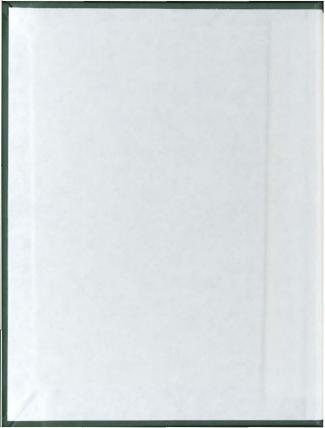AN ETHNOGRAPHIC STUDY OF HIGH SCHOOL TEACHERS'
KNOWLEDGE AND USE OF INSTRUCTIONAL DEVELOPMENT
IN INSTRUCTIONAL PLANNING IN THE PROVINCE OF NEWFOUNDLAND

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AN ETHNOGRAPHIC STUDY OF HIGH SCHOOL TEACHERS'

KNOWLEDGE AND USE OF INSTRUCTIONAL DEVELOPMENT

IN INSTRUCTIONAL PLANNING IN THE PROVINCE OF NEWFOUNDLAND

BY

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ABSTRACT

The purpose of this ethnographic study was to elicit information on the knowledge and competency levels of high school teachers in the instructional development process to determine whether the respondents had either explicit or tacit knowledge of instructional development. The study also attempted to determine the type of instructional planning used by the respondents in the absence of adherence to an instructional development model. The study was initiated as a result of three previous studies carried out in the province of Newfoundland by Gallant (1989), Tobin (1989) and Thomey (1991). These researchers, through surveys and interviews, determined that teacher-librarians, primary and elementary teachers, and high school teachers did not possess comprehensive knowledge of and competency in instructional development. In fact their knowledge and competency levels were minimal.

This study was implemented in the winter of 1990 and the spring of 1991 using both semi-structured and open-ended interviews with five high school teachers who were randomly selected from two large urban school boards in the province of Newfoundland. All interviews permitted open responses, and were tape-recorded with the permission of respondents.

The data were analyzed using Merriam's (1988) suggestion of organizing the data topically and Miles and Huberman's (1984) tactics of analyzing data by noting patterns and themes and by clustering.

Results of the study indicated that high school teachers participating in this study have little knowledge of and competency in instructional development. Furthermore, they make no use of the instructional development process in planning instructional events. Teacher planning, for the most part, can be categorized as non-systems planning.

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I would like to thank my wife, Geri, and my three children, John, Andrea and Ryan, who made untold sacrifices while this thesis was being compiled. Without their encouragement, patience, understanding and love the completion of this work would have been most difficult.

Special thanks to my Father for his encouragement and assistance.

Finally I would like to dedicate this manuscript to the memory of my Mother. Without her encouragement and participation in the early part of my graduate program, I would have not reached a point where finishing this thesis would have been a reality.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

Nature of the Study

<u>Introduction</u>

The purpose of this study was twofold:

1. To determine the knowledge and competency levels of high school teachers regarding the instructional development process, and to determine if such knowledge and competency were applied in their instructional planning processes.

2. To determine, in the absence of instructional development applications, what sort of planning processes high school teachers relied on.

An ethnographic case study was implemented with five high school teachers from two large urban school boards in the province of Newfoundland to probe both tacit and explicit knowledge on their instructional development and instructional planning processes.

<u>Background To The Problem</u>

The teacher is the most prominent individual in the education system. Sullivan, Lievens, Villalpando, Marquez and Watkin (1986) suggest that, with the variety of teaching techniques present today, "teacher-directed instruction

based on the textbook and the teacher's own teaching style remains the dominant form of classroom instruction" (p. 29). Teacher planning is an important component of the instructional process. Teachers can and do use a variety of planning and instructional methods. While all teachers plan instruction, not all are explicitly aware of their planning processes. There is variation in depth and scope of planning activities, as well as in mental versus written planning. Instructional development is one planning process that could be used by teachers. It claims to systematize the instructional process, from planning through delivery and evaluation. At its most basic level it provides an algorithm for the development of instruction. It is possible that teachers use an instructional development framework - that is an algorithmic or a systems approach, without being aware that they are, in fact, doing instructional development as they plan.

According to Diamond (1980) instructional development emerged in the 1960s as an application of the field of educational technology. "It became an identified profession at a national convention of what is now the Association for Educational Communications and Technology" (Diamond, 1980, p. 51). It is practised and can operate at various levels of application. It is a scientific and systematic process. Mellon (1983) suggests "the field of educational technology

has essentially two main components, product and process. The latter is more commonly known as the instructional development process" (p. 187).

Davies (1978) reports there have been three forms of educational technology. Educational Technology One was concerned with aids for teaching. Educational Technology Two stressed the importance of aids to learning. Educational Technology Three is a systematic approach, "focusing rather more deeply on the processes as well as the on the products of teaching and learning" (Davies, 1978, p. 104).

Educational technology has been used extensively and successfully by the military, business and industry, and government. Even with considerable success in these arenas over the past two decades, it has not been widely used in the school setting. Dick (1987) reports: "A process of improving students' achievement through systematic design, development, and evaluation is currently available but not widely used in the public school system. This process is referred to as the systems approach" (p. 54).

Dick (1987) reports that using the instructional development process results in greater gains on tests. "Even experienced teachers often gain insight into their students' abilities and the learning process that they had not realized through their normal teaching. Evidence is

accumulating that the use of instructional design results in more effective and efficient instruction" (p. 55-56).

Research on the use of the instructional development process in the school setting is scant and there have been few formal empirical studies done on this area in the past. In the past two years there have been a series of studies on the instructional development knowledge and competencies of specific groups of Newfoundland teachers completed by Gallant (1989), Tobin (1989) and Thomey (1991). These studies have concluded that teachers possess very little knowledge of or competency in instructional development. But teachers do plan for their instruction even if they do so without using an instructional development model or without explicit knowledge of instructional development.

Significance of the Study

Thomey (1991) recommended further study of high school teachers' knowledge level and use of instructional development, preferably using the interview process, so that the focus of such study could be on how teachers actually plan, extrapolating from their planning routines any knowledge or use of instructional development. In order to tap teachers' tacit as well as explicit knowledge, the researcher chose to select a small group of high school

teachers for indepth interviews over an extended period of time.

This study, designed as a follow-up to Thomey's (1991) survey of high school teachers' instructional development knowledge and competency, focused on teacher planning processes. Specifically the study, through a series of indepth interviews, attempted to establish:

1. The knowledge, competency level and application of instructional development among five high school teachers in planning their classroom instruction.

2. The planning approaches of these teachers, including their knowledge of instructional planning and their use of planning for daily classroom events, and the techniques and processes they used in carrying out planning process, as well as the types of plans they developed.

Five teachers were selected from two urban school boards. The rationale for using these two school boards lies in the fact that both these boards are presently implementing cooperative program planning and resource-based teaching programs among teacher-librarians and classroom teachers. Such programs have as a base a notion of instructional design, and, as a result of the implementation of these programs, teachers have undergone inservice training during the past two years to encourage the

implementation of resource-based teaching. It was therefore assumed that teachers with these two boards might be more familiar with some of the terminology of instructional development, and have gained at least rudimentary knowledge regarding instructional design.

<u>Definition of Terms</u>

For the purpose of this study the following terms and definitions apply.

<u>Educational Technology</u>. A complex integrated process involving people, procedures, ideas, devices and organization for analyzing problems and devising, implementing, evaluating, and managing solutions to those problems involving all aspects of human learning (Reiser, 1987, p. 20).

<u>High School Level</u>. An educational unit comprising teachers from grades ten through twelve.

<u>Instructional Development</u>. (Used interchangeably with instructional design and instructional technology). A systematic approach to the design, production, evaluation, and utilization of complete systems of instruction, including all appropriate components and a management system for using them (Silber, 1977, p. 172).

Learning Theory. A systematic integrated outlook in regard to the nature of the process whereby people relate to their environments in such a way as to enhance their ability to use both themselves and their environments more effectively (Bigge, 1982, p. 3).

Systems Approach. An operational system which synthesizes and interrelates the components of a process within a conceptual framework, insuring continued, orderly and effective progress toward a stated goal (Heinich, 1970, p. 8).

Public Examinations. A method of evaluation used in Newfoundland high schools, comprising sets of province-wide examinations in specific high school courses.

Teacher Planning. The selection of goals and the designing of appropriate instructional procedures for teaching.

Lesson Plan. A plan that is typically developed for a single instructional sequence. It is usually presented in one class session (Kourilsky and Quaranta, 1987, p. 23).

Evaluation. A student-centred process to observe the outcomes of student learning. It includes the role of the teacher, the specific instructional methods, the curriculum materials used and the learning principles applied in the instruction (Kourilsky and Quaranta, 1987, p. 40-41).

Limitations of the Study

In implementing this study the following limitations were recognized.

1. This case study was conducted using a small group of high school teachers of two large urban school boards in the province of Newfoundland. The conclusions and applications can only be made within the limits of this group.

2. This case study attempted to determine high school teachers' knowledge and competencies regarding the instructional development process. It also attempted to determine their approaches and methods regarding the planning of instruction. There has been no major attempt to draw inferences from their planning routines in relation to underlying principles of instructional development. It is felt that further study of teacher planning is required before tacit instructional development could be established.

Summary

This thesis reports the research findings of a study conducted in the winter of 1990 - 1991 regarding the instructional development competencies of selected high school teachers in the province of Newfoundland and their

approaches to instructional planning.

Chapter Two presents an historical overview of the field of instructional development and the various instructional development approaches or models. It also provides an overview of instructional planning, the processes of planning instruction, the various influences on teacher planning, planning decisions, and a variety of planning models.

Chapter Three delineates the methodology and the procedures which were implemented during the study.

Chapter Four presents the data, analyzed qualitatively, in summary form.

Chapter Five provides a summary of the results of the study, with conclusions and recommendations for further study.

CHAPTER TWO

Review of Related Literature

Historical Development of Instructional Development

Introduction

According to Feldhusen (1980):

Instructional technology is the systematic application of research, theory and established models to the design and evaluation of instruction. Instructional development is a broader set of procedures which include instructional technology and other less formal methods in the creation of new teaching systems. (p. 57)

Instructional development is an application of the field of educational technology. Diamond (1980) states the emergence of instructional development first appeared in a Michigan State University project entitled Instructional Systems Development: A Demonstration and Evaluation Project. It contained one of the earliest instructional development models (p. 51).

Instructional development has evolved as a subsystem of the field of educational technology. Mellon (1983) reports "the field of educational technology, while diverse, has essentially two main components, product and process. The later is more commonly known as the instructional development process (p. 187).

Educational Technology

The evolution of the field of educational technology is
important in the discussion of the history of instructional
development.

The rise of educational technology is as varied as the
authors who have reported it. Hawkridge (1976) suggests the
history can be divided into three sections: "the periods of
pre-history (before 1954), infancy (1954 to around 1966) and
adolescence (from 1966 to present)" (p. 8).

The pre-history stage started with a number of
classical educators. "Bacon might be said to have been in
favour of the systems approach: he seized the whole problem,
stated its terms and formulated its equations" (Hawkridge,
1976, p. 9). Saettler (1968) believed "Comenius was the
first real forerunner of modern instructional technology, he
laid the foundation of a systematic understanding of the
teaching-learning process (p. 22). "Pestalozzi advocated an
instructional approach known as object teaching" (Reiser,
1987, p. 13). This approach was popular in both Europe and
the United States in the 1600s.

In the early 1900s two authors served as "precursors to
the modern theories of educational technology, Thorndike and
Dewey" (Hawkridge, 1976, P. 10). Both were involved in the
science of instruction. Along with these theories of
education, visual education was making inroads at the school

level around the same time. "The earliest record of visual
education in the National Education Association (NEA) was a
speech on the effects of moving pictures at a 1912 meeting"
(Lembo and Bruce, 1971, p. 50). By the 1923 there was
enough interest in visual education to result in the NEA
forming a "Department of Visual Instruction" (Lembo and
Bruce, 1971, p. 50).

The visual instruction movement grew steadily during
the rest of the 1920s and the early 1930s. "Technological
advances in film and slide quality, radio broadcasting,
sound recording, and motion pictures with sound helped
foster this growth and served to expand the focus of the
movement from visual instruction to audiovisual instruction"
(Reiser, 1987, p. 14).

In the 1930s and early 1940s "lower birth rate and poor
economic conditions in America had a depressing effect on
education" (Lembo and Bruce, 1972a, p. 44). But audiovisual
education was on the rise.

The beginning of World War II had a positive influence
on the audiovisual movement. During the Second World War
there was a necessity to instruct and train large numbers of
individuals quickly and efficiently. The start of the war
resulted in a slow-down in the growth of audiovisual
instruction in schools, but an increase in the military and
in industry. Reiser (1987) stated "these audiovisual

devices were generally perceived as successful in helping the United States solve a major training problem, how to train large numbers of individuals with diverse backgrounds" (p. 15).

The school system was a beneficiary of the success of this audiovisual movement. Devices such as slide projectors, overhead projectors and audio equipment joined the film projector as classroom instruments.

Up to this point audiovisual use was mainly a supplement to a lesson. Saettler (1968) suggested "the historical development of the audiovisual movement has generally ignored psychological theory, stressing group presentation of materials" (p. 194).

The decade following the war was the beginning of the association between the audiovisual users and research involving learning theories. Reiser (1987) notes "the post-World War audiovisual research programs were among the first concentrated effort to identify principles of learning that could be used in the design of audiovisual materials" (p. 15).

The development of the audiovisual movement was an important step towards a division of educational technology. According to Ely (1973) "the roots of educational technology stem from the foundations of audiovisual education" (p. 53). Historically that field has been concerned with selection,

production and use of instructional materials and equipment. "In February 1947 the name of the association was changed to the Department of Audio-visual Instruction, mirroring the technological advances of the day" (Lembo and Bruce, 1972b, p. 66).

Hawkridge (1976) calls the second stage towards the rise of educational development as the "infancy stage" (p. 14). Professionals in the field began to realize that the field had to be expanded. James Finn was one of the pioneers in the field. Lembo and Bruce (1972b) reports Finn's speech of an evolving philosophy:

> If the DAVI ignores the spectacular developments in the communications field, the parallel movements arising in industry, the armed forces, and the social service organizations, if it continues to concentrate on what is only one phase of the audiovisual movement, in the long run it will never succeed in professionalizing and will have been passed by. (p. 67)

This evolution was caused by the development of "communications, learning theory, and educational psychology of the 50s" (Diamond, 1980, p. 51). Seels (1989) suggests two other important influences to cause this evolution. "First was Sputnik and the ensuing federal funds for large curriculum projects for schools and colleges and the second was the baby boom after World War II, which meant schools and colleges were overwhelmed by large number of students" (p. 11).

Psychologists such as Briggs, Gagne, Bloom, Lumsdaine, and Skinner were important contributors to this new field of the science of learning. Skinner was particularly important to the field of educational technology. By the use of teaching machines and programmed learning, Skinner "proposed a detail application of his own particular brand of science of learning, through the use of technological devices" (Hawkridge, 1976, p. 15).

"The principles of instruction proposed by Skinner led to the first instructional technology: programmed learning" (Seels, 1989, p. 11). "The emergence of the programmed instruction movement gave us great confidence in our ability to design effective and replicable instruction" (Heinich, 1984, p. 74). Morgan (1978) believed "the strongest case can be made for dating the origin of educational technology from the work of B. F. Skinner and other programmed instruction" (p. 143).

As a result there were many proposals for a name change for the profession. Silber (1978) reported the suggested name changes included "audiovisual communication by Ely, instructional technology by Finn, and different names such as audiovisual instruction, learning resources or educational technology" (p. 175).

This infancy stage resulted in a change of emphasis. Ely (1972) suggests:

> Until about 1950, American education tended
> to place almost exclusive emphasis on good
> teaching as the vehicle of good learning. It
> was teaching, therefore, that was emphasized,
> evaluated and changed. The advent of
> programmed instruction in the late 1950s
> helped to place a new emphasis on the
> learning process and the learner. This
> brought about the realization that learning
> is the goal of the instructional process and
> the criterion by which it must be judged.
> (p. 37)

Reiser (1987) confirms a shift in emphasis and "those in the
field should be primarily concerned with the design and use
of messages which control the learning process, rather than
the audiovisual devices that had been the focus of the
field" (p. 19).

Hawkridge's (1976) adolescence stage began in the mid-
sixties and continues to the present. In 1965 the systems
approach to instruction was presented in national
publications and at conferences of audiovisual
professionals. Reiser (1987) states "the systems approach
literature grew rapidly as models for design of instruction
were developed and numerous journal articles focusing upon
various aspects of the systems process were published" (p.
27).

In 1970 a task force was established to research the
field of instructional technology. It resulted in a
defining of instructional technology by the commission as:

> A systematic way of defining , carrying out, and
> evaluating the total process of learning and
> teaching in terms of specific objectives, based on

findings from research in human learning and
communication, and employing a combination of
human and nonhuman resources to bring about more
effective instruction. (Torkelson, 1971, p. 48)

In 1970 there were signs of an educational revolution.
The National Education Association changed the name of
Audio-Visual Instruction to the Association for Educational
Communication and Technology (AECT) in order to stay in tune
with the evolution of education. "This reflected the
broader concept urged by Finn (Silber, 1978, p. 175). As a
result:

changes in titles were accompanied by changes in
the terminology being used in published papers. A
systems approach to education and training was
urged upon all educational technologists.
Different authors had rather different
interpretations of what the term meant, but in
general it seemed to imply a systematic analysis
of all the components in a given learning
situation, whether or not that situation involved
programmed learning. (Hawkridge, 1976, p. 23)

In 1972 the profession broadened its scope and renamed
the field educational technology. "The name, the
definition, and the conceptual framework were finally
solidified in 1977 with the publication of AECT's official
definition statement of the profession, Educational
Technology: Definition and Glossary of Terms (Silber, 1978,
p.175).

Wagner (1986) views educational technology as:

in its broadest sense, the predetermined purpose of
educational technology is to maximize learning
and/or performance outcomes through the
development, design, delivery, and evaluation of

instructional and/or training programs, procedures
and materials. (p. 36)

Wagner (1986) discusses educational technology as having
both a product and a process component. The product
includes audiovisual, manuals and textbooks. The process is
"the means through which the products are generated. These
processes are embodied within the discipline of
instructional development" (Wagner, 1986, p. 37).

Instructional Development

Instructional development is a branch of educational
technology. Being a part of educational technology, it has
evolved along the same path and owes its inception to the
audiovisual movement. The two other fields that have led to
the process of instructional development are learning
theories and the systems approach. Diamond (1980) reports:

Instructional development did not come on the
educational scene suddenly. It represents, in
fact, a gradual evolution; one that has its roots
in visual instruction of the '20s; audio-visual
instructions of the '30s and '40s; communication,
learning theory, and educational psychology of the
'50s; and educational communication and system
design and management of the '60s. (p. 51)

This development has been echoed by Knirk and Gustafson
(1986) who suggest the field of instructional technology has
been developed through three separate developments:

1.   Designing instruction directly for the
      student instead of designing audio-
      visual materials for teachers to use in
      their presentations.

2.   Benchmark developments in learning
     theory as identified by B. F. Skinner
     ... and others.

3.   The influence of World War II and the
     later advancing hardware technology,
     which required developing quick task
     analysis procedures, effective training,
     and new communication technologies;
     often labelled the "systems approach".
     (p. 1)

The first connection between the fields of psychology
and educational technology occurred during World War II and
the training of the military. Psychologists were revealing
new information about the learning process and the audio-
visual movement had reached a new height in training and
instruction. "Audio-visual specialists were developing ways
to utilize the recognized learning principles in designing
effective films and other instructional materials" (Kemp,
1985, p. 4).

Learning Theories

According to Gropper (1983), "learning theory describes
the lawful ways in which changes in behaviour occur. Its
parameters identify: a unit of behaviour to be analyzed; the
conditions that product changes in it; and the nature and
permanence of the changes in it that can result" (p. 106).
Bigge (1982) defined a learning theory as a "systematic
integrated outlook in regard to the nature of the process
whereby people relate to their environments in such a way as

to enhance their ability to use both themselves and their environments more effectively" (p. 3).

Since psychology is the science of behaviour, it is obvious that psychology is an important aspect of learning. Therefore, education and psychology are united to form educational psychology. Educational psychology deals with the learning processes. One of the major parts of educational psychology is learning theory.

Lefrancois (1988) describes learning theory:

> It is a subdivision of general psychological theory. It deals with the question of how behaviour changes. Indeed, learning can be defined as changes in behaviour resulting from experience. This is why the expression learning theory and behaviour theory are nearly synonymous... The history of learning theory shows a progression from simple (rather mechanistic) interpretations of human learning to complex ones. (p. 7)

Saettler (1968) traces the birth of the learning theory to the early 1900s. Psychologists such as Dewey, Thorndike, Hall, Binet and Simon were responsible for the new movement. As a result "a true science of behaviour, and especially of learning theory began to emerge (not based primarily on metaphysical or philosophical speculation as previously), from which applications to a technology of instruction might be anticipated" (p. 48).

Reigeluth (1983) acknowledges the contributions of Dewey and Thorndike to the field of instructional design but

gives credit to other psychologists for the creation of the process. "Instructional design's birth as a discipline must be credited to B. F. Skinner, Jerome Bruner and David Ausubel" (Reigeluth, 1983, p. 27).

Landa (1983) believes "learning theories deal with relationships between learners' action and learners' psychological or behavioral processes - that is, with relationships of phenomena inside the learner (p. 63). Landa (1983) describes two types of learning theories:

> Descriptive learning theories deals with "if...,
> then" propositions stating what happens
> psychologically if such and such learning actions
> are performed, and prescriptive learning theories
> prescribe what learning operations should be
> performed (as necessary, sufficient, or both) in
> order for a certain psychological process to
> happen. (p. 65)

Bigge (1982) suggests that "at least ten different theories in regard to the basic nature of learning processes are either prevalent in today's schools or advocated by learning contemporary psychologists" (p. 8). Lefrancois (1988) believes there are three major learning theories: behaviourism, cognitivism and humanism. "Humanism presents a view complementary to the first two approaches" (Lefrancois, 1988, p. 8).

Learning theories are a mirror of the psychological theories of any particular time. A paradigm shift in a psychological theory will result in a similar shift in the

learning theories. In the twentieth century the two major
theories of learning, behaviourism and cognitivism,
developed in concert with developments in psychology.
Behavioral theory was important in learning from 1920s to
the 1960s, when cognitive theory became the dominant theory
of the learning process. This notion is supported by many
authors in educational psychology including Sahakian (1976),
Hilgard and Bower (1974), Schwartz (1977), and Hill (1963).

Behavioural Learning Theory

Behaviourism was a reaction to the introspection
movement or psychological investigations in which one
examines one's own thought and emotion. It was produced by
J. B. Watson in 1913. According to Lefrancois (1988),
"behaviourism denotes the theories that are concerned with
the observables of behaviour - that is, with the visible
aspect of behaviour: stimulus (that which leads to
behaviour) and response (the behaviour itself)" (p. 8).

There are many psychologist who followed the theory of
behaviourism. After Watson, this group includes Pavlov with
his theory of classical conditioning, Guthrie and his
contiguity principle, and Hull and his theories on
reinforcement. B. F. Skinner is one of the better known
behaviourists. His theory of operant conditioning is widely
reported. According to Lefrancois (1988):

> Behaviourism, because it is almost exclusively
> preoccupied with objective things and avoids any
> speculation about what occurs between stimuli and
> response, can explain learning and behaviour only
> in terms of rules that govern the relationships
> between observed physical events. (p. 8)

Cognitive Learning Theory

Historically, the Gesalt psychology was the beginning
of the cognitive learning theories, but it wasn't until the
1960s that it had an impact on learning. "Cognitivism
refers to the work of those psychologists who have abandoned
much of the earlier concern with external, observable
behavioral components. They have, instead, become
increasingly preoccupied with the organization of knowledge,
information processing, and decision-making behaviour"
(Lefrancois, 1988, p. 8). Bigge (1982) states "a cognitive-
field of learning describes how a person gains understanding
of himself and his universe in a situation so construed that
both his self and his psychological environment compose a
totality of mutually interdependent co-existing factors" (p.
172).

There are many psychologists who followed cognitive
field theories. Kurt Lewin studied motivation, personality
and social psychology. Jean Piaget studied intelligence and
child development. Bruner, a student of Piaget, developed
theories that dealt with conceptualization, perception,

instruction and development. He produced a discovery learning theory. Ausubel studied verbal learning.

Bowd, McDougall and Yewchuk (1982) summarize the cognitive field theory of learning as a process that "stress perception, insight, mental structures and problem solving" (p. 75). They conclude cognitive theorists are interested in verbal and concept learning.

Humanistic Psychology

Humanistic psychology is human or individual-oriented. It combines elements of both behaviourism and cognitivism.

Three members of this group are Albert Bandura, Benjamin Bloom and Robert Gagnè. Bandura's theory is based on operant conditioning or behaviourism but it recognizes our ability to perceive and anticipate the outcome of behaviour (Lefrancois 1988). Benjamin Bloom is associated with educational objectives and the theory of mastery learning. His theories contain both a behavioral and a cognitive component. Robert Gagnè used both the behaviourist and cognitive field theory to produce an hierarchical system to explain the learning process.

Instructional Development and Learning Theory

Instructional development is based on application of learning theories. At the time of its inception, behavioral

theory was still the dominant learning theory and many of the innovators were behaviourists. Sprague (1981) states, "behaviourism, which was the dominant school of thought in educational psychology in America in the 1950s and 1960s had a major influence on instructional design principles.... many instructional designers in the 1960s and 1970s were indoctrinated in the behavioral tradition a la Skinner" (p. 24). It is the cornerstone of instructional development. Jonassen (1984) states "the systems approach is grounded also in behaviourism" (p. 157).

There is a shift from behavioral to the cognitive learning theory. Dede and Swigger (1988) suggest "instructional design theory is gradually shifting from a behavioral science orientation to an emphasis on cognitive science, that is, from promoting students' overt performance in manipulating instructional materials to enhancing their cognitive processing" (p. 21).

"The shift to a cognitive orientation has brought about a focus on process, rather than product. Current work addresses the effect of technology on cognitive processing and problem-solving strategies" (Fosnot, 1984, p. 196). "Cognitive instructional methods include encouraging discovery strategies; suggesting the use of previously acquired and decontextualized skills through, for example, paraphrasing, advanced organizers and analogies" (Clarke and Voogel, 1985, p. 117).

Sewell (1988) believes "modern cognitive learning theory provides a potentially powerful paradigm, particularly when placed in conjunction with practical models of instructional design" (p. 110). Sprague (1981) concludes "keeping instructional design procedures in gear with current research finding in instructional psychology is important" (p. 29).

The Systems Approach

Romiszowski (1981) describes the systems approach as a series of stages that should be followed to carry out training or educational needs (p. 18). Reiser (1987) notes a relationship between programmed learning and the systems approach. "The process for developing programmed materials involves many of the steps found in the current systems approach models" (p. 22). Heinich (1970) states:

> Programmed instruction has been credited by some with introducing the systems approach to education. By analyzing and breaking down content into specific behavioral objectives, devising the necessary steps to achieve the objectives, setting up procedures to try out and revise the steps, and by validating the program against attainment of the objectives, programmed instruction succeeded in creating a small but effective self-instructional system - a technology of instruction. (p. 123)

Different models have different components. "The actual number of steps can vary from one schema to another,

but despite quite important variations the four basic steps are usually clearly discernible" (Davies, 1978, p.112). Davies (1978) identifies these steps as diagnosis, planning action, implementing action, and evaluation (p. 112).

Dick and Carey (1985) suggest "instruction is a systematic process in which every component is crucial to successful learning" (p. 2). They list a variety of components to their model. These include: identifying an instructional goal, conducting an instructional analysis, identifying entry behaviour and characteristics, writing performance objectives, developing criterion-reference test items, developing an instructional strategy, developing and selecting instruction, designing and conducting the formative evaluation, revising instruction and conducting summative evaluation (p. 5).

Pratt (1980) defines task analysis as "the process of listing the component tasks the students would need to be able to perform if the aim itself were to be attained" (p. 166). Reiser (1987) explains the importance of task analysis as part of the instructional development process and the development of the systems approach. Reiser (1987) states:

> The refinement of task analysis procedures during the 1950s was another major factor in the development of the systems approach concept. Task analysis is the process of

identifying the tasks and subtasks that must
be successfully performed in order to execute
properly some function or job. (p. 22)

Davies (1973) states "task analysis serves as a
practical means of interfacing a theory of knowledge with a
theory of instruction and a theory of learning" (p. 74).
Jonassen and Hannum (1986) report that "task analysis is an
integral part of the instructional development process. A
poorly executed task analysis will jeopardize the entire
development process" (p. 3).

Reiser (1987) associates behavioral objectives as the
next stage of the instructional development process (p. 23).
Romiszowski concludes "objectives are the cornerstone, the
keystone, one might even say the philosopher's stone of
problem-solving. If we follow the logic of the systems
approach we use objectives at each and every stage" (p. 55).
Behavioral objectives are often referred to as performance
or instructional objectives. "You will see in the
literature the terms performance objectives and
instructional objectives. You can assume they are
synonymous with behavioral objectives" (Dick and Carey,
1985, p. 99).

According to Cole and Chan (1987), behavioral
objectives are defined as "explicit statements about
intended outcomes of teaching which are derived from the
general goals of instruction. They specify the knowledge,

understanding and skills that students need to acquire to
demonstrate attainment of goals" (p. 50).

Reiser (1987), tracing the history of objectives,
suggests "objectives were discussed and used by educators as
far back as the early 1900s. Among the early advocates of
the use of clearly stated objectives were such people as
Bobbit, Charters, and Frederic Burk" (p. 23). Reiser (1987)
credits Tyler as the father of the behavioral objective (p.
23).

"In the 1950s, behavioral objectives were given another
boost when Benjamin Bloom and his colleagues published the
Taxonomy of Educational Objectives" (Reiser, 1987, p. 23).
This taxonomy of objectives was important in instructional
development. "These works attempt to establish a hierarchy,
or sequential classification, of types of objectives, which
should enable the objective developer first to achieve
agreement on the level of objectives to be achieved, and
then to search the subject for suitable teaching and testing
content" (Romiszowski, 1981, p. 56).

Robert Mager was also an important influence on the use
of behavioral objectives in education.

> Mager has influenced the total educational
> community through his emphasis on the need
> for clear, precise statements of what
> students should be able to do when they
> complete their instruction. The term
> behavioral objective became familiar to many
> educators in the 1960s. (Dick and Carey,
> 1985, p. 97)

"Robert Gagné helped to identify the instructional implications of defining and classifying objectives" (Reiser, 1987, p. 24). Hawkridge (1976) iterates:

> Neither Tyler nor Bloom thinks of himself as
> an educational technologist, yet the
> 'organized knowledge' about objectives
> provided by these two was assimilated into
> the systematic approach to the design of
> learning advocated by programmed learning
> enthusiasts and educational technology.
> (p. 16)

Reiser (1987) reports "in the 1960s another important factor in the development of the systems approach concept was the emergence of criterion-referenced testing" (p. 24). Criterion-referenced tests are based on the objectives you have written, you develop assessment items that are parallel to and measure the learner's ability to achieve what you describe in the objectives (Dick and Carey, 1985). According to Reiser (1987) Tyler was the first to advocate the use of criterion-referenced testing but Glaser was the first to use it (p. 24).

Dick and Carey (1985) suggest there are four types of criterion-referenced tests: entry behaviour tests to see if the student have the necessary skills to begin the instruction; pretests to measure the skills which are going to be taught by the instruction; embedded tests which are practice tests; and posttests or the post-assessment of the instruction (p. 109).

Reiser (1987) reports the use of criterion referenced testing for two purposes "which are a central feature of systems approach procedures" (p. 24). These purposes are student entry level testing and testing to determine the extent the student has achieved the objectives through the instructional program.

Reiser (1987) states "the evaluation of instructional products is an important part of the systems approach process" (p. 26). There are two types of evaluation: formative and summative evaluation. "They are differentiated by their placement and intent in regard to a given instructional sequence" (Kourilsky and Quaranta, 1987, p. 41).

Kourilsky and Quaranta (1987) discuss summative evaluation as evaluation done at the end of the instruction and its purpose is not to immediately change or improve the sequence of instruction but simply to assess it. "Summative evaluation is used to assess the effectiveness of the final version of the product" (Reiser, 1987, p. 26).

Kourilsky and Quaranta (1987) describes formative evaluation:

> It is done during instruction, when the actual lesson, unit, or course is in a state of potential flux. When teachers gather on-going feedback regarding the effectiveness of the sequence (i.e., appropriateness of materials, quality of teaching style, interest level of students, etc.) to

strengthen and possibly change it, they are
employing formative evaluation. (p. 41)

"Some systems approach models do not include summative
evaluation as a part of the process, but formative
evaluation is generally considered an essential element"
(Reiser, 1987, p.26).

The history on the use of formative evaluation can be
traced back to the 1920s when it was used to evaluate
instructional films. During the 1940s and 1950s formative
evaluation was incorporated for evaluating instructional
materials. In the 1960s formative evaluation was used in
the production of programmed instructional materials. The
terms formative and summative evaluation were introduced by
Scriven in 1967 (Reiser, 1987, p. 26).

Instructional Development Models

Knirk and Gustafson (1986) describe instructional
development models "as a systematic procedure for solving
instructional problems" (p. 19). An instructional systems
approach is the philosophical framework underlying the
instructional development process. This process itself is
presented in the form of instructional development models.

Gustafson (1981) noted that instructional development
models are used as:

1. communication devices with their
    [instructional developers] clients
    and each other;
2. planning guides for management
    activities;
3. prescriptive algorithms for
    decision-making. (p. 4)

The first model appeared in the 1960s. Gustafson

(1981) credits Dr. John Barson with the production of one of

the earliest models of instructional development. This

model was entitled Instructional Systems Development: A

Demonstration and Evaluation Project. Since then there have

been many different ID models. Gustafson (1981) concedes

"there has been a virtual flood of ID models appearing in

the literature (p. 1). Logan (1982) agrees with the numbers

of ID models. He reports, "Montimerto and Tennyson found

more than 100 manuals containing models published since

1951. Andrews and Goodson identified over 60 models and

Logan examined approximately 60 systems-based authoring

tools and procedures for one component of one particular

model" (p. 5).

Gustafson (1981) claims "while there are literally

hundreds of models, there are only a few distinctions" (p.

47). Logan (1982) agrees and states:

All models are variations on a basic theme derived
from the cybernetic model described originally by
Banathy, Churchman, and Van Bertalanffy. It
contains the following steps:

1. An input is selected for manipulation by some
   synthesis technique.

2. An output is generated that, it is hoped, will achieve a desired result.
3. The "match" or "fit" between actual output and intended output is measured.
4. The discrepancy between input and output is fed back into the synthesis technique to produce a better "match" or "fit". In practice, the feedback loop may also be returned to the input component. (p. 5-6)

Knirk and Gustafson (1986) suggest the underlying principles of each model remains the same: "gather data, define the problem, develop solutions, and evaluate and modify them as needed" (p. 19).

Gustafson (1981) created a taxonomy of instructional development models. "It is an excellent way of reducing an otherwise unwieldy body of ID model literature into a manageable package" (p. 6). Also, such a system of classification aids the user in the selection of a particular model. Gustafson (1981) used four categories to classify the ID models: Classroom Development Models, Product Development Models, Organizational Development Models, and Systems Development Models.

Classroom Development Models

These are the models for teaching and include models used from the elementary schools to the faculties of universities. Their major application "is to professional teachers who accept as a given that their role is to teach and that students require some form of instruction" (p. 10).

Gustafson (1981) continues: "the models assume there is already a teacher, some students, a curriculum, and a faculty. The teacher's role is to decide on appropriate content, plan instructional strategies, identify appropriate media and evaluate learners" (p. 7-10).

These models take into consideration that "due to the ongoing nature of instruction, often accompanied by a heavy teaching load, there is little time for developing new materials" (Gustafson, 1981, p. 10). Models included under this grouping are the Gerlach and Ely Models, the Dececco Model, the Kemp Model, the Brigg Model, and the David, Alexander and Yelon Model (Gustafson, 1981).

Product Development Models

These are common in both the educational and the business setting. Their goal is to prepare an effective and efficient product as efficiently as possible. Gustafson (1981) notes that the characteristics of these models include:

1. an assumption that the educational product is desired
2. considerable emphasis on tryout and revision
3. an assumption that the product must be useable by a variety of "managers" of instruction (p. 23).

Gustafson (1981) presents two examples of the product development models; the first by Banathy, and the second by Baker and Schultz.

Systems Development Models

Gustafson (1981) states that there are four major characteristics of the systems model approach: "large scale team development, linear development, wide distribution of the results of the development, and a problem solving orientation" (p. 29).

The major focus of systems models is instructional output. Instructional output is considered to be a system. Systems development models may be a subset of the product focus. "In design, development and evaluation phases, the primary difference between systems models and product models is one of magnitude rather than specific tasks to be performed" (p. 29).

Gustafson (1981) reviews three systems development models: the Instructional Development Institute (IDI) Model, one of the most publicized, the Interservice Procedure for Instructional Systems Development (IDISD) Model, and the Courseware Development Process (CDP) Model.

Organizational Development Models

"An organization focus for instructional development has as its goal, not only improving instruction but also modifying or adapting the organization and its personnel to a new environment" (Gustafson, 1981, p. 7). Of the materials written about organizational development models,

most discuss changing the structure of the organization.
According to Gustafson (1981) "the activities described most
often do not indicate systematic analysis, design,
development, and evaluation" (p. 39).

There are few well documented or validated models to
illustrate this focus. Two discovered by Gustafson (1981)
are the Blondin Model and the Blake and Mouton Model.

Summary

The history of educational technology traces two
important eras. During the first era prior to, during, and
immediately following World War II, educational technology
was concerned with the medium or the message. This era,
called the audiovisual age, found the learner as passive and
reacting to the environment.

The second era of educational technology is the era of
instructional development, which is rich in the psychology
of learning and systems approach. The emphasis in this era
is on the development of instruction and the choice of the
best media for presentation of the instruction, or as Wagner
(1986) suggests, a process and product view of educational
technology. Finn (1964) prophesied "the educational future
will belong to those who can grasp the significance of
instructional technology" (p. 26).

Historical Development of Teacher Planning

Introduction

Planning is one of the important processes carried out in most of the world's occupations. Whether the occupation be brain surgery or inshore fishing, a plan constitutes one of the integral parts of the system. Education is no different. Planning is one of the major functions of any teacher. Yinger (1980) believes "teachers and classrooms rarely function effectively without some kind of planning" (p. 107). Zahorik (1970) states:

> Probably no idea in education is more widely accepted than the idea that specific, thorough planning for a lesson makes the teaching-learning encounter valuable and productive. Conversely, no planning, or general and haphazard planning, leads to a wasteful, unproductive lesson. This notion pervades education at all levels and in all subject area. (p. 143)

Koslofsky (1984) believes "good teaching is hard work, only bad teaching is easy" (p. 101). A part of this hard work is a well-prepared lesson plan. "A well-prepared lesson plan is your most important tool for effective teaching and classroom control. It will give your students a feeling that your class has structure and direction and it will give you confidence" (Koslofsky, 1984, p. 101). Arnold (1988) believes in preparation for instructing students. "Teachers who spend more time in preparation will spend less

time in trying to keep their students on the learning track"
(Arnold, 1988, p. 10).

Borko, Lalik, and Tomchin (1987) interviewed student
teachers on their belief about what makes a good teacher.
"Planning and preparation were addressed as important
aspects of teaching. Stronger student teachers, more often
than weaker ones, wrote about planning as an area of
strength; weaker student teachers, more often than stronger
ones, identified planning as an area in need of improvement
and as a future goal (Borko et al, 1987, p. 84). Arnold
(1988) pointed to the importance of planning in education:

> A teacher who is thoroughly prepared for class
> each day knows what he or she hopes to achieve
> during a daily lesson and how this relates to
> previous lessons and forthcoming assignments; why
> and what materials and aids will be needs for
> specified activities during the presentation. The
> teacher who comes to the classroom well-prepared
> and who is concerned about students and the
> subject being taught will create a productive
> working relationship and an atmosphere in which
> teaching and learning are enhanced. (p. 11)

Definition of Planning

Yinger (1977) describes planning in two ways. The
first is planning as a design, a blueprint. "In this sense
the planner draws a blueprint, the design of which is
completed before steps are taken to realize its intention"
(p. 15). The second is planning as a process. Yinger
(1977), drawing on the works of Friedmann and Hudson,

defines the process of planning as "an activity centrally concerned with the linkage between knowledge and organized action" (p. 16). Regarding the process of planning, Yinger (1977) concludes:

> planning is referred to as a process of preparing
> a framework for guiding future action. It is
> oriented towards action rather than, say,
> knowledge or self-development, and the fact that
> this action is in the future introduces the
> problem of uncertainty and unpredictability, it is
> assumed that the planning process involves
> decision making and judgement. (p. 18)

McCutcheon (1980) suggests that some consider planning as a list of activities or page numbers written as notes in teachers' planbooks. But "perhaps the richest form of teachers' planning was the complex mental dialogue, the reflective thinking, that many engage in before writing these plans or teaching a lesson. Part of the mental dialogue resembled a rehearsal of the lesson, an envisioning of what happens" (McCutcheon, 1980, p. 7). Yinger (1980) states "the ultimate goal of instructional planning is the successful implementation of learning activities in the classroom" (p. 122).

History of Planning

"Interest in planning is as old as man's interest in relating knowledge to action. This can be traced back to

the Romans, Greeks, and Middle Eastern cultures and might historically be found in the study of government, law, administration, and public works" (Yinger, 1977, p. 15). He states that "the process of planning has been a subject of serious study in areas such as economics, business, city planning, and national planning since the mid 1930s (p.15).

Planning in education can be divided into two eras: the pre-1970 era and the post-1970 era. Pennella (1985) suggests "the literature regarding teacher planning through 1969 was devoted to theoretical prescriptions for planning" (p. 3). Yinger (1977) agrees, "Until recently the literature on planning in education has been mainly prescriptive. Many volumes have been written recommending specific principles for curriculum planning and most recent textbooks include at least one chapter on teacher planning" (p. 24). This can be seen in a variety of textbooks. Samalonis (1970), Lorber and Pierce (1983), and Cole and Chan (1987), among others, include planning as integral chapters on their theories of teaching.

The dominant model of planning for the pre-70's era was Tyler's (1950) rational approach model (Pennella, 1985). Yinger (1978) credits other disciplines for the rational model used in education. He states:

> Education has adopted, for the most part, a
> rational model of planning based on planning
> models from economic and from national and city

planning theory. This model, which will be referred to as the rational choice model, in essence requires:

1. the setting of goals
2. the formulation of alternatives.
3. the prediction of outcomes for each alternative; and
4. the evaluation of each alternative in relation to the goals and outcomes. (p. 6)

According to Pennella (1985), the rational model was later fully developed by Taba (1962). Yinger (1977) describes this model as essentially having four steps for effective lesson planning:

1. Specify objective
2. Select learning activities.
3. Organize learning activities.
4. Specify evaluation procedure (p. 25).

Pennella (1985) reports of challenges to the rational model during the sixties, especially on the setting of objectives. The result was a switch from the prescriptive knowledge to "definitional and conceptual knowledge" (p. 4).

From the early 1970s to the present time research on teacher planning changed focus. Studies by Yinger (1977), McCutcheon (1980), Bullough (1987), Callaway (1988), and Zahorik (1970) focused on three main areas of teacher planning. Pennella (1985) recalls "the studies in the past 15 years have addressed three major questions:

1. How do teachers plan?
2. What effect does planning have on teacher effectiveness?
3. Why do teachers plan? (p. 2)

Yinger (1977) suggests that there have been relatively few
studies into teacher planning research. Those performed can
be grouped into two categories.

> The first type has focused on testing the adequacy
> of the rational planning model for describing what
> teachers do and has examined the effect of using
> this model on teacher classroom behaviour. The
> second type of study has attempted to describe how
> teachers actually plan, free from constraints of
> any recommended procedure. (p. 29)

Levels of Teacher Planning

Different authors suggest a different number of levels
of planning. Samalonis (1970) uses the three levels of
planning: long range planning, intermediate planning and
immediate planning. "Long range planning is embodied in the
course of study, intermediate achieved through units and
immediate determines specific lesson plans" (Samalonis,
1970, p. 8).

Yinger (1980) identifies five levels of planning:
yearly planning, term planning, unit planning, weekly
planning, and daily planning. Yinger (1980) states:

> Yearly planning involves selection of general
> materials, placement of pupils, and sequencing and
> organizing teaching for the entire school year.
> Term planning focuses on the determination of a
> weekly schedule and unit activities to be carried
> out during the weeks until the next school
> vacation period. Unit planning lays out the
> activities that are to be a part of instructional
> units in areas such as science, social studies,
> and mathematics. Weekly planning focuses on

activities that will occur as part of the schedule
from Monday through Friday, while daily planning
involves the last-minute changes or preparations
to be made during the day or before school starts
the next day. (p. 112)

In Yinger's (1977) study, the majority of planning, in
most subjects, occurs in the unit period. "Prior planning
in these areas had consisted mainly of deciding which topics
might be good to treat at various times during the year. It
is not until the unit planning level that decisions are made
about specific content, materials, and activities" (p. 187).

Schwartz and Cramer (1989) suggest that lesson plans
are a very important part of the instructional process and
can be divided into three types: content, process, and
context. Content lesson are informational lessons. They
are important to the student because they construct meaning.
Skill or procedural lessons are called process lessons.
"They help students learn how to perform cognitive skills or
procedures" (Schwartz et al, 1989, p. 2). These process
lessons are important in developing independent study.
"Context plans set the larger framework in which content and
process lessons occur. The context consists of a large
number of factors that influence the setting and conditions
in which instruction occurs" (Schwartz et al, 1989, p. 4).

Research on Teacher Planning

One of the earliest empirical studies carried out in teacher planning was done by Zahorik (1970). Part of his study focused on the "relationship of planning to the behaviours that teachers display in the classroom and to pupils' learning" (Zahorik, 1970, p. 144). His results were tentative.

Another early study on teacher planning was conducted in England. Taylor (1970) held discussion with over 48 teachers in English, science, and geography, and administered questionnaires to another 261 teachers in the same disciplines. The study was conducted within a large city authority and a part urban, part rural area. Teachers in his study identified six major areas of planning: pupils, aims, methods, school organization, content, and evaluation.

A review of the conclusions of this study on planning shows that objectives were not the starting point for most teachers when they planned their instruction.

> Evidence indicates that the teachers, when they
> consider planning, tend to be occupied firstly by
> factors associated with classroom teaching and
> secondly by interests of pupils. This last factor
> seems to play several roles: as a guide to the
> construction of learning situations, as a purpose
> governing a course and as a criterion for
> evaluation. (Taylor, 1970, p. 59)

Evaluation was the facet that was the least considered when

planning occurred. Overall, Taylor (1970) determined that:

> What emerged from the discussion is the rather
> unsystematic approach which teachers seem to take
> to the business of planning. They appear far from
> certain of what planning calls for, and most of
> the planning in which they are involved seem to be
> "only general" in nature. (Taylor, 1970, p. 51)

Yinger (1980) refers to Taylor's major concern regarding planning as course context. "Taylor found that the teachers in his study began with the context of teaching (for example, materials and resources) and then considered which learning situations were most likely to interest and involve their pupils" (p. 109).

Taylor (1970) feels that the context framework of the teacher regarding planning is opposite to the curriculum theorists and curriculum planners. The order of planning, in the framework of the theorists, begins with aims and objectives, followed by a description of the learning experience necessary to achieve these aims, and finally with the evaluation procedures. Teachers, on the other hand, appear to start with the context of teaching, follow this with a consideration of the kind of learning situation likely to interest and involve their pupils, and only afterwards consider the purposes which their teaching is to serve. Lastly, and as an issue of lesser importance, teachers consider criteria and procedures for evaluating the effectiveness of their course of teaching (Taylor, 1970, p. 59).

A second study by John Zahorik was carried out on teacher planning in America. Part of his study focused on decisions teachers make before they start their planning session. His results are frequently used by researchers as base-line data on the types of planning decisions. Zahorik (1975) studied 194 teachers from a metropolitan city and its surrounding suburbs. These teachers taught a variety of grade levels from kindergarten to grade 12.

Data were collected in two sections:

> Part I simply requested teachers to list in writing the decisions they made prior to teaching in the order that they usually made them. The teachers were urged to list the decisions that, for one reason or another, they feel they should have made. Part II, which was given after the first part had been collected, requested those teachers who indicated that they did make decisions about objectives and activities to give an example of an objective and of an activity that they had used recently. (Zahorik, 1975, p. 135)

Zahorik (1975) suggested teachers decisions were classified into eight categories:

1. Objectives - Decisions about goals, aims, outcomes or purposes;

2. Content - Decisions about the nature of the subject matter to be taught, such as identification of facts, events, or other aspects;

3. Activities - Decisions about the type of learning activity or experiences to be used;

4. Materials - Decisions about resources to be used such as book, films, field trip sights, and guest speakers;

5.   Diagnosis - Decisions about students'
      readiness for a particular lesson or
      session. This would include students'
      previous learnings as well as their
      ability and interest;

6.   Evaluation - Decisions about how to
      determine the effectiveness of the
      lesson or session;

7.   Instruction - Decisions about teacher
      verbal and nonverbal behaviours and
      teaching strategies used;

8.   Organization - Decisions about how to
      arrange the teaching-learning
      environment such as grouping of
      students, use of space, and use of time;
      (p. 136);

Zahorik (1975) reported that "the decision that came closest
to being used by all the teachers was activities" (p. 136).
Second in decision categories on planning was content, with
objectives tied for third with materials. Evaluation and
diagnosis categories were low on the list. Other interesting
results included:

secondary teachers used the decision
[category] of materials more often than the
other teachers, and elementary teachers used
the decision [category] of diagnosis first
more frequently than the other teachers.
Science teachers used the decision [category]
of content first less often, but used the
decision [category] of objectives and
activities first more often than the other
teachers. (Zahorik, 1975, p. 137)

Zahorik (1975) derived the following general conclusions
from his study:

1. Objectives are not an important planning decision category to the majority of teachers.

2. Activities are an important planning decision category but seldom are the first decisions a teacher makes.

3. Content is another important planning decision category. Most of the teachers put it as the first decision category.

4. Less than one third the teachers deemed evaluation, organization, diagnosis, and instruction as important planning decision categories and organization and instruction categories were deemed to be particularly unimportant.

5. Teaching level, content area, and teaching experience accounted for little difference in the variables tested.

Zahorik (1975) states:

> The question that most of the teachers in this study ask themselves frequently and ask themselves first the most frequently, then, is not what specific objectives are students to achieve or what are the activities in which students will become involved. Rather, the question asked is what is the range and particulars of the subject matter of the lesson or unit to be taught. This practice of beginning the planning process with a consideration of content, and emphasizing content as a planning decision [category] would be rejected by many, if not most, curriculum theorists. (Zahorik, 1975, p. 138)

Peterson, Marx and Clarke (1978) carried out a laboratory study in the planning practices of 12 junior high

social studies teachers. Teachers were given 90 minutes to plan a lesson. The teachers planned aloud. This activity represented an aspect of the mental life of the teacher. Each session was taped and analyzed. The lessons were taught to 3 groups of 8 students each. The students completed achievement and attitudes measurements after each session.

From the data Peterson et al. (1978) outlined five categories of teacher planning: objectives, subject matter, instructional processes, materials, and learners. The authors reached four conclusions about the methods teachers use to plan instruction:

1. The major area of planning of the largest proportion of the teachers studied was in subject matter or content.

2. The second major area of focus was the instructional process. "Instructional process includes intended student activities as well as planned teachers strategies and activities" (p. 424).

3. Materials and learners were the third concern of teachers planning instruction.

4. The least amount of time spent planning was devoted to objectives.

Morine-Dershimer (1978-79) conducted a study called the South Bay study. Data were collected on ten teachers during this study. The purpose of the study was to determine the unstated plans of teachers before they enter the classroom. The focus of the study was on the relationship of teachers' planning and classroom reality.

Teachers were asked to state their general lesson plans. Morine-Dershimer (1978-79) stated:

> In response to the general question to state their plans, the South Bay teachers consistently mentioned content to be covered and the activities to be engaged in, as well as frequently mentioned the materials to be used. While the South Bay teachers rarely mentioned pupils' ability, specific objectives, teaching strategy, or seating arrangement in response to the general question, their ready response to probes indicated the mental plans or images of the lessons to be taught did include such aspects of instruction. There was a difference between the teachers' stated or recorded plans, and the mental images or expectations for the lesson. The mental images were significantly more detailed and spanned more aspects of the lesson. (p. 85)

This study showed that the written lesson plan did not accurately portray the mental picture the teacher had of the lesson. This mental picture included objectives which were left out of the written plan. Again, the main concern of the written plans included content, activities and materials.

Another study by McCutcheon (1980) examined the planning process of a group of 12 elementary teachers in the

Virginia area. It was an indepth study involving a research team that carried out interviews, studied planbooks, and observed the actual teaching process.

As a result of the study, McCutcheon (1980) believed that little long range planning occurred. Most of the planning was short term, covering about one week. Teachers suggested that textbooks were important for long term planning. The textbook was also deemed to be important in short term planning - "the scope and sequence of lessons are usually derived from the textbook" (McCutcheon, 1980, p. 20).

On the methods of planning and the decision teachers make before planning, McCutcheon (1980) reports:

> Teachers' planning involves a complex, simultaneous juggling of much information about children, subject matter, school practices, and policies. Teachers' planning does not follow the objectives- first model taught in many education courses. (p. 20)

It was also found that written plans recorded in planbooks served primarily as an memory joggers or reminders of activities that were to be used during the class. Mental planning was deemed to be much more elaborate than written planning. McCutcheon (1980) states:

> Perhaps the richest form of teachers planning was the complex mental dialogue, the reflective thinking, that many engaged in before writing these plans or teaching a lesson. Sometimes the result of mental planning was sketchily outlined in planbooks, but much of it never appeared on

paper. Part of the mental dialogue resembled a rehearsal of the lesson, an envisioning of what would happen. (p. 7)

McCutcheon (1980) suggested that many factors influence teachers' planning. Two such factors are (1) teacher education, and (2) the school and school system.

McCutcheon (1980) found that teacher education lacked concentrated work on how to plan lessons, and on the difference between written and mental lesson plans. The school and school system affected teacher planning in many ways. Teacher isolation was a factor - in many school systems the teacher is isolated from other teachers. Materials influenced planning activity - teachers are inclined to rely heavily on materials that are easy to come by, most often the textbook. Administrative practices and policies have an effect - there are many ways administrators affect the lesson plans of teachers. For example, some administrators make changes in the schedule that are unpredictable. Scheduling, time allotment and class size are other such administrative influences on teacher planning. Usually smaller classes or more assistants translates into more lesson planning. Teachers in McCutcheon's (1980) study also believed promotion and retention play a role in decisions about lesson planning.

Yinger (1980) carried out a detailed study of one elementary teacher during a five month period. "The primary

objective of this study was to describe the mental processes
that teachers engage in while making preactive planning
decisions" (Yinger, 1980, p. 110). He reports that the most
frequent planning concern is activities. He also suggests
"content and materials were features that helped define an
activity thus, activities were not separated from subject
matter" (Yinger, 1980, p. 123).

Yinger (1980) also believed that teaching routines
determined the amount and type of planning:

> In a highly routinized classroom the selection of
> content and materials was frequently left open,
> hence requiring planning at a weekly level.
> Content and materials could thus be viewed as the
> most frequent subproblems that this teacher had to
> deal with on a regular basis. Decisions about
> content and materials are even more frequent for
> teachers whose teaching is less routinized. (p.
> 124)

Yinger (1980) suggests that there was no provisions for
plans based on behavioral objectives. Evaluation was not a
major decision point at either the activity or the planning
level. But one factor that did influenced this teacher's
planning was attention to the pupils' background. He
concludes:

> It is obvious that research on teacher planning is
> in its infancy. The complex tapestry of planning
> and teaching, which has been only partially
> represented here, has revealed many new ideas and
> questions that need to be investigated. This
> study has helped dispel notions that teaching is a
> simple, straightforward enterprise. (p. 125)

Pennella (1985) reports on a study of written lesson plans, both submitted and private. The study was carried out on 16 secondary teachers of mathematics and English in 2 New Jersey schools.

Pennella (1985) found that content was the major decision made in lesson planning. "Secondary teachers focus on what to cover rather than on what to do. What matters to the teachers studied is the material or topic of the day" (p. 35). It was also noted that teachers who taught brighter students would spend more time in planning lessons. "Teachers reported that a more extensive personal map was needed for the brighter students. The potential to challenge teachers' knowledge precipitated more study and more notes" (Pennella, 1985, p. 38).

Pennella (1985) stated "the written unsubmitted plan is richer and more complex than the planbook and hence offers a more provocative window into teacher planning (p. 36). When teachers submitted their lesson plans, the most common form was a basic outline of topics. Teachers noted that lesson plans served as an aid which helped teachers with the content which was taught.

Callaway (1988) researched the topic of unit planning as it fits into the total scheme of planning. Seventy-six teachers from elementary through high school planned a unit of instruction. The decisions they made prior to beginning

teaching the unit were put in chronological order, and
studied along with the general overall plans. It was
presumed that each of the teachers had some experience in
instructional planning through methods courses and student
teaching.

Callaway (1988) found the first major decision made by
the majority of the group was a concern for content.
"Following the first concern about the content was the
question of availability and selection of resources and
related materials" (p. 8). There was little mention of
objectives or goals. Also students' prior learning,
teaching strategies, and class organization were very low on
the priority list of planning decisions. "In this study,
over 75% indicated the need for an evaluation plan. This
would generally take the form of paper/pencil test of some
kind" (Callaway, 1988, p. 9).

There was no significant difference between any of the
groups studied. The results showed that the majority of the
teachers do not plan units. Most of the planning is day by
day lesson plans. Any long term planning takes the form of
chapter planning related to chapters in a textbook. Mental
planning also played an important role. Callaway (1988)
concluded:

   the investigator comes away from this study still
   "believing" in the importance of teacher planning
   and believing in the efficacy of a "unit"

curricular and instructional approach but with the
feeling that not much unit planning and teaching
is going on - unless one considers "chapters" to
be units and accepts the notion of teachers'
mental planning. (p. 10)

Models of Planning

The literature on teacher planning indicates that the

major model used in the planning process is the rational

model that was "first proposed by Tyler and later elaborated

by Taba and by Popham and Baker" (Yinger, 1980, p. 108).

Yinger (1980) reports:

This model is basically a linear ends-means model
in which planning progresses logically from one's
goals. Curriculum-planning is thus characterized
as a task that requires orderly, careful thinking;
and this model is proposed as a rational and
scientific method to accomplish this task. The
model, because of its rational and scientific
appeal, has been prescribed for all types of
educational planning - from the most
comprehensive curriculum planning to the teacher's
daily lesson-planning. (p. 108)

Yinger (1980) suggested a second model of teacher

planning called the process model. He notes that there are

two purposes of this type of planning: "to describe and

speculate about components of teacher planning and their

interrelationships, and to lay a basis for further theory

and research on teacher planning. The focus of the model is

the individual, preactive, deliberate information-processing

involved in planning" (p. 113). The process model includes

three stages:

1.   Problem-finding;

2.   Problem formulation/solution (design);

3.   Implementation, evaluation, and routinization.

In teacher planning, "problem-finding is the discovery of a potential instructional idea that requires further planning and elaboration" (Yinger, 1980, p. 115). Included in this problem-finding stage are other factors such as classroom environment, curriculum, resources, and pupil characteristics, including background, ability, maturity, and attention span.

This problem-solving process is "an interaction between four components: the planning dilemma confronting the teacher, the teacher's knowledge and experience, the teaching goal, and the teaching material" (Yinger, 1980, p. 116). According to Yinger (1980) this is the level that takes the most time and energy. This is the time of elaboration and mental testing until a solution is reached.

The third stage is implementation, evaluation and routinization. This is the time that the solution to the design stage is tested and evaluated. It is used mainly for planning activities. "The ultimate goal of instructional planning is the successful implementation of learning activities in the classroom" (Yinger, 1980, p. 122).

If the activity is successful it become part of the teacher's routine. Yinger (1980) states, "routines

established in the classroom become part of the teacher's
repertoire of knowledge and experience, an important link
between current teaching and future planning (p. 123). If
the activity is still not workable there is a feedback loop
to the design stage where further work is done on them. If
they remain unworkable they are thrown out.

General Teacher Planning Models

Cole and Chan (1987) outline a general model of
instructional planning and preparation. This model has five
stages:

1. Conceptual stage
2. Definitional stage
3. Developmental stage
4. Operational stage
5. Progressive evaluation stage

During the conceptual stage the overall plan is
examined, and the need for resources, and potential student
impact is analyzed. General goals and ideas for
instructions are examined. The result is a general overall
plan. "At this stage, teachers need to give careful
consideration to students needs and priorities among these
needs" (Cole et al, 1987, p. 49). At this stage there
should be concern with the specific objectives which are to
be learned during the instruction. These objectives should

60

correlate with the overall goals, and they can be used as a
bases for the planning of the instruction.

The developmental stage is the stage where strategies
and materials come together so plans can be outlined.
According to Cole et al (1987) it is the design stage "where
instructional strategies are developed and details of lesson
plans are mapped out" (p. 52). Details include content,
activities, and method of presentation.

"At the operational stage, the instructional plan is
implemented in a practical context. It is here that
planning proceeds from the general and abstract to the
concrete and operational" (Cole et al 1987, p. 52). This
implementation stage must be carried out as planned. All
instructional materials, field trips, worksheets, tests
should be organized at this level. Some revisions might
have to be made before another group receives the
instructions. "There will be a need for change because the
realities of classroom teaching and learning never quite
match the idealized and conceptual schemes of teachers.
Flexibility and adaptability in lesson implementation are
always essential" (Cole et al, 1987, p. 53).

Progressive evaluation is the final stage. Although it
is the final stage chronologically, it is not the final
stage according to the scheme of the model. It is an
ongoing process involved through all the other stages. It

is the monitoring to ensure that all parts of the instruction are going as planned. At any stage a feedback loop could occur if a problem arises, therefore the process interacts with the other four stages, and evaluation is an ongoing process.

The evaluation stage has two functions: it checks student learning to ensure objectives are being met and it also checks the effectiveness of the instructional planning process. Cole et al (1987) conclude:

> evaluation acts as a feedback mechanism for the model and prevents the planning from becoming too unrealistic in its operation. Data from classroom experience, research evidence and students' progress in learning should act as reality checks to aid this evaluation process. (p. 53)

Cole et al (1987) suggest this instructional model could apply to any level of instructional planning including yearly planning, semester or term planning, unit planning or individual lesson planning.

Instructional Development and Planning

Branson (1988) suggests "there is a significant discrepancy between the current levels of productivity and quality of American schools and the levels required to serve society well" (p. 15). Reigeluth (1988) states "it is widely reported that our educational system has some important shortcomings ... it is the structure of our

educational system that is at the heart of the current problems" (p. 3).

Snelbecker (1988) indicates that "during the past several years there have been a number of reports and professional associations that collectively indicate the need for improving the quality of instruction in our nation's school" (p. 33). Sergiovanni (1985) suggests that teachers, in planning and delivering instruction, rely more on their experiences or the experiences of other teachers than on theories about the principles of teaching and instruction. Many instructional developers believe that the answer to some of the problems of education can be solved by using the process of instructional development. Heinich (1984) suggests "instructional technology can take over much of what teachers traditionally do" (p. 81). Shrock and Byrd (1988) state "instructional technologists have advocated rather massive reorganization of the sc ools accompanied by a heavy infusion of technologically delivered instruction" (p. 45). In considering how instructional technologists might improve teaching and learning, Shrock and Byrd (1988) note:

> instructional development provides the schema that
> the teaching effectiveness approach has lacked,
> and, therefore, provides the support for thinking
> about teaching.... If carefully communicated,
> instructional design could be seen as a logical
> extension of the teaching effectiveness movement.
> (p. 52)

Schiffman (1988) suggests:

> instructional technology focuses on the
> improvement of performance which may or may not
> call for teaching in the traditional sense. Its
> theory calls for systematic planning to assess
> what types of strategies and media can best
> address the task, learner, and environmental
> requirements for a particular instructional unit.
> (p. 41)

Shrock and Byrd (1988) suggest "it is extremely
important for instructional designers to be involved in
preservice teacher education" (p. 52). This will assist
teachers in their tasks and could improve the area of
instruction.

Summary

This review of the literature on teacher planning has
attempted to define and trace the history of models of
teacher planning, with insights into different levels and
influences.

Its history is as old as the educational process
itself. The five generally recognized levels of planning
include long term planning, yearly and monthly planning,
intermediate planning, such as unit planning, and the short
term weekly planning and daily planning. Three models of
planning were summarized, including the frequently used
rational model of Tyler (1950), Yinger's process model
(1980), and the general teacher planning model of Cole and
Chan (1987).

Teacher planning is an area with a tremendous number of prescriptive models on the process of planning, but with little research on indepth analyses of actual teacher planning. Most of the research on how teachers plan actually was begun after 1970, and it is, for the most part, focused on the elementary school level. As Pennella (1985) states, there are few studies done at the secondary school level, and few have focused on particular courses, on the importance of a written plan, and on the significance which teachers attach to written plans.

As Clarke and Yinger (1979) report "the most common form of written plan is an outline or list of topics to be covered, although many teachers reported that the majority of planning was done mentally and never committed to paper" (p. 15).

In teacher education programs, models for planning usually start with objectives. Most of the research indicates that objectives are not one of the major decision categories in teacher planning processes. The two decision categories most teachers used in their planning processes were activities and content. Cole et al (1987) describe the ideal planning process:

> We believe a systematic approach to planning and preparation is the key to efficiency in instruction. Planning decisions need to be made in sequential and logical order. Instructional goals should be specified before making decisions

about teaching methods and procedures. Further, at all times during the planning process, general aspects of instruction and the overall teaching strategy need to be determined before specific details and activities are considered. It is also important that teachers consider all alternative goals and strategies before making ultimate planning decisions. Finally, decisions made at the several stages of the planning process need to be integrated. (p. 47)

Snelbecker (1988) proposes that instructional development is an important process for the classroom teacher and could help in the improvement of instruction. He states:

the classroom teacher need not have the high level of expertise we might expect from full-time professional instructional designers but teachers do need at least fundamental instructional design strategies to plan, evaluate and modify instruction as a regular and continuing part of their classroom work. (p. 35)

CHAPTER THREE

Methodology

Introduction

Merriam (1988) states, "ethnography is a research design developed by anthropologists to study human society and culture. Recently, the term ethnography has been used interchangeably with fieldwork, case studies, qualitative research, and so on" (p. 23).

According to Merriam (1988) the term comes from anthropology and has two distinct meanings as follows:

[1] Ethnography is a set of methods used to collect data, and it is the written record that is the product of using an ethnographic technique.

[2] Ethnographic techniques are the strategies researchers use to collect data about the social order, setting, or situation being investigated (p. 23).

Merriam (1988) defines an ethnographic case study as a "sociocultural analysis of the unit of study. Concern with the cultural context is what sets this type of study from other qualitative research" (p. 23). This study was an ethnographic study. Qualitative data were collected from teachers concerning their instructional interactions in the classroom setting, in relation to their occupation.

The study was implemented to elicit information on the knowledge and competency levels of high school teachers regarding instructional development, and to determine the type of instructional planning performed by the respondents, in the event that they did not use the instructional development process.

In case study research of contemporary education, some and occasionally all of the data are collected through interviews. "Interviewing is necessary when we cannot observe behaviour, feelings, or how people interpret the world around them.... interviewing is also the best technique to use when conducting intensive case studies of individuals" (Merriam, 1988, p. 72). Guba and Lincoln (1981) state "the ability to tap into the experience of others in their own natural language, while utilizing their value and belief frameworks, is virtually impossible without face to face and verbal interaction with them" (p. 155). Dexter (1970) suggests interviews are a preferred method of data collecting and that "more data can obtained at less cost" (p. 11).

"The decision to use interviewing as one's primary mode of data collection should be based on the kind of information needed and where interviewing is the best way to get it" (Merriam, 1988, p. 72). It was felt by the author that the interview method was the best instrument for collecting the information required for this study.

Merriam (1988) suggests there are many types of interviews: structured, semistructured and unstructured (p. 73). "The most common way of deciding which type of interview to use is by determining the amount of structure desired. On a continuum, highly structured questionnaire-driven interviews would be at one pole and open-ended, conversational format at the other" (Merriam, 1988, p. 73).

In qualitative case studies, interviewing should be less structured and open-ended (Merriam, 1988, p. 73).

> In the semistructured interview, certain
> information is desired from all the
> respondents. These interviews are guided by
> a list of questions or issues to be explored,
> but neither the exact wording nor the order
> of the questions is determined ahead of time.
> This format allows the researcher to respond
> to the situation at hand, to emerging
> worldview of the respondent, and to new
> ideas. (Merriam, 1988, p. 73)

Since, according to Merriam (1988), "the main purpose of an interview is to obtain a special kind of information" (p. 72), the semistructured interview format was utilized, with the author serving as the interviewer. Only in the case of the collection of demographics was the highly structured, questionnaire-driven interview employed.

Development of the Instrument

The study is one of a series of studies on instructional development knowledge and competency levels among Newfoundland teachers. This particular study was also concerned with the relationship between knowledge of and competency in instructional development and the instructional planning processes used by teachers.

Gallant (1989) and Tobin (1989) completed studies of instructional development knowledge and competency among teacher-librarian and primary/elementary teachers. Their instruments, were not suitable for adoption in this study, given that one instrument was a written survey instrument (Tobin, 1989), and the other was a highly structured interview guide (Gallant, 1989). However, these instruments were used as a basic framework for the development of the instrument used in the first part of this study.

The second part of the study focused on the planning processes carried out by the respondents. Instruments from a variety of studies were used as a basic framework for the development of the semistructured interview guide on teacher planning: these studies including Taylor (1970), Zahorik (1975), McCutcheon (1980), Yinger (1978), Peterson, Marx and Clarke (1978) and Callaway (1988).

Sample Group

The sample group consisted of five respondents that were randomly chosen from a list of high school teachers from the two major boards in the St. John's area: the Avalon Consolidated School Board and the St. John's Roman Catholic School Board.

Because of the indepth case study approach of this study, it was decided that five respondents was the maximum possible number, given time constraints. The five respondents, given random selection, would guarantee some variation in preparatory backgrounds and teaching assignments.

Administration of the Study

The study took place throughout the fall of 1990 and the winter of 1991. Each of the five respondents participated in three interviews, for a total of approximately four hours each (see Appendix A for interview guide). Interview schedules were as follows:

Interview 1 - Demographics

Interview 2 - Instructional development knowledge and competency

Interview 3 - Method and kno:.ledge of the planning
process

All data collection was completed by March 1991.

Data Analysis Procedures

According to Merriam (1988) data analysis in
qualitative research includes "analysis during data
collection, the devising of categories, and the building of
theory" (p. 123). Merriam (1988) suggests that the data
should be organized topically or chronologically, "then
patterns and regularities are transformed into categories
into which all subsequent items are sorted" (p. 131).
These categories comprise of recurring regularities in the
data. The number of categories constructed depends on the
focus of the research.

Miles and Huberman (1994) suggest that there are a
variety of tactics that can be used to analyze qualitative
data (p. 215). These tactics include counting, noting
patterns and themes, seeing plausibility, clustering, making
metaphors, splitting variables, subsuming particulars into
the general, factoring, noting relationships between
variables, finding intervening variables, building a logical
chain of evidence and making conceptual/theoretical
coherence.

Analysis of the data in this study involved the categorizing of the data and subsequent analysis of this data by noting patterns and themes, and by clustering.

CHAPTER FOUR

Report and Analysis of Results

Introduction

The primary objective of this study was to determine the instructional development knowledge and competency level of high school teachers in the St. John's area of the province of Newfoundland. Further, the study sought to determine the depth of knowledge each respondent had of the instructional development process, as outlined in the literature, and the processes they used in the planning of their instruction.

Organization of the Findings

The instrument was an interview guide which permitted both open-ended responses and closed responses, the latter of which included, where appropriate, a checklist of possible answers. The interview had three separate sections, designed to be administered over three separate sessions as follows: demographic information; level of instructional development expertise and knowledge of the instructional development process; and the techniques used in the planning of instruction.

The author conducted the interviews, which were recorded on audio tape with the permission of the respondents. The interviews varied in length, with the shortest being one half an hour and the longest taking over two hours. Total interview time, for respondents, averaged approximately four hours.

This chapter presents the results of the indepth interviews with the five high school teachers, named for convenience, T1, T2, T3, T4 and T5. The interview data have been content analyzed in accordance with Miles and Huberman (1984), and are reported descriptively.

Demographic Information

The first set of interviews involved the collection of demographic informat on on each respondent. It was divided into two sections: teaching record and university record.

Teaching Information

The respondents had a variety of teaching experience, ranging from a low of 11 years to a maximum of 23 years. All respondents were high school teachers and had spent the majority of their teaching careers in either a high school or a combination of junior high

and high school setup. Among the five teachers, there
was little experience on either curriculum or course
development committees. Only T3 served on a curriculum
committee, in physics.

There was also variety in teaching and
administrative assignments among the teachers. Three
teachers, T2, T4 and T5 taught social studies, while T1
was an English teacher and T3, a science teacher.
T1 and T2 were both involved in the administration of their
schools, with T1 being a replacement assistant principal and
T2 a permanent assistant principal.

Specific subjects taught by respondents included
English Literature, English Language, Economics, Computer
Studies, Physics, Geography, History, Canadian Law and
Newfoundland Culture (see Table 1). Both T1 and T4 also
functioned as department heads in their specific subject
areas.

Table 1 provides information on the teaching records
and present teaching assignments of the respondents
interviewed during this survey.

Table 1

Respondents' Teaching Records

Teacher	Years Experience	Main Subject Taught
T1	15	English Language
		English Literature
T2	11	E. ..omics
T3	19	Physics
		Computer Studies
T4	23	History
		Geography
T5	18	History
		Canadian Law
		Nfld. Culture

University Training

All five respondents had either six or seven years of university training. T1 and T4 had six years while the other three respondents had seven years. All respondents held either two or three degrees, with three respondents holding Master's degrees.

Three respondents completed conjoint undergraduate degrees, while two completed separate degrees, with the degree in Education following the Arts degree (see Table 2).

Table 2

Respondents' Preparatory Programs

Teacher	Number of degrees	Degrees	Area of Specialization
T1	3	B.A., B.Ed., M.Ed.	English Administration
T2	3	B.Ed.,P.Ed. M.P.Ed.	Physical Education
T3	3	B.Sc., B.Ed. M.Ed.	Science Learning Resources
T4	2	B.A., B.Ed.	Social Studies
T5	2	B.A., B.Ed.	Social Studies

All respondents, in addition to studying in their area of specialization, had completed many courses in Education. T1 and T2 had completed between twenty to thirty education courses, while T3 had completed between thirty to forty education courses. T4 and T5 had completed from ten to

twenty education courses. Of all these education courses, only T1 and T3 had completed a course in instructional development. T3 was the only one of the group to have completed a course in curriculum development.

The majority of the respondents had not completed courses since 1982, and in fact T3 and T4 had not completed courses since 1975 and 1974 respectively. Only T2, who is presently working on a second Master's degree, had completed courses recently.

Overall, this group of teachers considered themselves to be average to highly specialized in their respective subject areas. They were satisfied with teaching and had no plans or desires to seek employment in another arena where they might apply their specialization areas. The exception was T2, who would consider employment in the business side of athletics.

Instructional Development Knowledge and Competency

The second round of interviews were held to determine the respondents' knowledge of and competency in instructional development. This interview consisted of six sets of both closed response and open-ended questions on the following topics: objectives; learner analysis characteristics or entry level behaviours; evaluation;

teaching/learning resources; performance assessment, revision and recycling; and general definitions of instructional development.

Each topic was further divided into three sections. The respondents had to describe their knowledge levels, their experiences, and their opinion or the value they placed on each of the six categories.

Instructional/Behavioral Objectives

Objectives: T1. T1 defined objectives as "where I want to get with the work I'm going to do". T1 could recollect working on the topic of objectives during university but could not remember how they were written, the different types of objectives, or any of the theories. When prompted, T1 recalled the name of Bloom and remembered Bloom's taxonomy but couldn't describe anything more about objectives except the name of Bloom. T1 had difficulties writing an objective and thought they should include "setting goals and reaching closure".

T1 had little experience with the formal use of objectives. They were not present in his course guidelines or in the textbooks. T1 stated:

> I use them informally and regularly without ever doing much thinking about them in an attempt to get something across to the students. They come from experiecce, I know where I want to go by being familiar with the work. Because of this

experience I know where I want to be at the end of a session. My objectives are better today than when I was a beginning teacher.

T1 does not give the objectives formally to the students but stated, "through the teaching process I am telling them continuously the importance of getting to a certain point which really is the objective I am going for."

T1 maintained objectives are very important especially for the teacher. It helps determine where they are going and the time factors in getting there. T1 also believed objectives come as a result of experience in the process of teaching. "I have an awful feeling that beginning young teachers may be more caught up in just getting work done or reading a story in literature versus what you're trying to get out of a story".

T1 regarded objectives as important in the evaluation process. But there can be drawbacks to objectives. "You can get so caught up in them, especially in literature, you can destroy a piece of work. Therefore it doesn't pay to get too objective oriented".

Objectives: T2. T2 is a strong believer in objectives and stated:

Before a unit is started the student should know the skills and knowledge they require to deal with the unit, and the amount of material they are responsible for in the chapter or in the unit of work they are about to begin. They make life easier, if you know where your going its easier getting there. It is the same for students, if

they know where and when something starts and the point where it is finished, then they can pace themselves like runners in a race.

T2 writes many of his own objectives but does not include a standard or measure in these objectives. T2 also possessed a knowledge of several of the theories involved in the writing of objectives. He recalled a part of Benjamin Bloom and his taxonomy of objectives, although this was not emphasized in his area of study.

T2 makes frequent use of objectives which he referred to as both behavioral and instructional objectives. They are obtained from a variety of sources including textbook, resource material, teachers' guides and ones he compiles. These objectives and a vocabulary list are distributed to students in the first class as an introduction before they start the unit.

T2 believed that they are very necessary but not used by everyone: "teaching is an idiosyncratic science, individuals do what works well for them." Experienced teachers are more likely to use objectives compared to younger, less experienced teachers.

A problem associated with objectives is in their writing. He surmised, "if they are written only for recall they will only produce a low level of learning and no critical thinking."

Objectives: T3. T3 defined objectives as "what you want a student to know at the end of the learning task." T3 recalled studying information on objectives, especially Bloom's taxonomy, in several university courses . Although he doesn't remember the parts necessary in writing an objective, when asked to do so he produced several objectives that included the proper structure except for a standard or measurement. T3 had a fair understanding of each level of Bloom's taxonomy and could distinguish the different hierarchical levels of Bloom's theory.

T3 used objectives extensively, usually at the end of the learning task as review sheets, before major exams. He suspected "they are not properly stated but I use them in my own kind of way, usually as a question and not necessarily as a statement." According to T3 his objectives are unit goals, and they come from textbooks, course outlines and/or are compiled on his own. These objectives can form the basis of an evaluation package for the unit being taught.

To T3, teacher application of objectives is a positive thing.

> It lets the student know where they stand and what they have to know. Not every student has the same ability to go through the material and figure out what it is they should know and not all textbooks or courses are designed or end up at a level that all students understand them. Therefore a list of objectives gives each student an equal bases on which to complete the unit of work which they are to be tested on.

In the opinion of T3, mathematics and science teachers make more use of objectives than other teachers. "This does not mean other teachers shouldn't use them, they just don't." As also stated by the first two teachers, T3 felt that objectives were produced as a result of the experience teachers gained over time.

Objectives: T4. T4, who has not completed university courses since 1974, could remember little about objectives. He remembered learning something about Bloom recalling "Bloom is that taxonomy guy. I heard of him somewhere before." When asked for a definition of an objective, T4 stated, "objectives are instructional objectives or goals, things you want to accomplish by the end of a section of instruction. They are the points of instruction you want to get across to the students." When it came to an understanding of the construction of objectives T4 suggested they must be measurable and should determine the level of performance of a student.

T4 used objectives frequently, "especially in courses with an abundance of content." He gets his objectives from manuals and textbooks, when they are present, or makes up his own when the need arises.

T4 believed that any academic subject, especially content-oriented courses, require a good set of objectives. "If you don't use them you just ramble from point A to B."

He feels that they are important in the evaluation process. "You evaluate your objectives and you should teach your objectives. One drawback with objectives is you could get boxed into a corner and then you would not be able to expand your scope."

T4 concluded his use of objectives started about seven or eight years ago as a result of the experience he gained as a teacher and not as a result of anything he had been taught, again inferring the importance of experience in the teacher planning process.

Objectives: T5. T5's university training in the social studies area involved the study of objectives, including the writing of objectives. He had difficulty writing an objective and could not remember the recommended components of an objective. T5 defined objectives "as a series of goals you are trying to do or hopefully what your results should be." He infers objectives are a part of the learning process. T5 could not remember any theories about objectives, but could remember the name of Bloom when prompted.

T5 makes use of objectives and usually gets them from either the curriculum guide or from the textbook. He suggested, "sometimes you don't even think about them from year to year. You got them from when you did the courses yourself. You know what you are going to do with the students and what they will get out of it." He does not

make them available to the students because "they won't know
the purpose of the objectives and would look at them
sceptically."

T5 stated that objectives are positive for a teacher
and students. "It helps teachers keep their work in line and
if the students know the objective there should be an
improvement in their marks." As far as negative aspects of
objectives, he explained you must watch out for objectives
"because if you have students of different abilities,
sometimes the objectives will not fit the student and the
objectives will be used in isolation." According to T5,
high school teachers make a greater use of objectives than
their counterparts in the lower grades.

Learner Analysis Characteristics/Entry Level Behaviour

This part of the interview determined the respondents'
knowledge regarding the entry level of their students before
they commence planning a unit of instruction. It consisted
of sections where they discussed their knowledge of learner
analysis, the influence this knowledge plays on the process
of instruction, which student characteristics they consider
when determining the entry level of instruction, and their
opinions of this process as part of the instructional
development process.

Learner analysis characteristics: T1. T1 could not give a definition for learner analysis characteristics, "I could probably guess at what it might be but I have never come across this term before." T1 determines the characteristics of his students through the teaching process. Therefore they are obtained over a period of time by studying individual pieces of their work. Certain students become better known than others. " Before the start of a course," T1 stated, "the only thing in place to show students' characteristics is the report cards showing a percentage."

T1 does not use the characteristics of the learner when starting off the initial instruction, except for their grade level. Later in the year information is obtained from the progress report, which normally is not issued until the midpoint in the term or at the end of the term. T1 thus discovers the ability of the students by studying their performance over a period of time. "If the students are brand new to me, I judge their work to determine the type of workers and thinkers they are." Over time T1 discovers students working habits and those who are having difficulty with the course. The other characteristics discovered are the obvious characteristics of sex and approximate age. All other learner characteristics are discovered either by chance or through the lack of a specific ability shown in the work they perform.

T1 believes that a learner analysis would be beneficial in his teaching approach. "If you could get a good profile of a complete class you might know which way to approach the instruction right from the start instead of realizing in October or November that you must back up a notch". This teacher would like such a profile to contain, first of all, reading ability followed by attention span, general ability, maturity, general knowledge, self discipline and the ability to work alone and in groups.

Learner analysis characteristics: T2. Learner analysis characteristics to T2 means "how the learner is performing or if a student is understanding the teaching or having difficulty with it." Entry level behaviour would be "the first time they are exposed to a certain topic." This teacher believes a pretest would be an advantage in determining entry level. He has little knowledge of learner analysis procedures and cannot recall studying anything about learner characteristics in any courses previously covered.

T2 believes the entry level of a student is very important and influences instruction. He has tried giving pretests to determine entry level, but recently has discontinued the practice because "pretesting is funny and I am not convinced it motivates a student at the beginning of the instruction. As a matter of fact it can intimidate a

weaker student." He believes most of his students are at a comparable level but if there were differences between them you would try to modify the course to fit these differences. This modification would occur either midway or at the end of the instruction. T2 discovers the characteristics of the learners as he proceeds through the instruction, and not at the beginning of the instruction. "I can look at the makeup of the class and by running down through it I recognize the academic makeup of most of the students, well, the academically strong and weak students."

T2 feels that dealing with the entry level of the student could interfere with the process of following the curriculum which is very important to an educator. He concluded that the knowledge of some learner characteristics such as general ability, special abilities, reading ability, writing ability, maturity and special interests could be used in certain subjects. Learner characteristics would be important in practical courses including physical education, music and shop courses.

Learner analysis characteristics: T3. T3 defined entry level behaviour of a student as "the type of skill a student has to work with so they can best make use of the objectives the course has given him." These would include factors such as reading and writing ability, and the prerequisite abilities, for instance the ability to perform at a certain

mathematics level in order to do a physics course.   He
alleged to know little of learner analysis characteristics
and could not remember encountering any such content in
university courses completed.

T3 does not take into account learner entry behaviour
levels when planning instruction, especially at the
beginning of the year.   Besides the basic information of
name, approximate age and the grade level, the rest of a
learner characteristics are obtained during interaction
throughout the school year.   Types of students can be easily
observed and sometimes the course is slightly altered if
students are having particular problems.   Characteristics he
looks for are the ability to follow directions, the ability
to complete work on time and the ability to work
independently.

T3 said he could use information about the learner if
it was presented to him early in the school year.   In his
opinion most high school teachers do not make use of
knowledge of learner characteristics, with the only
exception being teachers of mathematics.   He suggested
diagnostic testing result could be used to determine some
entry characteristics.   Some characteristics that he could
use if provided would be: socio-economic status, reading
ability, attention span, knowledge, skill, general ability,
special abilities, writing ability, maturity, parents'

employment and their peer group. "These are the type of things you should know but usually don't before you start the instruction." He also suggested "most of these traits are probably available but to take the time to go through two hundred students and tabulate all this information seems to be just another task that time doesn't allow to be done properly." Anytime a student is having difficulties he usually checks the Canadian Test of Basic Skills, for information on his/her basic skill levels.

Learner analysis characteristics: T4. T4 candidly admitted he has never heard of learner analysis characteristics or entry level behaviour. The only factors he identifies with a student is the approximate age, which is a calculated guess, the sex and the subject they are taking.

In the opinion of T4 he could make use of data on entry level characteristics if they were made available for him prior to instruction. Some of the characteristics he would look to see are academic ability, socio-economic status, reading ability, attention span, knowledge, skill, general ability, special abilities, writing ability, and maturity. He believes that most teachers look at the characteristics of the group rather than those of the individual.

Learner analysis characteristics: T5. T5 felt the characteristics of the group of students are more important

than those of the individual. He suggested that he looks at the group and not the individual students, so different groups require a different method of instruction. The chief characteristic which determines the type of instruction is the academic ability of the group. This characteristic is not determined until after the instruction has begun and usually after the first set of evaluations. Once again, the characteristics of learners are obtained after the evaluation process. The only other method of knowing anything about the entry level of the students is if a particular group of the students were previously taught by that teacher.

T5 had little knowledge concerning learner analysis characteristics. He concurred with T4 that he had not come across the terminology in any of the courses he had taken in university, and if he had it was minor and he had forgotten it. He did suggest it had something to do with "high calibre instruction, or a higher theory of instruction."

T5 does not use knowledge of learners' entry level when he is planning instruction. He assumes the group taking his courses are homogenous in nature, and due to the nature of the course the students are usually of average intelligence. If this is not so, he finds out after the evaluation process. If this is the case he adjusts the level of questions on the next evaluation but keeps the instruction

similar to the previous section. His questions "reach the
cognitive abi'ities of his students." He also suggested
"following the curriculum guides leave little time for
deviating away from the average path to work on the superior
students."

T5 believed others take advantage of information on the
entry levels of students and would like to know most of the
same characteristics of his learners as T3 and T4 mentioned.
In addition, T5 would like to know the interests of his
students before they entered the courses, but he still
wasn't sure if it would make any difference to the actual
instruction.

Evaluation

The interview session on evaluation was similar to
other sections, in that the respondents were asked to
comment on their knowledge, experience and opinion on
evaluation process.

In the knowledge section the respondents reacted to
their understanding of the terms evaluation, norm-referenced
testing, and criterion-referenced testing. The second
section on evaluation was concerned with specific elements
of evaluation - the when, what, how and why of evaluation.
The third section asked the respondents their opinion and
values on certain types and practices of evaluation. If

they had not heard of criterion-referenced testing, a brief explanation was given and they were asked to provide views on it.

    <u>Evaluation: T1</u>. T1 suggested "evaluation is the process by which teachers determine the level at which students are performing at any given time." Norm-referenced testing and criterion-referenced testing are two terms T1 has never come across before.

    T1 evaluated the "academic level of the student, but in some form I evaluate the whole person, their characteristics and the connection of literature to their life." He feels that he knows what he wants to evaluate before he starts the instructional process. This is a combination of content, objectives and connecting the relationship between literature and modern life. T1 stated, "I like the student to take a piece of literature and make it more than a piece of work in their heads, more than a textbook, more than a story, bring it to where it fits in today's life. This is what literature is all about." This is an important factor in producing his evaluation. Therefore all tests are developed before he starts to teach an instructional unit. "It only makes sense to me to have the test mapped out and know where I am going before I start the instruction."

    T1 professes the evaluating of objectives are important in most subjects in order to ensure the key elements have

been covered. If these objectives have not been reached the work would have to be retaught. He believes one of the pitfalls of developing tests early in the instructional process, which he guards against, is the danger of teaching for the test and not the necessary content.

T1 thought that criterion-referenced testing could be a valuable way of testing, but he didn't think that it would fit into the educational system the way it is set up today.

Evaluation: T2. T2 defined evaluation as an assessment of student performance based primarily on written testing, homework and term papers. "In certain courses the emphasis should be on the process and not the product but the system in most cases does not allow this to happen." He did not think that he knew the difference between norm-referenced testing and criterion-referenced testing. He suggested norm-referenced testing is testing similar to the Canadian Test of Basic Skills while criterion-referenced testing is similar to the public examination system present in Newfoundland, demonstrating at least the basic idea of these two terms.

T2 evaluated content and objectives. Before he tests he checks to see if the students are ready to write a test by giving a series of question and answer sessions, worksheets and review sheets. If they are ready then the test is developed using the objectives and content.

Therefore the test is prepared after the presentation of instructional unit, but some questions are put together during the instruction.

T2 believes that it is important to test objectives. As for developing tests early in the process T2 states, "I believe there is a real danger of producing the test before instruction; you may end up teaching for the test rather than teaching the content or curricula. Sometimes you get on a track that students find interesting and you would like to include this in your test." He suggested producing tests after the instruction is the result of habit and tradition.

To T2 criterion-referenced testing sounds interesting but is not practical in the present system. He concluded it could work but their must be provisions made for retesting. He suggested in the case of criterion-referenced testing "the test becomes a teaching tool that is used diagnostically."

Evaluation: T3. T3 defined evaluation as "the putting together of a list of scores obtained by students on a variety of tasks combined by a small amount of summative evaluation." He was not familiar with the concepts of either norm-referenced testing and criterion-referenced testing.

T3 evaluated "the skill level of the objectives." These are presented as homework. How they are answered and the

general work habits are weighed. Most of the objectives can be evaluated by test items also. "Tests are always developed after the unit of instruction is complete. T3 does not distinguish between content and objectives. "In my opinion the content is the objectives."

T3 considered evaluation as one of the more important parts of the instructional process and it is one method by which teachers know if what they are teaching is working. He would like to see more observation type evaluation especially in laboratory courses in science.

He didn't see any difference in developing tests earlier or later in the instructional process. "If you expect students to know certain objectives the test can be made up at anytime. I make them up at the end of the instruction because of scheduling and to make sure the material is covered."

After an explanation of criterion-referenced testing he concluded "it is a better way of evaluating but the success rate is questionable. Students would have to get used to this system at a very early age in order to be successful."

Evaluation: T4. To T4 evaluation is a measure of students' performance and whether or not a teacher has reached his or her goals or objectives. He had not heard of the terms norm-referenced testing and criterion-referenced testing before. He referred to these terms as "part of the

new terms in teaching," obviously unaware that they have been in use since the 1960s.

The tests that T4 designs are strictly academic and he evaluates according to his goals and objectives. Most of his evaluation is in a written form and it is used to indicate student performance. It takes various forms, including tests and independent work like assignments, written homework and term papers. The work is assigned according to the academic makeup of the class, and topics given to one group may not be the same topics given to a second group. If homework is assigned it is usually an extension of an objective. The tests are developed after the work is completed or nearly completed.

T4 agreed that most teachers should and do test objectives. He had little opinion on criterion-referenced testing.

Evaluation: T5. T5's definition of evaluation was similar to the others but he declared "one of the primary functions of evaluation is to evaluate the teachers' methods of instruction." As with the first four respondents he had not heard of norm-referenced testing or criterion-referenced testing and said any attempt to define these terms would only be a guess.

T5 evaluated the content students learn, their knowledge and skills, and the students' ability to make

logical conclusions. This is evaluated through essay
testing and written assignments. Tests are developed after
the instructional work is completed. T5 stated the purpose
of preparing the evaluation after instruction is "I get to
know the students and their characteristics as I go through
the instruction and use this information in deciding on test
items." The test are produced to fit the characteristics of
the students, therefore two groups of the same course could
have different tests.

T5 believed "if you test your objectives you are
teaching memorization and by giving assignments you can
evaluate your objectives. He suggested that objectives are
more skill-oriented."

If tests were developed early in instructional
planning, T5 stated:

> I'm afraid I'd miss something the students think
> is important or I would miss one of my aims.
> Sometimes during the instruction a topic is
> covered which is precipitated by the students. If
> the test is prepared earlier, this work may not be
> included. This would result in a teacher-oriented
> test rather than a student-oriented one.

He implied this wouldn't be fair. T5 suggested that
the teacher should test objectives, but if they used
criterion-referenced testing they would be testing
knowledge, not objectives.

Teaching Strategies and Resources

In part four of the interview the respondents were
asked their knowledge, experience and opinion on a variety
of different teaching strategies and resources commonly used
in the field of education.

Teaching strategies: T1. T1 could produce only a small
quantity of information on the different methods of
instruction. He had difficulties in naming different types
of teaching methods or strategies, but he knew that there
were many different strategies and tactics used in the
delivery of instruction. In the past he has come across
different methods of sequencing work presented in the
literature.

T1 considers his instructional strategies to be very
general and "the result of experience. It comes naturally
after fifteen or sixteen year of doing the same thing."
This respondent considered his main teaching strategy as
"being a presenter who directs students into a discussion as
I proceed through the unit." He proposed that seventy
percent of his teaching time was spent as a lecturer, and
twenty percent involved in question and answer, small group
discussion and class discussions. Less than ten percent was
used for mediated presentations, usually in the form of
videotapes. Each year a section of teaching time is devoted
to public speaking.

His sequencing strategy is the thematic approach. Once a theme is started he looks for poems, stories and plays that fit the theme. These are then sequenced for the purpose of clarity. T1 did not like the idea of sequencing by any other means than the thematic approach. "I like to take the middle of the road approach, instead of easy to hard or familiar to unfamiliar."

According to T1, time restraints and the amount of work that has to be covered limits the type of teaching strategies he can use, therefore he relies on the methods previously mentioned.

He would like to have room for independent study if the students were mature enough to handle it. He limits the amount of research projects and assignments because of the amount of work students are required to complete in other subjects.

Teaching strategies: T2. T2 was familiar with several types of instructional methods and teaching strategies. These included lecture, discussion, small group work experiment, simulation, research groups, debating, and field trips. He was also familiar with a variety of methods of sequencing work.

T2 relies on his experience in planning his instruction. He gets information from the textbook and curriculum guides to aid with this planning process. The

materials are read and the objectives are prepared. In delivery T2 uses a variety of teaching techniques. The most common technique is the lecture method, occupying fifty to sixty percent of the instructional time. The other techniques include group work and projects. Where possible field trips, outside speakers and the resource center are used in the instructional process.

T2 would like to make use of other methods of instruction and believes that variety is important and helpful to the students. He suggests a professional instructional planner would be an addition to a staff. "A variety of teaching strategies is an advantage to a student. The student population is derived of a variety of different characteristics and learning abilities. What might work with one could be all wrong for another."

T2 believes this is true for sequencing also. A variety of sequencing techniques could serve a purpose and, by alternating the sequencing, it could be beneficial to the individual student.

Teaching strategies: T3. T3 suggested all instruction should be presented in a logical way so that all the students can understand it. The purpose of both the planning of instruction and the methods of teaching is to keep this logic. His university training suggested, "clearly state and describe the topic then carry out

planning from this point. You set yourself a task to do and
you precede to carry out this task in a certain amount of
time without wandering." The instruction should include an
introduction, the main task and a conclusion.

T3 also knew of and could describe a variety of
teaching techniques and different sequencing methods. One
of his methods of sequencing is "by the number of
appearances on the public exams," i.e. frequency of testing.

In his own planning and teaching, T3 does not follow
any sequencing other than the sequence of topics in the
book. In his method of planning he uses experience he has
gained through the years of teaching a particular course.
His teaching methods include twenty to thirty percent
lectures and note taking, twenty percent small group work,
with the rest devoted to demonstrations, experiments, class
work and some media presentations.

T3's opinion is similar to the others on the methods of
teaching. A variety of methods could be successful
depending on the individual and the specific classes. A
textbook approach would be successful if you are given a
good textbook and a cooperative class. There is a place for
independent study if the class is cooperative. He prefers
sequencing from easy to more difficult and contends most
textbooks use this approach.

<u>Teaching strategies: T4</u>. T4 has little knowledge of the different varieties of instruction. He recalled " an inconsequential amount of time in university was spent on learning different styles of instruction. One method was chosen and time was spent on that method only. I have become familiar with the different types of teaching strategies but I do not use most of them." He did not remember covering the sequencing of materials but conjectured what it meant and gave examples. He concluded he does not consciously sequence when planning or presenting instruction.

T4's method of planning and instruction depended on the type of class he is teaching. He stated:

> For the majority of my classes I use the textbook to plan the course, but it depends on the students. If they can handle role playing I let them role play and if they can handle independent study I let them to do that. Other materials such as audiovisual, teaching guides, manual are secondary if used at all.

T4 spends over eighty percent of class time lecturing the students, who are required to take notes. He noted "this is the method I am most comfortable with, but I am sure the students would probably be more comfortable with one of the other methods." The other twenty percent of the time is spend in small group discussion. He does not sequence the course other than follow the sequence provided in the textbook.

He suggested teachers should use the strategies which they find most comfortable. T4 concluded by saying " I had been teaching years before I learned anything at all about the other methods of teaching. Over the last five years I am trying to get used to providing a variety of teaching techniques."

<u>Teaching strategies: T5</u>. T5 remembered learning a little about the different methods of instruction from his university studies, especially from methods courses, but cannot remember their specific names or theories. He could describe most of the different teaching techniques but was not familiar with the different sequencing strategies.

T5 uses the textbook as his prime resource in the instructional planning process. Sometimes he uses the curriculum guide and other enrichment materials. After he completes his class work in a topic he "sometimes use a movie as a supplement." His sequencing is the same as that of the textbook. First he discusses a topic with the students, and then gives notes on the topic. His main teaching method is lecture and note taking. T5 sometimes uses discussion and question and answer sessions to supplement work.

In the opinion of T5 more types of instructional strategies, beside the lecture, are used in the lower grades rather than in the high school grades. "Most media, such as

movies, are only good for supplementary work because most
students would not be able to use them as the primary source
of instruction." Other teaching methods such as research
projects, small group work and simulation are good for the
better students but not for the average. He stated:

> I would like to use these methods but I don't
> think the students are ready for it. The same is
> true for sequencing of the material. The average
> student can handle the materials presented in any
> order but the below average student cannot relate
> to it.

Assessment, Revision and Recycling

Each respondent was asked to comment on the assessment,
the revision and recycling of their instruction, using the
same criteria presented in the other parts of the interview:
knowledge, experience and their opinion of the strategies
that could be used in their planning and teaching. The
respondents' knowledge of assessment was explored;
specifically their knowledge of types of assessment and the
purpose of assessment, their methods of assessment, revision
and recycling, their opinions on certain types of
assessment, what should be assessed, and the function of
revision and recycling.

Assessment/revision: T1. T1 defined assessment as a
step in the evaluation process, with the main function being
to determine the success of the students. He has heard of

the terms summative and formative evaluation, but in terms
of teacher evaluation rather than student evaluation. He
could not give a definition of either type of evaluation and
demonstrated no understanding of the notion of recycling.

Student evaluation is used to check the goals of the
instruction. "After I finish with the evaluation I check to
see if they have attained the information I want them to
have. If they haven't, then I make my next move."
Assessment is done at the end of the instructional unit and
is based on the marks of the student evaluations. T1
considers his students evaluations to be subjective, taking
the form of essay questions. They are content-oriented, but
based on the course objectives, or objectives he has decided
to teach. Evaluations are used to check to see if the
students have grasped the concept. Instruction is repeated
if the students display problems in the evaluations. If the
students pass there is no modification of the instruction.
If they fail the unit is reviewed or retaught. In the
opinion of T1, objectives should be the primary base for the
evaluations, with content a close second. Factors such as
resources and activities need not be evaluated.
Modification of instruction should ideally take place
regularly, in his opinion, but realistically time does not
allow this to occur.

Assessment/revision: T2.   "Assessment can be defined as
the evaluation of the performance of the student or an
assessment of the performance of the teacher," according to
T2. "Most assessment is traditionally done by testing,
usually in the form of question and answer written test."
He is familiar with both summative and formative evaluation,
but thinks these concepts are more commonly used in the
evaluation of teachers and school personnel. Based on his
knowledge of evaluation of students, "it is used to
determine if a student will pass or fail the grade." To T2
revision of instruction is "to make it more workable for the
student," and he is not familiar with the concept of
recycling in relation to instruction.

T2 assesses the unit as he proceeds through it but
leaves the main assessment for the final evaluation. He
evaluates mainly content and the students' level of
confidence with the material. "I try to make them think
critically on the various topics by giving them problems
they have not encountered before." He stated, "evaluation
provides me with feedback to determine the students who are
having problems and those who are succeeding." The results
of the evaluation are used for assessment and revision of
the instruction only if the students do not do well.
Because of workload major revisions are only carried out
when there is a change in the course.

T2 believes a variety of things should be assessed, including objectives, resources, activities and attitudes. Evaluation should be used to assess the efficiency of the instruction, and results could be used to change the delivery system of the instruction. However he suggests that this is impossible under the present system because of restraints in time and teacher workload.

T2 suggests most of the evaluation in the school system is summative but there is a place for formative evaluation. He stated:

> It is ironic, in any professional organization's performance appraisal they talk so highly about formative evaluation and the only real way to improve performance is through formative evaluation, yet if we look at the school system we notice we concentrate on summative evaluation, not formative. The bottom line should be the students should know the material, if it takes longer for one than another that is secondary. The big drawback to formative evaluation is time and workload for the teacher.

He explained, "the major role of evaluation is to rank students so they live up to the minimum criteria expected of them to pass a course." In the opinion of T2, instruction should be current, and consist of a variety of methods with constant modification.

Assessment/revision: T3. T3 contends that assessment is "evaluating the validity of a test based on the students' success rate and compared to the objectives." He also described both summative and formative evaluation but, as

with the first two respondents, he related it to the evaluation of teacher performance rather than student performance. In describing his knowledge of evaluation, he suggested that it served two functions: the first to measure student success and the second to evaluate the success of the instruction.

In his evaluation T3 evaluates content and objectives. This is done on a continuous basis throughout the unit of instruction, usually through question and answer sessions with the students. The main evaluation is at the end of the unit and it is in the form of a written test. This evaluation is used to assess, revise and modify the instruction for the subsequent classes. If any student has a particular problem with any part of the instruction extra help is provide outside the normal school hours.

"Content is the most frequent material evaluated," according to T3. The content should be frequently revised "taking out procedures that don't work and replacing them, usually with procedures I have performed in the past. What works with one group of students may not work with another," according to this respondent. "If something doesn't work it should be replaced or at least modified. This may be for the teacher's benefit and indirectly affect the student. This will change the plan of attack."

T3 also suggested that revision and modification can break the habit of teaching a certain topic by one

particular method, and that can be beneficial to the
students.

Assessment/revision: T4. T4 saw no difference between
assessment and evaluation. He maintained that assessment
involved the appraisal of the students, and its main
component was the final mark, which is the "sum total of all
the bits and pieces of evaluation that has been done
throughout the year." He has a heard of both formative and
summative types of evaluation, but he is not sure of what
the terms mean. T4 described formative evaluation as
"measurable evaluation." The sole function of assessment is
to determine the success of the student in a particular
course or a student's academic performance, according to
this respondent.

T4 described his approach to assessment as "measurable
evaluation." It consists of quizzes, research paper and
exams and takes place at the end of the instructional unit.
He tests content and objectives and is looking for strictly
academic knowledge.

> I modify instruction only if the majority of
> students are not successful, in other words they
> fail. When this occurs I change the presentation
> going from lecture to worksheets. I only do this
> if I noticed there was not a lot of success from
> the original presentation. Other than that I
> assume everything is perfect.

Instruction is revised on a fairly regular basis, from year
to year.

T4 agreed that evaluation should include objectives, content and teaching strategies, but he doesn't think there is a need to evaluate activities or resources. Assessment should include evaluation of both students and the teaching process. The evaluation should be used to modify the instruction on a regular basis. He maintained "if you see instruction doesn't work then it is time to modify it, or if its working well why change it."

Assessment/revision: T5. Based on his previous knowledge, T5 related assessment to evaluation based on objectives, testing and results. This evaluation would be used "to adapt your instructional material and your instructional goals to meet the need of the students, to get an idea of their overall ability." The purpose of assessment is to ensure students are learning the skills and the objectives of the course, and to prepare them for a more productive life. He remembered coming across both summative and formative evaluation previously but he had forgotten the meaning of these terms and could not give an example of either type of evaluation.

T5 uses objective and essay testing to evaluate the students. The basis of these tests is primarily the content of the instructional unit, and testing usually takes place at the end of the presentation of the unit. The results are assessed, and if they are not as good as desired the method of presentation is adjusted. Revisions are determined by

the quality of the student. This often results in a
different form of testing, rather than modification to the
instruction itself. Instructional modifications, if any,
should occur at the end of the instructional unit.

In the opinion of T5, "content should be the main
strategy evaluated. The objectives are evaluated by the
teacher and not as a part of the student evaluation. If the
test is not adequate you would have to reassess your
teaching techniques." T5 believes if revision or
modification is necessary, it is the test that should be
modified, and not necessarily the instruction.

Definition of Instructional Development

Following the investigation of the specific components
in the process of instructional development as identified
and summarized from classroom instructional developmental
models, the respondents were asked to provide a definition
of instructional development and to discuss the origin of
their definition. They were also asked for their opinion of
the relationship between the instructional development
processes and curriculum development processes.

T1 could not provide a definition of instructional
development. However he suggested that both instructional
development and curriculum development are important in
developing, broadening, and improving the curriculum.

T2 contended that instructional development is a process of planning instruction based on a variety of different instructional strategies. He based this definition on the information discussed in the interview. In his opinion there is little, if any, relationship between instructional development and curriculum development. He suggested that curriculum development is developing affective programs of studies or content area. Instructional development is the development of a delivery system for the content.

T3 had completed a course in instructional development sixteen years ago and recalled a general definition. He defined instructional development as the process by which an improved model of instructional design is followed. He could not recall the parts of the process or describe a model. He noted:

> there is a relationship between instructional and
> curriculum development. Both are involved in the
> production of an instructional unit. Curriculum
> development is the body of knowledge which will
> eventually become the course where as
> instructional development is the method of
> presenting the material from teacher to the
> students.

T4 defined instructional development as the planning of teaching strategies to reach goals or meet objectives. The definition he provided was as a result of the context of the interviews. He could not describe any relationship between curriculum and instructional development.

T5 also provided his definition from his experience within the context of the interviews. He defined instructional development as the developing of instruction through goals designed to meet the needs of individual students. This development is produced in conjunction with the characteristics of the students. He concluded "there is a relationship between curriculum and instructional development. Curriculum development is associated with content and instructional development is related to the process of teaching. Together they determine the way you teach the course."

The Planning of Instruction

Introduction

In the third interview the five respondents were asked to discuss their planning methods. The interview was divided into two sections: (a) general background into the planning of instruction; (b) and information on their knowledge of the history of the instructional planning process. The first section of the analysis incorporated the respondents' experiences and opinions on a variety of topics concerning the planning process. The second part included their actual knowledge, along with their experiences and opinions.

The Process of Planning Instruction

The respondents were asked to discuss the strategies they used in planning a unit of instruction. Next they were requested to used Zahorik's (1975) eight categories of decisions concerning planning and rank them in importance from the most significant to least significant. The eight categories are: activities, content, diagnosis, evaluation, instruction, materials, objectives and organization. They were also asked to discuss any other factors that they used in making planning decisions.

Planning process: T1. T1's response regarding his starting point in instructional planning suggests that he begins with the content. After the content the objectives are next on his list. The instruction is then performed and followed by the evaluation of the instructional unit.

When given the eight categories of planning T1 ranked content first. Next came organization, followed by objectives and diagnosis. The instruction is planned and finally the evaluation is produced, usually at the end of the instruction. His planning does not incorporate activities or instructional materials. T1 suggested his students feel satisfied with this type of setup. "The feedback I get is the students feel comfortable with the piece of work when I am finished."

Planning process: T2. T2 described his starting point
as follows:

> The first step is becoming familiar with the text
> of the course and the outline provided by the
> Department of Education. The subsequent levels
> include planning activities relevant to each unit,
> looking at ways to evaluate the unit, and organize
> the manner you are going to present the material.
> The objectives have been assumed within the entire
> process, with the objectives emerging somewhere
> between the content and the activities.

In categorizing the eight planning decisions his
results were similar to his discussion on planning. He
related materials with the content, but placed materials
ahead of the content. Activities were placed third,
followed by the evaluation and then the production of the
instruction. Objectives are planned during these five
steps, thus T2 did not assign them a particular number in
the ranking. Organization and diagnosis were not placed in
the ranking, although organization was considered as a part
of the other steps.

T2 suggested that there are other factors that play a
role in his planning process. These factors are student
input and expectations, amount of time required for the
instructional unit, discussions with the department heads
within the school, and consultation with other teachers who
are teaching the course or have taught the course in the
past.

In the opinion of T2, much of the planning process is eliminated due to the input of the provincial curriculum committees. The course outline presented with each course dictates much of the planning and indeed delineates the process of planning, especially if the course is one that the teacher is less familiar with, or one which is not within his/her area of expertise.

T2 surmised that planning done by curriculum committees leads to more speed, on the part of the teacher, in planning instructional units, since much of the work is already done. He suggested that time is an important factor in planning, because usually there is a lack of time for instruction and the planning of instruction. He concluded "if I were teaching at a university where I had nine contact hours, planning would involve a different approach from working in a classroom with up to thirty classes a week."

Planning process: T3. T3 noted that the start of all planning begins with objectives. He suggested "in many of today's courses the objectives are provided in either the book or the curriculum guide, so this is where I start. If the objectives are given I adapt them to my personal needs." The next decision in the planning process is preparing the content. After he envisions what he wants to teach he decides on an activity he can use as an introduction to the topic. This activity is usually open-ended or inquiry-

oriented in nature to get the students' attention on the topic. If this approach is not used, a laboratory activity is used. Time is then spent in planning the instruction and the materials needed for the instruction. The lesson is subsequently organized and a method of evaluation is determined. He does not use diagnosis in his planning approach.

The strategy T3 uses to plan instruction includes the reading of the text and summarizing the points he wants to include in the lecture part of the presentation. If the material is easy to understand it is usually covered by providing a homework assignment to be completed by the students and corrected in class.

T3 has taught his courses for a number of years, and so he no longer plans them in detail. Rather than going through the complete process, he reviews the work from previous years, uses the same activities and laboratory exercises, and plans the instruction as follows: read the objectives and generalize them, read the content, assign problems where necessary and plan a summary for class. He concluded:

> Since most of these instructional units have been taught many times before a lot of the planning is done by looking briefly at the work to refresh my memory. I don't think about the objectives anymore, they come naturally. I know what I want the students to know and through my experience I know how to get them to this point. The

objectives are given out to the students at the
end of the instruction for review purposes, to
summarize the points I want to make. I have
taught the content so often I don't read it
anymore. I'm so used to the content it comes off
the top of my head.

Planning process: T4. When asked to describe his
process of planning, T4 noted that the course evaluation is
important in determining the planning process. He noted "if
the course is a public exam course, you plan it differently
than you do the other courses for the obvious reasons - you
must have a specific amount of material covered and there is
an external exam." The next step is to look at the
curriculum and see the amount and type of work involved.
Subsequently the objectives are examined along with the
scope of the material. Finally the instruction is put into
place. The evaluation is the last part of the instruction.

When asked to rank the various categories of planning
activities, T4 selected three which he considered as his
primary concern. He stated:

I look at the content first. Then I set down my
evaluation, the number of quizzes I am going to
have, the number of bits and pieces of activities,
homework and papers I want them to do. This is
built in right from the beginning. But the
objectives play an important role within one or
two.

When asked to put these three in order he proposed
objectives first, followed by content and then evaluation.
He considered materials fourth and the actual instruction

fifth.   Diagnosis and organization is not apart of the
planning process of T4. T4 contended "activities are not
planned, they just happen as I go." Other factors that
influenced T4 were the presence of a public exam, the
experience of the teacher and the scope of the course.

In the opinion of T4, different teachers plan different
ways, but there are only several points where one can start.
They are objectives, content or instruction, with the
instruction being the methodology. In most cases the
objectives are stated in the outline of the course. He felt
that evaluation should be set out early in the planning
process.

T4 maintains that after a teacher gains experience, in
most cases, the objectives are not stated but they remain in
the back of teachers' minds. "I have been teaching so long I
don't have a list of the objectives in front of me but I
basically know them. Somewhere along the line you build
your lesson so you can accomplish most of these goals."

Planning process; T5. T5 proposed collecting all the
relevant information about a topic before he started to
prepare a section of instruction. This information has to
be "put down in a logical manner and you must find a method
of presentation which helps the student. In summary, you get
familiar with the material and get the materials you want
together, a/v, film or magazines."

Using Zahorik's (1975) categories, T5 chose objectives as the first step in planning. He suggested that he considered objectives to be the basic learning objectives - i.e. general objectives (or goals) rather than specific behavioral objectives. He chose as subsequent steps, organization, content, diagnosis, instruction, materials activities and evaluation. He concluded that most teachers start with content when beginning the process of planning for a unit of instruction.

Table 3 summarizes the respondents' replies regarding the hierarchical organization of planning strategies in making planning decisions.

Table 3

Respondents' Ranking of Planning Decisions

			Teachers		
Category	T1	T2	T3	T4	T5
Activities		3	3		7
Content	1	2	2	2	3
Diagnosis	4				4
Evaluation	6	4	7	3	8
Instruction	5	5	4	4	5
Materials		1	5	5	6
Objectives	3		1	1	1
Organization	2		6		2
Other					

Time and Content Delivery Planning

The next section of the interview dealt with the planning from the perspective of time-tabling and of content delivery. With teachers covering a number of courses over many months, the need for time-tabling is paramount.

Time and content delivery planning: T1. T1 described

two types of planning: content planning and time planning.

Courses taught previously require very little planning, and

generally run from year to year. Each June T1 prepares for

the following year by arranging sequencing, dates of quizzes

and a time structure for the work to be covered. The

majority of his planning is time planning. He notes:

> If there is a new course or a new section to a
> course I do everything I can to have it prepared
> by the end of the previous year, and plan where I
> want to use it. This plan include outlining
> dates, plans and quizzes. Some of my planning has
> been done for the last three or four years. I'm
> ready for the whole year, what I'm going to teach,
> what I evaluate and the number of class periods
> necessary for each piece of work. During the term
> I make adjustment planning, say for instance due
> to cancellations or reteaching material. This
> planning is outlined to the students so they know
> where they are going also.

In his opinion this type of organization, which he

started several years ago, is beneficial to both student and

teacher. He states, "I didn't do this well enough as a

beginning teacher." It took him approximately seven years

to get this type of organization into his planning, and he

maintains that the organization of planning is a product of

experience in most teachers. At first, he explains, "long

term planning was not a goal. It was day-to-day survival

that was important. This practical change was the result of

experience." He claims all students desire a well planned

instructional unit to show the route they are taking. "They

sense if the teacher is organized; they [students] will also be organized. This prevents many of the difficulties in teaching."

T1's overall plans are for the year, followed by the plan for the term, and then instructional units or content delivery plans. In literature he takes a theme and incorporates a variety of different areas around the topic. Each class is a continuation of the theme and requires very little planning.

Time and content delivery planning: T2. T2 uses planning activity on a term basis. He describes his planning as follows:

> I start before the beginning of the term, set midyear goals and the end of the year goal [time planning]. If you see where you are going you've got a better chance of getting there. You still require an amount of flexibility. I plan the specifics but still require a lesson plan to make sure [that] the content and specific objectives are met [content delivery planning]. In the first plan I isolate on concepts and in the lesson plan, I isolate on content and methodology.

The majority of his planning time is spent in the lesson part of the planning process, or content delivery planning.

Time and content delivery planning: T3. T3's planning occurs at the start of each chapter. "I would like to find time to set up for the full year but I can't, so I do it as the materials are needed", he explained. At the beginning

of the year his only planning concerns time decisions - i.e.
where to be at Christmas, Easter and June. Some thought of
when evaluations are to be held during each term is planned
at the beginning of the year also. This he refers to as
"the house keeping things."

T3 prepares lesson by lesson, "with an overview [of]
what I'm going to do from lesson to lesson, making sure I'm
not caught a day before without my work done." Again he
explains that most of the planning at this point is brief,
because of his experience. When questioned about the
possibility of changing the way he plans he declared, "I
have always done it this way. It works, so why change it?"

Time and content delivery planning: T4. T4 contends
that he uses a variety of planning methods and that each
method has a specific function.

> At the beginning of the year I sit down and get an
> overall picture for the full year in terms of the
> content, how fast I am going to cover the
> material, the amount of work required for each
> term. I then set down my evaluation.
>   At the beginning of each term I review my
> yearly planning, divide it into the units I want
> to have covered by the end of the term and set
> them down [time planning]. During the term I carry
> out content planning. A new course requires a
> great deal of planning while an old course
> requires little, if any.
>   At the end of each term and at the end of the
> school year I evaluate my work to see what worked
> and what didn't, and try to adapt. Things don't
> happen at random. Its a planned year.

T4 noted, "I didn't become a well-organized teacher until I was teaching for fourteen to fifteen years. Before that it just happened with little planning. There was little emphasizes on planning in my preparatory training."

T4 does not plan individual lessons, such as introduction or closure, but these elements happen as a result of his experience. So the complete unit is planned and not chopped up into smaller segments. "You put the frame together in September and start putting the panes together as you go through it."

He also notes "student teachers I had over the last ten years don't seem to put together good solid lesson plans either. They have a fair idea what they want to accomplish, but [they] can't put it together."

Time and content delivery planning: T5. T5 agreed with the other teachers on the point that new courses require more planning than older courses, and for him this planning occurs at the start of the school year. He doesn't plan according to time or schedule events such as evaluation/tests because "I don't like being structured, setting dates for tests, etc. I like the unstructured type of approach and students seem to like it also." During the term he makes whatever changes need to be made, as he proceeds. Content and objectives are usually set out at the very beginning of each term. At the end of the term things

are evaluated but there is no changes made in the planning
until the beginning of the next year, at which time
everything is reviewed.

His plan is made at the beginning of the year.
Subjects are divided into units and each is planned from
start to finish. There are no individual lesson plans made.
"If you plan it out lesson by lesson, I find it too
restraining and it can lead to frustration on my part. You
are better off with an overall plan." T5 also notes that
there is little communication with other teachers involving
the planning of instruction, but he assumes most do it the
same way. T5 uses mainly yearly planning and little of any
other types of plans.

Factors Influencing Planning

In this part of the interview respondents discussed the
factors which influenced their planning. After they
presented their experiences, they were given a list of six
factors and are asked to give their opinion on the role each
played in influencing their planning. The factors included
(1) the aims of the course, (2) the content, (3) the
objectives, (4) the personal needs of the students, (5) the
absence or presence of public examination and (6) the
discipline. Respondents were also given the opportunity to
add and/or discuss any additional factors that influenced
their planning processes.

Respondents were also asked about factors they accounted for in their actual instructional plans. These factors included: (1) the ability level of the students, (2) the content, (3) the types of exams, (4) the materials, (5) the objectives, (6) the sequencing, (7) the syllabus, (8) the teaching methods, and (9) the time allotment.

Factors influencing planning: T1. T1 reported that three major factors influenced his planning. The first was the number of students in the class. The larger the class the more lecture type of instruction T1 planned. The second factor was the academic level of the class, as a group, and the third was time constraints, which generally did not have much influence except in public examination courses.

When provided with six general factors following his introductory comments, T1 indicated that three had considerable influence. The first was public exams. He suggested "in nonpublic exam courses I plan a more relaxed atmosphere [for] my class, but in public exam courses I proceed faster, with a less relaxed environment." Content and objectives were two other factors influencing the planning of this teacher. Personal needs of the student played little, if any role, in the planning. T1 continued, "because of the make-up of the classes, I have to teach to the norm and not to the advanced or the lower academic student.

T1 does not distinguish between the factors that influence his plan and the factors he accounts for during planning. He considers these to be the same. He does not account for the ability of the student in his planning. He refers to this as "adjustment planning", where the original plan is adjusted to meet the students' needs once the teaching process begins. The ability of the student is taken care of in his marking scheme. "I teach the same material to each group but the abilities of the students is taken care of by my method of marking. If I know a student is struggling, I automatically adjust for this in my marking."

The content delivery is sequenced, but this is a natural occurrence and not one that is deliberately planned. Objectives are handled similarly. They exist, for the teacher, because the course was taught before, but they are not recorded down nor are they distributed. The same is true with the teaching method. "It goes back to experience. It all comes as a routine, but you don't sit down and plan it. It occurs as you are going through the material."

Factors influencing planning: T2. In his beginning open-ended response T2 reported that the resource materials available were the primary influence on his planning. Time constraints was next on his list of important influences. Finally, teacher interest dictated planning procedure.

T2 furnished comments on several of the factors presented to him. He noted that instructional objectives influenced the type of planning, as did the content. If one is teaching a public examination course one loses the flexibility that exists in other courses, and this influences the planning process. "In a nonpublic exam course I feel much more confident in supplementing the course with resource materials that may not be within the confines of the content parameters that are set forth for the public exam course." These courses set specific objectives. Personal needs of students, aims of the course and the discipline did not influence his planning to any degree.

T2 reported that his experience was an important element in the planning process.

> On a scale of one to ten, experience is a nine in the importance of planning. In the beginning, planning was by trial and error. This trial and error is based on the knowledge obtained during my university education. In university I would have liked to have seen courses on the designing of instruction. Because I did not have any courses in planning instruction I did know how or what to plan. I did not know how to set up a unit of instruction. I guess I did what I perceived everybody else was doing through the process in which I had been immersed. When I left university I was left alone to plan the way I wanted to and I was not influenced by the system or any teacher in the system.

Factors such as content, materials, teaching methods and time are accounted for in T2's plan, but they are not

recorded. They just become incorporated when one starts the
teaching process, mainly through experience.

Factors influencing planning: T3. The factors which
have little, if any, influence on T3's planning include the
aims of the course, the content and the discipline. "The
major factor is how I see the students handling the topic -
whether I think they'll find it easy or difficult based on
their previous testing or evaluation", he explained. The
next important factor is the ease of getting the topic
across to the student with as little trouble as possible.
"I'd always look for the best way to get the topic across
[the methodology], whether it be as a demonstration, film,
inquiry, lecture or laboratory activity." The third factor
concerns the objectives. The content must include all the
important objectives. This is done mentally and "I say to
myself, can the students do this when I'm finished?"

Public examination courses are handled differently from
courses with school exams. The syllabus plays a factor at
this time. At times, the content order is changed to suit
the teacher. The purpose of this type of change is to
facilitate acquisition of content for the students, and
comes as a result of problems encountered by the students in
past years. Time is another factor built into the planning
process. "There are lots of things you would like to do,
but time just doesn't permit. You have a confrontation with

yourself over the material to be covered, the amount of time and the fact there are a few students that haven't mastered the material", he explains. Some of this can be taken care of by extra help, but many students do not or cannot avail of this.

T3 suggested that factors influencing his planning are synonymous with what he accounts for in his planning process. These factors are not usually recorded but are a part of his mental planning process. The one factor concentrated upon in the actual plan is the content. The objectives are taken care of through worksheets, and are distributed before the final evaluation of the unit. They are, in other words, used as review sheets.

Factors influencing planning: T4. T4 initially suggested that content, objectives and the type of evaluation, especially if it is a public examination course, have major influences on his planning.

When he was presented with six factors which have been identified as influencing planning, he reported that he was influenced by all of them. The one having the least impact, for him, was the aims of the course. The discipline plays a role, when one compares the content of the different courses. Courses with a great amount of content are treated differently than courses with less content base. Personal needs of the students, especially their academic needs, play a role in his planning.

> I am, and I am not influenced by the students.
> How I teach a course and the methodology I use is
> determined by the type of student I have. If I
> get lower academic students, I use more hands-on
> work and I do not stray away from the text. If
> they were good academic students I would be more
> open-ended, and would carry on more discussion.

The major goal of T4's plan is to make sure the work is
covered, especially in public examination courses. Ability
of the student is accounted for only when the results are
bad. He noted, "most of the courses I teach can be handled
by the average student so I teach that way. The teaching
methodology remains the same, lecture and discussion, but
they occur naturally in the teaching process and are not
really planned." Materials, content, syllabus, objectives
and time are all considered briefly, but not necessarily
planned. The same is not true for evaluation. It is
probably the most planned activity.

T4 concludes:

> From past experience I know when I get to a
> particular section I can cover it in a particular
> way, through a/v, through discussion, maybe a
> lecture or even by group project. It is not built
> into the actual planning, it is not written
> anywhere, it just occurs, probably by habit.

Factors Influencing Planning: T5. T5 at first
indicates that he was influenced by the materials, the
calibre of the students, the size of the class, the subject,
the time constraints, and the objectives, in his planning.

When provided with the categories which influence
planning, T5 chose the aims of the course, the personal
needs of students, and the presence of public examinations,
in addition to those he had already mentioned. Public
examinations are a big influence on planning, according to
T5. "In planning for [a] public exam course, you would plan
to teach more for the exam, you might even stray from your
objectives, to a certain extent."

Personal needs of the students "require you to tailor
courses to their needs," according to T5. "You might spend
more time in instructional activities, such as giving notes
and assigning questions."

T5 considered the aims of the course as similar to his
objectives. These aims or goals are very general
objectives. He sees this as influenced by the academic
level of the class. He stated "one of the main objective is
to teach content and information". He incorporates general
objectives such as "students should have an appreciation of
history", but stays away from delineating specific
objectives when planning a course.

T5 develops his plans as he goes along. Things like
content, material, syllabus, time, objectives and
type of exam are accounted for, but not in any structured
way. Methodology is determined as one goes through the
content. Past experience is important in determining

teaching methods, and things develop as one carries out the instruction. The ability of the students are important in T5's planning. He suggests higher academic students are much more structured than the lower academics. Since he teaches what he considers to be lower academics, it affects his planning. He reported:

> I don't look at it as being too structured, If
> you are structured you can frustrate yourself, you
> are looking at students who are of different
> calibers. If I knew when I came in September that
> the students were high calibre students then I'd
> have all that done but the way it goes now you've
> got to basically plan and adjust as you go. If
> you stay within a structured framework it is too
> frustrating. Structured in the sense students
> want information and you can bridge out, but with
> low academic students you stick to the content and
> hope they pick it up.

Description, Use and Revision of Plan

This section of the interview dealt with the type of plan produced by the respondents, the amount that the plan was used and the reasons for plan revision. In each case the respondents were asked to give their opinions and describe these experiences in relation to a variety of different factors important in the planning process.

The first consideration was the type of plan: a written plan versus a mental plan, and a detailed plan versus a simple outline.

Plan description: T1. T1 has "a prepared plan for each course, the work I'm going to do, the order I am going to do

it in and the time it should take." This plan is
distributed to the department in which he teaches. This is
the overall plan, "the selections covered and the time it
should take to cover them." In the daily plan it is "more a
sketchy type of thing, because I know what I want to do. It
is more of a reminder such as read this page or do that."
It is jotted down in his planbook but is "very skimpy".
This plan is a skeletal outline of the content to be
covered, and does not include objectives or methodology.

T1 likes to be well-planned, but what he refers to as
plans are just brief or outline plans of the content to be
covered in each class, or what day a test is to be
administered. The plan does not include a detailed outline
for the unit of instruction. Any actual plan for
instruction is a mental plan. The plan he refers to is more
of a calendar of upcoming events, rather than an
instructional plan. This keeps him on track. "It makes me
come in and do what I want to do and not ramble."

This type of plan is made for one session, for one
particular topic. If it is successful it is repeated. If
it doesn't work it is adjusted. He relies on his experience
to determine if it worked or not, "a gut feeling if it was
successful or not." Revision occurs immediately during the
instructional process. "If I notice a class is having
problems I immediately adjust it, I do not wait. I usually

plan to the average student so that I have limited revision."

The plan is reviewed at the end of the year. If it worked it is kept in the instruction, if it didn't it is replaced. Once the plan is made it is generally followed. "I am capable of making an adjustment and reaching my aims with slight alterations. Experience allows me to do this."

Plan description: T2. T2 uses a detailed mental planning format. He noted "in the beginning I used a written format but I found no one was interested in it. There is really no need anymore, I know it now." The only element recorded is the objectives, which are distributed to the students.

He reported:

When I first started I sketched the course for the year and sat down each night and made a detailed written lesson plan as they taught us to do in university. I still go through the same process but I don't write down my behavioral objectives or my instructional objectives. In any new course I pick up, I plan the year, then as I plan my units I outline and write my objectives for that unit and distribute them to the students, so they know what is expected of them at the end of the unit.

T2's yearly plan consist of mainly, important dates, times, and content in order to keep track of where he was going. When such a plan is made it is kept to be reused if it is needed or is appropriate. It is altered if the feedback from students is not desirable in terms of

reactions to the topic and the presentations, or if there is a change in priority, especially in topics such as current affairs. If the students do not score well on an examination T2 does not change the objectives. Instead he changes the method of delivery. At the end of the year the plan is reviewed and restructured if necessary. The original plan is followed once it is produced, but restructuring can occur during the instruction based on the reactions of the students. The plan, according to T2, has to be constantly "reviewed and revised."

Plan description: T3. The format of T3's plans differs, depending on when the plan is used. When the plan is being constructed it is seventy-five percent written. This written part consists of mostly content. It is a detailed outline without written objectives. He continues "I can't say the students know the objectives at the beginning. In my particular case they are given a list of objectives after the content is complete, as a means of review or preparation for a test."

The mental part of this first plan is twenty-five percent. It includes activities, objectives, a plan for evaluation, time allotments and materials needed. This mental part is usually an outline. The content is sketched out in a planbook, usually in a brief description of one to several words. Laboratories and questions to be assigned

are planned by recording their page and number from the text into the planbook.

The plan is constructed for permanent use and can be repeated from session to session. After each session the plan is evaluated but not changed at this time. It will not be changed until it is used again.

For the second and subsequent times that the plan is used it is revised, if necessary, at the beginning of the session. This revision is done mentally and is the result of memory of feedback from the students of the previous year.

The content from the first plan is reused with few, if any written changes. If the laboratories or demonstrations were not fruitful the year before, they are eliminated or replaced.

After several years of teaching the same course T3 feels that he doesn't need to review the content. He utilizes the knowledge he has gained in the past and therefore presents the content without referring to the original plan. He proceeds, "I know the units, where the labs go and the extra supplement work I'll be giving. I conveniently fit them in where I believe they should go."

T3 doesn't insist his plan is followed. "I make up a plan to be followed and I frequently find, for the most part, that it is. Occasionally it falls by the wayside

because something else falls into place, for example a
student question, so that the necessary content is
reasonably covered."

   Plan description: T4. T4's plan "is a skeleton plan
with the actual detail not built into it. The day to day,
week to week plan is mental. It is not written and was
never written." This skeleton plan started after 10 to 12
years of teaching and came with maturity. He suggests most
teachers that he knows operate with some sort of plan but
most are not written. He questions the need for a written
detailed plan if one know what one wants to teach. He
states:

>   In most fields a detailed plan is needed, but in
>   education it just happens most of the time. No
>   matter what you do everything requires a process.
>   Is it because in most fields you see your results
>   and your mistakes are obvious, but with children
>   and education everything is different and doesn't
>   have the impact? In education if they don't get
>   it this time they get it the next, in other words
>   there is a way of repeating it. If you don't use
>   a plan building a bridge the results are obvious.

He suggested that the written lesson plan is one way a
teacher would have to justify the instructional process if
questioned by a parent on the validity of the teaching
process. If there wasn't a written plan a teacher would be
hard-pressed to justify his/her method of instruction.

   Any revision of T4's plan is in reaction to poor
results by students in their evaluations. If it has been
successful it would be used again, with success being

determined by the students' marks. He states, "If it went well I use it again, with going well being defined by the mark on a piece of evaluation [to indicate] whether or not they got the content." He insists in following the plan to keep on track. This is determined by the nature of the course. If the course is a public examination course the plan is strictly adhered to; if not one can deviate. This deviation may be the result of finding a topic the students find more interesting. When this happens one spends more time on this topic, at the expense of the plan.

Plan description: T5. The format of T5's plans are mostly mental, in the form of a brief outline. He calculates the percent to be twenty- five percent written and seventy-five percent mental. He indicates that the plan could be written up if necessary, but "I can not see the need if it is in my head." He suggests that his plans were written in the beginning, when he started to teach a new course. These plans contained the content he wanted to teach, and had no objectives or time allotments. The teaching method was by lecture, so the plan consisted of the actual material in the form of notes and these notes then were presented orally to the student. The evaluation came at the end of the unit, after the lectures were finished. The first time the unit was taught the amount of time needed was not taken into account, because it was difficult to predict.

T5 explained that his mental planning is the result of experience - teaching the same courses several times so the instructional materials comes naturally. There is an inference made to the fact some of the written plan is "road map" planning, involving length of instructional time and positioning of the evaluation package. Part of the planning process is reviewing the content presented to earlier classes, again drawing on past experiences and deciding which route to follow.

Once a plan is produced for a unit it is repeated from year to year. There may be slight changes in content, objectives and method of instruction as a result of past experience and student feedback. The bases for changes are the calibre of the student and the failure of past groups to succeed. Sometimes the relevance of the material changes and has to be updated. The material presented to the student is reviewed at the end of the term and restructured if necessary. When the unit is finished, students are asked their opinion on the presentation. If they didn't like it, it might be revised.

T5 does not insist in following the plan. He checks to see if most of his objectives were met. If they were, it doesn't matter how they were met, but if they weren't met he will return to the plan. Sometimes a plan is not followed because students become interested in other topics, and the

course is changed to bring in these topics. Another reason
for changing the plan is if students are having too much
difficulty handling the information they are presented with.

Relationship of Planning to Teaching

In this portion of the interview the respondents were
requested to summarize their feeling on instructional
planning by discussing the following questions:

(1) Why do you plan?

(2) What do you feel is the importance of planning?

(3) Do you think you could teach effectively without
planning? If yes, what would permit you to do so?

(4) How is the way you plan related to the way you were
taught in your university methods courses?

Relationship of planning to teaching: T1. T1 noted
that he plans because "he is a planning person and it is the
only way to operate, otherwise you are a crisis person." He
believes planning is good and it is necessary. Planning is
important because "it takes away all the unnecessary panics.
There is always something that will pop up even when you
have planned, but by planning you eliminate ninety-five
percent of the things that will pop up." He implies
planning takes work and some teachers would rather put up
with the panic than do the work. T1 hypothesizes that
students will be better planners if they are associated with

a planning individual, and planning is an important
ingredient in life. Planning is appreciated by students.
T1 believes he would not be as good a teacher if he entered
the classroom without planning. He states
"the day I come to school unplanned will be a bad day."

     When asked to comment on the role of university
training in his method of planning he stated "I am reluctant
to give any credit to the university training. There is
plenty of theory thrown around and if you talk theory you've
got your degrees." The credit, according to T1, goes to
high school and the system, working with organized people.

     Relationship of planning to teaching: T2. T2 stated:

> I plan for direction. I know where I am going and
> the students also know where I want to get. In
> any leadership, you must have a vision, some sort
> of mental image what you expect for the course,
> where you will be at the end and a mental or
> written path how you get there. The plan changes
> often, that is, the route changes not the vision.
> Planning is important as a form of communication
> to others, a method of feedback and the
> realization of the objectives. Planning is a part
> of goal-setting and vice versa."

     T2 believes it is a form of self-evaluation. "You get
feedback for yourself through planning, you find your own
strengths and weaknesses."

     T2 feels that it is not possible to teach without
planning. "I consider it possible to survive without
planning in certain subject areas. In the majority of
academic subjects you can't." When asked to consider
university methods courses in relation to their significance

to his present planning routines, T2 concludes that there were positive and negative experiences. He singles out as a positive aspect the physical education methods course, which was very helpful in the planning process. The negatives include the overall lack of practical experiences.

Relationship of planning to teaching: T3. T3 summarizes his reasons for planning as follows:

> I like to be organized and have a time frame to work within. A plan is the best way to fulfil this time frame. It keeps you on track. Organization is important in the students' point of view. They like to have the feeling they are not just being thrown a haphazard conglomeration of ideas. Instead, when a topic has been covered and it is well-planned, they can trace back through the steps and feel they got something out of it. This makes the presentation worthwhile to the students. An ill-prepared teacher leads to an ill-prepared student.

T3 suggests planning leads to confidence which results in a better teacher. He feels that it is possible to survive without planning, especially if you are an experienced teacher. He implies that all experienced teachers could use mental planning and information obtained from past experiences to cover the necessary content. "I think experienced teachers plan without really knowing they are constructing a plan, especially if it a subject they taught before. You remember things from year to year so easily it is second nature to you."

When T3 did the methods courses, there was little time spent on anything accept methodology. This methodology training assisted him in the first years of his teaching profession. "These courses showed the methods of getting material across to the students, inquiry approach, etc. There was little, if any work done on things like planning, objectives and evaluation," he concludes.

Relationship of planning to teaching: T4. T4 uses his plans to make sure the course content is covered. It serves as a checklist to make sure the goals and the objectives of a unit are reached. He considers his plan to be very important. He concluded:

> I have seen it from both sides, flying from the seat of your pants or sitting down knowing where you are going, the length of time [it] is required to get there and how you are going to get there is a totally different way of teaching. I am much more comfortable with the planning method. Once [I] start planning or have a set plan, it allows me to accomplish what I have to accomplish.

He doesn't know how he survived the number of years he did without using a planning process. He is much happier since he started planning, and suggests he is much more satisfied with this method of preparation.

T4 noted that there was little in his methods courses that helped him in the planning process, but says in defense of the university, "it has been over twenty years since I have done subject methods and I did not find the course

particularly interesting." At that time he only had to
complete one methods course in his discipline. The methods
course lacked the study of the different components of and
approaches to teaching. Planning, instructional objectives
and evaluation were hardly mentioned. There was some work
done on methodology. He concludes with advice to beginning
teachers "planning is important: you must have a plan and
you must use it".

    <u>Relationship of planning to teaching: T5</u>. T5's reasons
for planning include (a) meeting his objectives, both mental
and written, (b) to be organized and (c) to have a route to
follow so that the content can be covered. This results in
an organized teacher which is important to both the student
and the teacher.

    He finds that planning provides a way to make sure the
content is presented in the proper fashion so one isn't all
over the place, or, in other words, being organized, and
also it aids evaluation. He suggests that the amount of
planning is determined by the subject. Certain subjects
require little, if any, planning while others require a
great deal.

    T5 suggested that the methods courses he did in
university helped him "to a certain degree to prepare for
teaching for objectives, schemes of planning and
instructional methodology, but just from a theory point of

view." He surmises he is a better teacher and planner now
because of his experience. Experience has provided him with
a greater confidence. T5 believes that the university
students he has come in contact with as a cooperating
teacher are more prepared and show more confidence than in
his days of student teaching.

He concludes with the suggestion: "becoming a good
teacher is something that is acquired, it doesn't happen all
of a sudden. It requires time and confidence."

History of Planning

This section of the interview concentrated on the
respondents' knowledge of experience in, and opinion of the
literature of planning. Respondents discussed the different
types of plans, and the common parts of an instructional
plan. Information was solicited on well known educational
theories on planning, after which they were given two types
of plans, Tyler's (1950) model and Cole and Chan's (1987)
model. They were asked if their planning processes were
closely aligned to either of these models. Furthermore,
they were asked about their knowledge of and familiarity
with Tyler's planning components (specific objectives,
learning activities, organization of activities and specific
evaluation measures) and Cole and Chan's element of planning
(conceptual, definitional, developmental, operational and
evaluation).

Knowledge of planning: T1. T1 claimed that he did not know of any types of planning, and that he had no experience with different methods of planning. The same was true with the components of instructional plans. T1 could not recall any particular components of instructional plans.

T1 had problems recalling any theories of planning. He thought Taba sounded familiar but couldn't draw a connection with planning. When asked if his method of planning was similar to either Tyler's or Cole and Chan's, he suggested Tyler's seemed rational to him and parallels the type of plan he preferred. While certain aspects of the Cole and Chan model could correlate with some of his planning, overall his planning was closer to Tyler's approach.

Knowledge of planning: T2. T2 had heard of short, medium and long term planning. He had no knowledge of the methods of planning or any theories about planning. The names of Tyler and Cole and Chan were foreign to him. He acknowledged his awareness of planning was limited and his university education did little to improve this knowledge. Methods courses in physical education helped prepare his skills and provided him with a methodology to help teach these skills but did little to train him for planning these activities. However they were more helpful than the methods courses he completed within the Faculty of Education.

When asked to compare his planning processes to those of Tyler and Cole and Chan, he suggested that his methods were closer to Tyler than to Cole and Chan, although he proposed that he utilized bits and pieces of both approaches.

Knowledge of planning: T3. T3 had not accumulated any knowledge of the various types of instructional plans, the methods of planning, the theories of planning, or the specific components of instructional plans, nor had he heard of any of the educational theorists in planning. His university meth... courses did not deal with the processes of planning, as far as he could recollect. He did not consciously follow a process similar to either the Tyler model or the Cole and Chan model. Having been given a description of both approaches, he suggested that his approach was closer to Tyler's concept of planning. He stated:

> I am an organized person and even though I consider I do a fair amount of planning I always feel it could be done better and I'm always striving to make it better. I find it is a fairly hard thing to evaluate. You can do general evaluation, for instance, if a topic is taught well, students usually achieve well, but I'm not sure how much the different planning stages might affect it. I guess planning is too general.

Knowledge of planning: T4. "The only knowledge I have on planning is information I have picked up myself by experience and not through the literature", admitted T4. He

had no knowledge on the various theories on planning, or the different components of and methods of planning. He had completed one methods course, and there was no emphasis on the planning process. His planning does not strictly follow the routes of either Tyler or Cole and Chan, but he concedes to being closer to Tyler's model. T4 concluded: "there needs to be more university involvement in preparing educators. This type of thing like instructional planning must have a greater emphasis."

Knowledge of planning: T5. T5 remembers completing two methods courses in his disciplinary area while attending university. He admitted that these courses did little to prepare him for the planning of instruction. He stated, "I got the theory and it was good for this: the thing it lacked was the practical." As with the other respondents, he had little knowledge of the literature on and theories of planning. When asked to compare his methods of planning to either Tyler or Cole and Chan, he concluded he uses parts of both processes of planning, but is probably closer to the Tyler model.

Summary

T1 lacked knowledge regarding objectives but believed in their importance. His objectives were not given directly to the students. They were used for his organization.

Learner characteristics were not explored, but he suggested that they could be useful if known. To T1 evaluation referred to testing. It was developed before starting the instruction and tested mainly content and objectives. Criterion-referenced testing was a term unfamiliar to him. He lacked knowledge on the instructional development approach to student assessment and could not produce a definition of instructional development.

T1's planning agenda started with the content of the course, followed by organization and objectives. The overall plan is designed at the beginning of the year. Other factors that influenced his planning included the number of students in the class, their academic level, and if the course had a public examination. His plans consisted primarily of timelines and dates, and the content and objectives were planned mentally as opposed to recorded. Plans were, in essence, brief sketches in a planbook. He believed in planning for organization, but he had little knowledge of the formal theories and literature on instructional planning.

T2 was a strong believer in the objectives approach to planning instruction. He made use of learner characteristics when planning his instruction. To him, evaluation meant testing and he evaluated content and objectives. He hadn't heard of criterion-referenced

testing, but in actuality he used that approach. His main teaching strategy was the lecture routine. He could supply a definition of instructional development as a result of experience of being interviewed on the topic, but he hadn't heard of the term before participating in this study.

T2's planning processes included objectives. Materials, content and activities were his starting points for planning, with the objectives being incorporated into each section. Factors such as resource materials, time, and teacher interest played a significant role in his planning process. He planned term by term. Experience was an important factor in his planning, which was mainly mental rather than written. Planning was seen as important for direction, according to T2. His knowledge of the literature on planning and various theories of instructional planning was very limited, focusing only on different types of plans.

T3 used objectives as a source for reviewing the content. Therefore they were supplied to the students as a review sheet. He did not make use of learner characteristics before starting instruction. To him evaluation was related to scoring projects, homework and tests. He regarded criterion-referenced testing as an interesting concept, but was not familiar with it prior to the interviews. He used a variety of teaching strategies

and limited lecturing to less than thirty percent of his
instructional time. To him, student assessment was similar
to evaluation, with content being the important factor in
this process. T3 could define instructional development as
a result of taking a course in the topic. He could not
describe it beyond providing a basic definition.

T3's conception of a plan began with the objectives,
followed closely by content and activities. He made a clear
distinction between instructional planning and organizing.
Organizing was done at the start of the year and included
the planning of time, location of quizzes and assignments.
Instructional planning was the preparation of lesson plans.
He counted heavily on his past experience for the lesson
planning, especially after the first time the course was
taught. Personal needs of the students were an important
influence on his lesson planning. Planning provided T3 with
organization. He had little background in the literature on
instructional planning, and was unfamiliar with planning
theories.

T4 admitted not using objectives and not having any
knowledge of them. He didn't use learner analysis. He
didn't understand the instructional development concept of
evaluation and student assessment. His main methodology was
lecturing, with the content being most important in
evaluation. He had some idea of instructional development

as a result of participation in this interviews, but he
hadn't heard of it before this time.

T4 was concerned with content and evaluation but
insisted that objectives functioned within these two
factors. His objectives were never written. They remained
in his mind as result of past teaching experiences in a
specific course. He made a distinction between planning for
the term and planning content. Term planning started at the
beginning of the year and content planning was done during
the term. Most of the content planning involved preparing
activities, notes and materials. Term planning included the
planning of dates, times and tests. Public examinations
were an important influence on his method of planning. His
planning format consisted of brief statements. He had scant
knowledge of the literature on and techniques of
instructional planning.

T5 used objectives in his teaching. In most cases
these objectives were very general, and not classified as
instructional objectives. He had little knowledge of
learner analysis. He did not believe in testing objectives
and preferred to think in terms of testing content. His
evaluations included the marking of tests and assignments
and to him assessment and evaluation were synonymous. T5's
teaching strategy was mainly lecture. His knowledge of
instructional development was limited to the information he
had acquired during the previous interviews.

T5 placed objectives first in a list of the factors important in the planning process. However during the interviews it was demonstrated that his definition of objectives was not really objectives, as delineated in the literature, but the general aims of the course. This left organization and content as his two priorities in the assimilation of an instructional unit. Calibre of the student, class size and materials were important considerations in the planning process. T5's plans were mental in nature, with the only written component being a schedule of dates and times. He acknowledged the fact that at one time lessons were planned by writing out notes which were presented to the students, but as a result of experience this procedure was no longer required. As with all the other respondents, he lacked awareness in the literature on and the theories of instructional planning.

CHAPTER FIVE

Conclusions and Recommendations

<u>Summary</u>

This study attempted to determine (a) instructional development knowledge and competencies and (b) teacher planning knowledge and processes among selected high school teachers within two large urban school boards in the province of Newfoundland. Five high school teachers were selected as case study participants. They took part in a series of indepth interviews of approximately four hours duration. Data were reported qualitatively, using, where feasible, respondents' own language.

The ethnographic approach used in this study enabled the researcher to explore respondents' knowledge, understanding, and use of both instructional development and teacher planning processes. By using for the most part, semi-structured interviews, respondents felt free to express themselves and to address questions and add comments beyond the scope of the interview guides developed by the researcher, leading to both thick description and a rich data pool.

The data indicate, much as expected by the researcher, that those high school teachers who participated in the study have little knowledge of or competency in

instructional development. Furthermore, in planning instruction they are, for the most part, unsystematic, and they rely heavily on textbooks and curriculum guides. The commonly held belief, among these five case study participants, is that the content or subject matter determines all other variables in the instructional process.

Conclusions

The results of this study indicate that for the majority of these teachers objectives were not the starting point of instruction. If objectives were used, in the majority of cases they were in fact general goals as found in the curriculum guides, and not specific instructional objectives. Respondents in this study do not view objectives as being important in guiding instruction or in guiding evaluation.

For the most part, content is the number one priority in instructional planning and guides everything else. The major concern of the respondents is to cover the outlined content. This covering of the content is used by the majority of respondents to justify the inability to consider other factors such as individual learner needs and the use of a variety of different instructional methods.

The majority of respondents use lecture/discussion as the main teaching strategy and only vary from this method as a break - for example to show a video. They have little faith that mediated instruction can actually present content, and when and if it is used, content presented via media is not evaluated. Between 60% to 80% of instruction uses lecture/notetaking methodology.

Evaluation is not based on objectives. It sometimes varies according to the learners ability, resulting in no true standards. Respondents evaluate differently for public examination courses versus regular school evaluated courses. As a result instruction differs between the school evaluated courses and public examination courses. Revision of instruction is seldom done before hand or during the instruction. Instruction is usually revised after evaluation evidence shows that the instruction was not successful. More often than not it isn't revised significantly even then. More frequently the tests get revised to better suit the group.

Learners are identified as a group and treated as a group with very little notion of individualization by the majority of the respondents. For the most part content is of higher priority than the learners: for example a teacher teaches science, not level two students. In the case where learners are considered it is only done from an evaluation

viewpoint - for example the test is changed after the initial evaluation because students score below average.

The main resources used by the respondents are textbooks and curriculum guides, and most other resources are not considered during instructional planning. Varied instructional resources are not used in the majority of cases, and are not seen as an important factor in planning instruction. With the exception of laboratory resources for science, little attention is paid to anything other than the text.

The respondents of this study don't make use of instructional development. They knew neither the specific steps in the instructional development process nor the meaning of instructional development. Furthermore they could not determine its relationship to curriculum development.

The respondents didn't see instruction from a systems perspective. They were unable to interrelate or interconnect in any way the various steps or components that make up instruction. Since systems perspective is in fact what lies behind instructional development, it can be concluded that they are not using a systems approach in planning instruction. It appears to the researcher that these respondents came out of teacher preparatory training without even a basic algorithm for instructional planning.

The respondents in this study approach instructional planning in a systematic way. They have a heuristic, developed through experience. The majority of the respondents mention that it took years of experience to get to their present stage of instructional planning. Their methods of planning are very individualized.

It was concluded by the researcher that these respondents felt that they have inadequate time for any amount of instructional planning. They are in class approximately 30 of 35 periods a week, and they are involved in instructing, grading, inservice training, planning, administrative duties, and supervision. These varied responsibilities created in the respondents the feeling of being overwhelmed in terms of time restraints, both from the point of view of planning and of covering the content.

Summary

The case study participants (a) don't know or use instructional development, and (b) don't, in their planning see instruction from a systems perspective. Planning is piece-meal, for the most part, with little indication that instructional events are drawn together as an integrated whole.

This is not to say that instruction as delivered by these teachers is poor. Given their years of experience and

their advanced studies, they are most likely knowledgeable and competent. However it is important to realize that instruction in their classroom is not systems-oriented, and that the components of any given instructional system - the objectives, the learners, the content, the strategies, the resources, the evaluation, the activities, and the materials - are not integrated to ensure that efficient and effective learning takes place.

Recommendations

Based on the summary and conclusions of this study, the researcher makes the following recommendations.

1. That teacher preparatory programs examine instructional development and methods courses with a view toward incorporating content that would better prepare teachers for their classroom instructional planning role.

2. That school boards implement, for existing high school teachers, an inservice training program on instructional development and instructional planning.

3. That indepth studies be done of teacher planning using single case study approaches in order to determine whether a systems-orientation provides the framework for instructional planning.

4. That further study be done of high school teachers
    to determine their view of instruction in terms of
    systems/non-systems orientation.

REFERENCES

Arnold, V.D. (1988). Planning for effective instruction. _The Teacher Educator_, 24(3), 10-12.

Bigge, M.L. (1982). _Learning theories for teachers_. New York: Harper and Row.

Borko, H., Lalik, R., & Tomchin, E. (1987). Student teachers' understandings of successful and unsuccessful teaching. _Teaching and Teaching Education_, 3(2), 77-90.

Bowd, A., McDougall, D., & Yewchuk, C. (1982). _Educational psychology: A Canadian perspective_. Toronto: Gage.

Branson, R. K. (1988). Why the schools can't improve: The upper limit hypothesis. _Journal of Instructional Development_, 10(4), 15-26.

Bullough, R. (1987). Planning and the first year of teaching. _Journal of Education for Teaching_, 13(3), 231-250.

Callaway, R. (1988). _A study of teachers' planning_. A paper presented to the Annual Meeting of the American Educational Research Association (New Orleans, LA). (ERIC Document Reproduction Service No. ED 292 795).

Clark, C. M., & Yinger, R. J. (1979). _Three studies of teacher planning_. (Research Series No. 55). East Lansing, Mich: Michigan State University, Institute for Research on Teaching. (ERIC Document Reproduction Service No. ED 175 855).

Clarke, R. E., & Voogel, A. (1985). Transfer of training principles for instructional design. _Educational Communication and Technology Journal_, 33(2), 113-123.

Cole, P. G., & Chan, L. K. (1987). _Teaching principles and practice_. New York: Prenctice-Hall.

Davies, I. K. (1973). Task Analysis: Some process and content concerns. _AV Communication Review_, 21(1), 73-86.

Davies, I. K. (1978). Some aspects of a theory of advice. In J. Hartley and I. K. Davies (Eds.), Contributions to an educational technology, Vol. 2. (pp. 104-122). New York: Nichols.

Dede, C., & Swigger, K. (1988). The evolution of instructional design: Principles for intelligent computer-assisted instruction. Journal of Instructional Development, 11(1), 15-22.

Dexter, L. A. (1970). Elite and specialized interviewing. Evanston, IL: Northwestern University Press.

Diamond, R. M. (1980). Instructional development: One biased view (problems, issues and the future). Educational Technology, 20(2), 51-54.

Dick, W. (1987). Instructional design and the curriculum development process. Educational Leadership, 44, 54-56.

Dick, W., & Carey, L. (1985). The systematic design of instruction. Glenview, Illinois: Scott Foresman.

Ely, D. P. (1972). The field of educational technology: A statement of definition. Audiovisual Instruction, 17(8), 36-43.

Ely, D. P. (1973). Defining the field of educational technology. Audiovisual Instruction, 18(3), 52-53.

Feldhusen, J. F. (1980). Instructional technology and innovation in higher education. Educational Technology, 20(2), 55-57.

Finn, J. D. (1964). The Franks had the right idea. NEA Journal, 53(4), 24-27.

Fosnot, C. T. (1984). Media and technology in education: A constructivist view. Educational Communication and Technology Journal, 32(4), 195-205.

Gallant, G. M. (1989). A study of instructional development knowledge and competency among teacher-librarians in Newfoundland. Unpublished master's thesis, Memorial University of Newfoundland, St. John's.

Gropper, G. L. (1983). A behavioral approach to
    instructional prescription. In C. M. Reigeluth, (Ed.),
    Instructional design theories and models: An overview of
    their current status. (pp. 106-161). Englewood Cliffs,
    NJ: Lawrence Erlbaum Associates.

Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation.
    San Francisco: Jossey-Bass.

Gustafson, K. L. (1981). Survey of instructional
    development models. New York: ERIC Clearinghouse on
    Informational Resources. (ERIC Document Reproduction
    Service No. ED 211 097).

Hawkridge, D. G. (1976). Next year, Jerusalem! The rise
    of educational technology. British Journal of Educational
    Technology, 1(7), 7-30.

Heinich, R. (1970). Technology and the management of
    instruction. Washington, D.C.: Association for
    Educational Communication and Technology.

Heinich, R. (1984). The proper study of instructional
    technology. Educational Communication and Technology
    Journal, 32(2), 67-87.

Hilgard, E. R., & Bower, G. H. (1974). Theories of learning
    (4th ed.). New York: Prentice-Hall.

Hill, W. F. (1963). Learning: A survey of psychology
    interpretations. San Francisco: Chandler.

Jonassen, D. H. (1984). The mediation of experience and
    educational technology: A philosophical analysis.
    Educational Communication and Technology Journal,
    32(3), 153-167.

Jonassen, D.V., & Hannum, W. H. (1986). Analysis of task
    analysis procedures. Journal of Instructional
    Development, 9(2), 2-8.

Kemp, J. E. (1985). The instructional design process.
    New York: Harper and Row.

Knirk, F. G., & Gustafson, K. L. (1986). Instructional
    technology. New York: Holt, Rinehart and Winston.

Koslofsky, N. (1984). Planning and behaviour - Two factors that determine teacher success. NASSP Bulletin, 68(483), 101-104.

Kourilsky, M.. & Quaranta, L. (1987). Effective teaching: principles and practice. Glenview, IL: Scott Foresman.

Landa, L. N. (1983). Descriptive and prescriptive theories of learning: An analysis of their relationships and interactions. In C. M. Reigeluth, (Ed.), Instructional-design theories and models: An overview of their current status. (pp. 55-73). Englewood cliffs, NJ: Lawrence Erlbaum Associates.

Lefrancois, G. R. (1988). Psychology for teaching (6th ed.). California: Wadsworth.

Lembo, D. L., & Bruce, C. (1971). The growth and development of the department of audiovisual instruction: 1923-1968. The pre-formative years: Part I. Audiovisual Instruction, 16(9), 50-54.

Lembo, D. L., & Bruce, C. (1972a). The growth and development of the department of audiovisual instruction: 1923-1968. An era of consolidation and change: Part I. Audiovisual Instruction, 17(1), 44-45.

Lembo, D. L., & Bruce, C. (1972b). The growth and development of the department of audiovisual instruction: 1923-1968. A time of organizational strengthening: Part I. Audiovisual Instruction, 17(3), 66-69.

Logan, R. S. (1982) . Instructional systems development. New York: Academic Press.

Lorber, M. A., & Pierce, W. D. (1983). Objectives, methods, and evaluation for secondary teaching (2nd ed.). New York: Prentice-Hall.

McCutcheon, G. (1980). How do elementary school teachers' plan? The nature of planning and influences on it. The Elementary School Journal, 81(1), 4-23.

Mellon, C. A. (1983). Instructional development as a social movement: An illustration of analogical theorizing. Educational Communication and Technology Journal, 31(4), 187-199.

Merriam, S. B. (1988). Case study research in education. San Francisco: Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1984). Qualitative data analysis: A sourcebook of new methods. Beverly Hills, CA: Sage.

Morgan, R. M. (1978). Educational technology - Adolescence to adulthood. Educational Communication and Technology Journal, 26(2), 142-152.

Morine-Dershimer, G. (1978-79). Planning in classroom reality, an in-depth look. Educational Research Quarterly, 3(4), 83-89.

Pennella, M. A. (1985). Mapping the instructional journey. The written public and private plans of secondary teachers of mathematics and English. (ERIC Document Reproduction Service No. ED 262 001).

Peterson, P. L., Marx, R. W., & Clarke C. M. (1978). Teacher planning, teacher behaviour, and student achievement. American Educational Research Journal, 15(3), 417-432.

Pratt, D. (1980). Curriculum design and development. New York: Harcourt, Brace and Johanovich.

Reigeluth, C. M. (1983). Instructional-design theories and models: An overview of their current status. Englewood Cliffs, NJ: Lawrence Erlbaum Associates.

Reigeluth, C. M. (1988). The search for meaningful reform: A third-wave educational system. Journal of Instructional Development, 10(4), 3-14.

Reiser, R. A. (1987). Instructional technology: A history. In R. M. Gagne (Ed.). Instructional technology: foundations (pp. 11-41). Englewood Cliffs, NJ: Lawrence Erlbaum Associates.

Romiszowski, A. J. (1981). Designing instructional systems. New York: Nichols.

Saettler, P. (1968). A history of instructional technology. New York: McGraw-Hill.

Sahakian, W. S. (1976). Introduction to the psychology of learning. Chicago: Rand McNally.

Samalonis, B. L. (1970). _Methods and materials for today's high schools_. New York: Van Nostrand Reinhold.

Schiffman, S. S. (1988). Influencing public education: A "window of opportunity" through school library media centers. _Journal of Instructional Development_, _10_(4), 41-44.

Schwartz, L. L. (1977). _Educational psychology: Focus on the learner_, (2nd. ed.). Boston: Holbrook.

Schwartz, R. M., & Cramer, R. L. (1989). _Planning process lessons: A guide to independent learning_. (ERIC Document Reproduction Service No. ED 311 401).

Seels, B. (1989). The instructional design movement in educational technology. _Educational Technology_, _29_(5), 11-16.

Sergiovanni, T. J. (1985). Landscapes, mindscapes and reflective practice in supervision. _Journal of Curriculum and Supervision_, _1_(1), 5-17.

Sewell, D. F. (1988). Instructional design, cognitive psychology and the development of computer-mediated learning materials for communication-impaired children. _Educational Media International_, _25_(2), 110-112.

Shrock, S. A., & Byrd, D. M. (1988). An instructional development look at staff development in the public school. _Journal of Instructional Development_, _10_(4), 45-53.

Silber, K. H. (1977). _Educational technology: definition and glossary of terms_. Washington, DC: Association for Educational Communications and Technology.

Silber, K. H. (1978). Problems and needed directions in the profession of educational technology. _Educational Communication and Technology Journal_, _26_(2), 174-185.

Snelbecker, G. E. (1988). Instructional design skills for classroom teachers. _Journal of Instructional Development_, _10_(4), 33-40.

Sprague, G. A. (1981). Cognitive psychology and instructional development: Adopting a cognitive perspective for instructional design programs in higher education. Educational Technology, 21(2), 24-29.

Sullivan, H. J., Lievens, R. C., Villalpando, E. M., Marquez, C., & Watkin G. (1986). Supplementing traditional instruction with objectives-based instructional development. Journal of Instructional Development, 9(2), 29-32.

Taba, H. (1962). Curriculum development: Theory and practice. New York: Harcourt, Brace and World.

Taylor, P. H. (1970). How teachers plan their courses. London, England: National Foundation for Educational Research.

Thomey, M. E. (1991). A study of instructional development knowledge and competency among secondary teachers in the Roman Catholic School Board Humber-St. Barbe and the Deer Lake-St. Barbe South Intergrated School District. Unpublished master's thesis, Memorial University of Newfoundland, St. John's.

Tobin, J. M. (1989). A study of instructional development knowledge and competency among primary and elementary teachers in the Roman Catholic School Board for St. John's, Newfoundland. Unpublished master's thesis, Memorial University of Newfoundland, St. John's.

Torkelson, G. M. (1971). Education/industry cooperation: Instructional technology in teacher education. Audiovisual-Instruction, 16(3), 48-49.

Tyler, R. W. (1950). Basic principles of curriculum and instruction. Chicago: University of Chicago Press.

Wagner E. D. (1986). Educational technology process system: The role of instructional development. Educational Technology, 26(5), 36-39.

Yinger, R. J. (1977). A study of teacher planning: Description and theory development using ethnographic and information processing methods. Unpublished doctoral dissertation, Michigan State University, East Lansing.

Yinger, R. J. (1978). A study of teacher planning: Description and a model of preactive decision making. (Research Series No. 18). East Lansing, Mich: Michigan State University, Institute for Research on Teaching. (ERIC Document Reproduction Service No. ED 152 747).

Yinger, R. J. (1980). A study of teacher planning. The Elementary School Journal, 80(3), 107-126.

Zahorik, J. A. (1970). The effect of planning on teaching. Elementary School Journal, 71(3), 143-151.

Zahorik, J. A. (1975). Teachers' planning models. Educational Leadership, 33(2), 134-139.

APPENDIX A - INTERVIEW GUIDES

INTERVIEW 1

Demographics

Teacher _____

Age   20-24, 25-29, 30-34, 35-39, 40-44, 45-49, over 50.

Teaching Record

1. Number of years teaching?   _____

2. What subjects do you teach?   _____

3. Have you served on curriculum   Yes   No
    committees? If yes which one(s)?   _____

4. Have you served on any committees   Yes   No
    for course development? If yes   _____
    which one(s)?

University Record

1. Number of years of university   _____
   training?

2. Degrees obtained?   _____

3. Graduate degrees obtained?   _____

4. Number of education courses?   _____

5. Specific area of education?   _____

6. Area of specialization?   _____
   Number of courses in this area?   _____

7. Type of education degree?   Conjoint   Other

8. Name of methods courses?   _____

9. Did you complete L6521
   Instructional development?   Yes   No

10. Have you completed any other
    course in instructional development?   Yes   No

11. Did you complete any courses in
    educational technology?   Yes   No

12. Did you complete any curriculum
    development courses?   Yes   No

13. Last course completed?   _____

    When?   _____

    Where?   _____

14. Have you considered a career in
    your area of specialization?   Yes   No

    If yes describe?   _____

15. Do you consider yourself
    specialized?   Yes   No

    If yes, in education or your   _____

    area of specialization?

    Explain?   _____

INTERVIEW 2

Instructional Development

The following questions/topics were used as a general guide
for the interviews. Respondents were permitted to alter the
order through open-ended responses.

General Knowledge

1. How would you define instructional development?

2. Where did you get this definition from?

3. Do you see any difference between instructional
   development and curriculum development? Explain.

Specific Instructional Development Components

Objectives

Knowledge.

1. How would you define objectives?

Prompts: a. Conditions or givens?
          b. Type of verb?
          c. Standards?
          d. Anything else?

2. What do you remember of theorists who wrote on
   objectives?

Prompts: a. Bloom?
          b. Gagne?
          c. Mager?

3. Are you aware of the different types of objectives?

Prompts: a. Cognitive?
          b. Psychomotor?
          c. Affective?
          d. Anything else?

Experience.

1. Do you make use of objectives?

   What type of objectives do you use?

Prompts: a. Unit goals?
           b. Behavioral objectives?
           c. Instructional objectives?
           d. Learner objectives?
           e. Teaching objectives?

   If you use objectives, where do you get the them?

Prompts: a. Curriculum guide?
           b. Textbooks?
           c. Write your own?
           d. Anywhere else?

Opinion/value.

1. Do you think objectives are important/necessary?

2. Could you make use of objectives?

3. Do other groups of teachers use objectives?
   Which group?

4. Should objectives describe student performance?

5. In your opinion are there any positive uses of
   objectives?

6. In your opinion are there any negatives associated
   with the use of objectives?

Learner Analysis Characteristics/Entry Level Behaviour

Knowledge.

1. How would you define learner analysis
   characteristics and entry level behaviour?

2. What is your knowledge of learner characteristics.

Experience.

1. Does entry level behaviour influence your instruction?

2. How do you determine entry level behaviour?

3. Which characteristics of the learner do you consider important when planning instruction?

Prompts: a. Age   g. Skills
          b. Sex   h. General ability
          c. Socio-economics i. Special abilities
          d. Reading ability j. Writing ability
          e. Attention span   k. Maturity
          f. Knowledge   l. Parents employment

Are there any other learner characteristics that you consider important?

4. How do you deal with student having different entry behaviours?

Opinion/value.

1. Do you think learner analysis characteristics or entry level behaviours are important/necessary?

2. Could you make use of learner analysis characteristics or entry level behaviours?

3. Do other groups of teachers use learner analysis characteristics or entry level behaviours? Which group?

4. Which of these characteristics could play a role in your instruction?

Prompts: a. Age   g. Skills
          b. Sex   h. General ability
          c. Socio-economics i. Special abilities
          d. Reading ability j. Writing ability
          e. Attention span   k. Maturity
          f. Knowledge   l. Parents employment

Evaluation

    Knowledge.

1. How would you define evaluation?

2. Are you aware of the different types of evaluation?

Prompts: a. Summative evaluation.
           b. Formative evaluation.

3. What do you remember about the purposes of
    evaluation?

4. Are you aware of the different types of testing?

Prompts: a. Criterion-referenced testing.
           b. Norm-referenced testing.

    Experience.

1. When do you carry out evaluation?

2. What type of evaluation do you use?

3. What do you evaluate?

Prompts: a. Objectives   d. Reading ability
           b. Content   e. Teaching strategies
           c. Learners   f. Resources

           Are there any other variables that you consider
           important in evaluation?

4. Do you use either norm-referenced or
    criterion-referenced tests?

5. When do you develop your tests?

    Opinion/value.

1. Do you think learner evaluation is
    important/necessary?

2. Which of these characteristics could be evaluated?

        a. Objectives   d. Reading ability
        b. Content   e. Teaching strategies
        c. Learners   f. Resources

3. Do you see any value of developing tests based on objectives?

4. Do you see any value in norm-referenced or criterion-referenced testing?

5. Do you see any value in preparing tests before the start of the instruction?

Teaching Strategies and Resources

Knowledge.

1. What is your understanding of instructional planning?

2. Are you aware of the different types of teaching strategies?

Prompts:
a. Lecture	g. Research topics
b. Discussion	h. Textbook
c. Demonstration	i. Experimentation
d. Independent study	j. Simulation
e. Small group work	k. Question/answer
f. Display work	l. Mediated instruction

3. Are you aware of the different types of sequencing of content?

Prompts: a. Easy to difficult.
b. Frequency of use.
c. Familiar to unfamiliar.
d. Temporal order.

Experience.

1. What materials do you use for instructional planning?

2. What different types of teaching strategies do you make use of in your instruction?
What percentage of time do you use each strategy?

3. Do you sequence your instruction?
What method do you use in sequencing?

Opinion/value.

1. Should the following be used in instructional planning?

   a. Textbooks   d. Resources
   b. Curriculum guides e. Learning activities
   c. Schoolboard guides f. Media

2. Which of the following strategies could play a role in your teaching?

   a. Lecture   g. Research topics
   b. Discussion   h. Textbook
   c. Demonstration   i. Experimentation
   d. Independent study j. Simulation
   e. Small group work   k. Question/answer
   f. Display work   l. Mediated instruction

3. Do you see value in any of the following methods of sequencing of content?

   a. Easy to difficult.
   b. Frequency of use.
   c. Familiar to unfamiliar.
   d. Temporal order.

Assessment, Revision and Recycling

Knowledge.

1. How would you define assessment, revision and recycling?

2. Are you aware of the different types of assessment?

3. What is the purpose of assessment, revision and recycling?

Experience.

1. Do you make use of assessment, revision and/or recycling?

2. What use do you make of student results?

3. Do you use student results to modify instruction? Explain your answer.

4. How often do you revise instruction?
    Is this a minor or a major revision?

5. Why do you revise instruction?

Opinion/value.

1. Should evaluation be use to modify instruction?

2. Should instruction be modified or revised?
    When? Why?

3. What type of revision should be made from
    student evaluation?

INTERVIEW 3

Instructional Planning

The following questions/topics were used as a general guide
for the interviews. Respondents were permitted to alter the
order through open-ended responses.

The Process of Planning Instruction

Planning Process

Knowledge.

1. What is your understanding of the planning process?

2. Are you aware of the different starting points of
    instructional planning?

Prompts: a. Activities   e. Instruction
           b. Content   f. Materials
           c. Diagnosis   g. Objectives
           d. Evaluation   h. Organization

Experience.

1. Describe the strategies you used in planning a unit
    of instruction.

2. Given the following variables, rank them according
    to their importance in your planning decisions.

           a. Activities   e. Instruction
           b. Content   f. Materials
           c. Diagnosis   g. Objectives
           d. Evaluation   h. Organization

Opinion/value.

1. Which of the following variables could play a role
    in your instructional planning?

           a. Activities   e. Instruction
           b. Content   f. Materials
           c. Diagnosis   g. Objectives
           d. Evaluation   h. Organization

Time Planning and Content Delivery Planning

Knowledge.

1. What is your understanding of the different types of planning?

2. Are you aware of the different times you can start instructional planning?

Prompts: a. Beginning of the school year.
          b. Beginning of the term.
          c. During the term.
          d. End of the term.
          e. End of the school year.

3. Are you aware of the different types of plans?

Prompts: a. Lesson plans
          b. Unit plans
          c. Term plans
          d. Yearly plan

Experience.

1. When do you plan your instruction?

2. How much content do you plan?

Opinion/value.

1. What is your opinion or can you see any value in planning at the following times?

    a. Beginning of the school year.
    b. Beginning of the term.
    c. During the term.
    d. End of the term.
    e. End of the school year.

2. What is your opinion or can you see any value in planning the following content?

    a. Lesson plans
    b. Unit plans
    c. Term plans
    d. Yearly plan