, 1970). Such elements are undoubtedly a component of teachers' deliberations and reflected

in their (stated) evaluative and normative beliefs. However, only the factors of student developmental level and curricular alternatives were specified as conditions of the study in view of their recognized importance in planning (Harris, 1970; MacDonald, 1965; Taba, 1962).

f) The sample was restricted to 112 elementary teachers in one school district who volunteered to participate in the study. The results may thus be generalized only to teachers who are similarly situated and who possess the particular personal and professional characteristics of this sample. The generalizability of the findings is further constrained by the Fishbein formulation. It has been indicated that the model is particularly sensitive to situational conditions and individual differences. The results of analysis then must be unique to the participating teachers. However, the underlying theory is claimed to be quite general in its application to various situations and persons. It is this general applicability that the proposed study attempted to demonstrate which has implications for the conduct of antecedent-process investigations in education.

1.8 Organization of the Study

The following chapter contains a more detailed discussion of the attitude-behaviour issue in education and related areas of social science. As well, the conceptual basis

and empirical development of the quantitative framework which underlies the study is examined. Research supporting the Fishbein formulation is reviewed and related to the problems which provide guidance to the study. In this context, the research questions initially identified are elaborated.

Chapter Three outlines the research design used in gathering data for the study, the development of the instruments employed, and the statistical procedures used in analysis of the data.

Chapter Four reports the results of analysis related to the identified research questions.

Chapter Five concludes with a summary of the study, discussion of the findings, conclusions, implications, and recommendations for further research.

CHAPTER TWO

STATEMENT OF PREVIOUS RESEARCH

This chapter first elaborates the various aspects of the attitude-behaviour problem from the perspective of both attitude theorists and more practically oriented researchers, principally social psychologists, who have considered this issue. In this context, the very few educational studies that have examined teachers' attitudes with regard to preactive instruction are reviewed and the needed consideration of some alternative conception of attitude shown. The theoretical basis and development of Fishbein's approach to attitude-behaviour relationships is examined. Relevant validation studies of the Fishbein Model are reviewed as are studies of its utility in more applied settings. Supported by this discussion and review, the research questions identified with respect to the present study are then elaborated.

2.1 Attitudes and Behaviour: Relevant Issues

A major concern among social scientists has been the lack of empirical support for a strong relationship between measures of attitude and behaviour. Wicker (1969) for example, reviewed 46 studies in which subjects' verbal and behavioural responses to attitude objects were obtained on separate occasions. He found that attitude-behaviour correlations were generally low and inconsistent and summarized the results of his review as

follows:

Taken as whole, these studies suggest that it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviour than that attitudes will be closely related to actions. Product-moment correlation coefficients relating the two kinds of responses are rarely above .30 and often near zero (p.65).

Although numerous potential sources of discrepancy have been suggested by such findings (DeFleur and Westie, 1958; Erlich, 1969; Lemon, 1973; Rosenberg and Hovland, 1960; Schwartz and Tessler, 1972), the problem may be seen to comprise two related aspects. The first concerns the conception and measurement of the attitude construct and the second relates to the influence of variables other than attitude in the prediction of behaviour.

2.1.1. The Conception and Measurement of Attitude

The theoretical nature and function of attitude has long engaged the interest of philosophers and psychologists and the considerable body of literature available on this topic clearly bears on the present study. However, the intent of this section is not to trace the historical development of the attitude concept but rather to outline current thought and practice regarding the empirical search for a systematic relationship between measures of attitude and behaviour.

It was previously indicated that the traditional definition of attitude refers to a learned predisposition to respond in a consistently favourable or unfavourable way to an

object or class of objects. This general definition has given rise to a number of differing interpretations, most of which stem from the failure to find the predicted association between measures of attitude and behaviour. Basic to the traditional interpretation is the assumption that attitude is an internal process which determines an individual's response to an (attitude) stimulus. Such a perspective may be seen in Allport's (1935) assertion:

An attitude is a mental and neural state of readiness exerting a directive influence upon the individual's response to all objects and situations to which it is related (p. 810).

Similarly, Campbell (1960) maintains that attitude is a primary determinant of behaviour:

Responses toward most objects are prefaced by attitudes toward those objects which in a proximal sense determine the responses (p. 28).

Beginning with the classic study of Lapiere (1934) empirical investigations of this assumption revealed that attitude, as measured by standard attitude instruments, and behaviour were not highly correlated. As a consequence, the argument was advanced that these instruments were insufficient in that they measured only the affective component of attitude. The alternative view held that attitude was multifaceted, involving not only affect but also cognitive and behavioural components (Chein, 1948; Insko and Schopler, 1967; Katz and Stotland, 1959; Rosenberg and Hovland, 1960). This multicomponent view of attitude has since gained considerable acceptance

both as a conceptual description of the attitude construct and as an explanation of behaviour. Kretch et al (1962) for example, relate attitudinally relevant behaviours to the complex system of beliefs, feelings and behavioural tendencies an individual holds with respect to an object:

The social actions of the individual reflect his attitudes-enduring systems of positive or negative evaluations, emotional feeling, and pro or con action tendencies with respect to social objects (p. 139).

At a conceptual level it may be seen that the above disagreement with the traditional view of attitude is a disagreement over the nature of predispositions. The more immediate implication of the multicomponent view for behavioural prediction is that all three components must be assessed if the attitude-behaviour relationship is to be adequately understood. This assumes however, that the hypothesized components are relatively independent. To date, attempts to establish empirically the independence of affect, cognition, and conation have produced mixed findings. Woodmansee and Cook (1967) conducted a factor analysis of a large pool of attitude items and found no evidence for such a classification of evaluative responses. Similarly, Ostrom (1969) found minimal support for the construct validity of this classification. In this study a high intercorrelation among the components was obtained with the uniqueness of each component contributing little additional variance. In explanation of these findings, Ostrom suggested that the homogeneous nature of the attitude issue, which

concerned the church, and the relatively homogeneous college student population reduced the amount of inconsistency possible between components. More recently, Kothandapani (1971) replicated Ostrom's procedures and reported some success in establishing the discriminant validity of scales measuring each of the hypothesized components. However, criticism of Kothandipani's analysis (Fishbein and Ajzen, 1975) suggests that the findings of this study must be accepted with some reservation.

Generally, the utility of the multicomponent view as an explanation of the attitude-behaviour relationship is questionable. The complexity of the procedures involved in a 'multi-indicator' approach to attitude measurement (eg. Cook and Selltiz, 1964) has inhibited the development of any new and widely useable instruments (Lemon, 1973). At a more fundamental level the high convergence among cognitive, affective, and conative items in standard attitude measures such as Thurstone (1931), Likert (1932), and Guttman (1944) scales indicates that responses from any of the three components would serve equally well as an index of attitude. It follows that separate assessment of all three components is unlikely to lead to improved behavioural prediction (Fishbein and Ajzen, 1975).

A second response to the consistently low relationship found between attitudinal and behavioural measures has been what DeFleur and Westie (1963) refer to as the 'probabilistic' definition. Essentially this view questions the existence

of attitude as a latent intervening variable between a stimulus and a behavioural response. Rather than accept the notion that an individual's behaviour is somehow shaped, guided or mediated by an unobservable variable, a conception of attitude more closely tied to observable behaviour is proposed. Fuson's (1942) definition is illustrative of this position:

The probability of occurrence of a defined behaviour in a defined situation (p. 856).

Adoption of this extreme view, with its rejection of any indirectly defined constructs and demand that conceptualization be linked absolutely to the processes of measurement, is, in Lemon's (1973) consideration, "tantamount to a rejection of the concept of attitude..." (p. 11). However, in a less literal sense the probabilistic definition may be related to a distinction often drawn between attitudes and their behavioural component; that is, attitudes are seen to differ from each other in the readiness with which they can be expressed in behaviour (eg. Davis, 1975; Triandis, 1964). Whether or not such a characteristic may be considered an integral part of attitude is subject to considerable debate. Fishbein (1967) for example, has argued for its separate identity. Specifically, he maintains that the term 'attitude' should be used when a measure places an individual's response on a bipolar, affective dimension and the term 'behavioural intention' employed when a measure is used which indicates the person's position along a subjective probability dimension involving a relation between himself and some

action.

Referring to the traditional definition of attitude and its accepted means of measurement, comparative studies of the predictive utility of standard attitude scales have been conducted on the premise that the failure to obtain reliable prediction of behaviour may be due not to the inadequacies of verbal measures per se but to the particular type of measure employed. Tittle and Hill (1967) for example, compared Likert, Thurstone, and Guttman scales together with a Semantic Differential measure (Osgood et al, 1967), in the prediction of multiple (four) behavioural criteria. It should be noted that in contrast to the Ostrom (1969) and Kothandipani (1971) studies the scales used by Tittle and Hill were designed to measure the same underlying attitude, ie. attitude toward various aspects of political activity. Their findings provide some evidence for the differential effect of measuring instruments on prediction. Significant differences among the attitude-behaviour correlations for each instrument were noted with the Likert scale being most highly correlated with behaviour. Various arguments were advanced for these differences. The superiority of the Likert scale was attributed, in part, to the operation of an intensity factor in the summated rating procedure used in scoring. Specifically, Likert scoring is influenced by the degree as well as the direction of response to each item. Intense or strongly felt responses would thus weight the final score assigned to each subject. The finer discriminations allowed were presumably reflected in the rankings of subjects

with respect to the object; the rankings being input to the particular (Gamma) statistic used in analysis. A second reason advanced by Tittle and Hill in explaining the greater predictive ability of the Likert scale related to the number of self-referent items contained in the instrument. Relative to the other measures, the Likert scale included considerably more personal pronouns (i.e. 'I' or 'me'). It was assumed that "response to an item is likely to be more specific for an individual if the item contains some self-reference" (p. 212). Although more technical treatments of the relative predictive utility of standard attitude scales have been given (eg. Fishbein and Ajzen, 1975), a general consideration of the two issues raised by Tittle and Hill, i.e. intensity and specificity, will outline the basic operational issues involved in predicting behaviour from attitude.

Although considerable debate surrounds the interpretation and function of such terms as intensity or salience in attitude measurement (eg. Lemon, 1973), they have been equated with the notion of importance (Hackman and Anderson, 1968; Wyer, 1970). While it seems plausible that the importance of a belief statement is a determinant of a person's total attitude score, this has not been shown empirically. (Kaplan and Fishbein, 1969). As a component measure of attitude, importance has been widely used in applied areas such as education (Stake and Gooler, 1971) and consumer research (Wilkie and Pessimier, 1972). However, this appears to be an inappropriate usage in that the importance of an attitude object or

attribute is not an adequate measure of evaluation. Measures of importance have been shown to load on both the evaluative and potency dimensions of the Semantic Differential (Osgood, Suchi and Tannenbaum, 1957).

The notion of specificity may be discussed with respect to attitudinal and behavioural variables. Some researchers (Ehrlich, 1969; Fishbein, 1967; 1973; Wicker, 1971) have drawn attention to the criterion measures employed in attitude-behaviour studies. It is argued that in most instances there are many possible favourable or unfavourable ways in which an individual can respond to an attitude object. Since such behaviours may be substitutes for one another, their inter-correlations may be quite low. It follows that to assess adequately the relationship between an attitude toward an object and behaviour with respect to that object, a representative sample of relevant behaviours should be used as a criterion. Referring again to the traditional definition of attitude and its assumed relation to behaviour, it may be seen that the criterion issue concerns the interpretation given the notion of response consistency. Some researchers (eg. DeFleur and Westie, 1958) maintain that there should be a consistency among different responses. Others (Fishbein, 1967; Osgood et al, 1957; Thurstone, 1931) assume that only the total amount of favourableness or unfavourableness of an individual's different behaviours toward an object should be consistent with his attitude toward that object. Empirical support for this position has been

provided by Fishbein and Ajzen (1974) who showed that traditional measures of attitude (i.e. Thurstone, Likert, Guttman and Semantic Differential) correlated highly with multiple behavioural criteria but only slightly with particular behaviours.

Rokeach and Kleijunas (1972) have elaborated the notion of content specificity with regard to verbal attitude measures. They proposed that attitude-behaviour relationships could better be explained by considering 'attitude toward the situation' (As) as well as 'attitude toward the object' (Ao). They argued that Ao and As were independent and that each would predict behaviour, at least to some extent. To test this formulation, Rokeach and Kleijunas attempted to predict college students' attendance (i.e. cutting classes) in terms of Ao and As, where Ao referred to the course instructors and As referred to the importance or unimportance of attending class. Consistent with expectations, they found Ao and As to be uncorrelated. However, while As was significantly correlated with behaviour, the relationship between Ao and behaviour was not significant. While these findings illustrate the significance of considering the various levels of specificity at which attitude may be measured with regard to the prediction of particular behaviours, certain interpretive difficulties attend Rokeach and Kleijunas' formulation. First, As was operationalized with respect to 'attending class' rather than the classroom situation. It is thus more closely related to an attitude toward the behaviour than toward the situation. Secondly, a measure of importance was used in assessing As. Specifically, a nine-point scale ranging from

'somewhat important to me' to 'very important to me' was employed. As previously indicated, measures of importance may not be highly related to attitude.

Perry (1976) recently conducted a study which examined the effect of scale specificity on the prediction of behaviour. In this study, two measures of attitude (Thurstone scales) were constructed at different levels of specificity with respect to the behaviour of interest. The latter involved a choice among five punishments for cheating on a college-level examination. The choices or verdicts differed in their severity, ranging from a mild rebuke to the assignment of a failing grade. The 'general' scale was composed of items which reflected a general orientation toward cheating in school while the 'specific' scale items made particular reference to punishment behaviours under specified circumstances. Results similar to Rokeach and Kleijunas' (1972) findings were reported. The specific and general scales were uncorrelated while the correlation of behaviour with the general and specific scales although low, was significantly higher for the latter measure. Perry concluded that, taken by itself, attitude is not a particularly efficient estimator of behaviour but that apart from other variables which presumably intervene to attenuate the relationship, some portion of the correlation between attitude and behaviour may be accounted for by the specificity of the attitude scale.

In both the Rokeach and Kleijunas (1972) and Perry (1976) studies it was anticipated and shown that attitude toward

the object (Ao) and attitude toward a specific behaviour (Ab) were uncorrelated. The implication that responses to these measures will always be uncorrelated does not, however, follow. In a study of two Prisoner Dilemma games Ajzen and Fishbein (1970) found significant correlations between (Semantic Differential) measures of Ao and Ab. Fishbein's explanation for this relationship provides a rationale for the ability of more specifically defined scales to predict behaviour. In his view, the more immediate determinant of a particular behaviour is the attitude toward performing that behaviour. Assessments of attitude toward the more general object will be related to a particular behaviour with respect to that object only to the extent that they are correlated with the more specific measure.

Evidence that standard attitude measures are predictive of sets of behaviours but not specific behaviours helps to explain the negative findings of many previous investigations of this relationship. Particularly, the effects of item specificity on the prediction of single-act behaviours indicates at least one direction in which reconceptualization of attitude may proceed. Currently however, the view that most investigators appear to hold may be summarized as including the belief that attitudes are a primary determinant of a person's responses to an object, i.e. affective, cognitive or conative, and that any of these responses provide a valid index of attitude. While this view prevails, it is also qualified by an awareness that no one-to-one correspondence may be expected between attitude so defined and any given behaviour. An

acceptance of the imperfect relationship between attitude and behaviour leads to a discussion of the second major explanation of discrepancies in this relationship.

2.1.2. The Role of Non-Attitudinal Variables in the Prediction of Behaviour

It has been suggested that much current research on attitude-behaviour relationships reflects the view that attitudes somehow shape, guide or mediate an individual's behaviour but that as presently conceived and measured, do not provide a sufficient basis for behavioural prediction. Freedman et al, (1970) have stated this position as follows:

... attitudes always produce pressure to behave consistently, but external pressures and extraneous considerations can cause people to behave inconsistently with their attitudes. Any attitude or change in attitude tends to produce behaviour that corresponds to it. However, this correspondence often does not appear because of other factors that are involved in the situation (p. 385-6).

A large array of 'other variables' has been proposed to account for the inconsistent relation between attitude and behaviour. Since comprehensive treatments of these potential sources of influence are available (Ehrlich, 1969; Fishbein and Ajzen, 1975; Kiesler, Collins and Miller, 1969; Tittle and Hill, 1967; Wicker, 1969) no attempt to elaborate these sources will here be made. However, certain points with respect to the general nature of these variables, their relationship to attitude in prediction and the methodological approaches employed in their study

is necessary.

Most generally the 'other variables' explanation implies that attitude is only one of a number of variables that influence behaviour and that non-attitudinal factors, relating to situational conditions and characteristics of the person, must also be taken into account. Wicker's (1969) review and analysis is perhaps the most comprehensive and his categorization of the logically relevant antecedents into personal (i.e., individual difference or intra-personal) and situational (i.e., environmental or extra-personal) factors is typical of most surveys. Wicker detailed the personal factors potentially capable of influencing the attitude-behaviour relationship as: other competing attitudes and motives; and differences among verbal, intellectual, and social abilities. The relevant situational elements proposed were: actual or considered presence of other people and normative prescriptions of proper behaviour; available alternative behaviours; unforeseen or extraneous events and expected or actual consequences of various acts; the specificity of the attitude object. A final factor, relating to the specificity of measuring scales previously discussed, was the degree of similarity between the test conditions under which attitude and behaviour measures were drawn.

While many variables have been identified as logical determinants of behaviour, relatively few studies have explicitly tested the other-variables explanation. Wicker (1969) stated:

Often these factors are mentioned in discussion sections by investigators who have failed to demonstrate attitude-behaviour consistency...The arguments for the significance of each factor are often plausible anecdotes and post-hoc explanations (p. 67).

Among those studies which have directly examined the effect of personal and situational factors on the attitude-behaviour relation, there appear to exist two points of view regarding the functional relationships among antecedent variables which may be termed interactive or independent (Fishbein and Ajzen, 1975). Where relationships between attitude and behaviour are moderated by other variables, as for example when certain skills are required to perform the behaviour, attitude is seen to interact with ability in determining the behavioural response. Alternatively, other variables may operate independently in their influence on behaviour. Direct effects of an ability variable on behaviour may occur regardless of the attitude held. In this case, the ability variable would function in conjunction with attitude in determining the behavioural response.

It is also possible to characterize each of the above viewpoints in terms of the research methodology typically employed (Wicker, 1971). One strategy has been to create experimentally two or more levels of a variable and then to examine the attitude-behaviour relation at the different levels. In a series of studies examining racial attitudes and various behaviours regarding participation in civil rights activities (DeFleur and Westie, 1958; Green, 1972; Linn, 1965; Warner and DeFleur, 1969), variables such as degree of public exposure or

visibility and degree of intimacy were experimentally manipulated to determine their effect on the relationship between racial attitudes and behaviour. In Warner and DeFleur's (1969) study for example, the effect of public exposure on behavioural commitments such as 'contributing money to a civil rights organization', 'attending a dinner to welcome ten negro students to campus', and 'endorsing an appeal to seek out qualified negro candidates for public office' was investigated for two groups of subjects defined in terms of their racial attitudes (i.e. most and least prejudiced). The visibility of the behaviour was manipulated by telling half the subjects in each attitude group that their responses would be published in a student newspaper (high social constraint condition) while the other group was assured that their responses would be kept confidential (low social constraint condition). Comparisons of the refusal and compliance rates of each attitude group under the social constraint conditions were made. Specifically the two situational conditions and the partitioned attitude positions allowed a test of proportions to be made using the behavioural measure as a dependent variable. As anticipated, Warner and DeFleur found a significant difference between the responses of the defined attitude groups attributable to social constraint.

More recently, Snyder and Swann (1976) examined the effects of a personality variable on attitude-behaviour consistency. Specifically, they investigated the influence of 'self-monitoring' on the relationship between attitudes toward the issue of sex-discrimination in job hiring practices and legal

decisions in a related court case. The construct of self-monitoring was defined as the propensity of an individual to refer either to situational and normative cues or to information about inner dispositional states such as attitude. Two groups of subjects were formed on the basis of high or low scores on the Self-Monitoring Scale (Snyder, 1974). This allowed a comparison of the congruence between attitudes toward hiring practices and verdicts rendered in the legal situation for subjects who were inclined either toward self or situation monitoring. Snyder and Swann found that for the high self-monitoring group, covariation between attitude and behaviour was significantly greater than for the low self-monitoring group although the magnitude of the association was not large. Snyder and Swann concluded that congruence between attitude and behaviour is greatest for persons who regard their behaviours as accurate reflections of corresponding dispositions, i.e. attitudes.

An alternative strategy for testing the contribution of a variable to behavioural prediction is to measure it directly, together with attitude. Here, attitude and additional factors are treated as independent variables in a regression equation with behaviour as a dependent variable. Wicker's (1971) investigation provides an example of this approach. In this study, three church-related behaviours involving attendance, monetary contributions and the degree of participation in church activities were predicted from the following variables: attitude toward the church; perceived consequences of the behaviour; evaluation of the behaviour; and judged influence of extraneous

events. Wicker reported results for the independent and joint contribution of the predictors which showed essentially that attitude and other variables may or may not be related to a given behaviour. Specifically, he found correlations between antecedents and behaviours which ranged in magnitude from low to moderately high while the multiple correlations were equally variable.

A study by Ewens and Ehrlich (1972) similarly demonstrated inconsistent relations between various civil rights related behaviours and antecedent variables, including attitude. In this study, correlations and partial correlations of each behaviour with 'ethnic attitudes' and 'reference-other support' variables were calculated. The attitude measure referred to Negroes in general while the reference-other measure assessed the number of significant social referent groups considered by each subject. As indicated, the relationship between the attitude toward the object measure employed in this study and the relevant behaviours varied considerably resulting in a pattern of association much like that found by Wicker (1971). When the influence of the normative term was partialled out, the magnitude of the attitude-behaviour correlations dropped somewhat. Although the normative term was expected to be strongly related to behaviour, the manner in which it was operationalized may have attenuated this relationship. Ewens and Ehrlich concluded that one of the reasons for the generally low and inconsistent attitude-behaviour relations found in the study was their reference to a general attitude object. Particularly, they refer

to the need for a more specific attitude measure:

... the use of the concept of 'attitudes toward specific situations' rather than 'attitudes toward more general attitude objects (such as minority groups) has been shown to yield significantly higher predictions than those reported here (p. 358).

It may be seen that both uses of the general linear model provide evidence that other variables may interact with attitude as well as exert an independent influence on behaviour. Consequently, the problem of understanding the association between attitude and behaviour in relation to other antecedent variables remains problematic. The issue appears to be one of determining the relevant 'other variables'. In Schwartz and Tessler's (1972) terms, the problem presents "...the challenge of developing a method for sampling among variables or for designating those that are crucial'.(p. 225). Fishbein and Ajzen (1975) have similarly assessed this situation:

Without some theoretical framework which specifies the 'other variables' that are relevant for the prediction of a given behavior, continued search for additional variables can only serve to confound the problem (p. 347).

SUMMARY

Much current research in the attitude area has attempted to explain why traditional measures of attitude-scores representing an individual's degree of affect for or against some object-are unrelated to behaviour. The most generally accepted alternative to this conception is the argument that

attitudes are complex phenomena comprising not only a person's affective feelings toward an object but also his beliefs about the object and action tendencies toward the object. According to this viewpoint, the adequate prediction of behaviour from attitude requires the measurement of cognitive and conative as well as affective aspects of attitude. However, despite a general acceptance of the multicomponent view as descriptive of attitude, attitude measurement is usually accomplished by obtaining a single score that represents an individual's feelings of favourableness or unfavourableness toward an attitude object. More specifically, this single score is usually obtained by considering either the cognitive component, the conative component, or some combination of both presumed to reflect the underlying evaluative predisposition. It has been shown that this single score, as generated by standard attitude instruments, is not reliably predictive of particular behaviours. That is, a score representing a person's feelings of favourableness or unfavourableness toward some object has no systematic relation to discreet behaviours with respect to that object. In response to this state of affairs, further explanations have been advanced. Among these are arguments that one or more additional variables have to be taken into account in order to predict the performance of a particular behaviour. These include situational variables, norms, motivation and personality factors in addition to traditional attitude measures. Yet investigation of the relationships between behaviour and proposed antecedent variables has failed to reveal any systematic relations. Such negative

findings are, apparent not only in the social psychology field but also in the educational area of research on teaching.

2.2 Attitude Research in Education

Although teachers' attitudes are acknowledged to be an important topic in educational discourse, relevant empirical studies are somewhat narrow in scope. Most such studies have attempted to elaborate the substance and structure of teacher attitudes toward self, students or particular aspects of the social environment in classrooms (Crocker, 1974). Few have considered teacher attitudes toward curriculum and fewer yet have examined the relationship of curricular attitudes to planning behaviours. The following review will reflect the concerns, assumptions and methodology of previous research that is relevant to the preactive instructional area.

A number of studies have focused on the priorities given curricular goals and teaching practices by teachers (Ammons, 1964; Downey, 1960; Miller et al, 1967; Ohnmacht, 1965; Stake and Gooler, 1970). Although equating priority with value has precedent in other disciplines (cf. Glass, 1970), nearly all studies in education have assessed goals, objectives, and instructional courses of action in terms of importance measures which, as previously indicated, are poor indices of attitude. In Stake and Gooler's (1970) study for example, groups of teachers were asked to rate various curriculum goals with regard to their relative importance and the amount of classroom teaching time they would allocate to goal attainment. The latter

may be considered a behavioural measure of commitment, Stake and Gooler found little consistency between the two measures and concluded:

When our scale of priorities shifted from use of time to the more general attribute, "importance", we found....that different ways of operationalizing priorities may lead to quite different school procedures (p. 47).

Attempts to describe the content and structure of teachers' beliefs toward the 'teaching-learning process' have been made. Wehling and Charters (1969) for example, viewed teachers' attitudes to be most meaningfully described in terms of a complex organization of beliefs. Based on a number of questionnaires and factor analytic studies, eight dimensions of elementary teachers' views of the educative process were revealed. The eight dimensions and the central theme of each are as follows:

<u>Dimension</u>	<u>Theme</u>
1. Subject Matter Emphasis	It is important that children learn subject matter in school.
2. Personal Adjustment Ideology	The social-emotional needs of students are important.
3. Student Autonomy versus Teacher Direction	Give children more freedom versus Keep pupils busy with a well planned program.
4. Emotional Disengagement	Keep proper 'professional distance' from pupils.
5. Consideration of Student Viewpoint	Understand and love your pupils.
6. Classroom Order	Keep firm control of your class.

- | | |
|-------------------------|---|
| 7. Student Challenge | Challenge students with difficult learning tasks. |
| 8. Integrative Learning | Teach the interrelationships of knowledge. |

No attempt was made by Wehling and Charters to relate these positions to teacher practice. The structural explication of teachers' belief systems was seen to be a preliminary to "uncovering the relationships between teachers' beliefs about the educative system and behaviour of teachers in the schools" (p. 23). However, subsequent studies based on Wehling and Charters' research have not yet appeared in the literature.

The first two dimensions of teachers' beliefs described in Wehling and Charters' (1969) study may be related to the factors of 'traditionalism' and 'progressivism' - dimensions which were presumed to underlie teachers' attitudes toward education - found by Kerlinger (1958). Sontag (1968) attempted to relate these attitudinal orientations to teacher judgements of desirable teaching behaviours. In this study, teachers were grouped by a median partition of their scores on Kerlinger's (1958) Educational Attitude Scale (ES VII). Their assessments of desirable teaching behaviours (ie. relative importance of a given practice to elementary teachers) were gathered from a Q sort of eighty behaviours relating to four broad areas of instructional practice: teaching subject-matter; interpersonal relations; authority-discipline; and normative-social. A factor analysis of the Q sort showed that four factors underlay the behaviours judged desirable for elementary school teachers.

These were labelled: Concern for Students; Structure and Subject Matter; Stimulating Teaching; and Self Control in Teaching. Of these, the two which accounted for the major portion of factor variance were Concern for Students and Structure and Subject Matter. Sontag concluded:

(These) factors were clearly related to attitudes toward education in that most of the progressives loaded on the first factor and most of the traditionalists loaded on the second factor (p. 400).

The behavioural factors were each composed of a number of items relating to specific planning and classroom management tasks and thus constructed, represent behavioural 'syndromes' or patterns rather than discrete behaviours. Sontag's findings may be seen as congruent, at least in a general way, with the previous discussion of the relationship between attitude toward an object and multiple-act behaviours or behavioural commitments.

Somewhat similar to Sontag's approach, Turner (1967) drew upon previous work by Ryans' (1960) to assess the relationship between beginning teachers' attitudes and their observed responses to instructional problems commonly encountered in the first two years of elementary-level teaching. Employing Ryans' (1960) Teacher Characteristics Schedule (Form E 54), Turner measured attitude toward pupils, democratic pupil practices, school personnel (i.e. fellow teachers) and beliefs regarding a permissive, child-centered versus a traditional, subject-centered approach to instruction. As well, the instructional problem solving performance of teachers was

assessed on Wade's (1961) Teaching Tasks in Reading test.

Essentially, this test assesses the ability to diagnose pupil learning difficulties and the ability to organize curricular materials. For purposes of comparison, teachers were categorized according to elementary supervisor and principal ratings into a number of 'problem groups'. The following such groups bear on aspects of preactive instruction:

1. Management: This grouping referred to problems of instructional 'organization', curriculum 'planning', or classroom 'management'.
2. Reading: Problems in this category referred to instructional difficulties in language arts generally and in the teaching of reading particularly. Specific problems related to the formation of instructional groups of pupils were paramount.
3. Expectancy: Teachers included in this category experienced difficulty relating to three aspects of instruction: 1) a tendency to 'over-expect' or 'under-expect' of pupils in terms of achievement; 2) difficulty adjusting instruction to individual differences among pupils; 3) problems in determining the appropriate level of complexity in instruction for the grade they were teaching.
4. No Problem: This group included all teachers who were perceived as having no notable problems in instruction. As such, they provided a criterion group for comparison.

Comparisons between the Problem and No Problem groups revealed the following results. With respect to management problems, the only significant difference found related to staff attitudes;

teachers with less favourable attitudes toward fellow staff members differed significantly from the No Problem group. Significant differences were also noted for the problem area of teaching reading. Here the Problem group displayed a significantly greater unfavourable attitude toward school staff and democratic pupil practices. Of particular interest is the non-significant difference of the comparison groups' scores on the Teacher Tasks in Reading test. In this regard, Turner (1967) concluded:

In the present sample at least, difficulties in teaching reading seem more closely identified with the personal-social characteristics of the teacher than with her problem solving characteristics (p. 255).

The group of teachers who had expectancy problems differed from the No Problem group with respect to the traditional versus permissive viewpoint and problem solving performance. According to Turner, this suggests that the teacher with expectancy problems is somewhat subject-centered but lacking in adequate problem solving ability in the skill subjects.

As with most studies in the area, Turner's investigation referenced attitudinal objects or issues with respect to behavioural patterns or sets of behaviours and significant relationships may thus be expected. Of particular interest are the findings concerning the function of the problem solving factor. The possession and utilization of analytic skills were assumed to be of primary importance as antecedents to teacher difficulties in instruction. The fact that they did not relate

to teacher problems in Management or in Reading prompted Turner (1967) to conclude that this factor did not operate directly; rather it appeared to "interact with other factors" (p. 256).

The above studies may be seen to correspond in methodology to the previously mentioned social psychology studies which manipulated different variable levels in examining attitude and the relationship between attitude and behaviour. The following study presents an example of the regression approach to attitude-behaviour research.

Maguire (1968; 1969) attempted to ascertain the attitudinal basis of certain instructional decisions made by teachers regarding educational goals. Specifically, teachers evaluated a list of curriculum objectives on a set of bi-polar, adjectival (semantic differential) scales which had been selected to describe various value aspects of the objectives. Subsequently, instructional decisions with respect to the implementation of each objective were recorded. These decisions included: 1) an estimate of the number of classroom instructional hours each teacher would devote to the pursuit of each objective; 2) their subjective estimate of the amount of commitment they would personally feel toward pursuit of each objective; 3) a similar estimate of the amount of commitment the school system in general should display in attaining each objective; 4) a ranking of the objectives in terms of their relative importance in the school program. A factor analysis of the values assigned to the objectives revealed four dimensions

which were common to the test and replication samples employed in the study. These were labeled Subject Matter Value, Motivational Qualities (to students), Ease of Implementation, and Statement Properties, the latter referring to the precision and clarity of the objectives. Regressing the derived 'value components' on each decision, Maguire(1969) reported that "although the accuracy of the (regression) model varied over the kinds of decisions made, the median multiple correlations for both samples, for all decisions were greater than .75" (p. 23).

Maguire's study is significant in that it addressed directly the relationship between attitude and behaviour. Again however, the reported variation in predictive accuracy of an attitudinal measure of objectives and specific behavioural commitments with respect to those objectives conforms to the previously discussed findings for this relationship. Of additional interest is Maguire's reported result that among the various individual difference and contextual variables assessed, which included teacher age and sex, teacher preparation and experience, and situational characteristics of the school, only teacher age was related to attitude.

A substantive consideration in Maguire's study was the view that teachers represented a legitimate body of experience to be consulted on matters of curriculum implementation (Taylor and Maguire, 1966). Specifically, teachers were seen to be important judges of a curriculum "at its point of contact with the student...It is contended that teachers' assessments of curriculum objectives can control the impact that a curricu-

lum has on a student" (Maguire, 1968:68). Such a position reflects the traditional, linear model of curriculum development associated with Tyler (1949), Taba (1962) and others. Within this framework, the role of stated objectives in providing appropriate criteria for evaluating the merit of curricula may be seen in Popham's (1969) assertion:

Precise objectives, stated in terms of measurable learner behaviour make it infinitely easier for the teacher to engage in curricular decisions. The clarity of precisely stated goals permits the teacher to make far more judicious choices regarding what ought to be included in the curriculum (p. 44).

Similarly, Mager (1962) states that "When clearly defined goals are lacking....there is no sound basis for selecting appropriate materials, content, or instructional methods" (p. 3). However, the importance of objectives as criteria for teachers' evaluations of curriculum materials and activities has been shown to be minimal (eg. Goodlad and Klein, 1974; Walker, 1971). Teachers engaged in curriculum decision making apparently consider aspects and consequences of program implementation other than the stated objectives. It follows that where traditional attitude toward the object measures are employed, a more appropriate object to consider in assessing curriculum evaluations is the program itself.

A search of the literature reveals but one study which has directly related teachers' curricular attitudes to problems

of program choice. ¹Morrison et al (1969) examined the relationship between elementary teachers' responses to the San Diego Teacher Inventory of Approaches to the Teaching of Reading (1961) and their preferred choice of reading curricula. Two curricular approaches were under study. The 'Skills Centered' approach comprised two programs: 1) the Basal Reader method in which the teacher relied on conventional basal readers and their accompanying manuals and workbooks; 2) the Phonovisual method which combined use of basal readers with a phonic system developed through use of phonovisual materials. The second approach was the 'Language Experience' procedure which also consisted of two programs: 1) a regular Language Experience program in which reading materials were largely developed from the experience and verbalization of children and in which library books were used for supplementary instructional purposes; 2) a Language Experience-Audiovisual program in which the basic language experience procedure was supplemented by various kinds of audiovisual equipment (eg. tape recorders, cameras, projectors).

The San Diego Attitude Inventory employed in this study is a Likert-item instrument on which teachers indicate their agreement or disagreement with the accuracy of statements for describing their particular approach to the teaching of reading.

1. Eash (1972) has constructed a program evaluation and choice instrument which involves a variety of teacher evaluative and importance responses. However, the instrument is designed to provide a logical analysis of curriculum materials rather than act as a measure of teachers' curricular attitudes, and no validation studies with this in mind have been carried out.

The instrument is composed of three scales each of which represents a Basic, Individualized, or Language Experience approach. Each scale requires a response to statements regarding the following aspects of reading instruction:

1. Teacher's purpose for reading instruction.
2. Basis of the plan for reading instruction.
3. Teacher's method of motivation for reading instruction.
4. Materials of reading instruction the teacher uses.
5. Teacher's method for organizing the classroom for reading.
6. How the teacher provides for direct reading instruction.
7. How the teacher provides for supplementary reading instruction.
8. How the teacher includes skill development in the reading program.
9. How the teacher incorporates vocabulary development in the reading program.
10. Provision for individual differences in the reading program.
11. Teacher's criteria for evaluation.

It may be seen that this instrument provided a broader assessment of teachers' concerns relating to curriculum choice than was possible in the Maguire (1968) study. In the Morrison et al study, the Basal Reader and Phonovisual methods, the Skills Centered approaches, were assumed to correspond to the Basic Scale on the Attitude Inventory while the Language Experience Scale was assumed to represent the beginning stages of reading in the Language Experience method and the Individualized Scale represented the later stages of this method.

The results reported by Morrison et al of the relationship between measured attitude and preferred choice of reading method indicate that teachers who chose a Skills Centered approach had significantly higher mean scores on the Basic Scale than on either the Individualized or Language Experience Scales. The scores of teachers who chose the Language Experience methods however, were not significantly different between the Basic and either of the Individualized or Language Experience Scales. Nevertheless, Morrison et al summarized their findings as follows:

Since selection of a teaching method in the... schools were largely optional, it must be assumed that for most teachers, a decision to use basal materials was more often based on personal preference than on administrative edict. Since the results of a teacher attitude inventory also indicated that teachers (participating in the study) were favourably disposed toward basal reading instruction, it is rather obvious that there is a strong relationship between teacher attitude and choice of approach (p. 392).

While the assertion of a strong attitude-behaviour relationship must be qualified by the empirical findings, the study is important in that it considered the relationship between attitude and behaviour with respect to a curriculum planning problem that typifies the task faced by classroom teachers. Moreover, in assumptions, methodology, and results, the study is characteristic of the traditional approach to the attitude-behaviour issue -- an approach that was previously shown to require some alternative formulation if a reliable association between attitude and behaviour is to be found.

2.3 The Fishbein Model

The purposes of this concluding section are first to outline the conceptual basis of the Fishbein model as well as the operational issues involved in its development. Empirical findings concerning the relationships between predictor and criterion variables and among predictor variables are then reviewed and the relevance of the Fishbein formulation to the present study drawn. This review and discussion underlies the subsequent statement of research questions to be tested in the study.

2.3.1. The Fishbein Model: Conceptual Antecedents

The theoretical basis for Fishbein's (1967; Fishbein and Ajzen, 1975) regression model for predicting behavioural intention and behaviour may be found largely in the work of Dulany (1968). In a series of studies related to concept learning, Dulany formulated the theory of Propositional Control. Here, Dulany argued that where subjects' responses to verbal learning tasks were under volitional control they would act according to the 'self-instructional set' or 'intention' that was formed and held with respect to a particular response. The central statement of the theory thus focuses on the determinants of intention and may be expressed as follows:

$$R \sim BI = (RHd \cdot RSv)_{w1} + (BH \cdot MC)_{w2} \quad (2)$$

Primarily, the theory is concerned with explaining the effect

of various reinforcement parameters on verbal responses. Related elements of knowledge, belief, and awareness are represented as propositions in the form of two hypotheses, the first of which concerns the individual's expectation of a reinforcement termed the Response Hypothesis or Hypothesis of Reinforcement Distribution (RHd). The second major hypothesis concerns the congruence of the response to group norms, the Behavioral Hypothesis (BH). Associated with the Response Hypothesis is a feeling of value termed the Subjective Value of Reinforcement (RSv). Similarly associated with the Behavioural Hypothesis is a positive or negative position on conformity, the Motivation to Comply (MC). W_1 and W_2 are empirically determined weights which indicate the relative importance of the two components in determining Behavioural Intention.

The variables included by Dulany reflect specific actions and situations. It is presumed that the subject's performance of the reinforced response is closely related to his intention to perform that behaviour; the level of specificity of the intention is determined directly by the available response. Similarly the co-determinants of intention are specific to the behaviour. The first component refers to the expectation that a given response will lead to a given event or consequence and the subject's evaluation of that event. The second component refers essentially to the subject's perception that the particular response is expected of him by some significant social referent (eg. the experimenter) and his motivation

to comply with the perceived pressure. Dulany suggests there are many additional variables that may influence the behavioural response. However, they are considered to have only an indirect effect; their influence on behavioural intention and behaviour is reflected in the model's component variables. Stated somewhat differently, each of the two components is assumed to contribute to the determination of intention but their relative importance may vary as a result of personal and situational factors. Validation studies reported by Dulany (1968) provide evidence to support the theory in the prediction of intention and behaviour under controlled conditions. Here, the independent variables were highly predictive of Behavioural Intention and the intention variable was similarly predictive of Behaviour (see Tables 1 and 2).

Fishbein's model is an adaption of the central statement contained in Dulany's theory (see Equation 1, page 14). As in the original formulation, Fishbein's modification deals with the prediction of a particular behaviour in a given situation. A person is assumed to form and hold a specific behavioural intention which influences his subsequent behaviour and this intention is directly predicted from the two components of attitude and norm which are given empirical weights.

In Dulany's model the behavioural intention term referred to the performance of a specific reinforced response in a highly controlled learning situation. Fishbein has elaborated this term to reflect the more complex social situation.

In his view, intention may be seen to vary along four dimensions: the nature of the behaviour, the time and situation in which it occurs, and the characteristics of the object or target of the behaviour. Studies of drinking habits by Sandell (1968) and leisure time activities by Bishop and Witt (1970) in which these conditions were manipulated showed that such variations significantly affected the likelihood that their subjects intended to perform the behaviours under study. It will be recalled that Fishbein has defined intention as the position an individual occupies along a subjective probability dimension involving a relation between himself and some action. It follows that alteration in any of the above mentioned elements defines a different probability dimension, a different behavioural intention. Adequate assessment of intention thus requires specification of the behaviour, target, situation, time or combinations of these elements.

The attitudinal component in Fishbein's model (Ab) refers to the individual's attitude toward performing a behaviour under a given set of circumstances. According to Fishbein, a person's attitude is a function of the perceived consequences of performing a behaviour and the evaluation of those consequences. Similarly, the initial component of Dulany's model concerns the subject's belief that a given behaviour leads to some specified reinforcing event and his evaluation of that event. A major distinction of Fishbein's model however, is the consideration of multiple consequences.

His expansion results in a set of beliefs and evaluations pertaining to each of the relevant consequences of performing the behaviour. The parallel between the components of each model is seen in their relation to expectancy-value theories of decision making and attitude (Feather, 1959; Fishbein, 1967; Peak, 1955; Rosenberg, 1956). In this context, the attitudinal component of the Fishbein model may be expressed as follows:

$$Ab = \sum_{i=1}^n b_i e_i \quad (3)$$

where b is the belief that performing behaviour B leads to consequence or outcome i ; e is the person's evaluation of outcome i ; and n is the number of beliefs the person holds about performing B . Fishbein and Ajzen (1975) have related their more general formulation and Dulany's first hypothesis to attitude as follows:

Consistent with the expectancy-value theory of attitudes, this generalization suggested that the first component of Dulany's theory could be viewed as attitude. In contrast to a traditional attitudinal approach, however, the attitude in question is the person's attitude toward performing a given behaviour rather than his attitude toward the object or target of the behaviour (p. 302).

Fishbein has similarly elaborated the normative component of Dulany's model. In both models the normative component deals with the influence of the social environment on behaviour. Fishbein's Subjective Norm (SN) term refers to the person's perception that most people who are important to him think he should or should not perform the behaviour. This

general subjective norm is presumed to be determined by the perceived expectations of specific referent individuals or groups and by the person's motivation to comply with these expectations. The generalized normative component and its determinants may be expressed as follows:

$$SN = \sum_{i=1}^n b_i m_i \quad (4)$$

where b is the normative belief that referent group or individual i thinks he should or should not perform behaviour B ; m is the motivation to comply with referent i ; n is the number of relevant referents. As with Dulany's normative component, the Subjective Norm refers to perceived pressures to perform a given behaviour and the individual's motivation to comply with these pressures. However, where Dulany considered only the influence of the experimenter on the subject's responses in his investigations, Fishbein has generalized the normative source by defining an overall subjective norm which includes all relevant referent groups and individuals. Empirical support for the relation between Subjective Norm (SN) and the compound measure of normative beliefs and motivation to comply ($\sum_{i=1}^n b_i e_i$) has been given by King and Jaccard (1973) and Glassman and Birchmore (1974).

An important issue with respect to the necessity of including a normative component in addition to attitude has been raised by Fishbein and Ajzen (1975). It may be argued that normative beliefs should properly be considered a part of attitude toward the behaviour:

... some of the consequences of performing a given act are that the act may please or displease relevant reference groups or individuals, and it may lead to reward or punishment from a given referent. Depending on the person's evaluation of these consequences, his attitude toward the behaviour should become favourable or unfavourable (p. 304).

However, Fishbein maintains the differentiation between beliefs about the consequences of performing a behaviour and beliefs about expectations of relevant others. This distinction is based on the assumption that different processes are seen to underly the formation of the attitudinal and normative components. This notion may be elaborated by brief reference to the social influence literature. According to Kelman (1961), social influence operates through one or more of three distinct processes. The first of these, internalization, is said to occur when the individual accepts influence because it is perceived as being instrumental to the attainment of valued goals or as "inherently conducive to the maximization of his values" (p.65). The process of identification is seen to occur when an individual adopts a behaviour or opinion derived from another because the role relationship between the individual and that other is beneficial to some portion of the individual's self-concept. The third process posited to account for social influence refers to compliance, a conformity to the expectations of another in order to receive a reward or avoid a punishment mediated by that other. Each of Kelman's processes may be distinguished in terms of the apparent motivational antecedents that are salient in a given influence situation.

Deutsch and Gerard (1955) have distinguished two types of social influence situations. They refer to informational social influence as the influence to accept information from another as evidence about reality. They reserve the term normative social influence for the influence situation which calls for conformity to the expectations of another person or group.

Thus an informational source of influence would be accepted and internalized if it was perceived as being instrumental to the solution of some problem confronting the individual or because it supports or adds to what the individual already believes about the situation. An important aspect of internalization is the credibility of the information source. McGuire (1969) points out that a source which is believed to be expert or very knowledgeable will most readily lead to internalization. With respect to curriculum planning, Gardner (1971) found that classroom teachers' informational needs were primarily in the area of instructional materials. Persons most often consulted in this regard were principals, fellow grade teachers, librarians and curriculum specialists.

In contrast, normative social influence situations would be salient when the individual is motivated to comply with expectations by realizing a reward or avoiding a punishment mediated by another. An individual similarly would be expected to accept the influence of a positively evaluated referent by adopting or identifying with the behaviours or views of that referent. Equally, he would be expected to disassociate him-

self from the behaviours and views of a negatively evaluated referent. This interpretation may be applied to some of the referents indicated by Gardner (1971) such as the principal or curriculum supervisor. In this regard, MacDonald (1970) has argued for the pervasive influence of school and community-based referents on the instructional practice of beginning teachers.

Fishbein's differentiation of beliefs about the consequences of behaviour and beliefs about the expectations of others may thus be seen to reflect distinct influence situations and processes. Fishbein and Ajzen (1975) refer to the broader implications of including both attitude and social norm in their model:

... this distinction emphasizes the importance of two basic social psychological concepts that have traditionally been treated independently. Psychologists and sociologists interested in individual behaviour have frequently made use of the attitude concept whereas theorists dealing with groups and societies have often relied on the concept of social norm. By including an attitudinal and a normative component, the present theory emphasizes the importance of both concepts and provides a bridge between the two approaches to the study of human behaviour (pp. 304-305).

A further social influence source was described by Deutsch and Gerard (1955) as including the individual's 'self'. That is, the expectations of oneself regarding appropriate behaviour and conduct. In his initial elaboration of Dulany's model, Fishbein (1967) posited a Personal Normative Belief (NBp) term, presumably to account for this influence source. The empirical findings with regard to this variable have been

equivocal. Some studies (Abramson, 1972; Atanu, 1974; Schwartz and Tessler, 1972) have included NBp in the prediction of behavioural intention. However, Fishbein and Ajzen (1975) report that their (own) empirical findings "have repeatedly indicated that a subject's report of his personal normative belief serves mainly as an alternative measure of his behavioural intention" (p. 305). They maintain that although a conceptual distinction between personal normative beliefs is possible, at this time a satisfactory operationalization of NBp is not apparent and it has therefore been deleted from the present version of the model.

2.3.2. The Fishbein Model: Empirical Support

In its present form the Fishbein model posits specific relations among variables that are of central concern to the present study. These include relationships between intention and behaviour, and between intention and variables external and internal to the model; the latter referring to the attitudinal and normative components. Empirical studies which describe and support these relations follow.

2.3.2.1. The Intention-Behaviour Relationships

In the framework suggested by Fishbein it is expected that where an appropriate measure of intention is taken, there should exist a high empirical relation between a person's intention to perform a particular behaviour and his subsequent performance of that behaviour. The studies listed in Table 1

TABLE 1

INTENTION-BEHAVIOUR CORRELATIONS OBTAINED IN VARIOUS STUDIES
USING THE FISHBEIN MODEL

Study	Situation	Correlation
Ajzen (1971)	Choose alternative X or Y in Prisoner's Dilemma (PD) game	.822 *
Ajzen and Fishbein(1970)	Choose alternative X or Y in two PD games	.841 * .847 *
Ajzen and Fishbein(1974)	Send communication to co-worker Follow instructions of co-worker	.690 * .211 *
Bonfield(1974)	Choice of fruit drinks	.400 *@
Darroch(1971)	Sign interracial photographic release	.462 *@
Devries and Ajzen(1971)	Cheating in college examination	.652 *@
Dulany(1968)	Verbal learning tasks	.940 *@
Fishbein(1966)	Engage in premarital sexual intercourse (females) a) Generally b) Time specific	.564 ** .676 *

* = $p < .01$

** = $p < .05$

@ = average correlation

TABLE 1 (continued)

Study	Situation	Correlation
Fishbein and Coombs (1974)	Voting behaviour a) one month interval b) one week interval	.796 * .888 *
Harrell and Bennett (1974)	Prescribing drugs for diabetes	.370 *@
Hornik (1970)	Extended PD game	.866 *
Schwartz and Tessler (1972)	Donation of transplant organs	.375 *
Songer-Nocks (1976)	Modified PD game	.693 *
Wilson et al (1972)	Two PD games	.740 *
Wilson et al (1975)	Choice of toothpaste	.900 *@

demonstrate considerable support for the model's ability to provide adequate prediction of behaviour from intention over a number of behaviours, situations and persons. Variation in reported results however, reflects the fact that the magnitude of this relationship may be influenced by a number of factors. Fishbein has identified three prerequisites for high intention-behaviour correlations. The necessary conditions are that the measure of intention be behaviour-specific, stable and free from new information about behavioural consequences and social pressures, and that the behaviour be within the individual's volitional control.

The effects of specificity between measures of intent and behaviour are demonstrated in the Fishbein (1966) study of premarital sexual intercourse (PSI) among female undergraduates. In this study, general intentions to engage in PSI and specific intentions to engage in PSI 'this semester' were correlated with self-report behaviours gathered at the end of the semester. A marked increase in the intention-behaviour relationship may be seen as the intended behaviour shifts from the general to the specific.

The effect of a long time interval on the stability of intention is apparent in nearly all field applications of the model. Among the laboratory investigations, primarily involving Prisoner's Dilemma games or modifications of these, the potential influence of extraneous factors was either experimentally controlled or accounted for by minimizing the time

between intention and behaviour measures. Attenuation of this correlation among field studies parallels the time lag between measures. This may be seen in the Fishbein and Coombs (1974) study or by comparison of the Devries and Ajzen (1971) study, in which behaviour was assessed immediately, with the Darroch (1971), Bonfield (1974), Harrell and Bennett (1974), or Schwartz and Tessler (1972) studies where behaviour was assessed from one to three months subsequent to gathering intent measures. However this factor does not alone account for the discrepancies shown. Other elements such as variation in co-worker's responses during a cooperative task (Ajzen and Fishbein, 1974), may intervene to modify previously held intentions. Among the field-oriented studies, that of Wilson et al (1975) is unique in the high correlation obtained. This may be explained not only by the fact that subjects chose a preferred brand of toothpaste immediately following completion of the questionnaire but also by the unusual procedure used to test the intention-behaviour relationship which involved computing a biserial correlation coefficient between brand choice and highest ranked behavioural intention.

The condition of volitional control has been interpreted in terms of the novelty of the behaviour for the individual. Tittle and Hill (1967) for example, refer to the extent to which the behaviour falls within the range of the person's common experience as a determinant of the degree of correspondence between predictor and criterion. Schwartz and Tessler (1972) also refer to the likely positive effect of prior

experience on the relation between intention and behaviour. Songer-Nocks' (1976) findings regarding the specification of additional variables, particularly prior experience, for predicting subject's responses to a modified form of the Prisoner's Dilemma game is illustrative. In her analysis of the intention-behaviour relationship, Songer-Nocks included the variables of prior experience and feedback (knowledge of results for various decisions made during the game) in a regression formulation with behaviour as a criterion. While intention contributed significantly to behavioural prediction ($R^2 = .48$), the addition of a triple interaction term involving intention, prior experience and feedback markedly increased the precision of this prediction ($R^2 = .59$). Of particular interest to the present study is the effect of prior experience on the weighting of intention in prediction under the common condition of feedback. This task may be equated with a problem of choice as generally accepted in the decision theory literature. Where subjects had no prior experience with the demands of the game, the intention variable received a relatively small weight (.27). In contrast, the prior experience condition resulted in a weight of .97 for intention. In the context of this study at least, specification of the novelty of the behaviour resulted in a more precise relationship between intention and behaviour.

2.3.2.2. The Relationship of Intention With Variables Internal and External to the Fishbein Model

As previously indicated, the central concern of the

Fishbein model is the elaboration of the immediate antecedent of behaviour; that is, the specification of the determinents of behavioural intention. According to Fishbein, the necessary and sufficient psychological variables for the prediction of intention are the attitudinal and normative components given by the model. The accuracy of prediction of intention from these components is indicated by the multiple correlations for different studies shown in Table 2. Over all studies listed the average correlation is .734, indicating that the precision of prediction is considerable both in highly controlled laboratory situations and in less constrained field settings. It is claimed by Fishbein that this precision will not be enhanced by the specification of additional variables such as personality characteristics or situational factors. Specifically, variables external to the model can affect intention only if they influence the attitudinal or normative components or their relative weights. Moreover, since a given behaviour may be under primarily attitudinal or normative control, the effect of external factors will be seen only if the related component is a significant determinant of intention. While the addition of external variables may not directly increase predictive precision, their specification does allow greater explanation of the formation of intention. However, before discussing the impact of external variables on the relative importance of attitude and norm in prediction, the sufficiency of the model will be considered.

Sufficiency may be demonstrated if the relation of

TABLE 2
MULTIPLE CORRELATIONS BETWEEN INTENTION
AND FISHBEIN MODEL COMPONENTS

Study	Situation	Multiple Correlation
Ajzen (1971)	Choose alternative X or Y in PD game	.716 *
Ajzen and Fishbein (1970)	Choose alternative X or Y in two PD games	.849 * .888 *
Ajzen and Fishbein(1972)	Perform four behaviours involving risk	.793 *@
Ajzen and Fishbein(1974)	Send communication to coworker Follow instructions of coworker	.704 * .608 *
Bonfield(1974)	Choice of fruit drinks	.600 *
Darroch(1971)	Sign interracial photographic release form	.647 *@
Davidson and Jaccard(1975)	Use birth control pills	.775 *@
Devries and Ajzen (1971)	Cheating in college examina- tion	.642 *@

* = $p < .01$

@ = average correlation

TABLE 2 (continued)

Study	Situation	Multiple Correlation
Dulany (1968)	Verbal learning tasks	.880 *@
Fishbein (1966)	Engage in premarital sexual intercourse (females, time- specific)	.935 *
Harrell and Bennett (1974)	Prescribing drugs for diabetes	.450 *@
Hornik (1970)	Extended PD game	.806 *@
Jaccard and Davidson (1972)	Use birth control pills	.775 *@
Songer-Nocks (1976)	Modified PD game	.771 *
Wilson et al (1972)	Two PD games	.695 *
Wilson et al (1975)	Choice of toothpaste	.672 *@

external variables to intention is drastically reduced when the attitudinal and normative variables (Ab and SN) are statistically held constant. In the Fishbein and Ajzen (1970) study for example, the effects of individual difference and situational variables on strategy choices in a Prisoner's Dilemma game were examined. The specific variables under study were the subject's sex and measured authoritarianism as well as the game's pay-off matrix and motivational orientation. The latter was defined in terms of cooperation, competition, and individualism. Ajzen and Fishbein's reported results indicate that sex and authoritarianism were not significantly related to intentions while intentions were significantly affected by the pay-off matrix and the motivational orientation. Consistent with the hypothesized relations between internal and external variables, similar relationships were reported with respect to the attitudinal and normative components. Employing the procedure of covariance analysis, Ajzen and Fishbein found that with the attitude and norm variables held constant the effect of the pay-off matrix was reduced to non-significance while the effect of motivational orientation, although significant, was greatly attenuated. In an extension of Ajzen and Fishbein's (1970) study, Songer-Nocks (1976) investigated the effect of prior experience and motivational orientation variables on intention in a modified form of the Prisoner's Dilemma game. A comparison of the Fishbein model variables alone with a model containing the external variables and interactions produced only a minimal increase in predictive efficiency, the multiple correlations

being .771 and .796 respectively.

As previously indicated, Fishbein regards general attitude toward the object (Ao) measures to represent variables external to the model. Studies by Ajzen and Fishbein (1970) and Ajzen (1971) in which attitude toward the behaviour (Ab) and subjective norm (SN) were held constant indicated the partial correlations of Ao with intention (I) to be nonsignificant in all cases. The study by Jaccard and Davidson (1972) in the more applied setting of family planning intentions similarly demonstrates the mediating role of the model's components with respect to traditional attitude measures. An examination of Table 3 illustrates this function as well as the differential relationship between attitudinal and normative components in the prediction of intention. It may be seen that the effect of partialling Ab on the Ao-I relationship dramatically reduces the initial correlation between Ao and I while the same procedure applied with SN results in a minimal reduction. This indicates that the intention to use birth control pills is primarily under the subjects' attitudinal control rather than social norms or pressures. While the weight of empirical evidence suggests that the attitudinal and normative variables specified by the Fishbein model are necessary and sufficient psychological predictors of intentions, one published counter-example should be mentioned. Schwartz and Tessler (1972) examined the necessity and sufficiency of an earlier formulation of Fishbein's model (i.e. one which contained a personal normative component) in the prediction of intentions regarding six kinds of medical

TABLE 3

CORRELATION BETWEEN ATTITUDE TOWARD THE OBJECT (Ao)
AND INTENTION (I) PARTIALLING OUT ATTITUDE TOWARD
THE BEHAVIOUR (Ab) AND SUBJECTIVE NORM (SN)

Object	Ao-I	Ab	SN	Ab+SN
Contraceptives	.625*	-.017	.554*	0.00

(adapted from Jaccard and
Davidson, 1971)

* = $p < .05$

transplant donations. They reported that attitude toward the behaviour, personal normative beliefs, and social normative beliefs were significant predictors of intention, accounting for somewhat better than fifty percent of the variance in intentions. When the variables specified by the model were partialled out, substantial reductions in the correlations between intentions and external variables occurred. However, the internal variables failed to account completely for the effects of four out of six variables tested across the thirty-three possible relationships defined by the study. Schwartz and Tessler concluded that these results cast doubt on the model's sufficiency. In response, Fishbein and Ajzen (1975) have pointed to the necessity of a theoretical framework for the specification of external variables since it is always possible to find significant correlations if a large number of relationships are considered. More relevant to the claim for sufficiency perhaps, are the greater number of studies which report a significant mediating effect of the attitudinal and normative components in the model.

Turning to the explanatory usefulness of considering external variables in predicting intention, Table 4 demonstrates the effect on the relative importance of the attitudinal and normative components due to variation in individual difference and situational factors. The effects of an individual difference variable, ie. religious persuasion, may be seen in the Jaccard and Davidson (1972) study. Specific situational effects are apparent in the Ajzen and Fishbein (1970) study while variation

TABLE 4

RELATIVE IMPORTANCE OF ATTITUDINAL (Ab) AND NORMATIVE (SN)
COMPONENTS IN THE PREDICTION OF INTENTION

Study	Situation and Condition	Correlation Coefficient		Regression Coefficient		Multiple Correlation
		Ab	SN	Ab	SN	
Jaccard and Davidson(1972)	<u>Use birth control pills</u>					
	a) Catholics	.909	.775	.715	.281	.931
	b) Protestant	.756	.565	.644	.195	.773
Ajzen and Fishbein(1970)	<u>PD Game</u>					
	a) Cooperative	.370	.752	.229	.707	.785
	b) Individual	.710	.780	.353	.552	.852
	c) Competetive	.883	.733	.691	.327	.922
Mathews et al (1974)	<u>Choice of tooth- paste</u>					
	a) Gleem	not reported		.240	.460	.620
	b) Crest			.210	.540	.660
	c) Colgate	reported		.360	.380	.670
	d) Ultra-brite			.110	.590	.660
	e) Macleans			.120	.570	.650
	f) Pepsodent			.090	.680	.640
Devries and Ajzen(1971)	<u>College Examinations</u>					
	a) Cheat	.459	.474	.331	.354	.566
	b) Copy	.546	.534	.398	.378	.647
	c) Allow others to copy	.526	.652	.317	.526	.714

in the behavioural object and the nature of the behaviour are seen in the Wilson et al (1974) and the Devries and Ajzen (1971) studies, respectively. In these studies, differences between as well as among attitudinal and normative components are illustrated across the various conditions. Fishbein and Ajzen (1975) report that over all studies conducted and across conditions within them, there is a slight tendency for the attitudinal component to take on a somewhat greater weight than does the normative component. However, they point out that such a comparison is theoretically meaningless; different behaviours, different situations, and different individuals have to be compared. The fact that individual difference and situational factors are reflected in the relative predictive importance of the two components of the model suggests its applicability to a wide variety of situations.

2.4 Summary

Research has been unable to demonstrate a consistent relation between general measures of attitude toward an object and an individual's behaviour with respect to that object. Various arguments have been advanced in response to this problem. Some authors have suggested reconceptualizing the attitude construct in terms of multiple components involving affect, cognition and conation. Others have proposed a distinctly behavioural conception of attitude. Some of the difficulty in establishing reliable attitude-behaviour links has been attributed to the instruments employed in assessing attitude.

Where traditional conceptions and measures have been accepted, the problem has been seen as one of including the appropriate personal and situational factors associated with specific behaviours. The latter approach emphasizes the importance of the social environment in the prediction of behaviour. DeFleur and Westie (1958) for example, acknowledge this influence:

... analysis of the beliefs of an individual about the attitudes, norms and values held by his reference groups, significant others, voluntary organizations, peer groups, and the like may be essential for better prediction of individual lines of action with the use of verbal scales (p.673).

In light of empirical findings relating to the above mentioned approaches to the prediction of behaviour from attitude and relevant antecedent variables, Dulany's (1968) formulation of a prediction model which accounted for personal and situational antecedents provided the needed basis for an alternative conception of the relationship between attitude and behaviour (Ajzen and Fishbein, 1973; Fishbein, 1967; Fishbein and Ajzen, 1975). Particularly, Fishbein's extension of Dulany's model offers a well-defined conception of attitude and its measurement as well as providing a methodology for examining the 'other variables' argument. In Fishbein's proposed prediction model, attitude is defined in terms of a single score indexing a feeling of favourableness or unfavourableness toward some object. However the object in this case is not general. Rather, attitude toward performance of the particular behaviour defines the object of interest. It is thus not the definition of attitude

that is altered but the attitude object. Fishbein has also accommodated the argument that non-attitudinal variables must be included in the prediction of behaviour. Specifically, his formulation proposes that attitude toward the act or behaviour and social normative beliefs are the basic co-determinants of an individual's intention and actual performance of a behaviour. Other variables, including traditional attitudes toward (general) objects, individual differences and situational factors are seen to influence intention and behaviour only indirectly by affecting the attitudinal or normative components or their relative weights. In its present form, the Fishbein Model places the attitude-behaviour relationship in a position consistent with previous observations in that there is no necessarily high correlation between attitude and behaviour. The magnitude of this relation depends in part on the weight determined for the attitudinal term in the prediction of intention and on the empirical relation established between intention and behaviour.

Fishbein's Model has been shown to predict some behaviours reasonably well. Much of this research however, has been concerned with model validation involving highly controlled laboratory experiments and game behaviours. Burhans (1972) assessed this research with the Fishbein Model:

... the few - though highly successful studies that (Fishbein) has conducted which employ his model have been concerned with very specific and limited kinds of behaviour....Much empirical research is needed to test the efficacy of his model in predicting behavioural intention and behaviour under a wide range of circumstances and with a wide range of classes of behaviour (p.427).

More recent field tests of the model have been indicated in the present literature review. However, there remains a need for further elaboration in applied settings. Application of the model in the context of preactive reading instruction and with elementary teachers provides such a test of the generality of the model in a situation and with a population not previously considered.

In the field of teaching research the prediction of instructional behaviour from measures of attitude has for the most part reflected the traditional assumptions and methodology of related disciplines. Consequently, the findings of empirical research are similar. The application of Fishbein's model in an educational context appears to offer a promising approach to the prediction and explanation of teacher instructional behaviour, particularly in the preactive setting. Here, the immediate usefulness of the Fishbein model is that it delimits the necessary independent variables for predicting curriculum planning intentions and behaviours. Moreover, the functional relations among these predictors as well as their relationship to other antecedents is specified by the model. According to Fishbein, additional (external) variables will not directly improve prediction although their consideration allows interpretation of the relationships assumed by the model. Explanation of the relative importance of the attitudinal and normative components with respect to individual difference and situational factors provides an understanding of subject's perception of behavioural consequences and normative expectations.

In the present study, an understanding of the attitudinal and normative basis for preactive planning intentions and behaviours involves elaboration in terms of teachers' personal and professional characteristics.

2.5 Research Questions

A general statement of the research questions to be investigated was given in Chapter I. These concerned the prediction and explanation of elementary teachers' intentions and behaviours toward recommending the instructional use of basal reading programs with particular ability groups of primary students. Specifically, the behaviours and behavioural intents under study involved four curriculum planning decisions requiring the matching of two basal reading programs and two ability-groups of grade two students. The initial research questions are reiterated below and elaborated with respect to the following variables: Recommending Behaviour (B); Recommending Intention (I); Attitude Toward the Behaviour (Ab); Social Norm (SN); Attitude Toward the Object (Ao); Teacher Experience (TE); Teacher Preparation (TP).

2.5.1. Do the variables specified in the Fishbein Model provide the necessary and sufficient predictors of Behaviour and Behavioural Intent?

- a) Are Behaviour and Intention highly correlated?
- b) Is Intention predictable with greater than chance accuracy from variables internal to the Fishbein

Model (i.e. Ab and SN)?

- c) Is Intention predictable with increased accuracy by the addition of variables external to the Fishbein Model (i.e. TE, TP and Ao)?

2.5.2. What is the effect of elementary teachers' prior experience and learning on the relationship between Intention and Behaviour?

- a) Does the correlation between Intention and Behaviour depend significantly on teachers' prior classroom teaching experience (TE) and formal learnings relevant to primary reading instruction (TP) ?

2.5.3. What is the effect of teachers' prior experience and learning on the relationship between Intention and variables internal to the Fishbein Model?

- a) In the prediction of Intention does the relative importance of Ab and SN depend significantly on teachers' prior classroom teaching experience (TE) and formal learnings relevant to primary reading instruction (TP) ?

CHAPTER THREE

METHOD

The study was an attempt to apply a recent formulation of Fishbein's attitude model to the prediction and explanation of elementary teachers' responses to curriculum planning tasks in primary reading instruction. The study thus presented two aspects: the prediction of curriculum planning intentions and behaviour, and the explanation of differences among teachers intentions and behaviours in terms of their personal and professional characteristics. The previous chapters indicated the potential usefulness of employing Fishbein's Model in the context of the identified problem. Consistent with recent applications of the model in more realistic non-laboratory settings, a certain loss of predictive validity was expected. The explanatory potential of the model, specifically its accommodation of variables seen to be of importance to preactive instructional decision making, was also emphasized as an initial step toward further understanding the basis for teachers' curriculum planning.

3.1 Subjects

The subjects in the study were practicing elementary teachers in the New Westminster School District (School District Forty, Province of British Columbia). From among the 138 elementary teachers in the district, 112 agreed to

participate in the study. For the investigative purposes of the study, subjects were categorized with respect to preservice or inservice preparation in primary reading instruction as well as classroom teaching experience at this level. Table 5 illustrates this partitioning and the number of subjects in each of the defined groups. Only practicing elementary teachers were included in the study to make comparable the general school experience of the defined groups. For example, where investigation of curriculum planning intentions and behaviours involved a comparison between subjects with primary level experiences and those without, both shared the common background experience of the elementary school. Similarly, only elementary teachers who had received inservice or preservice preparation in reading instruction related to the elementary level were considered. Thus, where investigation involved a comparison between subjects who possessed this learning and those who did not, formal learnings were relevant to primary instruction. As well, only elementary teachers from one school district were considered in the study to make the conditions of school facilities and community similar for subjects. The relevant biographical data for the teachers included in the study are given in Table 6. Table 7 details the characteristics of the district in terms of student population and elementary school facilities.

3.2 Instrumentation

Three independent variables external to the Fishbein Model as well as two internal predictor variables were under study (see Table 8). The former included: Teacher Classroom

TABLE 5

PROFESSION CHARACTERISTICS OF ELEMENTARY TEACHER SAMPLE

Teacher Experience	Teacher Preparation	
	Reading	No Reading
Primary	37	25
Intermediate	27	23

TABLE 6

BIOGRAPHICAL DATA FOR SUBJECTS

Group One: Primary and Reading

Age:* 32.20
 Sex:** 0 male 37 female
 Teaching Experience:* 8.76 years
 Teacher Training:** U.B.C. 28 U. Victoria 2
 S.F.U. 7 Other 0

Group Two: Primary and No Reading

Age: 32.88
 Sex: 0 male 25 female
 Teaching Experience: 8.18 years
 Teacher Training: U.B.C. 13 U. Victoria 3
 S.F.U. 6 Other 3

Group Three: No Primary and Reading

Age: 33.37
 Sex: 7 male 20 female
 Teaching Experience: 7.00 years
 Teacher Training: U.B.C. 17 U. Victoria 4
 S.F.U. 2 Other 4

Group Four: No Primary and No Reading

Age: 36.44
 Sex: 10 male 13 female
 Teaching Experience: 8.11 years
 Teacher Training: U.B.C. 12 U. Victoria 0
 S.F.U. 7 Other 4

* Values are means

** Values are numbers of subjects in groups

TABLE 7

DISTRICT ELEMENTARY SCHOOL CHARACTERISTICS

Students	Schools						
	1	2	3	4	5	6	7
Primary	177	75	186	168	247	144	220
Intermediate	251	106	175	170	288	166	259

TABLE 8

VARIABLES INTERNAL AND EXTERNAL TO THE FISHBEIN MODEL

Dependent Variables	Independent Variables (internal to the Model)	Independent Variables (external to the Model)
I	Ab	TE
B	SN	TP
		Ao

Experience (TE), Teacher Preparation (TP), and Attitude Toward the Object (Ao), where the objects were the Basal Reading Series. The variables internal to the Model were: Attitude Toward the Behaviour (Ab), and the Subjective Norm (SN). The criterion variables were Behaviour (B) and Intention (I).

3.2.1 Independent Variables

Teacher Preparation (TP)

In the study, TP referred to the prior acquisition or non-acquisition of an accredited program of study related to elementary school reading instruction. It was assumed that teachers who had taken a university program in developmental reading possessed theoretical knowledge relevant to reading instruction at the elementary level. The TP categories for subjects were thus established on the basis of academic qualification, i.e. 'Reading' or 'No Reading'. Ninety per cent of the subjects received their professional education at one of three provincial institutions: the University of British Columbia (62%), Simon Fraser University (20%), and the University of Victoria (8%). The remaining ten per cent received their training out of province but in Canadian institutions. Each of the provincial universities offer programs in developmental reading for the elementary level and all place basically the same emphasis on theory. Program descriptions for each institution are included in Appendix A.

Teacher Experience (TE)

As with the Teacher Preparation variable, Teacher

Experience (TE) was defined in terms of two categories, 'Primary' and 'No Primary'. The first was designed to index a knowledge of the situational conditions of reading instruction in primary classrooms. The second category referred to subjects who did not possess this awareness. Specifically, primary classroom experience included teaching at one of the first four years of elementary school, i.e. kindergarten or grades one to three. It was assumed that subjects who taught at the intermediate grade levels, i.e. grades four through seven, would not be as intimately aware of the characteristics of primary basal reading programs or the unique requirements of beginning readers.

Attitude Toward the Object (Ao)

Attitude Toward the Object (Ao) assessed the subject's feeling of favourableness or unfavourableness toward both basal reading programs under study. These measures were gathered from a semantic differential instrument composed of three bipolar evaluative adjectives drawn from Fishbein and Ravens' (1962) 'A' scales. The specific seven-point scales employed were: good-bad, wise-foolish, and harmful-beneficial.

Attitude Toward the Behaviour (Ab)

Attitude Toward the Behaviour (Ab) represents one of the internal variables specified for the Fishbein Model. It refers to the amount of favourableness or unfavourableness a subject feels toward performing a stipulated act in a given situation. In the study, Ab was assessed with respect to the

act of recommending the instructional use of the particular basal reading programs under study. Specifically, Ab was measured on a seven-point semantic differential instrument composed of the same scales employed in the Ao instrument.

Subjective Norm (SN)

Subjective Norm (SN) appears as the second internal variable in the Fishbein Model and represents the influence of the social environment on behaviour. It is an indicant of the subject's commitment to what he perceives as his social referent group's behavioural expectations. In the study, SN referred to the subject's perception of what persons or groups important to him expected him to do in the curriculum planning task. SN was measured on three, seven-point subjective probability scales drawn from Fishbein and Ravens' (1962) 'B' scales. The specific scales used in the study were: probable-improbable, likely-unlikely, and possible-impossible.

3.2.2 Dependent Variables

Intention (I)

Behavioural Intention (I) refers to expressed intent to perform some behaviour under specified conditions. According to Fishbein, intentions may vary in specificity along four dimensions: the nature of the behaviour, the time and situation of occurrence, and the object toward which the behaviour is directed. In the study, intentions varied with respect to objects (basal readers) and situation (student achievement groups). The

willingness of subjects to make particular program recommendations for the instructional use of basal reading series was assessed on the three subjective probability scales employed for the SN measure. It was assumed that expressed intention to recommend a particular reading program for use with a given achievement group of students reflected the degree of subjects' awareness of both the instructional consequences and the appropriateness of the recommendation with regard to important referents.

Behaviour (B)

The particular curriculum planning behaviours under study involved recommending the instructional use of two basal reading programs -- the Canadian Reading Development Series (Copp-Clark series) and the Language Patterns Series (Language Patterns) -- with high and low achieving students at the second grade level. The planning task thus required subjects to make four program-group matching decisions:

- a) Copp-Clark - High Group
- b) Language Patterns - High Group
- c) Copp-Clark - Low Group
- d) Language Patterns - Low Group

3.3 Collection of the Data

The collection of the data followed a sequence of three steps, each phase relating to the major variable classes under study. The instruments administered to the subjects in each phase are given below.

Phase I (External Variables): a questionnaire, including the Ao instrument.

PHASE II (Internal Variables): the Fishbein instruments including I, Ab, and SN.

PHASE III (Curriculum Planning Behaviour): the Behavioural Record Instrument, B.

The Questionnaire

The questionnaire was used to gather relevant background information from subjects as well as their teaching situations. Personal and professional data included the subject's age, sex, teaching experience, and professional education. Other information gathered related to school and class size factors. A sample of the questionnaire is given in Appendix B. The questionnaire was administered to subjects as a group in each school. The experimenter first explained the general purpose of the study and the procedure to be employed in responding to the affective and probability scales used in the Attitude Toward the Object and Fishbein instruments. The confidentiality of the information gathered was also guaranteed.

The Fishbein Instruments

The Intention (I), Attitude Toward the Behaviour (Ab), and Subjective Norm (SN) instruments were designed to measure subjects' dispositions toward recommending the instructional use of particular basal reading programs. Samples of the instruments are given in Appendix B. For each instrument written instructions

were provided to guide subjects in making their responses. These instructions followed the general format for semantic differential instruments (Osgood et al, 1957) and recommended by Fishbein and Raven (1962). Subjects were directed to complete the instruments for each phase in one sitting and not in the company of their colleagues. A pilot study was initially carried out with a group of thirty-three elementary teachers in three schools from an adjacent school district (School District Forty-Three, Coquitlam). Questions regarding the difficulty of understanding the instructions were solicited and the needed clarifications incorporated in the instruments before administration to subjects in the main study.

The Behavioural Record Instrument

The behaviour under study was recorded one week subsequent to subjects' completion of the Fishbein instruments. Recommendations were recorded on a form which indicated a simple 'yes' or 'no' response with regard to instructional adoption of each basal reading program for each student achievement group. An example of the Behavioural Record Instrument is given in Appendix B.

3.4 Technical Characteristics of the Instruments

Validity of the Instruments

For the intended purposes of the study instrument validity was considered for: 1) the constructs being measured 2) the particular behaviours and curriculum planning situations

under investigation and 3) the prediction of behaviour and intention.

Evidence for the construct validity of the instruments employed in the study derived mainly from adherence to the well-established procedures that have produced similar instruments to measure similar constructs. Reference to studies which have employed Fishbein and Ravens' (1962) A-B scales in the measurement of Attitude Toward the Object, Attitude Toward the Behaviour, and Subjective Norm were given in Section 2.3. Here, the data collected with instruments constructed in accordance with Fishbein's procedures confirm that such measures perform as theoretical considerations require. In the current study, established practice was adhered to in constructing instruments for measuring intention, attitude, and norm. For example, a subject's expression of favourableness or unfavourableness toward the performance of an act in a given situation was taken as a measure of his attitude toward the behaviour (Ab). Similarly, a subject's normative beliefs regarding the behavioural expectations of important referents was taken as a measure of his subjective norm (SN). Finally, a subject's expressed willingness to perform a given act in a given situation was regarded as a measure of his behavioural intention (I). Fishbein (Fishbein and Ajzen, 1975) considers these to be appropriate verbal measures of the variables in his model. Item data with respect to both evaluative and probability scales employed in the various instruments are given in Table 9 for the present study. Specifically, item-scale correlations for both evaluative

TABLE 9

INSTRUMENT VALIDITY: ITEM-SCALE CORRELATIONS

Scales	Concepts *							
Evaluative	AoCC	AoLP	AbCCCH	AbLPL	AbCCCL	AbLPL		
. good-bad	.91	.97	.95	.96	.96	.97		
. wise-foolish	.95	.94	.97	.96	.97	.97		
. harmful-beneficial	.92	.97	.97	.98	.98	.98		
Probability	SNCCH	SNLPH	SNCCL	SNLPL	IlCCH (I2CCH)	IlLPH (I2LPH)	IlCCL (I2CCL)	IlLPL (I2LPL)
. probable-improbable	.96	.97	.93	.98	.95 (.95)	.99 (.97)	.95 (.94)	.98 (.97)
. likely-unlikely	.98	.98	.98	.98	.97 (.98)	.99 (.99)	.97 (.98)	.99 (.99)
. possible-impossible	.96	.99	.96	.99	.97 (.97)	.99 (.98)	.97 (.97)	.97 (.99)

** Concepts Notation:

Ao: Attitude Toward the Object
 Ab: Attitude Toward the Behaviour
 SN: Social Norm
 Il: Intention (first assessment)

CC: Copp-Clark
 LP: Language Patterns
 H: High-ability student group
 L: Low-ability student group

and probability scales are presented to show their applicability across the various concepts examined in the study.

Fishbein and Raven (1962) have investigated the convergent and divergent validity of the A-B scales. They reported inter-item correlations of .90 for the A scales and .91 for the B scales on the concept of Extra-sensory Perception (ESP). A-B correlations for the concepts "ESP", "Atomic Fallout" and "Racial Prejudice" were -.17, -.07 and .12, respectively. Similar results were found in the present study where inter-item correlations for Evaluative (A) scales ranged from .85 to .95. For the Probability (B) scales, inter-item correlations ranged from .82 to .98. However, correlations between Evaluative and Probability scales ranged from .50 to .64 indicating less than satisfactory divergent validity.

A basic construct validity consideration in the study was the notion that by varying the situation and object toward which intention was directed, distinct behavioural intentions were defined. Reference to the correlations among Intention measures reported in Table 10 for each curriculum planning decision suggests that the subjects in the study perceived the decisions to be relatively discrete.

With regard to the behavioural criterion, the argument for using recommending behaviour as a valid indicant of preactive instructional decision making has already been made in Chapter One.

TABLE 10

INSTRUMENT VALIDITY: CORRELATIONS BETWEEN INTENTION MEASURES
FOR FOUR CURRICULUM PLANNING DECISIONS

Decision	D1	D2	D3
1. Copp-Clark - High Group (D1)			
2. Language Patterns - High Group (D2)	-.10		
3. Copp-Clark - Low Group (D3)	-.32	.30	
4. Language-Patterns - Low Group (D4)	.32	.16	-.20

With regard to content validity, the curriculum planning task under study is basic to reading instruction at the primary level. Moreover, the dimensions of the task emphasized in the study -- available curriculum alternatives and individual differences among students -- are primary considerations in planning. The particular basal reading programs selected are those prescribed as alternatives by the Provincial Department of Education and both are widely used in the province (Hill et al, 1976).

Determination of predictive validity constitutes a substantive part of the study and is dealt with in Section 3.5.

Reliability of the Instruments

The instruments for which reliability measures were sought included Intention (I), Attitude Toward the Object (Ao), Attitude Toward the Behaviour (Ab), and Subjective Norm (SN). The main reliability interests of the study related to the internal consistency and stability of the instruments.

Internal consistency was assessed using Cronbach's (1951) Coefficient Alpha. The results for each instrument on each concept are given in Table 11. These findings indicate a high level of internal consistency for the instruments used.

Estimates of stability were available only for the intention measure and are given in Table 12. The reported correlations are between measures of Intention taken one week apart, i.e. at the time when the questionnaire and Fishbein

TABLE 11

INSTRUMENT CHARACTERISTICS DATA: INTERNAL CONSISTENCY.

Concepts	Mean	Standard Deviation	Cronbach Alpha
AoCC	14.01	2.72	.91
AoLP	15.12	3.64	.96
AbCCH	14.87	3.53	.96
AbLPH	15.53	3.81	.96
AbCCL	11.83	3.92	.97
AbLPL	13.73	4.13	.97
SNCCH	14.24	4.28	.97
SNLPH	15.02	4.41	.98
SNCCL	11.82	4.10	.96
SNLPL	14.54	4.63	.98
I1CCH	13.39	4.70	.97
I1LPH	15.07	4.90	.99
I1CCL	11.04	4.43	.96
I1LPL	13.65	4.90	.98
I2CCH	14.00	4.71	.97
I2LPH	15.20	4.57	.98
I2CCL	11.33	4.31	.96
I2LPL	13.40	5.04	.98

TABLE 12

INSTRUMENT CHARACTERISTICS DATA: TEST-RETEST
RELIABILITIES FOR INTENTION MEASURES (I1, I2)
FOR FOUR CURRICULUM PLANNING DECISIONS

1	2	3	4
.77	.71	.82	.84

Instrument data was gathered (I1) and at the time when the Behavioural Observation Instrument was administered (I2). The obtained results indicate an adequate level of stability for the purposes of the study. Although stability measures were not available for the Ao, Ab, and SN instruments in the present study, Fishbein and Raven (1962) correlated attitude (A) scores of forty-three subjects in a study of the concept ESP (Extra-sensory Perception) after a four-day interval and obtained a correlation of .90. The corresponding correlation for belief (B) scores was .91 on this concept.

3.5 Method of Analysis

To investigate the applicability of the Fishbein Model in the context of the present study, analysis of the gathered data was guided by the predictive and explanatory purposes of the study. The analytic procedures outlined below thus relate to an assessment of: 1) the necessity and sufficiency of the Fishbein Model variables in predicting Behaviour and Intention with respect to the four curriculum planning decisions under study; 2) the effect of prior teacher experience and learning on the relationships among variables assumed in the Model.

3.5.1 The Necessity and Sufficiency of the Fishbein Model

The statistical procedures employed in examining the utility of the Fishbein Model for predicting Intention and Behaviour are given below together with the specific research questions related to this purpose.

a) Are Intention and Behaviour highly correlated?

According to the Model, the immediate determinant of a particular behaviour is an individual's intent to perform that behaviour. This is in contrast to traditional notions of behavioural prediction from attitudes which typically employ standard Attitude Toward the Object (Ao) measures as antecedent variables.

To assess the strength of the relationship between Intention (I)¹ and Behaviour (B) in the present study, point-biserial correlation coefficients were computed between these measures for each curriculum planning decision and across all subjects. The statistical significance of these coefficients was reported utilizing a two-tailed test of their departure from zero value.

In addition to examining the strength of the relationship between I and B over the one-week time period which intervened between their respective assessment, Attitude (Ao)-Behaviour correlations for a similar time period were computed. A test of significant differences between I-B and Ao-B correlations for (non-independent) samples was made for comparison (Glass and Stanley, 1970).

b) Is Intention predictable with greater than chance accuracy from variables internal to the Fishbein Model ?

To assess the accuracy of prediction given by the

¹ All subsequent references to I refer to the first assessment of that variable (ie. I1).

attitudinal and normative variables specified by the Model, a multiple regression procedure was employed with Intention as the criterion. Multiple correlation coefficients and coefficients of determination were computed across subjects and for each curriculum planning decision. This procedure allowed investigation of the joint contribution of Attitude Toward the Behaviour (Ab) and Social Norm (SN) toward predicting variation in Intention.

Since a unique feature of Fishbein's Model is its inclusion of a normative term in the regression, the necessity of including SN in addition to Ab was examined. This was done in terms of the increment in predicted criterion variation associated with the normative term after that due to attitude had been taken into account. A consideration of the predictive role of both attitudinal and normative components in previous empirical research has shown a degree of correlation among these predictors. As a result, not only the joint and unique predictive utility of Ab and SN but also their direct association with Intention was reported to better present the relationships among Model variables. The relevant statistics thus considered were:

b1) the coefficient of determination (R^2) between the criterion variable (I) and predictor variables (Ab and SN),

b2) the increment in predicted I variation due to the individual terms Ab and SN (ΔR^2)

b3) the multiple correlation coefficient (R) of I with Ab and SN ,

b4) the first-order correlation coefficient (r) between I and each predictor variable Ab and SN ,

b5) the standardized regression (β) weights associated with each predictor.

Derivation of the appropriate F test statistics from the regression is given by Kim and Kohout (1975).

c) Is Intention predictable with increased accuracy by the addition of variables external to the Fishbein Model ?

To examine the claim made by Fishbein that the attitudinal and normative components mediate the effect of any additional variables on Intention, the variables of Teacher Experience (TE), Teacher Preparation (TP), their interaction ($TE \times TP$) and Attitude Toward the Object (Ao) were included in multiple regression equations constructed for each curriculum planning decision and computed across all subjects. This procedure allowed the effect of Ab and SN to be held constant while any significant increment of the predicted variation in Intention due to the external variables was examined. Derivation of appropriate F test statistics from regression which reflects an ordering logic for entering variables in the equation is given by Kim and Kohout (1975). Interpretive cautions in employing qualitative variables in regression with unequal numbers of

subjects for each level or category of these variables (eg. TE and TP) have been discussed by Overall and Speigel (1969), Kaufman and Sweet (1974) and Marks (1974).

Fishbein has stated that where external variables are related to Intention they are also directly related to Ab and SN. To more clearly examine the relations among variables included in the regression, external variables were correlated with Intention and with the Fishbein predictor terms.

3.5.2 The Effect of Prior Teacher Experience and Learning on the Relationships Assumed in the Fishbein Model.

The statistical procedures employed in examining the effect of external variables on components of the Fishbein Model and the behavioural criteria are given below together with the specific research questions related to this explanatory purpose. Since the analysis involved examination of the effects of prior teaching experience (TE) and formal learning (TP) on the relationships among criterion and predictor variables, the TE and TP variables were considered as design factors. The resultant sub-groupings of subjects were labelled as follows.

Group 1: subjects who possessed both primary classroom teaching experience and formal learnings relevant to primary reading instruction.

Group 2: subjects who possessed primary classroom teaching experience but no formal learnings related to primary reading instruction.

Group 3: subjects who had no prior primary classroom teaching experience but who did possess formal learnings relevant to primary reading instruction.

Group 4: subjects who possessed neither classroom teaching experience at the primary level nor formal learnings relevant to primary reading instruction.

- a) What is the effect of prior teaching experience and learning on the relationship between Intention and Behaviour ?

According to Fishbein's formulation, the strength of the relationship between intent and behaviour is, in large part, determined by the degree of volitional control individuals have over performance of the behaviour. In the present study volitional control was indexed in terms of subjects' possession of relevant prior teaching experience and formal learnings. Accordingly, correlation coefficients were computed between I and B for each curriculum decision and sub-group of subjects. The procedure suggested by Marascuilo (1966) for examining differences among multiple (first-order) correlation coefficients was employed. This procedure involves first a test of the equality of K coefficients followed by the specification of contrasts among all possible pairs or selected combinations of these coefficients to determine the source of differences initially found.

b) What is the effect of prior experience and learning on the relationship between Intention and variables internal to the Fishbein Model ?

According to the Model, persons and situations elements will have a differential effect upon the (regression) weights given the Ab and SN terms in the prediction of Intention. Separate regression equations were therefore constructed for each curriculum decision and each sub-group of subjects to assess the relative predictive importance of these components. While the attitudinal and normative terms are considered to be formed by distinct processes, previous empirical research has shown a lack of independence. To investigate the relative importance assigned Ab and SN in predicting I and at the same time take into account any intercorrelation among predictors, simple correlations and multiple correlations between criterion and predictors as well as standardized regression weights were reported and examined for their significance.

CHAPTER FOUR

RESULTS OF ANALYSIS

Chapter Four presents the results for the analyses outlined in Section 3.5 of the previous chapter. The statistical analyses of data were performed on an IBM 360/67 computer using the applicable sub-routines of the Statistical Package for Social Sciences: SPSS (Nie et al, 1975). Statistical significance levels of less than .05 are reported for substantive discussion and interpretation. The analysis consisted of two phases, each of which related to the major research purposes identified in the study. These referred first to the necessity and sufficiency of the Fishbein Model in the prediction of Elementary teachers' intentions and behaviours with respect to recommending the instructional use of basal reading programs with different ability-groups of primary level students. The particular curriculum planning behaviours and behavioural intents examined related to the following decision situations: 1) recommending the instructional use of the Copp-Clark series with a High ability group of grade two students; 2) recommending the instructional use of the Language Patterns series with a High ability group of grade two students; 3) recommending the instructional use of the Copp-Clark series with a Low ability group of grade two students; and 4) recommending the

instructional use of the Language Patterns series with a Low ability group of grade two students. The second phase of analysis consisted of an examination of the effects of prior teaching experience and formal learning factors on the relationship between subjects' Recommending Intentions and Behaviour and on the relative importance of the Model's attitudinal and normative components in predicting Intention. Additional relations between and among variables considered internal and external to the Model were of interest as were their numerical values. Descriptive statistics were thus included for elaboration of the research questions.

5.1 The Necessity and Sufficiency of the Fishbein Model.

The first phase of analysis involved testing the applicability of the Fishbein Model to the prediction of Behaviour (B) and Intention (I) for all subjects and each of the curriculum planning decisions under study. The research questions which guided the analysis are given below together with the related findings.

a) Are Intention and Behaviour highly correlated?

To assess the strength of the relationship between subjects' Recommending Behaviour and Behavioural Intent, point biserial correlation coefficients were computed across subjects for each curriculum planning decision. The results of this analysis are given in Table 13. Here, the four

TABLE 13

RELATIONSHIPS BETWEEN BEHAVIOUR, INTENTION
AND ATTITUDE (Ao)

Decision	Correlations		Observed Z Values for Correlation Comparisons
	I-B	Ao-B	
D1	.49 *	.21 *	3.00 **
D2	.54 *	.19 *	4.30 **
D3	.54 *	-.11 *	5.56 **
D4	.49 *	.29 *	2.27 **

* $p < .05$

** $Z .975 = 1.96$

curriculum planning decisions -- Copp-Clark-High Group, Language Patterns-High Group, Copp-Clark-Low Group, and Language Patterns-Low Group -- are indexed as Decision One (D1), Decision Two (D2), Decision Three (D3), and Decision Four (D4), respectively. It may be seen that relationships between I and B measures were moderately strong and positive over all curriculum planning decisions. The coefficients obtained for each planning decision were .49, .54, .54 and .49 ($p < .05$) respectively. These results are comparable to the findings of related studies where the Model has been applied in non-laboratory settings.

For purposes of comparison, correlations were also computed between the Attitude Toward the Object (Ao) measure and Behaviour (B) for each planning decision. The obtained coefficients were .21, .19, -.11 and .29 ($p < .05$) for Decisions One to Four, respectively. While significant for each of the four planning decisions, the Ao-B correlations were generally low and in one instance (Decision Three) demonstrated an inverse relationship. Comparison of the I-B and Ao-B correlations for each decision produced significant differences in favour of the I-B correlations in all cases. The observed Z values for this analysis were 3.00, 4.30, 5.56 and 2.27 ($p < .05$) for the respective decisions.

These results lend support to Fishbein's contention that traditional measures of attitude are not highly related

to particular behaviours and that behavioural intention provides an improved antecedent measure.

b. Is Intention predictable with greater than chance accuracy from variables internal to the Fishbein Model ?

To assess the ability of variables specified as internal to the Fishbein Model -- Attitude Toward the Behaviour (Ab) and Subjective Norm (SN) -- to accurately predict Intention, multiple regression equations were constructed for each planning decision. Tables 14, 15, 16 and 17 report the results of this analysis in terms of the coefficient of determination (R^2). The obtained results of this analysis indicated that variation in Intention could be accounted for with some precision from the attitudinal and normative components of the Model. For all decisions, the joint predictive values of Ab and SN were strong and positive although considerable range in these values (Total R^2) was apparent across decisions; coefficients of determination obtained for Decisions One to Four were .54, .62, .47, and .72 ($p < .05$), respectively. These results are comparable to those found in other field applications of the Model where conditions do not permit the degree of experimental control available in laboratory studies.

In the context of the present study, the Ab and SN terms of the Model were sufficiently predictive of Intention

TABLE 14

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
VARIABLES ON INTENTION FOR DECISION ONE

Source	ΔR^2	Degrees of Freedom	Fobs
Ab	.51	1	38.47 *
SN	.04	1	8.81 *
Total	.55	2	65.07 *
Error	.45	109	

* $p < .05$

TABLE 15

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
VARIABLES ON INTENTION FOR DECISION TWO

Source	ΔR^2	Degrees of Freedom	Fobs
Ab	.53	1	36.67 *
SN	.09	1	26.77 *
Total	.62	2	88.44 *
Error	.38	109	

* $p < .05$

TABLE 16

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
VARIABLES ON INTENTION FOR DECISION THREE

Source	ΔR^2	Degrees of Freedom	Fobs
Ab	.46	1	46.39 *
SN	.02	1	3.19 *
Total	.48	2	48.47 *
Error	.52	109	

* $p < .05$

TABLE 17

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
VARIABLES ON INTENTION FOR DECISION FOUR

Source	ΔR^2	Degrees of Freedom	Fobs
Ab	.61	1	79.09 *
SN	.11	1	44.83 *
Total	.72	2	142.36 *
Error	.28	109	

* $p < .05$

to provide support for Fishbein's general formulation.

To assess the necessity of the Ab and SN terms in prediction, the incremental contribution of each to the regression was examined for the four planning decisions. For all decisions, the attitudinal term made the greatest contribution; as reported in Tables 14, 15, 16 and 17, R^2 values for Decisions One to Four were .51, .53, .46 and .61 ($p < .05$), respectively. In each decision situation SN accounted for a small but significant proportion of the I variation beyond that provided by Ab. For the four decisions the respective increments in R^2 due to SN were .04, .09, .02 and .11 ($p < .05$). While the necessity of both components in prediction was indicated, the relative importance of Ab in the regression was clearly greater. However, this interpretation was complicated by the correlation among predictors for the respective decisions ($r = .77, .71, .82$ and $.84$; $p < .05$). Reference to Table 18 provides a more complete picture of the relationships between Intention and the predictors as well as relations among predictors. In terms of the regression, the role of Ab and SN may be seen in the relative weights assigned each predictor (i.e. the regression coefficients). As indicated, the attitudinal term received the greatest weighting for all decisions. However, measures of the direct association of Intention with Ab and SN showed both to be significantly correlated with the criterion. Respective first-order correlations of Ab and I for the four decisions were .71, .73, .78

TABLE 18

RELATIONSHIPS BETWEEN INTENTION AND INTERNAL
VARIABLES FOR FOUR CURRICULUM PLANNING DECISIONS *

Decision	Correlation Coefficients		Regression Coefficients		Multiple Correlation
	Ab	SN	Ab	SN	
D1	.71	.62	.54	.26	.74
D2	.73	.69	.48	.39	.79
D3	.68	.50	.59	.15	.69
D4	.78	.72	.55	.41	.85

* all reported values have $p < .05$.

and .78 ($p < .05$) while those between SN and I were .62, .69, .50 and .72 ($p < .05$). The effect of correlation among predictors is made apparent by a comparison of the first-order correlations of Ab and SN with I to the multiple correlations of both with the criterion across decisions ($R = .74, .79, .69$ and .85; $p < .05$), respectively.

In the context of this analysis, it would appear that the attitudinal term is a necessary component of the Model and inclusion of the normative term increases predictive efficiency.

c) Is Intention predictable with increased accuracy by the addition of variables external to the Fishbein Model ?

Another aspect of the sufficiency of the attitudinal and normative components of the Fishbein Model relates to their role in mediating the influence of additional variables on Intention. To assess the potential of variables not specified in the model to increase the precision of prediction, the following terms were added to the regression formulation: Teacher Experience (TE), Teacher Preparation (TP) and Attitude Toward the Object (Ao). The regression procedure employed in this analysis allowed the Fishbein variables (Ab and SN) to be statistically held constant in order to examine the relationship between Intention and the external variables. Tables 19, 20, 21 and 22 show the increment in predicted I variation attributable to the external variables for each

TABLE 19

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
AND EXTERNAL VARIABLES ON INTENTION
FOR DECISION ONE

Source	ΔR^2	Degrees of Freedom	Fobs
(Ab SN)	.54	2	65.07 *
Ao	.005	1	.57
TE X TP	.02	1	3.83 *
TE	.007	1	1.68
TP	.001	1	.26
Total	.58	6	
Error	.42	105	

* $p < .05$

TABLE 20

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
AND EXTERNAL VARIABLES ON INTENTION
FOR DECISION TWO

Source	ΔR^2	Degrees of Freedom	Fobs
(Ab SN)	.62	2	88.44 *
Ao	.005	1	.69
TE X TP	.001	1	.58
TE	.01	1	4.14 *
TP	.00	1	.00
Total	.64	6	
Error	.36	105	

* $p < .05$

TABLE 21

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
AND EXTERNAL VARIABLES ON INTENTION
FOR DECISION THREE

SOURCE	ΔR^2	Degrees of Freedom	Fobs
(Ab SN)	.47	2	48.47 *
Ao	.002	1	.12
TE X TP	.00	1	.00
TE	.005	1	.99
TP	.00	1	.03
Total	.48	6	
Error	.52	105	

* $p < .05$

TABLE 22

RESULTS OF REGRESSION ANALYSIS OF INTERNAL
AND EXTERNAL VARIABLES ON INTENTION
FOR DECISION FOUR

Source	ΔR^2	Degrees of Freedom	Fobs
(Ab SN)	.72	2	142.36 *
Ao	.00	1	.00
TE X TP	.00	1	.00
TE	.00	1	.00
TP	.00	1	.00
Total	.73	6	
Error	.27	105	

* $p < .05$

curriculum planning decision. These results generally supported the sufficiency of the attitudinal and normative components in mediating the effect of additional variables. Exceptions were found with the TE variable and the constructed variable TE X TP which gave small but significant increments in predicted criterion variation for Decision Two and One respectively ($TE = .01, p < .05$; $TE \times TP = .02, p < .05$).

Fishbein has stated that where external variables are related to Intention, they also will be related to either or both the Ab and SN components. To examine these relationships, first-order correlation coefficients were computed between each external variable, Intention, and the Fishbein variables. Table 23 provides these results. Among the external variables considered in the present study, Ao was significantly related to I in three of the four planning decisions. Obtained Ao-I correlations for Decisions One to Four were .37, .53 ($p < .05$), $-.05$ ($p > .05$), and .42 ($p < .05$), respectively. The pattern of relationships between Ao, Ab, and SN conformed to that outlined by Fishbein; correlations between Ao and Ab and between Ao and SN were significant for Decisions One, Two and Four but not Three. Similarly for Decision Two, where TE gave a significant increment in predicted I variation, the I-TE correlation was .45 ($p < .05$) and the TE-Ab and TE-SN correlations were .47 ($p < .05$) and .30 ($p < .05$), respectively. For the first planning decision, where the independent contribution of the TE X TP variable to predicted I variation was significant, the

TABLE 23

CORRELATIONS BETWEEN INTENTION AND (INTERNAL AND EXTERNAL)
 PREDICTORS AND AMONG PREDICTORS FOR
 FOUR CURRICULUM PLANNING DECISIONS

Variables	Decisions			
	D1	D2	D3	D4
Ao-I	.39 *	.53 *	-.05	.42 *
Ao-Ab	.52 *	.56 *	.00	.56 *
Ao-SN	.21 *	.51 *	-.07	.40 *
TE X TP-I	-.11	.05	.01	-.13
TE X TP-Ab	.07	.15	.03	-.13
TE X TP-SN	-.02	.05	.01	-.06
TE-I	.14	.45 *	.03	.23 *
TE-Ab	.32 *	.47 *	.17	.17
TE-SN	.22 *	.30 *	.03	.32 *
TP-I	.17	.16	-.07	.12
TP-Ab	.21 *	.19 *	-.09	.09
TP-SN	.12	.16	-.10	.14

* $p < .05$.

I-TE X TP correlation was not large and negatively signed ($-.11$; $p < .05$). The relationship of TE X TP with Ab was correspondingly nonsignificant ($.07$; $p > .05$) as it was with SN ($-.02$; $p > .05$).

Claims for the sufficiency of the Model in the sense that the specified attitudinal and normative components mediate the effect of external variables were generally supported. Where the Model failed to mediate completely the influence of additional variables, their relationship with Intention was greatly attenuated.

5.3.2 The Effect of Prior Teacher Experience and Learning on the Relationships Assumed in the Fishbein Model.

This phase of the analysis was directed toward examining the effect of prior classroom teaching experience and formal learning related to primary reading instruction on: 1) the relationship between Intention and Behaviour and 2) the relationship among the attitudinal and normative components of the Model in the prediction of Intention. To examine the effect of the individual difference factors on these relationships, the sample was partitioned in terms of experience and learning background to form four subgroups: Group One subjects possessed both experience and learning related to primary reading instruction; Group Two subjects possessed only experience; Group Three subjects possessed only learning and Group

Four subjects possessed neither experience nor learning. The relevant research questions and findings are summarized below.

- a) What is the effect of prior teaching experience and learning on the relationship between Intention and Behaviour ?

In the present study it was conjectured that relevant classroom teaching experience and formal learnings would significantly effect the strength of the Intention-Behaviour relationship. To assess the extent of this influence, I-B correlation coefficients were computed for each curriculum planning decision and each sub-group of teachers as defined by their experience and learning background. Descriptive statistics relevant to the analysis are given in Table 24.

Results of the χ^2 analysis used to test the equality of the I-B coefficients between groups are reported in Table 25. It may be seen that for three of the four decisions significant differences existed between the groups; observed χ^2 values for Decisions One to Four were 7.37 ($p > .05$), 14.57, 9.03 and 11.57 ($p < .05$), respectively. These results indicated that the specific nature of group differences could be usefully explored for Decisions Two, Three and Four. With the exception of Decision One, which required a matching of the Copp-Clark program with a Low-ability group of students, the effect of subjects' prior experience and learning on the I-B relationship was further examined by defining pairwise contrasts between

TABLE 24

DESCRIPTIVE STATISTICS FOR INTENTION-BEHAVIOUR
ANALYSIS BY SUBJECT GROUPS

Group	Variables				
	Intention		Behaviour	Correlation of I with B r	
	\bar{X}	S.D.	P*		
	Decision One				
	G1	14.08	5.66	.62	.67
	G2	13.80	4.75	.72	.55
	G3	14.07	3.47	.82	.38
	G4	11.04	3.69	.57	.08
	Decision Two				
	G1	17.54	4.94	.84	.79
	G2	16.36	4.04	.84	.45
	G3	13.33	4.36	.59	.36
	G4	11.74	3.83	.39	.06
	Decision Three				
	G1	10.95	5.47	.38	.72
	G2	11.44	4.28	.28	.67
	G3	10.59	3.52	.30	.48
	G4	11.49	4.01	.39	.10
	Decision Four				
	G1	14.46	5.97	.57	.70
	G2	15.00	4.23	.68	.48
	G3	13.70	4.13	.74	.48
	G4	10.83	3.59	.39	-.11

* Proportion of subjects in group who chose indicated program.

TABLE 25

GROUP DIFFERENCES ON INTENTION-BEHAVIOUR
CORRELATIONS FOR FOUR CURRICULUM PLANNING DECISIONS

Group	Decisions			
	D1	D2	D3	D4
	Observed Zr Values			
G1	.816	1.064	.908	.863
G2	.614	.489	.787	.517
G3	.393	.381	.517	.520
G4	.084	.056	.103	-.114
	Observed χ^2 Values for Group Differences			
	7.37	14.57 *	9.03 *	11.57 *

* $\chi^2 (3, .95) = 7.81$

groups for the following decision situations:

1. Decision Two: Language Patterns-High Group (students)

Table 26 gives the results of the pairwise contrasts between groups for this decision. Reference to these results and to the correlations reported in Table 24 indicate that Group One, composed of subjects who had primary classroom teaching experience and formal learnings related to primary level reading instruction, had a significantly higher I-B correlation (.79) than did the Group Four subjects (.06) who had neither experience nor learnings relevant to primary reading instruction. No other significant differences were found between groups.

2. Decision Three: Copp-Clark-Low Group (students)

The results for the pairwise contrasts among the groups for this decision are given in Table 27. These results are similar to those found for Decision Two. Group One subjects had a significantly higher I-B correlation (.72) than did Group Four subjects (.10). No other significant differences were noted between the groups.

3. Decision Four: Language Patterns-Low Group(students)

The results for the pairwise contrasts among groups for this planning decision are presented in Table 28. As in Decisions Two and Three, Group One subjects had a significantly

TABLE 26

RESULTS OF ANALYSIS OF PAIRED COMPARISONS
BETWEEN GROUPS FOR DECISION TWO

	Observed Zr Difference		
	G2	Group G3	G4
G1	.575	.683	1.008
G2		.108	.433
G3			.325
	Confidence Intervals About Observed Zr Differences		
	G2	Group G3	G4
G1	(-.190, + 1.400)	(-.063, + 1.428)	(+.220, + 1.80)
G2		(-.718, + .933)	(-.431, + 1.296)
G3			(-.521, + 1.171)

TABLE 27

RESULTS OF ANALYSIS OF PAIRED COMPARISONS
BETWEEN GROUPS FOR DECISION THREE

	Observed Zr Differences		
	G2	Group G3	G4
G1	.121	.391	.805
G2		.270	.684
G3			.414
	Confidence Intervals About Observed Zr Differences		
	G2	Group G3	G4
G1	(-.644, + .886)	(-.355, + 1.136)	(+.018, + 1.593)
G2		(-.556, + 1.095)	(-.180, + 1.547)
G3			(-.432, + 1.260)

TABLE 28

RESULTS OF ANALYSIS OF PAIRED COMPARISONS
BETWEEN GROUPS FOR DECISION FOUR

	Observed Zr Differences		
	Group		
	G2	G3	G4
G1	.346	.343	.977
G2		-.003	.631
G3			.634
	Confidence Intervals About Observed Zr Differences		
	Group		
	G2	G3	G4
G1	(-.419, + 1.111)	(-.402, + 1.088)	(+.189, + 1.764)
G2		(-.828, + .822)	(-.233, +11.494)
G3			(-.212, + 1.480)

higher I-B correlation (.70) than did Group Four subjects (-.11). All other comparisons were nonsignificant.

Since no significant differences were obtained between Group One subjects and subjects in Groups Two and Three, nor were there significant differences between Group Four subjects and subjects in Groups Two and Three, interpretation of the results was not straightforward in terms of either experience or preparation. Nevertheless, the fact that Group One subjects had significantly higher I-B correlations than did Group Four subjects in three of the four decision situations does suggest that practical and theoretical knowledge operate jointly to produce greater consistency between behavioural intent and subsequent actions.

- b) What is the effect of prior teaching experience and formal learning on the relationship between Intention and variables internal to the Fishbein Model ?

To assess the influence of individual difference factors on the relative importance of Ab and SN in predicting subjects' Recommending Intention for each planning decision under study, separate regression equations were constructed for each decision situation and subject group, as defined by their previous classroom teaching and formal learning experiences. Descriptive statistics relevant to the analysis are given in Table 29.

TABLE 29

DESCRIPTIVE STATISTICS FOR FISHBEIN-MODEL
ANALYSIS BY SUBJECT GROUPS

Group	Variables			
	Ab		SN	
	\bar{X}	S.D.	\bar{X}	S.D.
Decision One				
G1	16.46	3.37	15.27	5.16
G2	15.00	4.03	14.80	4.04
G3	14.22	3.38	13.85	4.13
G4	12.91	2.17	12.44	2.47
Decision Two				
G1	17.84	3.66	16.68	4.40
G2	16.12	3.42	15.48	4.09
G3	13.82	3.48	14.15	4.43
G4	13.17	2.52	12.87	3.94
Decision Three				
G1	12.16	5.12	11.62	5.12
G2	12.80	3.86	12.36	4.60
G3	10.67	3.26	11.26	3.25
G4	11.61	1.88	12.22	2.49
Decision Four				
G1	14.16	5.03	15.89	5.74
G2	14.64	3.76	15.80	3.22
G3	13.96	4.04	13.96	3.71
G4	11.78	2.28	11.65	3.74

The results of the (regression) analysis reported in Table 30 indicate first that Intention could be adequately determined from either or both predictors for each decision and for all subject groups but the Fourth which was composed of subjects who had no prior experience or learning. Here, considerable variation in first-order and multiple correlations between predictors and criterion was evident for the four decisions.

Since the Ab and SN variables were correlated, their relative importance in the regressions was reported in terms of three values: 1) the simple correlation between each predictor and Intention; 2) the multiple correlation between Intention and both predictors; and 3) the standardized regression coefficients for each predictor. These results are given in Table 30. It may be seen that Intention was related to both the attitudinal and normative components with respect to the direct measure of association and the multiple correlation for all subject groups. For the four decisions, both Ab and SN received significant regression weights in the prediction of Intention. For Group One subjects who possessed both prior classroom teaching experience and formal learning related to primary reading instruction and for Group Two subjects who possessed relevant classroom teaching experience, neither the Ab nor SN terms appeared to be dominant across all decisions. However, for Decisions One and Three, Group One subjects had significant regression weights for the Ab term

TABLE 30

EFFECT OF PRIOR TEACHING EXPERIENCE AND FORMAL LEARNING
ON THE ATTITUDINAL AND NORMATIVE COMPONENTS OF
FISHBEIN'S MODEL IN PREDICTING INTENTION

Decision	Correlation Coefficients		Regression Coefficients *		Multiple Correlation	
	Ab	SN	Ab	SN		
	Group One					
	D1	.81	.58	.82	-.02 NS	.81
	D2	.72	.77	.38	.53	.83
	D3	.83	.49	.83	-.01 NS	.83
	D4	.78	.82	.43	.55	.89
	Group Two					
	D1	.78	.80	.43	.49	.86
	D2	.84	.56	.78	.11 NS	.84
	D3	.60	.65	.27 NS	.45	.68
	D4	.84	.74	.62	.38	.89
	Group Three					
	D1	.71	.57	.57	.25 NS	.74
	D2	.70	.61	.55	.19 NS	.71
	D3	.81	.79	.55	.50	.92
	D4	.72	.31	.72	.00 NS	.72
	Group Four					
D1	.31	.42	.19 NS	.36	.46	
D2	.03	.52	.00 NS	.52	.52	
D3	-.11	-.17	-.09 NS	-.16 NS	.19	
D4	.69	.65	.55	.49	.83	

* All reported values have $p < .05$ except where indicated as non-significant (NS).

(.82 and .83; $p < .05$). For Group Three subjects who possessed relevant formal learning, the attitudinal term was clearly dominant in three of the four decisions but had only a slightly larger regression weight assigned the Ab term for the remaining decision (Decision Three). Standardized regression weights reported for the Ab term for the four decisions were .57, .55, .55 and .72 ($p < .05$), respectively; for the SN term, the corresponding weights were .25, .19 ($p > .05$), .50 ($p < .05$) and .00. For Group Four subjects the normative term received the greater weighting in two of the four decisions. Standardized regression weights reported for the SN term for Decisions One to Four were .19, .00, .09 ($p > .05$) and .54 ($p < .05$), respectively. Corresponding weights for the SN term were .36, .52 ($p < .05$), -.16 ($p > .05$) and .49 ($p < .05$).

The results of the analysis thus suggested a pattern of regression weights which was interpretable with respect to the individual difference factors considered for three of the four subject groups. Subjects who had relevant theoretical experience tended to give primary emphasis to attitudinal factors for three of the four decisions while for subjects with neither primary-level experience nor relevant formal learning, normative considerations were to the fore in two of the four decision situations. Subjects who possessed both primary-level experience and related formal learning emphasized attitudinal factors in two of the four decision situations.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Statement of the Problem

The purpose of the study was to examine the basis for elementary teachers' curriculum planning activities in primary reading instruction. The particular planning behaviours investigated involved recommending the instructional use of basic reading programs with different ability groups of primary-level students. Recommending behaviour was seen to be an instance of autonomous teacher activity; that is, an aspect of instruction within the volitional control of teachers. Under these conditions, Dunkin and Biddle (1974) indicated that teachers' behaviour may best be predicted from a knowledge of their personal and professional characteristics. Three categories of predictive variables were proposed: 1) formative, relating to the practical experiences of teachers; 2) academic, relating to relevant theory acquired in preservice or inservice learning; and 3) psychological properties, involving the beliefs, motivations and attitudes that teachers bring to the instructional situation. According to Dunkin and Biddle, the effect of formative experiences and academic learnings on teachers' instructional behaviour is reflected primarily in their affective dispositions. The problem of relating the proposed antecedent variables to behavioural criteria was thus considered in terms

of the more general attitude-behaviour issue of current concern in (social) psychological research. In this context, the framework of Dunkin and Biddle was investigated by reference to Fishbein's Behavioural Intention Model.

Fishbein (1967; Fishbein and Ajzen, 1975) has developed a regression model for the prediction of behavioural intention and behaviour from attitudinal and normative variables. The model represents an alternative formulation to that typically employed in studies which have attempted to explain behaviour from attitude using traditional attitude instruments. Evidence that standard Attitude-Toward-The-Object (Ao) measures are not related to particular behaviours requires that other variables be included in prediction. Fishbein considers the appropriate antecedent measure for a given behaviour to be an individual's intention to perform that behaviour (I). The formation of behavioural intent is further seen to be related to the person's attitude toward performance of the behaviour (Ab) and his social normative beliefs (SN) as to whether he should perform the behaviour. The attitudinal and normative components of the Model are assumed to provide the necessary and sufficient predictors of Intention. Variables considered external to the Model, including traditional attitude measures, are assumed not to add to predictive accuracy. However, external variables can significantly affect the prediction by their influence on the Model's components. Behavioural prediction from conative, affective and normative variables thus parallels the position of Dunkin and Biddle with regard to instructional activities.

A second aspect of the study involved investigation of the influence of formative and academic factors on the prediction of Behaviour and Intention from attitudinal and normative variables. The formative and academic characteristics of subjects were defined in terms of teacher classroom experience (TE) in primary reading instruction and teacher preparation (TP), the acquisition of relevant theoretical learnings from preservice or inservice experiences. These indices were assumed to reflect the possession and utilization of situational and theoretical knowledge required of teachers for autonomous and effective curriculum planning.

Specific research questions were posed to direct investigation of the predictive and explanatory potential of the Fishbein formulation:

- 1) Are Behaviour and Intention highly correlated?
- 2) Is Intention predictable with greater than chance accuracy from variables internal to the Fishbein Model (ie. Ab and SN) ?
- 3) Is Intention predictable with increased accuracy by the addition of external variables (ie. Ao, TE, TP, and TE X TP) ?
- 4) What is the effect of prior teaching experience and learning on the relationship between Intention and Behaviour ?
- 5) What is the effect of prior teaching experience and learning on the relationship between

Intention and variables internal to the Model?

5.2 Results and Conclusions

A number of tentative conclusions can be offered to the problems that provided direction for the investigation. These relate to the predictive and explanatory aims of the study.

5.2.1 The Prediction of Intention and Behaviour

The results of analysis indicated that the Fishbein Model provides a useful approach to the prediction of Behaviour and Intention.

Correlations obtained between I and B averaged .51 over the four curriculum planning decisions examined and were significantly higher than those observed between Ao and B which averaged .20 over the decisions. While only moderate, the I-B correlations found in the study are similar to those reported for other studies of an applied nature. It may be concluded that while intention does not provide a necessary and sufficient antecedent measure of subjects' curriculum recommendations it does offer a much better estimate than that given by the standard attitude measure.

In forecasting Recommending Intention, the attitudinal and normative variables specified in the Fishbein Model were adequately predictive. Obtained coefficients of determination were greater than those previously reported in

applied studies where approximately fifty per cent of I variation was accounted for from AB and SN. In the present study, approximately sixty per cent of the variation in I was accounted for from the Model's predictors over the four planning decisions. With regard to the necessity of the Model's components, particularly the normative term, it may be concluded that Ab is central to prediction while inclusion of the normative term increases predictive efficiency and accuracy. However, assessment of the relative importance of these variables in the regression was complicated by their intercorrelation. Moreover, examination of the direct association between Intention and each predictor showed that both were highly related to the criterion. This raises doubts as to the adequacy of the particular formulation of the normative term employed in the present study.

Turning again to the sufficiency of the Model but in terms of the relationship of its components to external variables, it may be concluded that the latter are in large measure reflected in attitude and norm. Where Ab and SN were statistically held constant the effect on I of Ao, TE, TP and the constructed variable TE X TP was removed or greatly attenuated.

5.2.2 The Effect of Prior Experience and Learning on the Relationships Assumed in the Model.

The results of analysis indicated that individual difference factors had at least some effect on the relationships among variables which were of interest. These were: 1) the

relationship between I and B; and 2) the relationship between I and the predictors Ab and SN. The individual difference factors were TE and TP. Partitioning the sample into subgroups as defined by their experience and preparation defined four such groups. Required correlations and regression coefficients were computed for each group on each decision and compared.

With respect to the influence of prior experience and preparation on the correlation between I and B, significant differences were noted between subjects who possessed both classroom teaching and formal learning experience (Group One) and subjects who possessed neither (Group Four). Of the subject groups which possessed only one of these experiences (Groups Three and Four) none differed significantly from Group One or Four subjects. It may be concluded that both situational and theoretical knowledge are necessary to produce behavioural intents which are acted upon in a manner strongly consistent with their initial formation. Such a finding is consonant with notions of rational curriculum decision making which presume that knowledge of situational elements as well as relevant concepts and principles are required for effective problem formulation and action.

Assessment of the relative importance of the Ab and SN components in predicting I produced some significant findings. However, examination of the regression weights associated with each term did not demonstrate a clearcut pattern for all groups. For Group One and Group Two (which possessed primary-level

teaching experience only) the Ab term received the greater weight in two decisions while the SN term was most heavily weighted for two decisions. For Group Three, which possessed a relevant theoretical background, the attitudinal term received the greatest weight for all decisions. For subjects in Group Four, the normative term received the greatest weight in three of the four decisions. An interpretation of the attitudinal component in terms of evaluative beliefs and the normative component as compliance is possible from these results. Group Three subjects may well have been unaware of the expectations of principals or curriculum supervisors regarding the classroom use of basic reading programs and relied instead on their acquired learnings to form evaluative beliefs. Conversely, Group Four subjects, lacking a theoretical background, would have been more likely to consider the perceived expectations of school curriculum authorities. For Group One and Two subjects, both of whom had actual experience in primary reading, evaluative and normative considerations would likely have been entertained. While plausible in the context of the regression formulation proposed by Fishbein, the above explanation must be qualified by the empirical relations found among I, Ab and SN variables. Specifically, intercorrelations among predictors and significant first-order correlations between each predictor and the criterion were noted for all groups and decisions.

Some general conclusions may be drawn with respect to the applicability of the Fishbein Model to the problems identified in the study.

First, the Model gives a reasonably good prediction of behaviour in the sense that Intention, when viewed as an antecedent variable, is associated with Recommending Behaviour. The strength of this relationship was much greater than that observed between Behaviour and the traditional attitude measure Ao. Secondly, the attitudinal and normative components of the Model are adequately predictive of Intention and mediate the effect of external variables on the Intention measure.

These results conform to Dunkin and Biddle's notion that the immediate determinants of instructional behaviour are the conative, evaluative, and normative beliefs held by teachers. Similarly, they support the view that formative and academic variables are reflected in psychological properties variables although not always and not entirely in teachers' affective dispositions.

Less firm conclusions are possible with respect to the specific nature of the effect that formative and academic factors have on the relationships among criterion and Model variables. It would appear that the notion of volitional control, as defined in the study (eg. TE and TP) was inadequate to clearly demonstrate the role of this condition in influencing the formation and execution of curriculum planning intentions.

A basic aim of the study was to demonstrate the utility of the Fishbein Model in an educational context. The fact that some clearly significant findings were obtained in prediction and that these results were comparable to those found in similar

applied studies suggests that the Model is suitably general to have application to antecedent-process studies in teaching research.

5.3 Limitations of the Study

The following are some limitations which affect the interpretation of results found in the study:

a) Direct measures of reliability for all instruments used in the study, based on their stability, were not obtained. With regard to the Behavioural Record Instrument, the substantive interest of the study dictated that a single-act behavioural criterion be used. However, such measures are inherently less reliable than either multiple-act or repeated measures criteria.

b) The non-random sampling of subjects and the school district selected as the study site limits the generality of the findings. The results of analysis are limited to teachers who are similarly situated and who possess the personal and professional characteristics of those involved in the study.

c) Related to the sampling problem mentioned above were the unequal numbers of subjects in each subgroup as defined by their experience and learning backgrounds. This requires that some caution be taken in interpreting the results of regression analysis.

d) An important limitation concerns the operation-

alization of the normative component of the Fishbein Model. While evaluative and normative beliefs are conceptualized to be the products of distinct influences, the Ab and SN terms were found to be highly correlated in the present study. It is possible that had an alternative formulation of the SN term been used, involving the product of normative beliefs and motivation to comply with significant referents, less correlation among Model components would have occurred.

e) Lastly, the assumption that the TE and TP factors were adequate indices of both the possession and utilization of situational and theoretical knowledge may be questioned. Both 'years of teaching experience' and 'accreditation' measures are typically employed in educational studies to describe the informational acquisitions of teachers presumed used in curriculum planning activities. However, in the present study TE and TP were only partially successful in differentiating teachers in terms of the relationship between Intention and Behaviour. Problem identification and information processing capabilities may be assumed different for individuals with different professional characteristics but such perceptions and processes were not traced in the present study. It may well be that subjects in Groups One, Two, and Three drew upon a broader, and common, information base to form and execute behavioural intents. Similar argument may be offered to explain the lack of a differential effect on the relative predictive importance of Ab and SN for these groups.

5.4 Recommendations for Further Research

a) The present study has been confined to investigating relationships between selected antecedent and process variables in teacher curriculum planning for primary reading instruction. The curricular decision situations were necessarily limited. Further research is needed into decisions involving other curricular objects and instructional settings. In addition, expressions of curricular merit other than recommending behaviour should be examined.

b) Further investigation of the Fishbein Model under varying instructional conditions, with a variety of teacher groups and curricular materials, would provide a firmer basis for elaboration of predictor variables. Particularly, the attitudinal and normative components of the model may be further explored in a teaching research context.

With respect to the attitudinal term, it was noted that an alternative formulation is given by the product of beliefs and evaluations for salient outcomes of a behaviour. This expectancy-value formulation is essentially equivalent to subjective expected utility models in decision theory (Etter, 1975). Since a basic aspect of this approach involves specification of behavioural outcomes as perceived by the decision maker, application of this model to teacher curriculum planning would address directly a current issue in curriculum development. When teachers are allocated responsibility for deciding questions of curricular worth for instructional plans and programs,

traditional assumptions of curriculum theory require that teachers state their intended learning outcomes. According to this view, specifically stated objectives provide the necessary evaluative criteria upon which to decide curricular merit. That teachers may hold purposes other than those contained in specific objectives has been argued in the literature, but not investigated empirically to any extent (Wise, 1976). An assessment of the basis for teachers evaluative decisions in the context of an expectancy-value attitude model would provide insight into the particular criteria utilized in curriculum decision making at the classroom level.

An extension of this approach to include all persons and groups involved in curriculum - teachers, curriculum and subject-matter specialists, etc. - would make quantitative and visible the areas of agreement and conflict, thus facilitating the process of development and implementation.

Elaboration of the manner in which teachers combine information is also possible in terms of the expectancy-value model. Such study could draw upon existing work in cognitive modelling and information processing (Slovic and Lichtenstein, 1973). Examples of applied uses of attitude models in this framework are available in the consumer literature (eg. Wilkie and Pessimier, 1972).

The determination of normative elements in teachers' planning could proceed along similar lines. It will be recalled that the SN term in Fishbein's Model may be represented by the

product of normative beliefs and motivation to comply. Specification of significant referents for teachers would provide a means of outlining the sources of influence for their curriculum decisions. Knowledge of the relative influence of say, colleagues, curriculum supervisors or university professors would locate those individuals or groups perceived as most capable of providing meaningful inservice programs.

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APPENDIX AUNIVERSITY PROGRAM DESCRIPTIONS1. The University of B.C.Curriculum and Instruction in Developmental Reading
in the Elementary School.

"The reading process and the teaching of basic reading skills from beginning stages through the elementary school."

2. Simon Fraser University.a) Studies in Educational Theory and Practice.

"Development of teaching skills and educational concepts through work shops, seminars and directed and independent study."

b) Designs for Learning: Reading.

"Planning for learning; creating learning environments; developing teaching strategies and materials."

3. University of Victoria.a) Foundations of Reading.

"Consideration of the processes and psychology of reading."

b) Reading in the School.

"Components of a total reading program:
examination, evaluation and construction
of instructional materials; curricular
organization."

APPENDIX B

Instruments Used in the Study

1. Written Directions for Scales.
2. The Questionnaire and Attitude Toward the Object
Instrument (Ao).
3. The Fishbein Instruments
 - 2.1 Attitude Toward the Behaviour (Ab).
 - 2.2 Social Norm (SN).
 - 2.3 Behavioural Intention (I).
4. The Behavioural Record Instrument (B).

Here is how you are to use the following scales in judging the programs and program aspects involved in the study. Each set of scales has a "concept" listed above it. When judging the concept, do so on the basis of what it represents or means to you. For example, if the concept is:

"Choosing Coca-Cola provides a
refreshment that is sweet:" you would

respond as below:

1. If you feel that the concept is very closely related to one end of the scale, you would respond by placing an "X" as follows:

probable X : : : : : : improbable

OR

probable : : : : : : X improbable

2. If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely so), you would place an "X" as follows:

good : X : : : : : bad

OR

good : : : : : X : bad

3. If the concept seems only slightly related to one side of the scale as opposed to the other (but not really neutral), then you would place an "X" as follows:

harmful : : X : : : : beneficial

OR

harmful : : : : X : : beneficial

The direction toward which you place an "X" depends upon which of the two ends of the scale seem more characteristic of your feeling toward the concept you are judging.

4. If you consider the concept to be neutral on the scale - both sides of the scale equally associated with the concept, or if you feel completely indifferent toward the concept - then you would place an "X" in the middle space:

probable : : : X : : : improbable

PHASE I: BIOGRAPHICAL INFORMATION

I. PERSONAL

1. Age: _____

2. Sex: _____

II. TEACHING EXPERIENCE

1. Grades Taught:

Grade K: _____ years

Grade 4: _____ years

Grade 1: _____ years

Grade 5: _____ years

Grade 2: _____ years

Grade 6: _____ years

Grade 3: _____ years

Grade 7: _____ years

2. Grade Currently Registered: _____ or Split: _____ and _____.

3. Number of Students Currently
Registered in Class: _____ or Split: _____ and _____.III. TEACHER QUALIFICATIONS

1. Name of Degree Held (eg. BA, BEd, etc.): _____.

2. Reading Education Courses Taken:

a) Developmental Reading _____

b) Remedial Reading _____

c) Other _____

3. Institution at Which Teacher Training Taken:

a) University of B.C. _____

b) Simon Fraser U. _____

c) U. of Victoria _____

d) Other _____

PHASE I: SECTION 2

In this section we would like you to indicate your degree of favourableness or unfavourableness toward the basic reading programs listed below. In doing so, please consider the total program, ie. the readers, workbooks, guidebooks, etc. Also, consider the programs with respect to second year primary (grade two) only.

COPP-CLARK

harmful _____:_____:_____:_____:_____:_____:_____ beneficial

wise _____:_____:_____:_____:_____:_____:_____ foolish

bad _____:_____:_____:_____:_____:_____:_____ good

LANGUAGE PATTERNS

harmful _____:_____:_____:_____:_____:_____:_____ beneficial

wise _____:_____:_____:_____:_____:_____:_____ foolish

bad _____:_____:_____:_____:_____:_____:_____ good

PHASE II

In this part of the study we would like you to indicate your feelings and beliefs toward recommending the instructional use of basic reading programs with different ability-groupings of students at the second year primary level (grade two). Consider the four planning situations listed below to occur at the beginning of the school year (ie. September).

- S1: Recommending the instructional use of COPP-CLARK with a HIGH ability group of students.
- S2: Recommending the instructional use of LANGUAGE PATTERNS with a HIGH ability group of students.
- S3. Recommending the instructional use of COPP-CLARK with a LOW ability group of students.
- S4. Recommending the instructional use of LANGUAGE PATTERNS with a LOW ability group of students.

PHASE II SECTION 1

In this section we would like you to indicate your feelings of favourableness or unfavourableness toward recommending the instructional use of basic reading programs with different ability groups of students.

S1: COPP-CLARK - HIGH GROUP

harmful _____:_____:_____:_____:_____:_____:_____ beneficial
 wise _____:_____:_____:_____:_____:_____:_____ foolish
 bad _____:_____:_____:_____:_____:_____:_____ good

S2: LANGUAGE PATTERNS - HIGH GROUP

harmful _____:_____:_____:_____:_____:_____:_____ beneficial
 wise _____:_____:_____:_____:_____:_____:_____ foolish
 bad _____:_____:_____:_____:_____:_____:_____ good

S3: COPP-CLARK - LOW GROUP

harmful _____:_____:_____:_____:_____:_____:_____ beneficial
 wise _____:_____:_____:_____:_____:_____:_____ foolish
 bad _____:_____:_____:_____:_____:_____:_____ good

S4: LANGUAGE PATTERNS - LOW GROUP

harmful _____:_____:_____:_____:_____:_____:_____ beneficial
 wise _____:_____:_____:_____:_____:_____:_____ foolish
 bad _____:_____:_____:_____:_____:_____:_____ good

PHASE II: SECTION 2

In this section we would like you to indicate your beliefs concerning what program recommendations other people who are important to you would expect you to make in each planning situation.

Eg. For each planning situation consider the statement:
 'Most people who are important to me would expect me to recommend the XXX program for instructional use with the XXX ability group of students'.

S1: COPP-CLARK - HIGH GROUP

possible _____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____ improbable

S2: LANGUAGE PATTERNS - HIGH GROUP

possible _____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____ improbable

S3: COPP-CLARK - LOW GROUP

possible _____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____ improbable

S4 LANGUAGE PATTERNS - LOW GROUP

possible _____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____ improbable

In this section we would like you to indicate your intentions to recommend a basic reading program in each planning situation.

Eg. For each planning situation consider the statement:
'I intend to recommend the XXX program for instructional use with the XXX ability group of students'.

S1: COPP-CLARK - HIGH GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible
unlikely _____:_____:_____:_____:_____:_____:_____ likely
probable _____:_____:_____:_____:_____:_____:_____ improbable

S2: LANGUAGE PATTERNS - HIGH GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible
unlikely _____:_____:_____:_____:_____:_____:_____ likely
probable _____:_____:_____:_____:_____:_____:_____ improbable

S3: COPP-CLARK - LOW GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible
unlikely _____:_____:_____:_____:_____:_____:_____ likely
probable _____:_____:_____:_____:_____:_____:_____ improbable

S4: LANGUAGE PATTERNS - LOW GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible
unlikely _____:_____:_____:_____:_____:_____:_____ likely
probable _____:_____:_____:_____:_____:_____:_____ improbable

PHASE III: SECTION 1

In this section we would like you to indicate your intentions to recommend a basic reading program in each planning situation.

Eg. For each planning situation consider the statement:
'I intend to recommend the XXX program for instructional use with the XXX ability group of students'.

S1: COPP-CLARK - HIGH GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____:_____ improbable

S2: LANGUAGE PATTERNS - HIGH GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____:_____ improbable

S3: COPP-CLARK - LOW GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____:_____ improbable

S4: LANGUAGE PATTERNS - LOW GROUP

possible _____:_____:_____:_____:_____:_____:_____ impossible

unlikely _____:_____:_____:_____:_____:_____:_____ likely

probable _____:_____:_____:_____:_____:_____:_____ improbable

PHASE III SECTION 2

In this section we would like you to make actual program recommendations for instructional use with different ability groups of students. For each planning situation listed below indicate your recommendation with a check().

S1: COPP-CLARK - HIGH GROUP

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

S2: LANGUAGE PATTERNS - HIGH GROUP

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

S3: COPP-CLARK - LOW GROUP

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

S4: LANGUAGE PATTERNS - LOW GROUP

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>