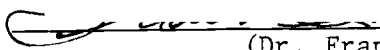


AN ABSTRACT OF THE THESIS OF

Mickey Ann Parker for the degree of Doctor of Philosophy
in Education presented on January 28, 1982
Title: The Development and Authentication of the Parker Unified
Motivational and Learning Theories Model

Redacted for Privacy

Abstract approved: 

(Dr. Frank R. Cross)

The purpose of the study was to develop a schematic model that would make motivation and learning theories more comprehensible to beginning theory students by providing a common method of displaying, and integrating theories in such a way that they could claim a mutual language and could be examined and compared so as to further the basic understanding of their processes.

Design of Study

In the beginning a committee selected five representative theorists to use as authenticating factors for the model. It was assumed that if these five authorities' theories could be adequately represented on the PUMaLT Model (Parker Unified Motivational and Learning Theories Model), then other learning and motivation theories could also be successfully plotted on the model.

A questionnaire committee was employed to guarantee the quality of the original questionnaire. They offered input on the individual questions, as well as the entire questionnaire format.

The PUMaLT Model itself was developed and authenticated through the use of a selected Delphi panel. Panel members reacted to four rounds of the Delphi technique in accomplishing this task.

Analysis of Study

The end result was a visual schematic model upon which learning and motivation theories could be plotted, thus enabling the comparison and analysis of theories heretofore impossible. The completed model encompassed the various processes that take place during the learning-motivation cycle. This had the effect of unifying the language of the various theories.

Recommendations

More theories need to be plotted on the PUMaLT Model in an effort to translate them into the processes to which these theories refer. Some theories need further clarification in order to be accurately displayed on the model.

It was suggested by the Delphi panel that annual learning symposiums be established to further analyze and plot learning and motivation theories according to the PUMaLT Model. Accuracy of the translations could be improved if the original theorists could attend these symposiums.

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The Development and Authentication of the
Parker Unified Motivational and Learning Theories Model

by

Mickey Ann Parker

A THESIS

submitted to

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the requirements for the
degree of

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APPROVED:

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My personal thanks to my questionnaire committee for their help with the original questionnaire. Their input was most valuable.

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TABLE OF CONTENTS

I.	Introduction.....	1
	Statement of the Problem.....	1
	Purpose of the Study.....	1
	Assumptions of the Study.....	1
	Limitations of the Study.....	2
	Definition of Thesis Terms.....	2
II.	Review of Literature.....	4
	Models.....	4
	Delphi Technique.....	5
	Theories Summary.....	9
III.	Design of Study.....	15
IV.	Analysis of Study.....	20
	PUMaLT Model Description and Explanation.....	33
	PUMaLT Model Taxonomy of Terms.....	35
V.	Recommendations.....	44
	Bibliography.....	46
	Appendices.....	48
	Committee/Delphi Panel Members.....	48
	[Original] UMaLT Questionnaire #1.....	50
	Delphi Panel Invitational Letter.....	68
	Questionnaire #1 Cover Letter.....	71
	Informational Packet.....	72
	Module #1.....	74
	Module #2.....	79
	Module #3.....	92
	Module #4.....	113
	Module #5.....	119
	UMaLT Model Questionnaire #1.....	151
	UmalT Model Questionnaire #1 Compilation.....	169
	Questionnaire #2 Cover Letter.....	188
	UMaLT Model Questionnaire #2 Compilation.....	189
	Questionnaire #3 Cover Letter.....	200
	Revised Module #2.....	201
	Revised Module #3.....	213
	UMaLT Model Questionnaire #3.....	234
	UMaLT Model Questionnaire #3 Compilation.....	240
	Questionnaire #4 Cover Letter.....	244
	UMaLT Model Questionnaire #4.....	245
	UMaLT Model Questionnaire #4 Compilation.....	249
	Final Letter to Delphi Panel.....	251
	Module #2--Revised Revision.....	252

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Learning and motivational theorists	15
2 Illustration of compilation reporting technique	25
3 Percentage of responses for Questionnaire #1	26
4 Percentage of responses for Questionnaire #2	28
5 Percentage of responses for Questionnaire #3	30
6 Percentage of responses for Questionnaire #4	32
7 PUMaLT Model	34
8 Sample shaded PUMaLT Model	43

THE DEVELOPMENT AND AUTHENTICATION OF THE
PARKER UNIFIED MOTIVATIONAL AND LEARNING THEORIES MODEL

I. INTRODUCTION

A. Statement of the Problem

The problem was to develop and authenticate a schematic model, through the use of the Delphi technique, designed to resolve discrepancies among motivation and learning theories.

B. Purpose of the Study

The purpose of the study was to develop a schematic model that would make motivation and learning theories more comprehensible to beginning theory students by providing a common method of displaying and integrating theories in such a way that they could claim a mutual language and could be examined and compared so as to further the basic understanding of their processes.

C. Assumptions of the Study

This study assumes that:

1. The five major learning and motivational theories sampled in this study are adequately represented on the developed model.
2. If the five major learning and motivational theories sampled in this study can adequately be plotted on the developed model, then other motivational and learning

theories can also be adequately represented on the model.

3. All known learning and motivational processes are included in the developed model.
4. Delphi panel members were knowledgeable about the five selected representative theories.

D. Limitations of the Study

The study was limited to the use of five representative theories, chosen by a selected cross-discipline committee from Oregon State University, Corvallis, Oregon. The five representative theories were taken from a larger list of theorists supplied by this writer. The five representative theories selected were:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement theory.
3. Maslow's hierarchical motivational theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of learning and motivation.

The development and authentication of the model were done by a Delphi panel of seven members. Members were selected from the Department of Education at Idaho State University, Pocatello, Idaho.

The development of the model was limited to the use of questionnaires and a projected interpretation of their answers.

E. Definition of Thesis Terms

Model--A schematic drawing that delineates the processes involved in learning and motivational theories.

Summary--The word, summary, as used in the Delphi technique literature, refers to the compilation and analysis of responses on returned questionnaires.

Tav--Tav is an arbitrarily chosen, artificial word that takes the place of he-she or him/her and is used throughout this study in an effort to neutralize gender. (Possessive case is represented by an 's [e.g., "his/her hat" = "tav's hat"].)

PUMaLT--PUMaLT is an acronym for Parker Unified Motivational and Learning Theories. This is the final name for the developed model in this study. The model will be referred to as the PUMaLT Model from here on in this paper (with the exception of earlier work accomplished during the developmental stage of the model and included in the Appendices).

UMaLT--UMaLT is the acronym for Unified Motivational and Learning Theories. UMaLT Model is the working name for the PUMaLT Model during its development.

Unified--In the Second College Edition of Webster's New World Dictionary of the American Language (1968:1551), the word, unify, is defined as "to combine into one; become or make united; consolidate." The word, unified, is used in the PUMaLT Model to indicate that theoretical processes are combined, consolidated, and united into one schematic model. In this sense, the interblended parts are considered unified.

II. REVIEW OF LITERATURE

This literature review covers three specific areas: Models, Delphi technique, and a very brief summary of the five major learning and motivational theories sampled in this study.

A. Models

Osborne (1976:1) states that the word model is an important concept, noting, however, that the term is frequently misused. He carefully delineates the technical meaning and the distinct parameters of models. Although he specifically relates the use of models to mathematics, many of his statements, when neutralized or modified, are relevant to models in general--and the PUMaLT Model specifically. He states that models serve a variety of purposes. Three of the more crucial intentions of models are:

1. They are predictive devices.
2. They are thought-provoking mechanisms that suggest critical components of theoretical contexts.
3. They facilitate communication among researchers, teachers, and students.

Osborne also believes that well-developed models identify essential variables, parameters, and conditions to which the models themselves speak. Carefully described models are interpretable to those who examine them, establishing common and necessary communication bases.

Models, it seems, have several forms. They consist of

narrative-type descriptions of procedures or processes; they can take the form of hierarchies, schematic drawings, or concrete examples. In other words, models can take the form of words (descriptions, narratives, outlines), diagrams (schematic-type drawings), or three dimensional objects. The PUMaLT Model uses the schematic drawing form of representation.

B. Delphi Technique

The most common method of validating a model is through test construction. However, the tests are generally structured to fit the models. It seems to this writer that this process validates the test, rather than the model as intended. Consequently, this study uses a Delphi technique to examine the model itself.

The Delphi process was originally developed as a predictive tool to forecast the effects of a nuclear attack on the United States in the 1950's. Olaf Helmer is credited with being one of the originators of this technique and is the authority most often quoted in the literature.

A Delphi design is most often used to generate judgmental information and "... may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem." (Linstone and Turoff, 1975:3).

Helmer (1966:1) notes that the "... Delphi Technique is a method for the systematic solicitation and collation of expert opinions." He believes that this method of investigation is

applicable whenever outcomes must be based on informed judgments.

To accomplish a "structured communication", the use of the Delphi technique provides (Linstone and Turoff, 1975:3):

1. Feedback of individual contributions of information and knowledge.
2. An assessment of the entire group's judgments.
3. An opportunity for each individual to revise his views.
4. A degree of anonymity for individual responses and for the individuals themselves.

As can be seen by the four points above, the results of a Delphi can be discerned as the product of a carefully designed and managed interaction among individuals, information, and judgments (Scheele, 1975:38).

Linstone and Turoff (1975:4) list situational characteristics that lead to the need for using a Delphi process. The Delphi technique is useful when:

1. The problem does not lend itself to precise analytical techniques.
2. The problem can benefit from subjective judgments on a collective basis.
3. Time and money make frequent group meetings infeasible.
4. The heterogeneity of the participants must be preserved to assure validity of the results.
5. Avoidance of the possibility of disagreements among individuals might bring about severe or politically unpalatable responses that could necessitate refereeing.

Taking into account these statements, the development of a model is an authentic application of the Delphi treatment. Gideon, et al (1971), in their study of Adult/Continuing Education, present a model similar to the PUMaLT Model, developing it through the use of a Delphi technique.

Fintzy (1974) uses this tool to develop a Conceptual Career Education Model. Although his model is primarily descriptive in nature, he finalizes his study with a schematic representation.

Below is a typical outline of the Delphi process (Hellreigel and Slocum, 1974:226-227):

1. A questionnaire is sent to specified experts who respond and return the questionnaire to the sender.
2. A summary of the response is compiled and is fed back to the participants, requesting that they revise their earlier responses if they feel it is appropriate.
3. A new summary is prepared from their returned reactions, but with a major difference: Those experts whose responses significantly deviate from the median are asked to justify their responses.
4. Summaries are again prepared and returned to the participants along with the stated justification. This time, rationalizations of the counterpositions are sought.
5. Finally, the counterpositions are fed back with the request for additional appraisals.
6. A final summary is made when a consensus or near consensus is reached.

As can be seen, this technique involves the systematic refinement of experts' opinions to arrive at a consensus. Weaver (1971:268) reports that most of the changes in priorities occur after the first reporting back of responses. Subsequent rounds produce few significant changes.

Helmer (1966:4) defends the value of the Delphi technique even when no clear-cut consensus is achieved. He believes that even then, the technique produces a narrowing of the original spread of opinions and a condensing of the reasoning process. This helps clarify the issues by reducing the number of positions to be considered.

Rarely are the necessary or required number of experts referred to or specified in the literature. Turoff (1975:86) briefly states that "... a Policy Delphi can be given to anywhere from ten to fifty people as a precursor to a committee activity." A Policy Delphi has the function of exposing differing positions and presenting the pros and cons of these positions. In other words, the Policy Delphi does not stress the reaching of a consensus, as does a fact-finding, a forecasting, or a model-development Delphi.

Brockoff (1975:315), reporting on his findings on the correlation between group size and performance in Delphi studies, found that fact-finding Delphi groups with seven panel experts had the best performance. However, in the forecasting Delphi groups, the group with eleven participants was superior.

It is not uncommon to see as few as four participants in the literature studies. However, Brockoff (1975:295) hypothesizes that

with increasing group size, the group performance also increases, everything being equal, but he was not able to prove this satisfactorily. He finally states that (1975:320): "A general positive relationship between group size and group performance cannot be recognized."

Theories Summary

Festinger's motivational theory of cognitive dissonance:

Festinger places great emphasis on cognitive dissonance as a human motivator, stressing the negative aspects. In fact, he terms it a negative drive. His main consideration is the relationship between behavior and behavior evaluation. According to Huse and Bowditch (1973:300), Festinger theorizes that "when a person's beliefs do not conform to what actually occurs, the person experiences a psychological state called cognitive dissonance." Festinger is further interpreted as explaining that cognitive dissonance is a negative drive state in which humans continually attempt to find ways to reduce the drive. This motive to reduce dissonance is comparable to achieving a kind of cognitive homeostasis. Festinger's belief that humans are driven to act because of a feeling of imbalance is repeated throughout motivational and learning theories.

Skinner's reinforcement theory: Skinner is a "pure" behaviorist whose mechanistic theory views people as machines that are being pushed around by various forces. He virtually ignores inner processes, believing that concepts, such as motivation, merely interfere with understanding human behavior (Hoy and Miskel, 1978:95).

He views internal drives or motivation as relatively useless explanatory constructs that are similar to personality traits (Hilgard and Bower, 1975:243).

Skinner distinguishes between two kinds of behavior: (1) respondent behavior and (2) operant behavior. Respondent behavior is produced by an externally known stimulus. Operant behavior is produced arbitrarily by the individual. He believes that most behavior falls into this second category.

His greatest emphasis is upon reinforcement of actions in an effort to modify behavior. He posits that if one controls the reinforcements (rewards), one can then control behavior. In other words, Skinner's concepts emphasize the effects of a response on the response itself. He concludes that the reward changes the probability of the response recurring.

Skinner proposes that behavioral occurrences must be described in terms of things that directly affect behavior. He suggests that it is inconsistent with logic to attempt to explain behavior in terms of physiological happenings. Consequently, his method of research is frequently referred to as "the empty organism approach" (Hergenhahn, 1976:113).

Maslow's hierarchical motivation theory: Maslow theorizes that needs are arranged in an hierarchy in such a way that the lower-level needs must be satisfied before the higher-level needs come into play. His hierarchy is actually an intuitive needs ranking. The five generally accepted levels are:

1. Physiological.
2. Safety.
3. Belongingness.
4. Esteem.
5. Self-Actualization.

This model of self-developing and self-actualizing individuals is based on the assumption that people have innate needs to grow and mature. Maslow assumes that people feel a sense of meaning and accomplishment in their life and world. As lower-level needs are satisfied, higher-level needs become activated. Two levels can operate at the same time, but the needs at the lower level take precedence.

Maslow's hierarchy of needs is a common approach to studying motivation. It can be said that Maslow sees motivation as an unending process caused by varying hierarchical levels of stimuli.

Gestalt learning theory: Gestalt psychology concerns itself with the organization of the mental processes. Learning is viewed as the rearrangement of previous ideas and experiences leading to new patterns of thought or insight.

Gestaltists believe that people experience the world in meaningful wholes. They emphasize the pattern--the Gestalt--the wholeness of experience and its recollection. They oppose reductionism of any kind.

The Gestalt phenomenon or the phenomenological experience is different from the parts that make it up. In fact, the total is more than the sum of its parts. Each person adds something to the

experience that is not contained in mere sensory input data. Gestaltists insist that this something is organization--that the brain organizes sensory information to make the individual's experience more meaningful. This psychological organization--the law of Prägnanz--is the Gestaltists' guiding principle in the study of perception, learning, memory, personality, and psychotherapy.

Gestaltists believe that the organizational abilities of the brain are genetically determined and occur in every normal brain (Hergenhahn, 1976:240). Although they stress this genetic factor, they also take into account the effects of experience. They believe that repetition results in improvement of skill.

Gestaltists generally agree that learning takes place when the individual comes to understand the basic structure or pattern of relationships. Learning, to them, occurs when people recognize the relationships of parts to parts and/or parts to the whole. Learning is complete when experiences are perceived in a new and more meaningful way. This is called insight. Insight, or insightful learning, is said to have developed when the individual decides that he has discovered the correct solution. Gestaltists firmly believe that when this solution comes, it comes suddenly. They do not believe that individuals learn bit-by-bit, but rather in wholes.

Primarily, Gestaltists are concerned with inner processes. They believe that anything external to the individual has an inner effect and that these inner effects are the processes upon which emphasis should be placed.

Bruner's humanistic theory of learning and motivation: Bruner is identified as a cognitive learning and developmental psychologist. His approach to psychology is eclectic, drawing concepts and ideas from many great thinkers and psychologists of past eras. His principle concern is with the means whereby people actively select, retain, and transfer information. This is the essence of learning for Bruner.

According to Bruner, individuals do not mechanically associate responses with specific stimuli. Instead, they tend to infer principles or rules that underlie patterns which allow them to transfer their learning to different problems (Bigge, 1976:247).

Bruner places great emphasis upon the structured models of the world with which a culture equips its members. In essence, these models of the world are the experiences that an individual has, that help tav learn about the world in a way that enables tav to make predictions about what comes next (Bigge, 1976:250). Such models make it possible for people to predict, interpolate, and extrapolate further knowledge. The existence of these models of the world reflects a general tendency to categorize.

Bruner labels his view of learning as instrumental conceptualism. These beliefs are centered around two basic tenets that concern the nature of the knowing process. They are (Bigge, 1976:251):

1. An individual's knowledge of the world is based on tav's constructed models of reality.
2. Tav adopts these models from tav's culture, then adapts them to tav's individual use.

Thus, it can be seen, Bruner believes that humans are information processors and not merely passive receivers of facts. Knowledge acquisition is an active process that relates incoming information to previously acquired knowledge. Consequently, thinking is equated with learning for Bruner.

These five major theories represent a sampling of leading contemporary learning and motivation theories. The brief summaries presented here are not intended to be complete or instructive. A somewhat expanded review is presented in Module #5 of the Informational Packet in the Appendices of this paper.

III. DESIGN OF STUDY

This study used input from three outside sources: two committees and one panel of experts (source names are listed in the Appendices on pages 48-49). The first committee had the responsibility for ranking theorists from the list illustrated in Figure 1 below in an effort to choose the theories to be used in this study. (This list was taken from an unpublished paper developed by this writer in 1979.)

Mickey Parker	
<u>Learning and Motivational Theorists</u>	
<u>Dissonant theorists</u>	<u>Hierarchical theorists</u>
_____ Festinger	_____ Maslow
_____ Adams	_____ Alderfer
_____ Jaques	_____ Gagné
_____ _____	_____ Piaget
_____ _____	_____ Herzberg
<u>Reinforcement theorists</u>	_____ McGregor
_____ Pavlov	_____ _____
_____ Thorndike	_____ _____
_____ Hull	<u>Gestalt theorists</u>
_____ Skinner	_____ Gestalt theory
_____ Locke	_____ _____
_____ Atkinson	_____ _____
_____ Vroom	<u>Humanistic theorists</u>
_____ House	_____ Combs
_____ Porter and Lawler	_____ Bruner
_____ _____	_____ Rogers
_____ _____	_____ _____
_____ _____	_____ _____
Figure 1	

The list is divided into five categories to cover the various disciplines in learning and motivation theories. The five categories are:

1. Dissonant theorists.
2. Reinforcement theorists.
3. Hierarchical theorists.
4. Gestalt theorists.
5. Humanistic theorists.

Each category was to be ranked separately. The committee members had the option of placing the authorities in different categories if they felt the need to do so. A minimum of one and a maximum of four theorists were to be selected and ranked from each category. Figure 1 was the form that was provided for the ranking process.

The second committee was asked to critique the original questionnaire. Their task was to judge and direct the quality of the questionnaire before it was presented to the Delphi panel.

The third outside input source came from the Delphi panel. Their purpose was to finalize the development and the authentication of the PUMaLT Model.

The study was divided into eight distinct phases:

Phase I:

The establishment of theories to be used in the study.

Phase II:

1. The preparation of the Informational Packet.
2. The preparation of the questionnaire.

- a. Informational Packet--This Packet was divided into five Modules that briefly:
 - (1) explained the purpose of the study.
 - (2) described the Delphi technique.
 - (3) described and explained the proposed PUMaLT Model.
 - (4) reviewed each theory and applied it to the PUMaLT Model.
- b. Questionnaire--This portion of the process contained questions directed toward the proposed PUMaLT Model, as well as questions regarding the applications and interpretations of the selected theories. The questionnaire was revised according to suggestions offered by the questionnaire committee before giving it to the Delphi panel.

Phase III:

Selection of Delphi panel members.

The following methods of initial contact were considered as possible alternative paths to reach those who might suggest Delphi panel candidates:

1. Letters of introduction from appropriate Deans of Schools of Education to suitable colleagues.
2. Letters of introduction from personally known professors to suitable colleagues.
3. Phone calls or personal contact from any of those mentioned above to appropriate colleagues.

4. Personal contact through phone calls, letters, and/or meetings by this writer with/to personally known appropriate colleagues.

Phase IV:

Final selection of the Delphi panel.

The following methods were considered as possible alternative paths to the final selection of the Delphic experts:

1. Recommendations from Deans, heads of departments, or colleagues.
2. Personal meetings by this writer with candidates with final selection based on:
 - a. expressed interest in the study.
 - b. familiarity with selected theorists.
 - c. availability during course of the study.
3. Any other means that seemed advisable and prudent.

Phase V:

The delivery and/or mailing of the Informational Packets and questionnaires to the selected Delphi panel members.

Phase VI:

Questionnaire responses by the Delphi participants were summarized by tabulating responses, analyzing and reporting narrative reactions, and redefining and/or redesigning questions. Compilations of the group's responses were then fed back to the experts with requests that they adjust and/or clarify their opinions. This phase was repeated until there was an acceptable consensus or acceptable near consensus.

An acceptable consensus would be a unanimous agreement by the Delphi panel restricted to the top number on the Likert-type ranking scale that was used in the questionnaire. A near consensus was limited to a two-point range on the scale. An acceptable near consensus was further limited to the two top numbers on the five-point rating.

Phase VII:

A final summary was made and sent to participants for their information.

Phase VIII:

Make final report (dissertation), that includes:

1. Processes.
2. Summaries of responses.
3. Final PUMaLT Model design.
4. Final summary that includes conclusions and recommendations.

IV. ANALYSIS OF STUDY

The purpose of this study was to develop a model that would make psychological motivation and learning theories more comprehensible to beginning theory students by providing a common method of displaying and integrating theories in such a way that they could claim mutual language and could be examined and compared so as to further the basic understanding of their processes. It can be hypothesized that most people do not like or do not consciously apply theory because they do not understand it. It may be said that understandable theory is useable theory. The interblended, schematic-type PUMaLT Model developed in this study aids in the understanding and application of learning and motivational theories by providing a constant model upon which an individual can plot and/or study the various theories.

Therefore, the first task of this study was to select representative learning and motivation theories with which to work. A committee, consisting of professors representing the Schools of Business, Education, and Science at Oregon State University, selected five learning and motivation theorists from a list of 22 theorists supplied by this writer. This roster of theorists was taken from an unpublished paper developed in 1979 by this writer, with which the committee was familiar. A copy of this list can be found on page 15 of this paper.

The outcome of this almost unanimous selection was:

1. Dissonant theorist--Festinger.

2. Reinforcement theorist--Skinner.
3. Hierarchical theorist--Maslow.
4. Gestalt theory.
5. Humanistic theorist--Bruner.

A rough draft questionnaire was then developed, along with a proposed PUMaLT Model and Informational Packet to present to a questionnaire committee. This committee was composed of two professors who had broad backgrounds in questionnaire development. Their task was to look at the questionnaire rough draft and independently examine individual questions as well as the entire questionnaire format and then offer their suggestions for improvement of the document. A copy of this original questionnaire begins on page 50 in the Appendices of this paper.

The committee's findings and suggestions were almost identical. They included:

1. Reduce the formidable size of the questionnaire by using common stems and single spacing wherever possible.
2. Do not break off questions at the bottom of the page.

Concern was also indicated regarding the intent of specific questions. It was felt that the Delphi panel might be confused regarding individual theory interpretations versus this writer's theory interpretations. However, it was decided by this writer that this type of mental "sorting through" was a necessary beginning process for the Delphi panel to deal with.

The first two suggestions above were incorporated into a revised questionnaire that was then presented to the Delphi panel for

their reaction. This revised questionnaire was used for the first two Delphi panel reactions and can be found in the Appendices beginning on page 151.

At the time the original questionnaire was composed, the Informational Packet was written, containing five modules. They were:

Module #1--Informational Packet Introduction.

Module #2--UMaLT Model Description and Explanation.

Module #3--UMaLT Model Application.

Module #4--Delphi Technique Literature Review.

Module #5--Motivational and Learning Theories Literature Review.

The purpose of Module #1--Informational Packet Introduction--was four-fold:

1. The introduction and overview of the Informational Packet.
2. The explanation and purpose of each separate module.
3. The explanation and purpose of the study.
4. The description of the Delphi technique as it was to be used in the study along with the duties of the Delphi panel.

The purpose of the second module--UMaLT Model Description and Explanation--was to acquaint the members of the Delphi panel with the basic proposed model with which they would be expected to interact.

Module #3--UMaLT Model Application--demonstrated how five major learning and motivational theories could be applied to the

proposed model. The combination of modules number two and three made up the core of this study.

The fourth module--Delphi Technique Literature Review--gave a brief overview of the history and use of the Delphi process. The purpose of this review was to give the Delphi participants a handy reference of basic information regarding this technique should they need it.

The fifth and last module--Motivational and Learning Theories Literature Review--briefly reviewed the literature of the five major theories that were to be examined through the use of the proposed PUMaLT Model. The five theories covered in the UMALT Model Application module and this literature review were:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement learning theory.
3. Maslow's hierarchical motivational theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of motivation and learning.

A copy of this original Informational Packet can be found in the Appendices of this paper (pages 72-149). Its purpose was to provide the Delphi panel with necessary information and references.

The next step in the study was the selection of the Delphi panel. The Dean of Education at Idaho State University and fellow professors at both institutions suggested panel candidates from the School of Education at Oregon State University and professors from the Department of Education at Idaho State University who had previously taught or were presently teaching educational psychology

(at the undergraduate or graduate level) and who were considered well versed in learning and motivation theories. A total of sixteen professors were suggested--seven from Oregon State University and nine from Idaho State University.

Each of these sixteen experts was contacted by an introductory, invitational letter. A form accompanied each letter on which the invited individuals could indicate their interest in being part of the study. A sample copy of the letters and form are included in the Appendices (pages 68-70).

Primarily due to busy schedules, none of the proposed candidates from Oregon State University was able to participate in the study, even though additional information was furnished them. Part of the problem was the poor timing (for them) of the study. Therefore, Oregon State University was not represented in the study.

Two of the suggested panel participants at Idaho State University also declined the invitation due to busy schedules. Therefore, the final panel consisted of seven members. Each of these members was then sent a cover letter, the Informational Packet, and Questionnaire #1.

When the seven questionnaires were returned, a summary was compiled. The responses reflected the participants' efforts to incorporate the concept of a universal model for motivation and learning theories with their own interpretations of those theories. As expected and predicted, there was initially some confusion and frustration among panel members regarding theory interpretations--especially when participants' personal interpretations were

different from this writer's interpretations. However, by compelling panel members to work with the writer's theory translations, the Delphi panel was forced to examine the model and their own theory interpretations thoroughly. This process required that each participant re-categorize their interpretations according to the processes that were presented in the proposed PUMaLT Model.

The compilation of Questionnaire #1 can be found in the Appendices of this paper beginning on page 169. Figure 2 below illustrates the reporting technique used. The numbers in parentheses below the ranking format depict the number of participants who selected that particular ranking for the question. The illustration

34. Process D	5	4	3	2	1
(Motivation)	(4)	(2)	(1)		
Figure 2					

shows that four panel members gave this process a ranking of 5; two members ranked it at 4; and one participant gave it a ranking of 3. None of the Delphi experts ranked this process below 3.

Figure 3 on the next page shows the percentage of responses that are a(n) near consensus, consensus, near acceptable consensus, and/or acceptable consensus. This chart is broken down into the same categories as the questionnaire plus the additional category of "totals". It was evident that there was quite a diversity of opinions at that point.

The compilation of the first questionnaire was returned to

<u>Questionnaire #1</u>				
	<u>Percentage of questions with a(n):</u>			
	Near Consensus	Consensus	Acceptable Near Consensus	Consensus
PUMaLT Model	---	---	10%	10%
Festinger	---	---	30%	---
Skinner	---	---	---	10%
Maslow	---	---	---	---
Gestalt	---	---	---	---
Bruner	---	---	20%	---
Total Questionnaire Questions	0%	0%	10%	3%
Figure 3				

the Delphi panel along with Questionnaire #2. Each panel member's own answer was indicated for tav by the circling of tav's responses in red ink on tav's personal copy of the questionnaire compilation.

Questionnaire #2 was identical to Questionnaire #1. This gave the participants the opportunity to review and react to other

members' comments that were on the questionnaire compilation. They were given the same directions as before with the added emphasis to include their reasons for their rankings.

(Since this questionnaire is exactly the same as the first one, it is not included in the Appendices. However, the cover letter for Questionnaire #2 can be found on page 188.)

A compilation of this second questionnaire was accomplished upon the receipt of the seven completed questionnaires. Figure 4 on the next page illustrates the consensus and near consensus of the answers. The complete compilation is presented in the Appendices beginning on page 189.

This round of answers demonstrated a closer unity of thought on the part of the participants. Thirty-five percent of the panel reached an acceptable near consensus on the questionnaire as a whole (as opposed to ten percent in Questionnaire #1).

At this point in the Delphi process, the suggestions and comments of the panel were taken into consideration, resulting in several changes and revisions. They were:

1. The revision of the PUMaLT Model.
2. The development of a taxonomy of terms.
3. The revision of Module #2--UMaLT Model Description and Explanation.
4. The revision of Module #3--UMaLT Model Application.
5. The request that each Delphi expert apply his own theory interpretations to the model.
6. The revision of Part 2 of the questionnaire.

<u>Questionnaire #2</u>				
	<u>Percentage of questions with a(n):</u>			
	Near Consensus	Consensus	Acceptable Near Consensus	Consensus
PUMaLT Model	---	---	60%	10%
Festinger	20%	---	40%	---
Skinner	10%	---	10%	10%
Maslow	---	---	30%	---
Gestalt	---	---	30%	---
Bruner	---	---	40%	10%
Total Questionnaire Questions	5%	0%	35%	5%
Figure 4				

An explanatory cover letter, the revised modules and the new taxonomy of terms were issued to the panel members along with the revised questionnaire--Questionnaire #3. The cover letter emphasized the fact that the development of a universal model was the prime task of the participants. It was explained that there was no

necessity to agree on theory interpretations. Therefore, they were instructed to plot each theory on the revised PUMaLT Model according to their own understanding of that theory.

The taxonomy of terms was provided to explain each model process more concisely. Model process names and definitions were somewhat revised and/or changed from the original Module #2 due to suggestions and/or perceived misunderstandings of panel members.

An additional process was added to the PUMaLT Model to help clarify Process B (perception). This had been a vague, "catch-all" process that had been confusing to some participants.

This entire packet of revised materials, plus the revised questionnaire, can be found in the Appendices of this paper beginning on page 200. It can be noted that Questionnaire #3, through its revision, was shortened from a massive 60 questions to 16 questions due to the fact that only one question was asked about each theory in part 2 of the questionnaire, rather than the original ten questions for each theory. The respondents were asked if the theory in question could be adequately displayed and conceptually represented on the revised PUMaLT Model according to their own personal interpretation of the theory.

Figure 4 on the next page reflects the acceptance of the revisions and changes by the group. With the exception of one question, the panel was able to come to an acceptable near consensus regarding the PUMaLT Model and its application to theory concepts.

For the most part, the ranking of "4" demonstrated certain individuals' concerns that there still might be processes of

<u>Questionnaire #3</u>				
	<u>Percentage of questions with a(n) :</u>			
	Near Consensus	Consensus	Acceptable Near Consensus	Consensus
PUMaLT Model	---	---	91%	---
Festinger	---	---	100%	---
Skinner	---	---	100%	---
Maslow	---	---	100%	---
Gestalt	---	---	100%	---
Bruner	---	---	100%	---
Total Questionnaire Questions	0%	0%	98.5%	0%
Figure 5				

learning and motivation theories that had not been thought of by the panel or this writer. This conservative attitude reflected the general feeling of the panel that absolutes should not be definitely stated in order to leave room for future growth and/or development of the PUMaLT Model.

There was concern on the part of one panel member that the explanation of the motivation process was more limiting than clarifying. This prevented tav from accepting that portion of the PUMaLT Model. The compilation of Questionnaire #3, detailing the panel's considerations of the revisions and changes contained in this questionnaire, begin on page 240 of this paper.

Since the motivation issue was the only point of departure in this round of rankings, Questionnaire #4 dealt only with that process. Questionnaire #4 (pages 245 through 248) was made up of only three questions. These questions concerned:

1. Revision of pages 6 and 7 in the revised Module #2--
UMaLT Model and Description (dealing with the explanation
of Process D--motivation).
2. Revision of the process illustration on the PUMaLT Model.
3. Revision of the definition of motivation in the taxonomy
of terms.

This questionnaire came back with 100% acceptable near consensus on all three questions. (The compilation is on pages 249 and 250.) Figure 5 on the next page summarizes the responses to the three questions.

The PUMaLT Model was considered completed upon acceptance of these revisions by the Delphi panel of experts. An acceptable near consensus had now been reached regarding all aspects of the model. The Delphi panel was in agreement that each of the five sampled learning/motivation theories could be adequately displayed on the model according to individual interpretations.

Questionnaire #4				
Question #	Percentage of questions with a(n):			
	Near Consensus	Consensus	Acceptable Near Consensus	Consensus
1	---	---	100%	---
2	---	---	100%	---
3	---	---	100%	---
Total Questionnaire Questions	0%	0%	100%	0%
Figure 6				

The panel was notified by letter of their final agreement concerning the PUMaLT Model. A final revision of Module #2 was also furnished them at this time as a culminating action.

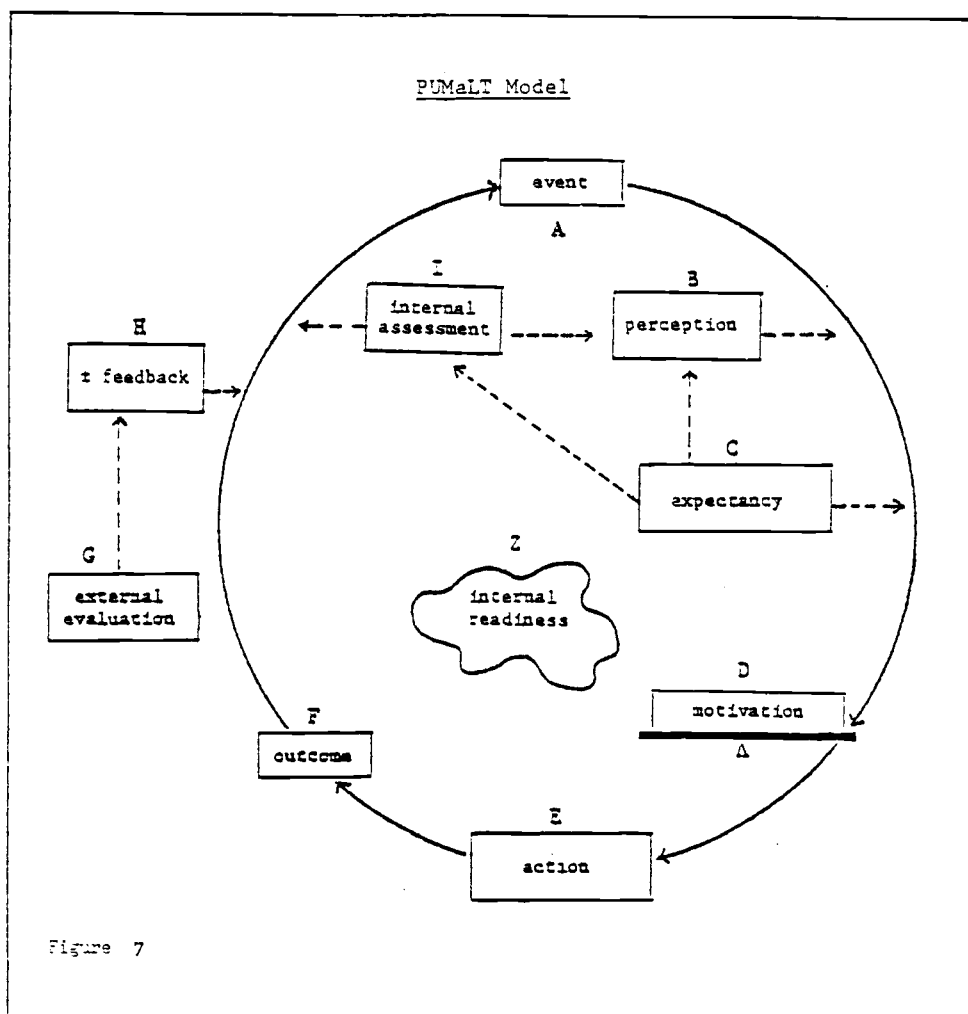
The following pages represent the final description and explanation of the PUMaLT Model (the final revision of Module #2)--the results of this study. A similar copy was sent to each Delphi member at the end of the study. (The actual copy of the final module revision that was sent to the Delphi panel members begins on page 252 in the Appendices of this paper.)

PUMaLT Model Description and Explanation

The PUMaLT Model is a schematic model that can make learning and motivation theories more comprehensible to beginning theory students by providing a common method of displaying and integrating theories in such a way that the theories claim a common language and can be examined and compared to further the basic understanding of their processes. Based upon the understanding of the ten processes that compose the PUMaLT Model, this model will be interpretable to all who examine it, thus establishing common and necessary communication bases regarding motivation and learning theories.

PUMaLT Model is an acronym for Parker Unified Motivation and Learning Theories Model. The model is intended to be a schematic representation of the learning-motivation processes cycles. The PUMaLT Model demonstrates the concept that not only are both learning and motivation cyclical in nature, but they are both encased in the same sphere. This is in contrast to the traditional hierarchical or linear schematics of most learning and motivation theories. A hierarchical or linear method of notation generally indicates a stoppage of action--internal or external--at some point in the process. The PUMaLT Model contends that a stoppage of the learning and motivation cycle rarely, if ever, takes place.

The PUMaLT Model graphically illustrates the inner and outer processes that take place continually for an individual. All notations inside the circle, (see Processes B, C, D, I, and Z in Figure 6, page 34) indicate operations that take place within the person.



This includes all affective, cognitive, and readiness operations. In other words, the processes noted inside the circle speak to the learning-motivation processes that take place within the individual.

The two notations that are located outside the circle (Processes G and H) are processes that take place externally to the individual. These processes are initiated or created by someone or something other than the individual and/or are openly visible.

Those processes depicted both inside and outside the circle (Processes A, E, and F), are operations and/or events that take place internally and/or externally to the person.

The solid flow lines of the circle and their directional arrows indicate the direction of movement from Process A through Process E, Process F, and back around to Process A in a clock-wise progression. It can be seen that these lines tie together those processes or occurrences that can be either internal or external for the individual.

The dotted lines indicate influence of processes upon other indicated processes. The dotted lines do not indicate movement or progression as do the solid lines. The purpose of the dotted lines is to indicate those processes that are influential in determining the strength of, the weight of, or the degree of input upon the various processes.

In order to fully understand the model, it is important that the processes be clearly understood. Below is a brief taxonomy of the process terms that are used in the PUMaLT Model.

PUMaLT Model Taxonomy of Terms

Process A--Event: An external or internal occurrence.

Process B--Perception: An awareness and interpretation of the event.

Process C--Expectancy: The affective and cognitive projections of the action, outcome, and/or feedback.

Process D--Motivation: The impulse or driving force that influences the quality, quantity, and nature of an action.

Process E--Action: Response to an event.

Process F--Outcome: The result of an action.

Process G--External Evaluation: A judgment by someone other than the individual.

Process H--Feedback: The results--positive or negative--given to an individual by someone or something other than the individual.

Process I--Internal Assessment: The individual's personal judgment regarding tav's degree of success.

Process Z--Internal Readiness: The degree of physiological, mental, emotional, social, and/or cultural maturity from which an individual operates.

The PUMaLT Model illustrated on page 34 depicts the flow of processes thus: An event (Process A)--influenced by the individual's perception of the event and the situation (Process B) and expectancy of an outcome and possible external feedback (Process C)--leads to a degree of positive or negative motivation (Process D), which, in turn, determines the amount, the quality, and the type of effort the individual puts forth in the action (Process E), which then affects the quality, quantity, and nature of the outcome (Process F). The individual's perception and assessment of the outcome (Process I) has the possibility of being influenced, not only by the individual's personal judgments, but also by an external feedback (Process H), which, itself, has been influenced by an external evaluator (Process G). The assessed outcome now either becomes a new event or it triggers some sort of a related event; or a totally different event takes its place, thus continuing the spherical nature of the event-action-outcome-event operations.

Process Z--the individual's internal readiness--is shown on

the PUMaLT Model as a free floating, free form process to signify its capability to permeate and influence all of the PUMaLT Model's processes. Every perception, action, assessment, prediction, decision, and judgment of the individual has the capability of being influenced by this internal readiness or level of physiological, mental, emotional, social, and/or cultural maturity.

The previous statements describe the flow of the PUMaLT Model processes. However, it is important to examine each process separately to determine parameters and influences in detail.

Process A (event) is shown inside and outside of the circle because an event or occurrence can be internal or external (e.g., A teacher can give a student a test--an external event for the student; or an individual can arbitrarily decide to think about a loved one--an internal event).

After the event has occurred--externally or internally--the individual then considers that event according to tav's own perceptions (Process B). This perception takes into account, and is influenced by, action, outcome, and feedback expectancies (Process C). If tav believes that tav will feel good about the outcome, then Process B is influenced in such a way that it adds weight and strength to the individual's motivation (Process D). On the other hand, if tav anticipates that tav will not feel good about the outcome (due to an expectation of unfair feedback, a lack of relevance of the outcome to tav's life, or if tav believes that tav is not capable of producing the outcome to a specified standard), then Process B will influence the character and strength of the individual's motivation

(Process D) in a different manner. This expectancy of outcome, feedback, and assessment helps determine the strength and direction of the individual's motivation to act.

Process I (internal assessment) also influences the individual's perception of the situation by taking into consideration the results of former encounters. The way it is felt at the end of a similar or identical outcome, influences Process B. Whereas, Process C is a predictive judgment, Process I is an "after-the-fact" type of assessment that affects Process B's influence in determining the amount and character of the individual's motivation.

Motivation (Process D) is shown inside the circle because it represents the disequilibrium that is felt internally when an individual has a need to know, to act, or to feel. These needs, in turn, drive the individual to act (Process E)--externally and/or internally. As previously mentioned, the potency and character of the motivational drive is determined from the inputs of Processes B, C, I, and Z in relation to Process A.

As noted, Process D determines the strength and nature of the stimulated action (Process E). This action can be overt, such as tightening a bolt on a lawnmower or sharpening a pencil. It can also be internal, such as changing one's perception about a concept or the mental computation required to solve a mathematical problem. The effort that goes into the action is directly proportional to the potency of the motivational drive.

Process E must not be confused with Process F (outcome). Process F constitutes the outcome of an action. In other words,

Process E is the action that leads to an outcome. If an individual is in the process of hammering a nail into a board, Process E concerns itself with the act of hammering, not the end result of the hammered nail.

Process F (outcome) can also be either internal or external. The outcome can be in the form of a mental solution, a decision, or a visible product. Process F is the result of an action.

Process G (external evaluation) does not always enter the picture. In other words, there is not always an external evaluation of the individual's action or outcome.

It is also possible that an external evaluation can take place without the individual's knowledge. Unless the external evaluator provides the individual with some sort of feedback (Process H), the individual cannot incorporate that knowledge into his internal assessment (Process I) operation.

Process H (feedback) is also external to the responding or producing individual. Rewards and punishment are both types of feedback since they furnish the individual with the results of an external evaluation.

Like Process G, external feedback does not always take place. An individual can go from outcome to internal assessment (Process F to Process I) without any external feedback. However, if there is feedback, the individual includes that information into the internal assessment (Process I) operation. It is at this point that the individual decides whether or not he is content with the outcome, the feedback (if there was feedback), and whether to repeat, alter, or

change the event. Process I has a great influence on Process A. The more the individual believes that tav was successful, happy, or satisfied with the outcome, the stronger the movement toward repeating or approximating the outcome again. Process E is similar to Process B in that it, also, is an internal judgment of the situation at that moment in time.

In addition, Process I is similar to Process D at this point. The individual determines tav's previous expectancies, inputs, outputs, and other contributing factors. These satisfied or dissatisfied feelings can also be considered a type of positive or negative internal feedback for the individual.

The internal assessment that takes place in Process I determines the individual's next event and resulting action in response to the particular situation, or at a later date to a similar situation. Thus, the cycle continues, with continual adjustments made by the individual, as tav constantly evaluates, reevaluates, and assesses, not only the immediate occurrences, but also related situations.

In summary, the PUMaLT Model is designed to display the various internal and external processes that take place when an event occurs. It illustrates the direction of process flow and the diverse influences that processes have on each other. It is the vigor of these influences that determines the amount and kind of effort, quality, and/or emphasis, that weights the various direct-line processes. It can be seen at a glance which processes are internal or external to the individual, and which processes have the ability

to be both internal and external. Thus, the PUMaLT Model presents a total interrelated, interblended picture of the various aspects of learning and motivation. Rather than depicting the processes in a linear or hierarchical mode, the PUMaLT Model illustrates the cyclical nature of motivation and learning.

Not all learning and motivation theories incorporate all parts of the PUMaLT Model. Some theories do not agree that Process I (the internal assessment operation) plays a significant role in the motivation or learning transaction; others recognize only the external portion of Process F (the outcome process); still others ignore the influence of external evaluation and the resulting feedback (Processes G and H).

Even those theories that agree on process, oftentimes place their emphases on different operations. Some theories emphasize Process C (expectancy); whereas others stress outcome (Process F) as the most important aspect of learning or motivation. Therefore, theories that, on the surface, seem to be the same or similar, yet emphasize different processes, take on a whole new meaning that has not always been easy to discern.

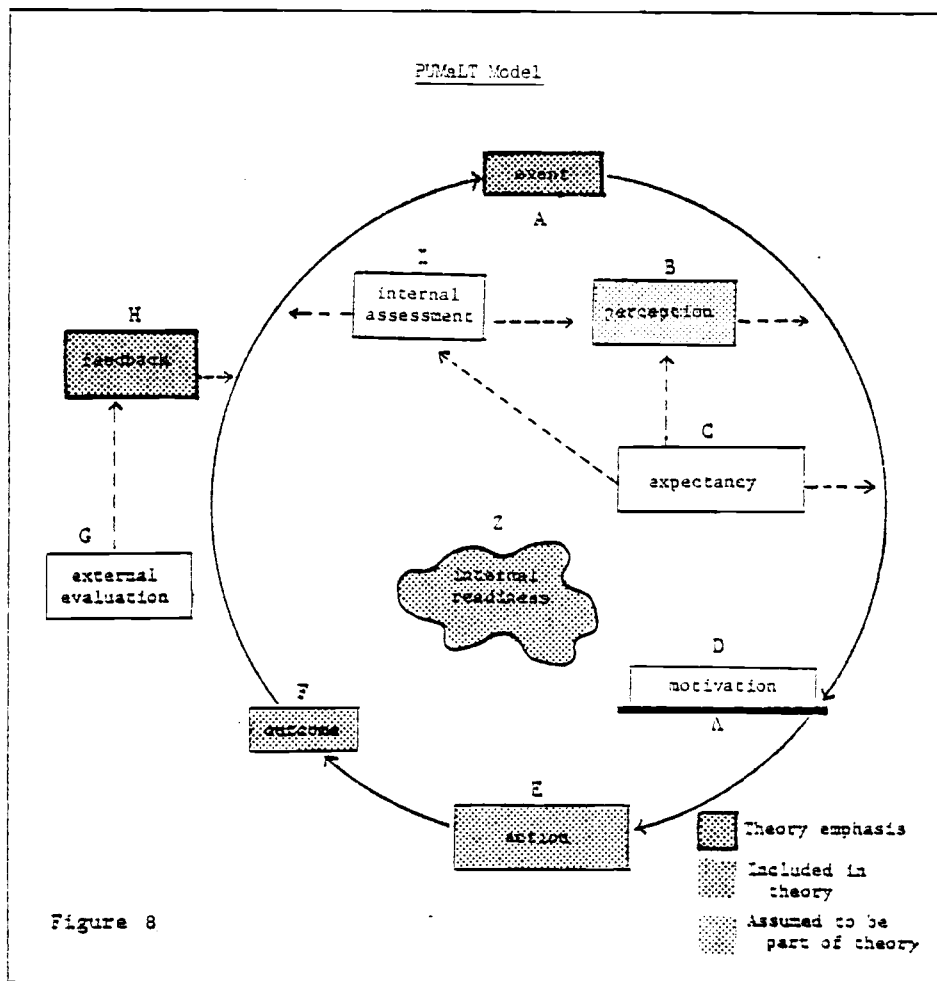
Terminology usage is a common roadblock to the understanding and comparison of theory content. Process D illustrates this problem. What one theory terms dissonance; another theory calls satisfaction or dissatisfaction; another uses the expression disequilibrium; still another prefers the designation drive; and yet a different theory uses the word motivation. However, for all intents and purposes, all of these theories are referring to the same process.

This type of "term conglomerate" is frequently confusing to beginning theory students, affecting their ability to understand, analyze, compare, apply and/or observe various theories. The PUMaLT Model unifies terminology among the theory contents and eliminates this long-time stumbling block to comprehension, comparison, or parallelization of the various theories.

When plotting theories on the PUMaLT Model, the processes are shaded according to the emphases placed on them in the theory (see Figure 7, page 43). The processes included in each theory are identified in this manner:

1. The process(es) that is/are the most strongly emphasized in each theory, are shaded the darkest (e.g., Processes A and H in Figure 7, page 43).
2. The process(es) that is/are assumed to be included in the theory, are given the lightest shade (e.g., Process B in Figure 7, page 43).
3. The balance of the processes that are included in the theory are given a medium shade (e.g., Processes E, F, and Z in Figure 7, page 43).
4. Any process(es) not part of the theory do not have any shading at all (e.g., Processes C, D, G, and I in Figure 7, page 43).

Through the use of a Delphi panel of experts, a unified, interblended, schematic model was developed upon which motivation and learning theories could be universally plotted and displayed. The final model was given the acronym of "PUMaLT Model"--meaning,



Parker Unified Motivation and Learning Theories Model. A series of questionnaires was used to develop and authenticate the model. Five interdisciplinary learning and motivation theories were selected as "test" theories for PUMaLT Model application, with the assumption that other learning and motivational theories could also be plotted and displayed on the finalized model. The study ended with an acceptable near consensus by the Delphi panel, indicating strong agreement with the PUMaLT Model. Figure 7 on page 34 illustrates the final PUMaLT Model design. The final description and explanation of the model is presented on pages 33 through 43 of this paper.

V. RECOMMENDATIONS

The fact that Delphi panel members believed that there was still room for growth and development of the PUMaLT Model demonstrates its adaptability and flexibility. In order for the PUMaLT Model to realize its potential as a universal model, it must have this capability to adapt to new concepts and ideas while retaining its original conceptual display abilities.

The first step in demonstrating the value of the PUMaLT Model is the broadening of the base of theory application. To prove its universality, all learning and motivation theories need to be plotted on the model. Toward this end, the Delphi panel members suggested a yearly PUMaLT Model symposium in which they could take part along with other learning and motivation teachers, theorists, and experts from across the country.

It would be of great value to include as many of the originating theorists in these yearly meetings as possible. This would eliminate as much "interpretation of interpretations" as possible. It would enable the authorities (e.g., Skinner) to explain their own theories as related to the PUMaLT Model.

These symposiums would not only establish common meeting grounds for learning and motivation theorists and teachers, but the PUMaLT Model would also provide a new method for theory experts to explain their theories. Furthermore, the PUMaLT Model would encourage theorists to consider and respond to learning-motivation factors other than those treated in their own theories.

Ultimately, a new educational psychology text needs to be written for use in the classroom, translating learning and motivational theories onto the PUMaLT Model. This would provide motivation and learning theory teachers with a more concrete teaching tool. Most theories are partial theories in that they zero in on selected aspects of the learning-motivation picture. Through the pictorial capabilities of the PUMaLT Model, educators should be able to present a better, more balanced, interblended view of the entire learning-motivation process.

BIBLIOGRAPHY

- Bigge, M.L. Learning Theories for Teachers, N.Y.: Harper & Row, 1976.
- Brockhoff, K. The Performance of Forecasting Groups in Computer Dialogue and Face-to-Face Discussion. In H.A. Linstone & M. Turoff (Eds.), The Delphi Method Techniques and Applications. Reading, Mass.: Addison-Wesley, 1975.
- Bruner, J.S. On Knowing: Essays for the Left Hand, Cambridge, Mass.: Belknap Press of Harvard University Press, 1962.
- Festinger, L. A Theory of Cognitive Dissonance, Evanston, Ill.: Stanford University Press, 1957.
- Fintzy, L.I. The Epistemology of Career Education and the Development Via Delphi Technique of the Conceptual Career Education Model for Yonkers, New York: Interim Report, Career Education Project, VEA CO-93-C-292 (CG). Washington, D.C.: Office of Education (DHEW), 1974.
- Gideon, V.C., Link, A.P., Runyan, H.M., & Sutherland, M.R. Terminology About Adult/Continuing Education: A Preliminary Structure and a Suggested Development Process. Boston: Systems Management Corporation for U.S. Department of Health, Education and Welfare/Office of Education National Center for Educational Statistics, 1971.
- Helmer, O. The Use of the Delphi Technique in Problems of Educational Innovations. Santa Monica: The Rand Corporation, 1966.
- Hellriegel, D. & Slocum, J.W. Management: A Contingency Approach. Reading, Mass.: Addison-Wesley, 1974.
- Hergenhahn, B.R. An Introduction to Theories of Learning. Englewood Cliffs, N.J.: Prentice Hall, 1976.
- Hilgard, E.A. & Bower, G.H. Theories of Learning (4th ed.). Englewood Cliffs, N.J.: Prentice Hall, 1975.
- Hoy, W.K. & Miskel, C.G. Educational Administration: Theory, Research, and Practice. N.Y.: Random House, 1978.
- Huse, E.F. & Bowditch, J.L. Behavior in Organizations: A Systems Approach to Managing. Reading, Mass.: Addison-Wesley, 1973.

- Koffka, K. Principles of Gestalt Psychology. N.Y.: Harcourt, Brace & Company, 1935.
- Köler, W. Gestalt Psychology. N.Y.: H. Liveright, 1929.
- Linstone, H.A. & Turoff, M. Introduction. In H.A. Linstone & M. Turoff (Eds.), The Delphi Method, Techniques and Applications. Reading, Mass.: Addison-Wesley, 1975.
- Maslow, A.H. Motivation and Personality. N.Y.: Harper & Row, 1970.
- Maslow, A.H. Religions, Values, and Peak-Experiences. Columbus, Ohio: Columbus Ohio State University Press, 1964.
- Maslow, A.H. Toward a Psychology of Being. Princeton, N.J.: Van Norstrand, 1968.
- Osborne, A.R. Models for Learning Mathematics. In A.R. Osborne (Ed.), papers from a research workshop. Washington, D.C.: National Institute of Education (DHEW), 1976.
- Scheele, D.S. Reality Construction as a Product of Delphi Interaction. In H.A. Linstone & M. Turoff (Eds.), The Delphi Method, Techniques and Applications. Reading, Mass.: Addison-Wesley, 1975.
- Skinner, B.F. Contingencies of Reinforcement; A Theoretical Analysis. N.Y.: Appleton-Century-Crofts, 1969.
- Skinner, B.F. Beyond Freedom and Dignity. N.Y.: A.F. Knopf, 1971.
- Turoff, M. The Policy Delphi. In H.A. Linstone & M. Turoff (Eds.), The Delphi Method, Techniques and Applications. Reading, Mass.: Addison-Wesley, 1975.
- Weaver, W.T. The Delphi Forecasting Method. Phi Delta Kappan, 1971, 52, 267-271.
- Webster's New World Dictionary of the American Language (2nd Coll. ed.). In D.B. Guralnik (Ed. in Chief), N.Y.: World Publishing, 1972.
- Wertheimer, M. Productive Thinking. N.Y.: Harper & Brothers, 1945.

APPENDICES

COMMITTEE/DELPHI PANEL MEMBERS

A. Theory Selection Committee:

1. Dr. Frank Cross, Professor of Education, Oregon State University, Corvallis, Oregon.
2. Dr. Gwyneth Britton, Associate Professor of Education--Reading, Oregon State University, Corvallis, Oregon.
3. Dr. Michael Colbert, Associate Professor of Education--Adult Education, Oregon State University, Corvallis, Oregon.
4. Dr. Stephen James Hawkes, Professor of Chemistry, Oregon State University, Corvallis, Oregon.
5. Dr. Robert F. McCain, Assistant Dean, School of Business; Associate Professor--Business Administration, Oregon State University, Corvallis, Oregon.

B. Questionnaire Committee:

1. Dr. Joanne B. Engel, Assistant Professor of Education, Willamette University, Salem, Oregon.
2. Dr. Larry J. Kenneke, Assistant Dean of Service Education, Oregon State University, Corvallis, Oregon.

C. Delphi Panel:

1. Dr. Evelyn Craven, Associate Professor of Education, Idaho State University, Pocatello, Idaho.
2. Dr. Molly M. Drotter, Assistant Professor of Education, Idaho State University, Pocatello, Idaho.
3. Dr. George D. Gates, Assistant Professor of Education, Idaho State University, Pocatello, Idaho.
4. Dr. R. Laverne Marcum, Professor of Education, Idaho State University, Pocatello, Idaho.

5. Dr. Richard A. McEwing, Director of Field Experiences, Assistant Professor of Education, Idaho State University, Pocatello, Idaho.
6. Dr. JoAnn Schall, Assistant Professor of Education, Idaho State University, Pocatello, Idaho.
7. Dr. W. Hugh Tucker, Director of Adult Education, Assistant Professor of Education, Idaho State University, Pocatello, Idaho.

UMaLT MODEL QUESTIONNAIRE #1

This questionnaire is composed of two parts. The first part deals with the UMaLT Model alone, and the second part applies itself to the application of the five theories to the UMaLT Model.

Each question will require a ranking judgment from 5 (strongly agree) to 1 (strongly disagree). Each Delphi panel member will be expected to circle the ranking of their choice. Each question will also offer the participants the opportunity to add comments to any questions they wish.

Panel members are encouraged to refer to the Informational Packet should additional information be needed. Although theory reviews are brief, they encompass the various processes or operations that are involved in learning/motivation. Those same processes are dealt with in the UMaLT Model applications.

It is requested that Delphi panel members return the completed questionnaire within seven days from date of reception. There are two reasons for this request for fast turn-around:

1. The presented and answered material will be fresher in the panel members' minds due to the shorter time span between questionnaires.
2. With less down time, the writer is better able to keep the flow of information psychologically current.

The following pages contain questions pertaining to the UMaLT Model itself as well as theoretical application to the UMaLT Model. Please answer all questions, adding comments if desired.

UMaLT Model Questionnaire #1

Part 1--UMaLT Model

Please circle the ranking of your choice. The number 5 indicates that you strongly agree with the statement. The number 1, the opposite end of the spectrum, indicates that you strongly disagree. Please feel free to add any comments that you wish on the lines provided. If there is not enough room to complete your comments, feel free to use the back of the page or attach another page. If you use the back of the page or another page, please number your comment in accordance with the questionnaire statement.

STRONGLY
AGREE

STRONGLY
DISAGREE

5 4 3 2 1

1. Process A, as described in Module #2 of the Informational Packet, adequately portrays a legitimate process in the learning/motivation cycle.

5 4 3 2 1

2. Process B, as described in Module #2 of the Informational Packet, adequately portrays a legitimate process in the learning/motivation cycle.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 3. Process C, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.

5 4 3 2 1 4. Process D, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.

5 4 3 2 1 5. Process E, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.

(UMaLT Model Questionnaire #1, continued)

- 5 4 3 2 1 6. Process F, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.
-
-
-

- 5 4 3 2 1 7. Process G, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.
-
-
-

- 5 4 3 2 1 8. Process H, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/moti-
vation cycle.
-
-
-

- 5 4 3 2 1 9. Process I, as described in Module #2 of the
Informational Packet, adequately portrays
a legitimate process in the learning/

(UMaLT Model Questionnaire #1, continued)

motivation cycle.

<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	10.	The proposed UMaLT Model includes all of
						the processes that take place during the
						learning/motivation cycle.

(UMaLT Model Questionnaire #1, continued)

Part 2--UMaLT Model Application

5 4 3 2 1 11. Process A, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 12. Process B, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 13. Process C, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 14. Process D, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 15. Process E, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 16. Process F, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 17. Process G, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational

(UMaLT Model Questionnaire #1, continued)

theory of cognitive dissonance.

5 4 3 2 1 13. Process H, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 19. Process I, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Festinger's motivational
theory of cognitive dissonance.

5 4 3 2 1 20. The proposed UMaLT Model includes all of
the processes that take place in Festinger's
motivational theory of cognitive
dissonance.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 21. Process A, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

5 4 3 2 1 22. Process B, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

5 4 3 2 1 23. Process C, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

5 4 3 2 1 24. Process D, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement

(UMaLT Model Questionnaire #1, continued)

learning theory.

5 4 3 2 1 25. Process E, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

5 4 3 2 1 26. Process F, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

5 4 3 2 1 27. Process G, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Skinner's reinforcement
learning theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 28. Process H, as described in Module #3 of the Informational Packet, adequately portrays this aspect of Skinner's reinforcement learning theory.

5 4 3 2 1 29. Process I, as described in Module #3 of the Informational Packet, adequately portrays this aspect of Skinner's reinforcement learning theory.

5 4 3 2 1 30. The proposed UMaLT Model includes all of the processes that take place in Skinner's reinforcement learning theory.

5 4 3 2 1 31. Process A, as described in Module #3 of the Informational Packet, adequately portrays this aspect of Maslow's hierarchial motivation theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 32. Process B, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 33. Process C, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 34. Process D, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 35. Process E, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 36. Process F, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 37. Process G, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 38. Process H, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial

(UMaLT Model Questionnaire #1, continued)

motivation theory.

5 4 3 2 1 39. Process I, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Maslow's hierarchial moti-
vation theory.

5 4 3 2 1 40. The proposed UMaLT Model includes all of
the processes that take place in Maslow's
hierarchial motivation theory.

5 4 3 2 1 41. Process A, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 42. Process B, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 43. Process C, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 44. Process D, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 45. Process E, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 46. Process F, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 47. Process G, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 48. Process H, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

5 4 3 2 1 49. Process I, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Gestalt learning theory.

(UMaLT Model Questionnaire #1, continued)

5 4 3 2 1 50. The proposed UMaLT Model includes all of
the processes that take place in Gestalt
learning theory.

5 4 3 2 1 51. Process A, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Bruner's humanistic theory
of motivation and learning.

5 4 3 2 1 52. Process B, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Bruner's humanistic theory
of motivation and learning.

5 4 3 2 1 53. Process C, as described in Module #3 of the
Informational Packet, adequately portrays
this aspect of Bruner's humanistic theory
of motivation and learning.

(UMaLT Model Questionnaire #1, continued)

Teacher Corps
Department of Education
Idaho State University
Pocatello, ID 83209
March 16, 1981

Dr. Richard McEwing
Department of Education
Idaho State University
Pocatello, ID 83209

Dear Dr. McEwing:

I am in the process of working on my doctoral thesis. I am using a Delphi technique to gather and finalize my information. I would like to know if you would care to participate as a member of my Delphi panel? Your experience--or lack of experience--with the Delphi process does not need to be an issue. You will be given complete instructions. Actucally, it is merely a matter of completing a few questionnaires.

The tentative title of my proposed thesis is, "The Development and Authentication of a Unified Motivation and Learning Theories Model." Background information will be provided for any questions that you will be asked to respond to. The questionnaires will be kept simple and as short as possible in deference to your busy schedule.

I will ask that you return the completed questionnaires within one week after you receive them. There are two reasons for this request for a fast turn-around:

1. The presented and answered material will be fresher in your mind due to the shorter time span between questionnaires.
2. With less down time, I will be better able to keep the flow of information psychologically current.

The ultimate goal of the questionnaire is to come to an acceptable consensus (or an acceptable near consensus) regarding the proposed schematic model. You will have the opportunity to make comments and/or to change the model if you see fit.

If you are willing to participate in this project, please sign the attached consent form and return it to me in the attached envelope. Please put this consent form in the Teacher Corps mailbox by Monday, March 23, 1981.

Monday, March 30, providing I have received your consenting signature, I will put your Delphi panel materials, including your first questionnaire, in your personal department mailbox. If you decide against participating on the Delphi panel, you do not need to do anything more.

Thank you for your time and consideration. I hope to hear from you soon.

Sincerely,

Mickey Ann Parker

DATE _____

Dear Ms. Parker:

Yes, I am interested in participating on the Delphi Panel concerning your doctoral thesis, titled, "The Development and Authentication of a Unified Motivational and Learning Theory Model."

SEND TO:

Mickey Ann Parker
445 N. Johnson
Pocatello, ID 83204

NAME _____

March 30, 1981

Dear Delphi Panel Member:

Thank you for agreeing to participate in this Delphi experience. I realize how busy you are and will do my best, during this project, to be as efficient with your time as I possibly can.

Enclosed please find your first questionnaire, Informational Packet (which is yours to keep and use as a reference), and full directions. Please return to me by April 6, 1981--one week from today.

After receiving all of the completed questionnaires, I will compile the responses and return them to you so that you may know the responses of the rest of the panel. At that time, you will also receive another questionnaire giving you the opportunity to revise and/or explain your responses. This procedure will be followed until the entire Delphi Panel comes to an acceptable consensus and/or an acceptable near consensus on all points. (An acceptable consensus is a unanimous ranking of 5 or 4 on questionnaire items. An acceptable near consensus is a one-number spread of 5-4 agreement among the panel on questionnaire items.)

Again, thank you for your cooperation in this project. It is professionals like you who advance the cause of quality education. I will forever be in your debt. I only hope that I can return the favor--directly or indirectly.

Sincerely,

Mickey Ann Parker

THE DEVELOPMENT AND AUTHENTICATION OF A
UNIFIED MOTIVATIONAL AND LEARNING THEORY MODEL

INFORMATIONAL PACKET

by

Mickey Parker

1981

INFORMATIONAL PACKET INDEX

<u>MODULE NAME</u>	<u>MODULE #</u>
Informational Packet Introduction	1
UMaLT Model Description and Explanation	2
UMaLT Model Application	3
Delphi Technique Literature Review	4
Motivational and Learning Theories Literature Review	5

MODULE #1

INFORMATIONAL PACKET INTRODUCTION

by

Mickey Parker

1981

INFORMATIONAL PACKET INTRODUCTION

This Informational Packet is intended to serve as a guide and reference throughout this study for those who participate in the development of the questionnaire and for the Delphi panel. The information contained in the modules that make up the Informational Packet are to be considered the base from which this study and the Unified Motivational and Learning Theory Model (hereafter called the UMaLT Model) are developed.

This Informational Packet consists of these five modules:

1. Informational Packet Introduction
2. UMaLT Model Description and Explanation
3. UMaLT Model Application
4. Delphi Technique Literature Review
5. Motivational and Learning Theories Literature Review

The purpose of this first Informational Packet Introduction module is to:

1. Introduce and give an overview of the Informational Packet.
2. Explain the purpose of each separate module.
3. Explain the purpose of the study.
4. Describe the Delphi technique as it is to be used in this study along with the duties of the Delphi panel.

Thus, it can be seen that this first module gives a brief overview of the five modules that make up the Informational Packet, as well as defines the study and the techniques and input of the research process.

The purpose of the second module--UMaLT Model Description and Explanation--is to acquaint the participator with the basic model that *tav*¹ will be expected to interact with in this study. It is this UMaLT Model with which this study is concerned.

The third module--UMaLT Model Application--demonstrates how five major learning and motivational theories are applied to the model. It is the combination of modules two and three that make up the core of this study.

The fourth module--Delphi Technique Literature Review--gives a brief overview of the history and use of the Delphi technique. The purpose of this review is to give the participators a handy reference of basic information about this technique should it be needed.

The fifth and last module--Motivational and Learning Theories Literature Review--briefly reviews the literature of the five major theories that are to be examined through the use of the UMaLT Model. The five theories to be covered in the UMaLT Model Application module and this literature review module are:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement learning theory.
3. Maslow's hierarchial motivational theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of motivation and learning.

¹*Tav* is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s) and is used throughout this paper in an effort to neutralize gender.

The purpose of this study is to develop a schematic model that has the ability to illustrate any motivation and learning theory, thus enabling professionals and students to compare and analyze the various theory processes. Through the perfection of this model, it is hoped that learning and motivational theories can be better understood, and thereby more aptly applied.

The basic Delphi technique consists of questionnaires that are repeatedly answered and refined until a consensus is reached. The specific steps that will be used in this study are as follows:

1. A questionnaire will be sent to members of the Delphi panel. Each panel member is expected to answer the questions according to the directions and return the questionnaire. (Questionnaires and/or summaries will be will be returned after each interaction.)
2. A summary of all of the responses will be compiled and sent back to the panel; giving each individual the opportunity to change any of their own responses.
3. A new summary will be prepared and sent to panel members, but this time with a major difference: If any responses deviate significantly from the median, panel members will be asked to justify those responses.
4. A new summary will be prepared containing the stated justifications. This time panel members will be asked for rationalizations of the counterpositions.
5. The counterpositions will be offered in a new summary along

with a request for additional appraisals.

6. A final summary will be made when a consensus, or near consensus, is reached. At that point, it will be considered that the model is as developed and perfected as it can be under the circumstances.

In short, the five modules of the Informational Packet will provide the basic body of knowledge that is needed to develop the UMaLT Model. The end product should result in a unified schematic model that will enable theorists, teachers, and students to better understand learning and motivational theories.

MODULE #2

UMaLT MODEL DESCRIPTION AND EXPLANATION

by

Mickey Parker

1981

UMaLT MODEL DESCRIPTION AND EXPLANATION

The primary purpose of this study is to develop a schematic model that will make learning and motivation theories more comprehensible to beginning theory students. This can be done by providing a common method of displaying and integrating theories in such a way that the theories claim a common language, and can be examined and compared to further the basic understanding of their processes. Upon completion, this model should be interpretable to all who examine it, establishing common and necessary communication bases.

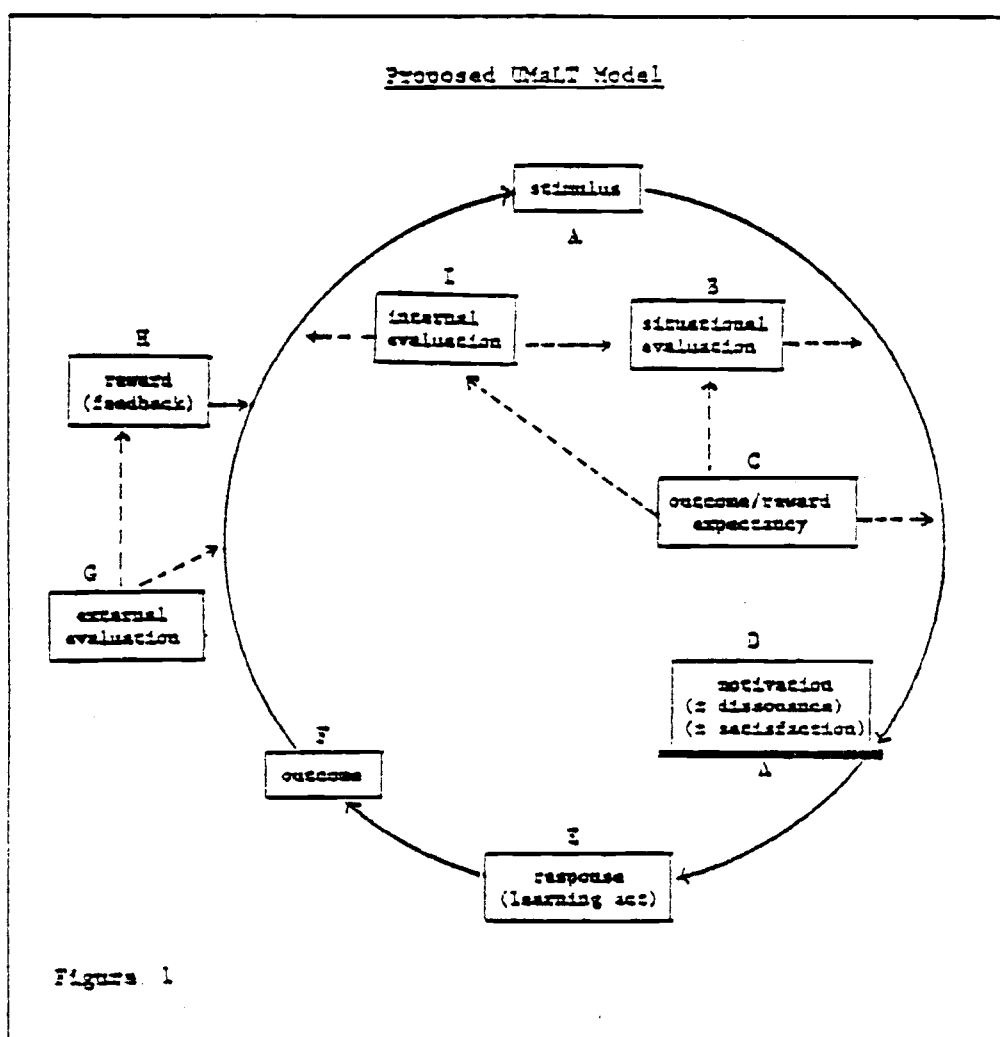
It is expected that each of the five theories/theorists presented in this study should be able to fit, in entirety, on the completed model. Figure 1, page 2, illustrates the proposed UMaLT Model (Unified Motivation and Learning Theory Model), demonstrating the concept that, not only are both learning and motivation cyclical in nature, but they are both incased in the same sphere. This is in contrast to the traditional hierarchical or linear schematics of most learning and motivation theories. A hierarchical or linear method of notation indicates a stoppage of action--internal or external--at some point in the process. Indeed, this stoppage is rarely, if ever, the case.

The proposed UMaLT Model graphically illustrates the inner and outer processes that take place continually for an individual. All notations within the circle (Figure 1, page 2) indicate processes that take place internally. This includes the mental processes as well as the emotional processes.

The two notations that are outside of the circle (Processes G

and H) are processes that take place externally to the individual. In other words, these processes generally are initiated or created by someone or something other than the individual.

These processes, depicted both inside and outside of the circle, (Processes A, E, and F) can take place internally, externally or both for an individual.



The proposed UMALT Model illustrated on the previous page, depicts the flow of processes thusly: A stimulus (Process A)--influenced by an internal evaluation of the situation (Process B) and an expectancy of an outcome and/or a reward (Process C)--leads to a positive or negative motivation (Process D), which, in turn, determines the effort put forth in the response (Process E), which then affects the quality or quantity of the outcome (Process F). The outcome, influenced by external evaluation (Process G), reward (Process H), and/or an internal evaluation (Process I), then becomes a stimulus (Process A), which then leads to further action (Process E), thus continuing the spherical nature of the stimulus-response-outcome-stimulus process.

The previous statements describe the flow or continuity of the processes. However, it is important to examine each process separately to determine parameters and influences in detail.

Process A (stimulus) is shown both inside and outside of the circle because a stimulus can be internal or external. A teacher can give tav's¹ students a test (an external stimulus); or an individual can arbitrarily decide to learn a new language (an internal stimulus).

After the stimulus is presented, either externally or internally, the individual then evaluates the situation (Process B) by taking into consideration tav's chances of succeeding. This consideration takes into account past experiences, future hopes, self-concepts, present

¹Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s) and is used throughout this paper in an effort to neutralize gender.

needs, alternatives, background knowledge, personal skills, and anything that is relevant to the situation.

Process B is influenced by Processes C and I. When evaluating the entire situation, the individual takes into consideration tav's expectancy or conception of what the outcome and/or reward or feedback will be (Process C). In other words, the individual considers the value of the reward or feedback to tavself.

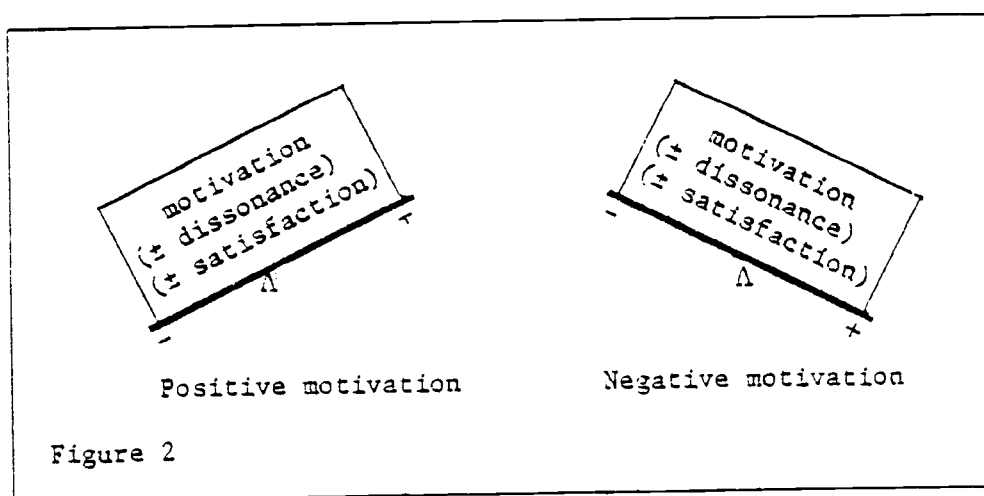
Take, for instance, a term paper versus a doctoral thesis: The reward for a term paper is a grade. However, the success of an individual's entire doctoral program is dependent on the dissertation. A term paper can affect the successful passing of a course of study, whereas, a thesis can affect the lifetime job options and earnings of an individual. Consequently, the amount of effort the individual decides to put forth is directly proportional to the expected outcome and/or reward.

In the same manner, Process I--internal evaluation--also influences Process B. If a student believes that tav will feel good about the outcome; that tav will receive the expected reward or feedback (Process H); that tav will be judged fairly (Process G); or that tav's success will be directly proportional to the amount of effort tav puts into the response (Process E), tav will act accordingly. On the other hand, if tav believes that no matter how much effort tav puts into the response, tav will not succeed; that the feedback or reward will not be what tav believes tav should have; that tav will not be judged fairly; or that the outcome will be small or unimportant to tav, tav

will have less stimulus energy to repeat the response in the same way. In other words, these considerations will affect the strength of the resultant stimulus, thus influencing Process B--the situational evaluation--in determining the degree of motivation that has for the task.

Process D--motivation--is shown inside the circle because it represents the disequilibrium that is felt internally when an individual has a need to know, to act, or to feel. These needs, in turn, drive or motivate the individual to act (Process E)--externally or internally.

Motivation is seen as a teeter-totter concept (Figure 2) with a positive dissonance on one end and negative dissonance on the other end. The amount of disequilibrium determines the degree of satisfaction or dissatisfaction that an individual feels. The stronger the need or satisfaction (or dissatisfaction), the greater the slant of the teeter-totter. The greater the degree of positive slant, the stronger the motivation to respond and conversely, the less the degree of positive slant, the weaker the motivation to respond.



If the positive slant goes below the central point, it then puts the strength of motivation on the negative side, thus instituting a negative response (Figure 2, page 5). The strength of the negative response is determined by the degree of negative slant. In other words, the degree of positive or negative slant determines the strength of the positive or negative response.

As shown, motivation (Process D) is influenced heavily by Process B and Process C. These two processes and their influences determine the degree and direction of the motivational slant.

As noted, motivation determines the strength of the stimulated action (Process E). The action can be overt, such as tightening a bolt on a lawnmower or sharpening a pencil. It can also be internal, such as changing one's perception about a concept or the mental computation of a mathematical problem.

The effort that goes into the response is directly proportional to the degree and direction of the slant of the motivational teeter-totter. It can also be said that the motivational slant determines the quality of the response due to influences of Processes B and C. That is to say, Process E--the response--is based on the interrelatedness of the degree of dissonance (positive or negative) along with the individual's evaluation of the situation and the expected outcome and/or reward.

The act of learning can be considered a response as can the act of hammering a nail. This process is not to be confused with Process F which constitutes the outcome of the action. In other words, the

response or the learning act, should not be confounded with the outcome. Process E is merely the act of learning or the act of responding. If an individual is in the process of hammering a nail into a board, Process E concerns itself with the act of hammering, not the end result of the hammered nail.

Process F--outcome--can be either internal or external. It can be in the form of a mental solution, a decision, or a visible product. It is the outcome of the response or the action.

Process G--external evaluation--does not always enter the picture. There is not always an external evaluation of an individual's response or outcome.

The phrase, external evaluation, indicates that the evaluation is done by someone or something other than the individual who responded or produced the outcome. That is to say, the evaluation is external to the responding individual. Individuals are frequently unaware of the external evaluations that take place. Individuals become aware of evaluations only if the external person or "thing" offers feedback.

Process H--reward/feedback--is also external to the responding or producing individual. Even if the individual rewards tavsself, it is an external process. However, reward is oftentimes influenced by an external evaluation or judgement. Rewards are a type of feedback since they give the individual the results of an evaluation of the individual's responses or outcomes.

External rewards or feedback do not always take place. An individual can go from outcome to stimulus without an external reward or

without external feedback.

After the outcome, the individual internally evaluates the effect upon tavsself (Process I). Generally, it can be said that this is an evaluation of the outcome (Process F) or the fairness of the reward or feedback (process H) to the individual.

Process I has a great influence on Process A. The more the individual believes that tav deserves the reward, or that the feedback equals tav's own perception of tav's response, the stronger the stimulus toward the next related response. Process I is similar to Process B in that it is also an internal evaluation of the situation at that moment in time.

Process I is also similar to Process D at this point. The feedback or reward that an individual receives determines, through the influence of the individual's internal evaluation, the degree of satisfaction or dissatisfaction that is felt by the individual with the outcome. These feelings of satisfaction or dissatisfaction could also be considered a type of internal reward, thus demonstrating a similarity to Process H.

These evaluations then determine the individual's next response in relation to the particular situation or a similar situation. Thus, it can be seen that the circle continues, with proper adjustments made by the individual, as tav constantly evaluates and reevaluates, not only the immediate situation, but also related situations.

The solid flow lines of the circle and their directional arrows indicate the direction of movement from Process A through Process E,

Process F, and back around to Process A in a clock-wise progression.

The dotted lines indicate influence of processes upon other indicated processes. In other words, solid lines indicate the progression of processes in the model. Dotted lines, on the other hand, indicate those processes that are influential in determining the strength of, or the weight of, or the input upon the various processes.

In summary, the proposed UMaLT Model displays the various internal and external processes that take place when a stimulus is presented. It illustrates the direction of process flow and the various influences that some processes have on other processes. It is the strength of the influences that determine the amount and kind of effort, or degree of quality or emphasis, that weights the various direct-line processes. It can be seen at a glance which processes are internal or external to the individual, or which processes have the ability to be both internal and/or external.

Thus, there is a total unified picture of the various aspects of learning and motivation. Rather than depicting the processes in a linear or hierarchial mode--which can be misleading--the proposed UMaLT Model illustrates the cyclical nature of motivation and learning.

Not all educational learning and motivational theories agree with all parts of the UMaLT Model. Some theories do not incorporate Process I--the internal evaluation process; others recognize only the external portion of Process F--the outcome process; still others ignore the influence of external evaluation--Process G.

Even those theories that agree on process, oftentimes place their

emphasis on different processes. Some theories emphasize Process D--motivation, whereas others stress the outcome--Process F. Therefore, theories that on the surface seem to be the same or similar, yet place their emphasis on different processes, give their theories a whole new meaning.

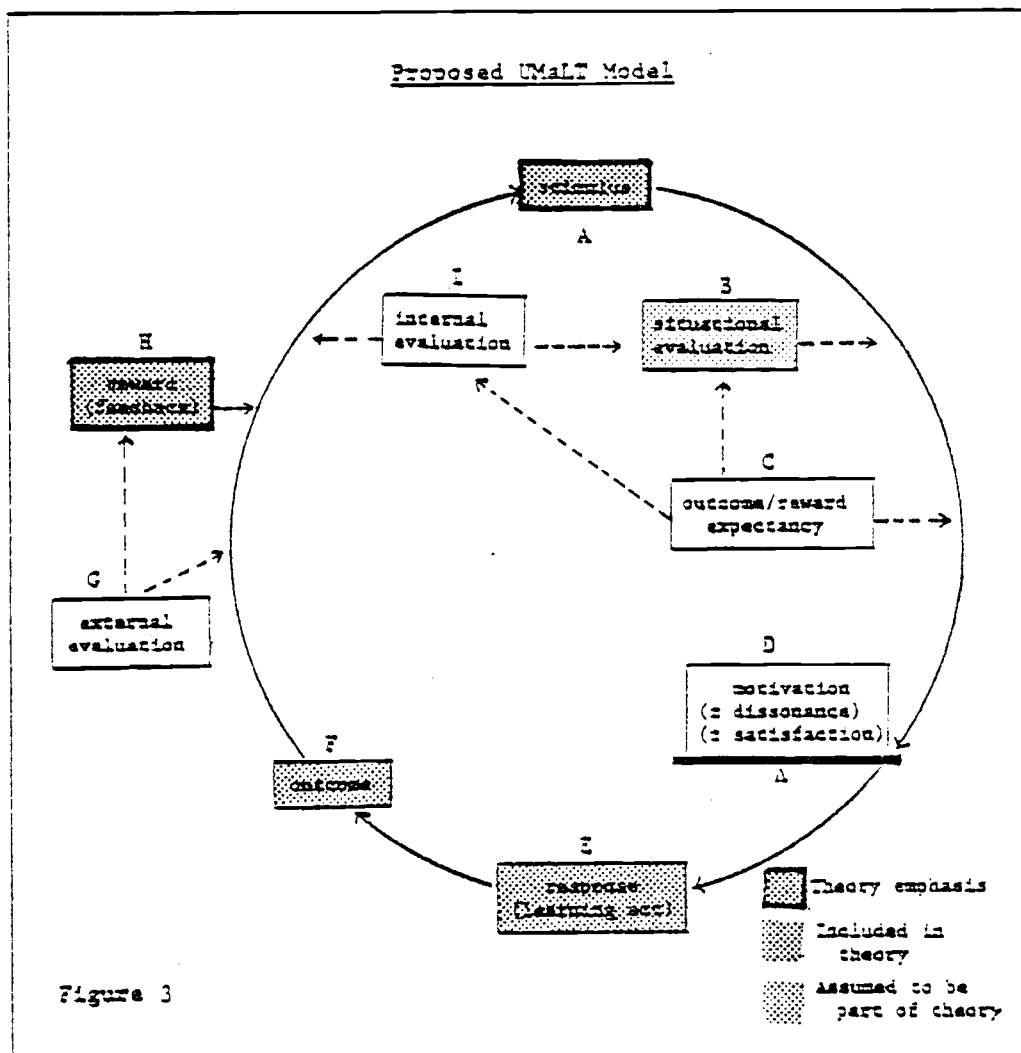
Terminology is a common roadblock to understanding and comparing theory content. Process D clearly illustrates this problem. What one theory terms dissonance; another theory calls satisfaction or dissatisfaction; another uses the term disequilibrium, and yet another uses the word motivation. Yet all of these theories refer to the same process.

Consequently, the understanding and comparison of theories has been difficult in the past because of the variety of terms in the theory content. The proposed UMaLT Model is intended to help unify terminology among the theory contents and eliminate this long-time stumbling block to comprehension and comparison or parallelization of the various theories.

As mentioned, the proposed UMaLT Model is a unified schematic model that is intended to have the capability of displaying any learning or motivational theory. In other words, the proposed UMaLT Model should have the ability to illustrate the plotting of all learning and motivational theories on this one schematic form, thus allowing students, teachers, and theorists to see the interrelatedness of the various theories.

The theories will be illustrated (Figure 3, page 11) thusly:

1. The process(es) that is/are the most strongly emphasized in a theory, will be shaded the darkest (Processes A and H in Figure 3).
2. The process(es) that is/are assumed to be included in the theory, will be the lightest shade (Process B in Figure 3).
3. The balance of the processes that are included in the theory, will be given a medium shade (Processes E and F in Figure 3.)



4. Those processes not included in the theory will not have any shading at all (Processes C, D, G, and I in Figure 3).

Each of the five major theories/theorists previously mentioned will be plotted on the UMaLT Model with appropriate shadings. The questionnaires will deal with the correctness or applicability of each theory to the model. The model design will also be questioned.

MODULE #3

UMaLT MODEL APPLICATION

by

Mickey Parker

1981

APPENDIXTABLE OF CONTENTS

Application of Festinger's motivational theory of cognitive dissonance to the proposed UMaLT Model	1
Application of Skinner's reinforcement theory to the proposed UMaLT Model	4
Application of Maslow's hierarchial motivation theory to the proposed UMaLT Model	9
Application of Gestalt learning theory to the proposed UMaLT Model	11
Application of Bruner's humanistic learning and motivation theory to the proposed UMaLT Model	14

UMaLT MODEL APPLICATION

This third model concerns itself with the application of the UMaLT Model (Unified Motivation and Learning Theory Model) to five major learning and motivation theories. Each theory will be plotted on the proposed model. The theories will be presented in this order:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement learning theory.
3. Maslow's hierarchial motivation theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of learning and motivation.

A brief literature review of each theory is presented in the fifth module, consequently, there is no effort put forth in this module to explain or substantiate theoretical content. A selected bibliography also accompanies module number five.

Application of Festinger's motivational theory of cognitive dissonance to the proposed UMaLT Model

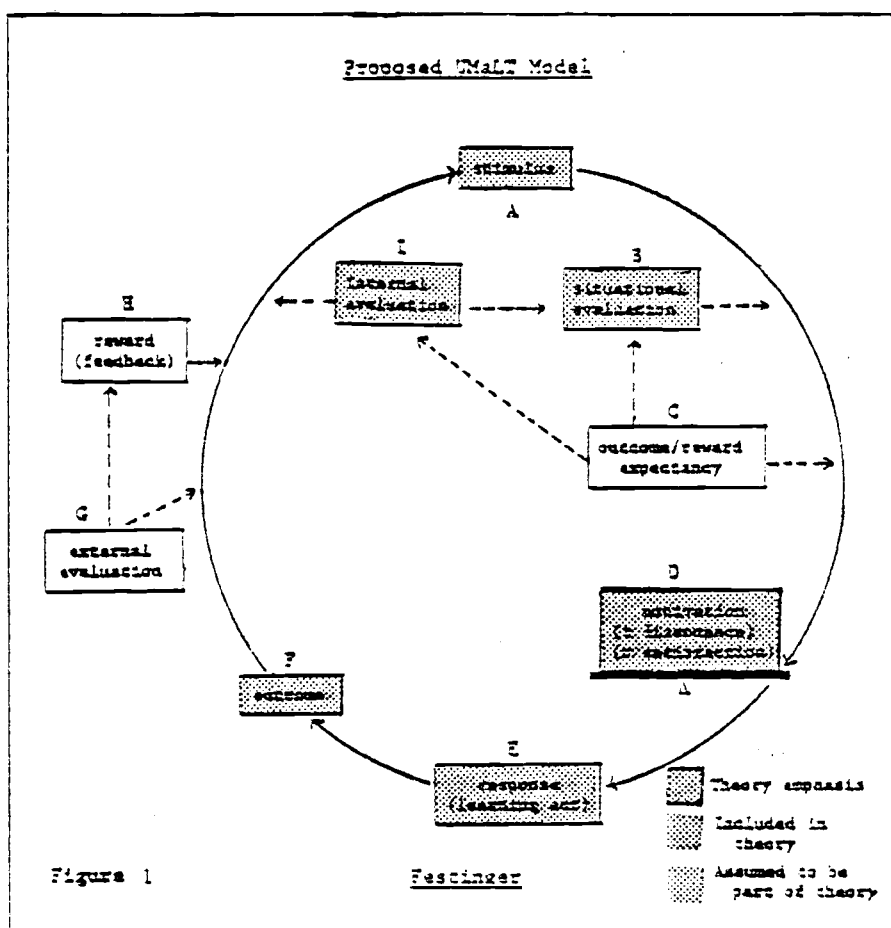
Process A:

For Festinger, an individual's beliefs are the stimuli that provoke action. Although he seems to emphasize the internal aspects of the process, he also considers external stimuli. Process A (Figure 1, page 2) is given a medium shade.

Process B:

Process B is also given a medium shade. When the individual is

determining the implications of tav's¹ beliefs, tav is evaluating the situation as it affects tav at that moment in time. Festinger believes that at this point an individual takes into consideration tav's past related experiences, whether or not there are conflicts between conditions or beliefs, and any other pertinent information that tav deems crucial to the situation.



¹Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s) and is used throughout this paper in an effort to neutralize gender.

Process C:

Process C is not included in Festinger's theory.

Process D:

Process D has been given the darkest shading because Festinger places his greatest emphasis on cognitive dissonance. Although he stresses the negative aspect of it, he does not mean negative in the same way that it is depicted on the model. He merely means an unbalance of the "teeter-totter" concept. Any time that one end of the teeter-totter is lower than the other, there is a drive within the individual to bring the teeter-totter back to an even keel. Festinger calls this a negative drive.

Irrelevance, consonance, and dissonance are all Process D processes within the model. These three motivational possibilities reflect the strength of the motivation as a result of the individual's evaluation of belief conflicts.

Process E:

Process E is given a medium shade and is indicated by Festinger when he refers to individual's "attempting" to find ways to reduce drive; or that dissonance "instigates" a process to reduce dissonance. These statements indicate that the individual is taking action toward an outcome.

Process F:

Festinger continually refers to behavior as an outcome to reducing a negative drive. He conceptualizes behavior externally, as well as internally. It is given a medium shade.

Process G:

Process G is not included in Festinger's theory.

Process H:

Process H is not included in Festinger's theory.

Process I:

Festinger refers to Process I--internal evaluation--when he indicates that the individual "justifies" and "rationalizes" his behavior. He firmly believes that individuals evaluate their behavior and make adjustments accordingly--his indication that the motivation process is cyclical and continuous. Process I is given a medium shade.

In summary, it can be said that Festinger places his greatest emphasis on Process D--dissonance. Processes A, B, E, F, and I are also included in his theory. It can also be said that he does not take into consideration outcome/reward expectance (Process C), external evaluation (Process G), or external rewards (Process H) as relevant to dissonance or motivation.

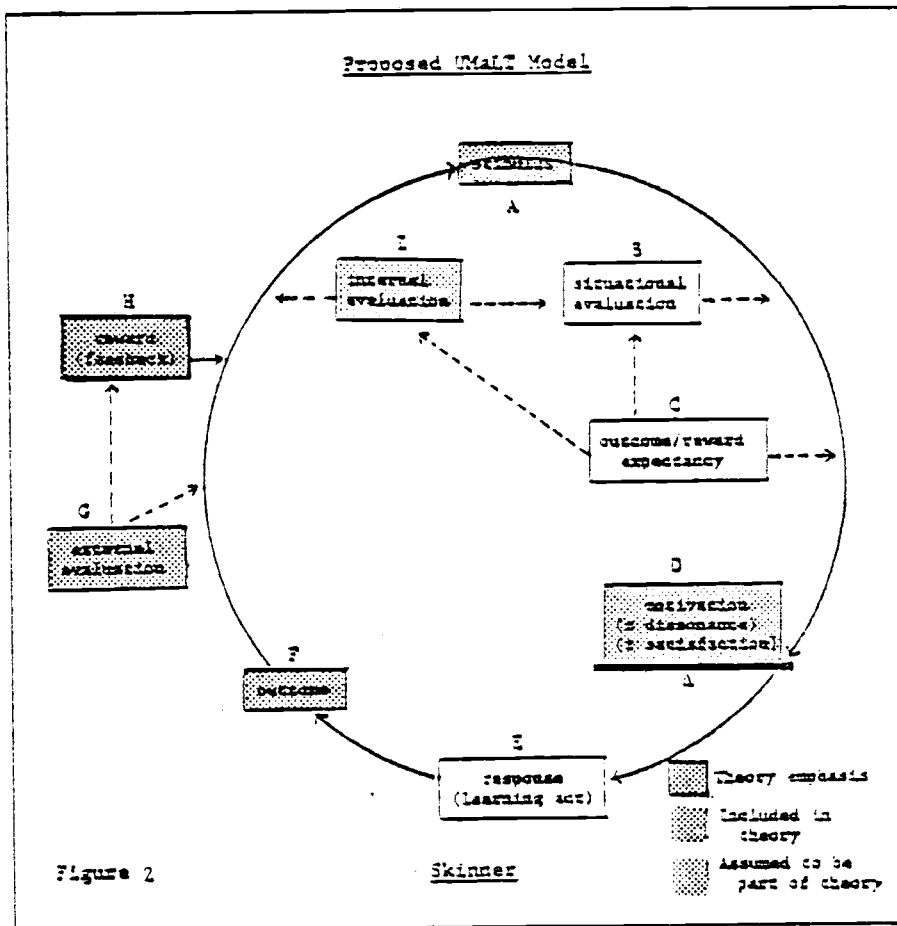
Application of Skinner's reinforcement theory to the proposed UMaLT Model

Process A:

Skinner refers to stimuli frequently in explaining his theory. The interesting feature that shows up when applying his theory to the UMaLT Model, is that respondent behavior depends upon an external stimulus, and type S conditioning emphasizes the importance of the role of the external stimulus (Figure 2, page 5).

Operant behavior, as Skinner sees it, depends on an internal stimulus. He states that the stimulus is unknown and that it is unimportant to know its cause.

The external portion of Process A is an important issue with Skinner, but not the most important and is given a medium shade. The inner portion of Process A is not important to him and is indicated as an assumed process by a light shade.



Process B:

Process B is not included in Skinner's theory.

Process C:

Process C is not included in Skinner's theory.

Process D:

Skinner's only reference to motivation is his belief that exhilaration is an incentive. That is to say, satisfaction from achievement can be a motivator. Figure 2 (page 5), therefore, indicates Process D as assumed (even though Skinner believes concepts, such as motivation, merely interfere with the understanding of human behavior).

Process E:

Process E is not included in Skinner's theory.

Process F:

Skinner uses the word "response" to mean "outcome". His theory is built around producing "correct" responses or outcomes. He concerns himself seriously with the strength of the outcome (strength of the outcome meaning the frequency with which the outcome will be repeated).

Although the outcome process is an important process to Skinner, like the stimulus process, it is not the most important process in his theory. It is, therefore, indicated on the UMaLT Model merely as an integral part of the theory, without undue emphasis.

Process G:

Skinner theorizes that if one controls the rewards, one can also control behavior. In other words, he sees Process H--rewards--as being primarily determined by someone or something outside the individual

who is being rewarded or reinforced. Thus, Figure 2, page 5, shows Process G as an essential part of the theory.

Process H:

Process H is given the greatest emphasis on the UMaLT Model since that is where Skinner places his greatest emphasis. He believes that all behavior is controlled by its rewards. He uses the terms, "consequences" and "reinforcement" to mean the same as rewards. He believes that rewards can be positive or negative and that a negative reward can be considered the same as punishment. He also conceptualizes that rewards are what give strength to the response (the outcome). (As mentioned, he refers to the strength of an outcome to mean the frequency with which the outcome will be repeated.)

If Skinner were placing his theories on the UMaLT Model, he would believe that a non-reward breaks or stops the flow of the circle, thus keeping the outcome from becoming a stimulus. He would not consider that due to a non-reward (and the individual's internal evaluation of that consequence), the outcome merely becomes a different stimulus. In other words, he would not consider that a non-reward might be thought of as a type of negative reward in the eyes of the individual.

When he refers to a "reinforcing stimulus", he means a reward that causes the outcome to become a positive stimulus since it elicits a positive outcome. That is to say, a "reinforcing stimulus" is a reward that adds strength to the outcome.

Process I:

As noted, Skinner believes that good feelings or exhilaration

are incentives. According to the UMaLT Model, good (or bad) feelings occur as the result of an individual's internal evaluation of the outcome and/or the reward. However, Skinner only mentions this in passing and it holds such a weak place in his theory, that it is indicated as an assumed process on the UMaLT Model.

In summarizing Skinner's theory placement on the UMaLT Model, his three levels of processes are:

Level 1: Process H, which has the strongest emphasis.

Level 2: Processes A, F, and G--processes that he refers to frequently, but not with quite the same amount of emphasis that he indicates for Process H.

Level 3: Processes D and I--processes that he refers to briefly, but dismisses as unimportant or confusing to the issue.

Processes B, C, and E are not included in his theory, even though logic might indicate that they must be for the theory to have strength and hang together.

The UMaLT Model illustrates that Process A is externally important, but internally assumed; Process D is assumed; Process F is strong, but not paramount; Process G is also strong, but not the dominant process; Process H is the process that holds the entire theory together and is illustrated the heaviest on the UMaLT Model; and finally, Process I is assumed.

Skinner basically believes in the cyclical nature of the system. He explains it through his concept of the reinforcing stimulus. In other words, although he conceptualizes that the process is generally

continuous (except in a non-rewarding situation), he believes that it is the reward or reinforcement that causes the process to continue.

Application of Maslow's hierarchical motivation theory to the proposed UMaLT Model

Process A:

Stimuli are internal intuitive needs in Maslow's eyes. According to him, these innate needs are the driving force for motivation. His theory places a strong emphasis on this internal process as illustrated in Figure 3 on page 10.

Process B:

Process B is not included in Maslow's theory.

Process C:

Process C is not included in Maslow's theory.

Process D:

Motivation is another major emphasis in Maslow's needs theory. The strength of the motivation--the degree of slant of the motivational teeter-totter--is determined by the internal evaluation (Process I) and the stimulus (Process A).

Process E:

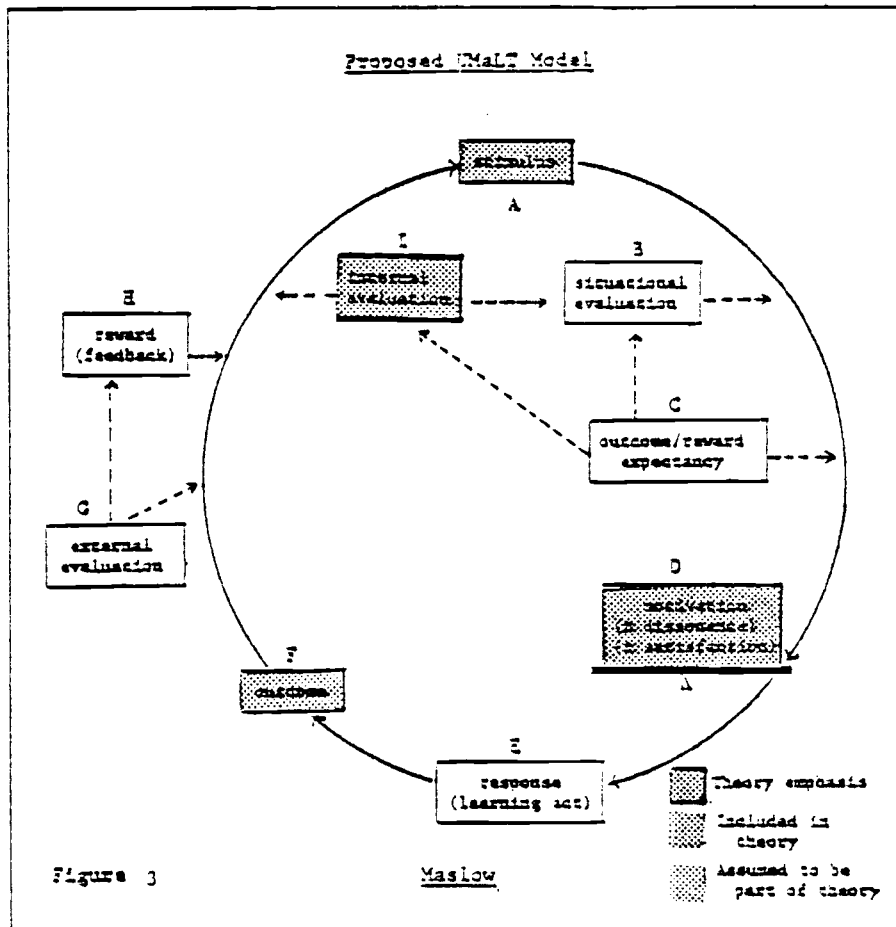
Process E is not included in Maslow's theory.

Process F:

Maslow considers both internal and external outcomes--even though he only considers internal stimuli. Although the outcome is important in his theory, it is not paramount.

Process G:

Process G is not included in Maslow's theory.

Process H:

Process H is not included in Maslow's theory even though he uses the term "reward". His use of the term is, in reality, the same as the UMALT Model's term, "outcome".

Process I:

Process I is the third major emphasized process in Maslow's

theory. It is the individual's internal evaluation that determines whether or not a need is satisfied, thus determining the stimulus. He uses such phrases and words as, "a sense of meaning and accomplishment"; "satisfaction of needs"; "enjoyment"; and "internal rewards" to indicate an individual's internal judgement or evaluation of that individual's internal or external outcome.

When Maslow refers to internal rewards, he is referring to the good feelings an individual has about an outcome. That is to say, the individual has evaluated his outcome and found it satisfying.

In summary, it can be noted that Maslow stresses three major processes--Processes A, D, and I. He acknowledges Process F, although not with as much emphasis. He does not take into consideration the influences of Processes B, C, E, G, or H.

Primarily, Maslow emphasizes inner process, and except for Process I, he places little emphasis on an individual's internal judgement. He believes that the subconscious does the driving and that the individual is merely swept along.

Application of Gestalt learning theory to the proposed UMaLT Model

Process A:

The term "problem" is consistently used throughout Gestalt discussions to indicate a stimulus. A problem (stimulus) is anything that causes a cognitive imbalance within the individual. Although a stimulus may be presented to the individual externally, it is only its effect as an inner stimulus that Gestaltists consider. Hence,

information (perception), processes (brain activity caused by environmental experiences), memory traces, repetition, and trace systems.

None of the other four theories presented in this study break this process into so many variables.

Process C:

Process C is not included in the Gestalt theory.

Process D:

Process D does not carry as much weight in Gestalt theory as it does in some of the other theories. Dissonance is often referred to as a "maintaining stimulus" in some Gestalt writings. This merely means that until the individual has come to a successful solution, they are still in a state of cognitive imbalance and thus, the original stimulus is still maintained as a stimulus that creates an internal imbalance.

Process E:

Process E is not included in Gestalt theory.

Process F:

Process F is referred to as a problem "solution" rather than "outcome" in Gestalt psychology. Since Gestaltists only consider insightful solutions to be valid proof of learning, only the inner aspect of the process is noted on the UMaLT Model in Figure 4, page 12. Although this is an important consideration for Gestaltists and unique to their theory, it does not carry as heavy an emphasis as does Process B. Consequently, it carries a medium shade on the UMaLT Model.

Process G:

Process G is not included in the Gestalt theory.

Process H:

Gestalt theorists believe that the strength of an insightful solution (Process F) is influenced by the consequences (Process H-- the reward or the punishment) of that solution. Process H is represented by a medium shade on the UMaLT Model.

Process I:

Process I is assumed. Since Gestaltists view rewards and punishments as confirming or disconfirming the attempted solution (outcomes), it must be presumed that they believe that the individual evaluates, not only the outcome, but also the reward or punishment that was received as a result of that outcome.

In summary, it can be said that Gestaltists place the greatest emphasis on Process B. They also include Processes A (inner process only), D, F (inner process only), and H. Process I is assumed.

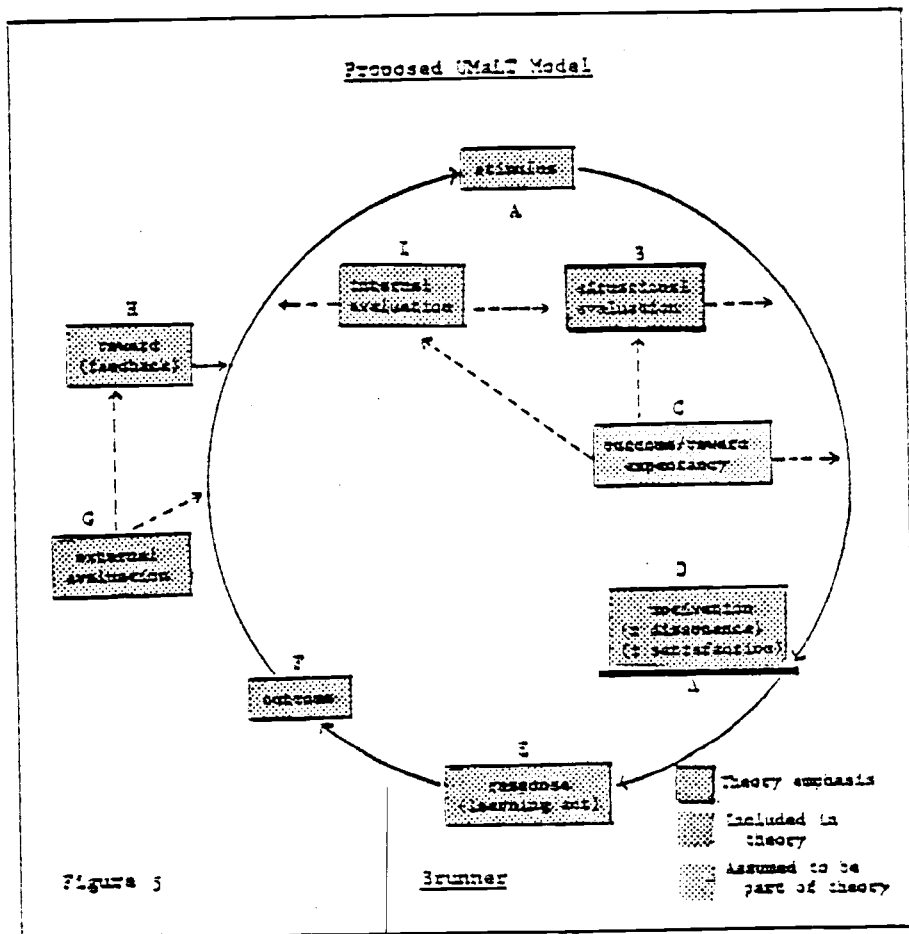
Except for Process H, Gestaltists are primarily concerned with inner processes. They believe that anything external to the individual has an inner effect and that these inner effects are the processes upon which emphasis should be placed.

Application of Bruner's humanistic learning and motivation theory to the proposed UMaLT Model

Process A:

Bruner's attention to Process A is somewhat hidden by the use

of alternative terminology. He speaks of "freeing" the individual from stimulus control through cognitive growth. His intention is to free the individual from the necessity of an external stimulus. He sees the mature individual as responsive primarily to an inner stimulus. Figure 5 below, depicts Process A with a medium shade to indicate



that although this process does not carry the same weight as Process B, it is an integral part of Bruner's theory. Both the inner and outer aspects of the process are considered.

Process B:

Process B poses the greatest emphasis in Bruner's theory. He believes that learning takes place primarily through the influence of internal reorganization of previous experiences, knowledge, expectancies, and skills. Underlying patterns that infer rules and principles allow individuals to transfer previous learnings from problem to problem.

Bruner uses the term "active" in relationship to Process B to convey the concept that the individual uses inner processes to compare and question in the selection of the individual's responses. His concept of human beings as information processors, thinkers, and creators is further evidence of his reliance on Process B as the key to understanding the learning process.

Process C:

Bruner believes that individuals must have a continuously available knowledge of results in order to be effective. This indicates that the individual perpetually expects and adjusts tav's view of tav's probable outcomes and/or rewards. Process C is illustrated with a medium shade.

Process D:

Although Bruner is dissonance-oriented with his motivational concepts, he believes that there is not much advantage in attempting to go beyond the concept of an individual, reducing the complexity of tav's environment. In other words, he acknowledges the fact that there is a dissonance-related drive that propels people toward action, but

he sees no use in dwelling on it. Consequently, Process D is noted on the UMaLT Model, but it is not given as strong an emphasis as is Process B.

Process E:

Bruner believes that individuals learn best when they are actively involved in the learning process. Although he realizes that there are internal processes that are important during the learning act, he also places importance on the effect of a hands-on approach to learning. In other words, he places a certain amount of emphasis on the response--the learning act.

His three modes of coding representation entail both internal and external learning action. The enactive mode represents an external response, whereas the iconic mode represents an internal response. The symbolic mode, with its thought-to-speech concept, represents both internal and external action. Figure 5 on page 15 illustrates Process E with a medium emphasis.

Process F:

Process F is indicated by Bruner's belief that individuals and the learning process itself are primarily goal-directed. This process is given a medium shade on the UMaLT Model.

Process G:

Process G does not play as strong a role as most of the other processes and yet it is not an assumed process. This process only comes into play when an extrinsic reward is used, thus suggesting an external evaluation. Bruner barely mentions an external evaluator

in his writings. Process G is represented with a medium shade on the UMaLT Model.

Process H:

Bruner believes that extrinsic rewards should only be used in the beginning of a learning program. He places a low value on rewards offered by someone or something other than the learner. Even with it's low emphasis, Process H is not an assumed process; therefore, it is represented on the UMaLT Model with a medium shade.

Process I:

Bruner's interest in self-evaluation in relation to the continuing motivation of the individual are reflected in Process I on the UMaLT Model. Although an individual's good feelings about task's outcomes are an important step in the learning process, this is not as strong a point in this theory as is Process B and is illustrated by a medium color on the proposed UMaLT Model.

In summary, it can be seen that Bruner takes into consideration all aspects of the proposed UMaLT Model in his learning and motivation theory. He places a major emphasis on Process B. The rest of the processes are included in the illustration even though Processes D, G, and H are not high priority processes with Bruner.

The five theories that have been presented in this module represent a cross section of disciplines in learning and motivational theories. Although the terminologies differ, processes are remarkably similar. The descriptions illustrate that the processes are continuous, with each process leading to the next process. Each process

has the capability of beginning it's own interrelated/independent circle with the original circle continuing.

The use of a common schematic model on which to display seemingly unrelated theories enables students and theorists alike to better compare, analyze, and understand the various learning and motivational theories. It makes theory interrelatedness, as well as differences, more obvious and discussable.

MODULE #4

DELPHI TECHNIQUE LITERATURE REVIEW

by

Mickey Parker

1981

DELPHI TECHNIQUE LITERATURE REVIEW

This literature review is not meant to be comprehensive. Its purpose is to provide participators in this study with a brief, handy reference. A bibliography is included for those who desire to follow up any references used in this review.

The Delphi program of action was originally developed as a predictive tool to forecast the effects of a nuclear attack on the United States in the 1950's. Olaf Helmer is credited with being one of the originating fathers of this technique and is the authority most often quoted in the literature.

A Delphi design is used to generate judgmental information and

"... may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem." (Linstone and Turoff, 1975:3)

Helmer (1966:1) notes that the "... Delphi technique is a method for the systematic solution and collation of expert opinions." He believes that this method of investigation is applicable whenever outcomes need to be based on informed judgments.

To accomplish a "structured communication", the use of the Delphi technique provides (Linstone and Turoff, 1975:3):

1. Feedback of individual contributions or information and knowledge.
2. An assessment of the entire group's judgments.
3. An opportunity for each individual to revise their views.

4. A degree of anonymity for individual responses and for each individuals.

As can be seen by these four points, the results of a Delphi can be discerned as the product of a carefully designed and managed interaction among individuals, information, and judgments. It is these interactions that create such a unique outcome.

Linstone and Turoff (1975:4) list situational characteristics that lead to the need for using a Delphi process. The Delphi technique is useful when:

1. The problem does not lend itself to precise analytical techniques.
2. The problem can benefit from subjective judgments on a collective basis.
3. Time and money make frequent group meetings infeasible.
4. The heterogeneity of the participants must be preserved to assure validity of the results.
5. Avoidance of the possibility of disagreements among individuals that might bring about severe or politically unpalatable responses that could possibly necessitate refereeing.

Taking into account the above statements, it can be seen that the development of a model is an authentic application of the Delphi treatment. Gideon, et al (1971), in their study of adult/continuing education, present a model similar in structure to the proposed UMALT Model, developing it through the use of a Delphi technique.

Fintzy (1974) also used this tool to develop a Conceptual Career

Educational Model. Although Fintzy's model was primarily descriptive in nature, he finalized his study with a schematic representation.

Hellreiger and Slocum (1974:226-227) outline the Delphi process in six major, generally accepted steps. These six steps are:

1. A questionnaire is sent to specified experts who respond and return the questionnaire to the sender.
2. A summary of the responses is compiled and is fed back to the participants, requesting that they revise their earlier responses if they feel it is appropriate.
3. A new summary is prepared from their returned reactions, but with a major difference: Those experts whose responses significantly deviate from the median, are asked to justify those responses.
4. Summaries are again prepared and returned to the participants along with the stated justifications. This time, rationalizations of the counterpositions are sought.
5. The counterpositions are fed back with the request for additional appraisals.
6. A final summary is made when a consensus or near consensus is reached.

As can be seen by the above statements, this technique involves the systematic refinement of experts' opinions to arrive at a general consensus. These steps, in essence, are the steps that this Delphic study will follow. The questionnaire that accompanies this Informational Packet for the Delphi panel is Step 1.

Helmer(1966:4) defends the value of the Delphi technique even when no clear-cut consensus is achieved. He believes that even then, the technique produces a narrowing of the original spread of opinions and a condensing of the reasoning process. This helps clarify the issues by reducing the number of positions to be considered. It is hoped that a general consensus will be reached in this study; however, if it is not, a near consensus will be accepted.

APPENDIXSELECTED BIBLIOGRAPHY

- Fintzy, Leonard E. "The Epistemology of Career Education and the Development Via Delphi Technique of the Conceptual Career Education Model for Yonkers, New York," Interim Report, Career Education Project, (Office of Education, Washington, D.C., June 1974).
- Gideon, Victor C., King, A. Patricia, Runyan, Harry M., Sutherland, Michael R. "Terminology About Adult/Continuing Education: A Preliminary Structure and A Suggested Development Process," Systems Management Corporation, Boston, Massachusetts, (For U.S. Department of Health, Education, and Welfare/Office of Education National Center for Educational Statistics, November 1971).
- Hellriegel, Don and Slocum, Jr., John W. Management: A Contingency Approach. California: Addison-Wesley Publishing Company, 1974.
- Helmer, Olaf. The Use of the Delphi Technique in Problems of Educational Innovations. California: The Rand Corporation, December 1966.
- Linstone, Harold A. and Turoff, Murray (eds.). The Delphi Method: Techniques and Applications. Massachusetts: Addison-Wesley Publishing Company, 1975.

MODULE #5

MOTIVATIONAL AND LEARNING THEORIES LITERATURE REVIEW

by

Mickey Parker

1981

APPENDIXTABLE OF CONTENTS

Festinger's motivational theory of cognitive dissonance	1
Skinner's reinforcement theory	4
Maslow's hierarchial motivational theory	9
Gestalt learning theory	13
Bruner's humanistic theory of learning and motivation	21
Selected Bibliography	30

MOTIVATIONAL AND LEARNING THEORIES LITERATURE REVIEW

This literature review is not meant to be comprehensive. Its purpose is to provide participators in this study with a brief, handy reference. A bibliography is included for those who desire to follow up any references used in this review.

Five major theories/theorists will be presented, representing a cross-section of motivational and learning theoretical thought. These theories will be presented in this order:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement theory.
3. Maslow's hierarchial motivational theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of learning and motivation.

Festinger's motivational theory of cognitive dissonance

Cognitive theories permeate, in one way or another, almost all of the other theories. Hergenhahn (1976:311) notes that Tolman defines cognitive dissonance as "a psychological state experienced when there is a discrepancy between what is expected and what actually occurs." Other terms used for cognitive dissonance are: drive, dis-equilibrium, expectancy, and motivation.

Festinger defines cognitive dissonance in much the same terms as Tolman. According to Huse and Bowditch (1973:300), Festinger theorizes that "when a person's beliefs do not conform to what actually

occurs, the person experiences a psychological state called cognitive dissonance." Festinger is further interpreted as explaining that cognitive dissonance is a negative drive state and that those who experience it attempt to find ways to reduce the drive. An example is a person who is hungry, seeking to reduce the hunger drive by eating.

Festinger then extends this concept from the physical to the cognitive by theorizing that if a discrepancy exists between an individual's behavior and that individual's evaluation of that behavior, that individual will justify and rationalize *tav's*¹ behavior so as to reduce the discrepancy (Perkins, 1974:65). In other words, for Festinger, as for Tolman, cognitive dissonance is an inconsistency between an individual's behavior and *tav's* cognitive response toward that behavior.

The cognitive dissonance theory is more complex than it seems on the surface. It concerns itself particularly with the complex interrelations among the judgments and beliefs that humans have about many numbers of people, objectives, issues, and other elements in the environment that fill a human being's cognitive life space (Chaplin and Krawiec, 1974:663-664).

Reducing this complex notion to its simplest form, Festinger believes that the relationship between two cognitive elements are reduced to three possibilities. These three possibilities are:

1. Irrelevance--when the beliefs have no bearing on each other.

¹Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s) and is used throughout this paper in an effort to neutralize gender.

2. Consonance--the result of the implication if the two conditions or beliefs are consistent with each other.
3. Dissonance--when the two beliefs contradict each other or imply inconsistent conclusions.

Festinger expands on this last possibility by explaining that it is not just simple inconsistency that produces dissonance. But rather that the two beliefs must have confounding behavior implications.

It is this idea of behavior implications that brings to light a crucial aspect of this theory. This circumstance of physical, emotional, or cognitive dissonance is a drive or motivational state. As noted earlier, a dissonant relationship between two beliefs creates an unpleasant drive-like state which instigates a process to reduce the dissonance and restore the person to a balanced or consonant state. This motive to reduce dissonance is comparable to achieving a kind of cognitive homeostasis.

Hoy and Miskel (1978:94) quote Leavitt and Dell as stating,

"... we must remember motives are not things. They are states of mind that spring chiefly from deficiencies, from felt lacks, from an imbalance between what people have and what they want."

This quote summarizes the essence of Festinger's motivational theory of cognitive dissonance more aptly than most. Festinger's belief that humans are driven to act because of a feeling of imbalance, is repeated throughout motivational and learning theories.

Skinner's reinforcement theory

Skinner is one of the most widely cited learning theorists today. His theoretical concepts are easily understood and easily applied to education and human behavior.

He is considered the father of programmed learning, which in reality is the educational application of his theory. He is also considered the initiator of the behavioral modification movement (although the beginnings of this approach can be seen in Hull's work). This method of behavioral engineering has become the most widely used, and many feel the most effective method of working with disturbed and retarded people.

Skinner's concepts emphasize the effects of a response on the response itself. He concludes that the reward changes the probability of the response recurring.

He is a "pure" behaviorist whose mechanistic theories view people as machines that are being pushed around by various forces. He virtually ignores inner processes, although he believes that exhilaration or good feelings can act as an incentive. He feels that such concepts as motivation merely interfere with the understanding of human behavior (Hoy and Miskel, 1978:95). He views internal drives or incentives as relatively useless explanatory constructs that are similar to personality traits (Hilgard and Bower, 1975:243).

Skinner proposes that behavioral occurrences must be described in terms of things that directly affect behavior. He feels that it is

inconsistent with logic to attempt to explain behavior in terms of physiological events. Consequently, his method of research is frequently referred to as "the empty organism approach" (Hergenhahn, 1976:113).

Skinner distinguishes two kinds of behavior. They are:

1. Respondent behavior.
2. Operant behavior.

Respondent behavior is produced by a known stimulus (Hergenhahn, 1976:84). Reflexes, such as jerking one's hand when touching a hot stove or dilation of the eye when presented with a darkened room, are everyday examples of respondent behavior. Put simply, respondent behavior is dependent on the stimulus that precedes it.

Operant behavior, on the other hand, is not produced by a known stimulus. It is arbitrarily produced by the individual (Hergenhahn, 1976:84). Examples of operant behavior are: Learning to sing, ice skating, or standing up and walking around the room. In fact, most of our everyday activities can be considered operant behavior.

Skinner does not contend that operant behavior occurs independently of stimulation, but that the stimulus that causes this behavior is unknown and that it is not important to know its cause. This is consistent with his lack of attention to inner processes.

He stipulates that operant behavior is controlled by its consequences (rewards) and that these consequences are necessary to increase operant strength. Consequences can be positive or negative. Negative consequences are oftentimes construed as punishment. Punishment has a wide range of effects, although generally it suppresses the response.

Skinner emphasizes that reward and punishment do not differ merely in the direction of the changes they induce. Positively rewarded behavior is likely to be repeated, whereas negatively rewarded behavior is not always likely to disappear. In fact, punished behavior will probably reappear after the punitive contingencies are removed. Consequently, Skinner argues against punishment because he says that it is ineffective in the long run (Hergenhahn, 1976:103). In other words, it seems that punishment merely suppresses behavior and when the threat of punishment is removed, the rate with which the behavior occurs returns to its original level. So punishment that often seems to be successful has in fact only produced a temporary effect.

Skinner finally concluded that simple non-reward is as effective in extinguishing a habit as a non-reward plus punishment. An example of this concept is when a mother of a young child ignores tav's temper tantrum (non-reward) versus dealing with the situation in the same way but also sending tav to bed without tav's dinner (punishment). In other words, he believes that the most effective process for eliminating undesirable action is to ignore the unacceptable behavior because behavior persists only when it is being rewarded in some way. This is true whether it is desirable or undesirable behavior.

Along with the two kinds of behavior described, Skinner enumerates two kinds of conditioning. They are (Hergenhahn, 1976:85):

1. Type S conditioning.
2. Type R conditioning.

Type S conditioning (also called respondent conditioning) is

identical to Pavlov's classical conditioning. It is called type S conditioning to emphasize the role of the stimulus in eliciting the desired response. The strength of the conditioning is generally determined by the magnitude of the conditioned response.

Type R conditioning (also called operant conditioning), on the other hand, emphasizes the behavior and its consequences--its rewards (Hergenhahn, 1976:87). In other words, the individual must respond in such a way as to produce the reinforcing stimulus. It is called type R conditioning to emphasize the necessary response. It is also called operant conditioning because it involves operant behavior. It is this type R conditioning that shows the strength of conditioning by the response rate.

This operant conditioning process exemplifies contingent reinforcement, since getting the reward is contingent upon the individual's producing a certain response. Hergenhahn (1976:87) explains contingent reinforcement: Reinforcement happens only if a certain response is made. If the response is not made, the individual does not receive the reward. Skinner's research has been concerned almost entirely with type R, or operant conditioning.

There are two general principles associated with type R conditioning. They are (Hergenhahn, 1976:86):

1. Any response that is followed by a reinforcing stimulus tends to be repeated.
2. A reinforcing stimulus is anything that increases the rate with which an operant response occurs.

Skinner does not suggest a rule that could be followed in discovering what would be an effective reinforcer. He merely says that whether or not something is reinforcing can only be determined by its effect on behavior. In other words, he is not concerned with what the reinforcer is--merely its effect on behavior.

Behavior modification is a popular use of operant conditioning principles. Skinner believes that to modify behavior, one merely has to find something that is rewarding for the individual whose behavior one wishes to modify. Then wait until the desired behavior occurs and immediately reward the individual. The rate at which the desired response occurs goes up when this is done.

In summary, Skinner is considered the father of behavioral modification and programmed learning. His influence is wide-spread in educational circles and child-rearing practices.

Most learning theorists look upon learning as a process that results in behavioral change. However, Skinner says that behavioral changes are learning and that no further process needs to be inferred.

Although Skinner does not like to be considered purely a behaviorist, his theory definitely falls into this category. His theory depends on modifying behavior through a reinforcement program.

Therefore, according to Skinner, if one controls the rewards, one can also control the behavior. This is a most powerful statement because it becomes not a question of whether behavior is going to be controlled, but who or what is going to control it.

Maslow's hierarchical motivation theory

Maslow's needs hierarchy has many followers as well as disclaimers. Since he first enumerated his five levels of needs, others have modified them from a minimum of two levels to a maximum of twenty levels or classes of needs.

Maslow theorizes that needs are arranged in a hierarchy in such a way that the lower-level needs must be satisfied before the higher-level needs come into play. His hierarchy is actually an intuitive needs ranking. The five levels are:

1. Physiological.
2. Safety.
3. Belongingness.
4. Esteem.
5. Self-Actualization.

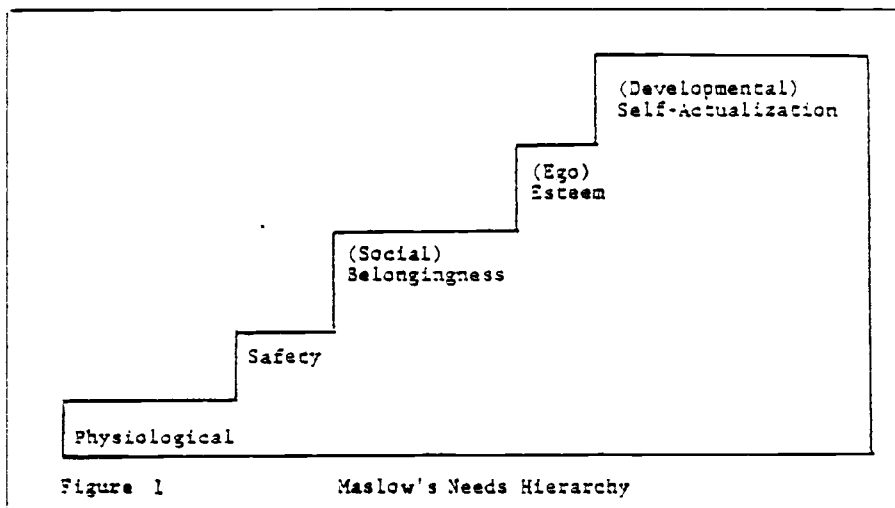
This hierarchy was not originally based on any empirical foundation, but was derived primarily from Maslow's own clinical experiences (Campbell, et al. 1970:354). Figure 1 on page 10 graphically illustrates his hierarchy.

This model of self-developing and self-actualizing (hereafter noted as S-A) individuals is based on the assumption that people have innate needs to grow and mature. Maslow assumes that people feel a sense of meaning and accomplishment in their life and work. As lower-level needs are satisfied, higher-level needs become activated.

In Huse and Bowditch (1973:64), Maslow's assumptions are stated

in this manner:

- " 1. Motives in the adult are highly complex, and no single motive affects behavior. Rather, a number of motives may be in operation at the same time.
2. There exists a hierarchy of needs so that in general, lower-level needs must be at least partially satisfied before a high-level need is satisfied.
3. A satisfied need is not a motivator. When a need is satisfied, another emerges to take its place so that in a sense, man always remains a wanting being. "
4. The higher-level needs can be satisfied in many more different ways than can the lower-level needs. "



Two levels can operate at the same time, but the needs at the lower level take precedence. With this fact in mind, Huse and Bowditch (1973:66) comment that since the hierarchy covers such a wide span, not all motives may be classified at one place at one time. In other words, some aspects of a student's day may be more satisfying than others.

Some motives may be involved in class behavior or behavior in a particular class, whereas, other motives are reserved for behavior in other classes. An example of this is the music-loving student who is prompt, prepared, and attentive in band, but exhibits tardy, unprepared, inattentive, and disruptive behavior in English class.

Maslow postulates that unlike motivation based on primary drives, motivations based on growth needs do not decrease as the needs become satisfied. He argues that as people experience growth and S-A, they desire more S-A. Gaining growth creates a desire for more growth; whereas, getting food decreases the desire for food.

Vroom (1964:143) notes that there should be substantial individual differences in the strength of the S-A need. He feels that there should be a positive correlation between these needs and the lower needs. This hypothesis has been both proved and disproved. Quotes such as (Vroom, 1964:141): "... What a man can be, he must be...." by Maslow are too subjective to be testable.

Maslow further believes that an individual derives satisfaction from jobs which permit him to use his skills and abilities. He argues that the concept of S-A could finally explain most of the motivation in organizations--particularly at the managerial level--where people are motivated by a desire to S-A.

Maslow's hierarchy of needs is a common approach to studying motivation. However, he is frequently interpreted too rigidly. Although he maintains that most people have their basic needs in the approximate order shown in Figure 1 on page 10, Maslow notes several

general exceptions; for instance, people who desire self-esteem more than belongingness or those whose level of aspiration is permanently dead-ended or lowered (Hoy and Miskel, 1964:99).

Maslow believes that behavior is caused. He believes that people work to satisfy needs and in this sense, people are always motivated. He further believes that most of the S-A individual's behavior is motivated solely by the sheer enjoyment tav obtains from using and developing tav's capabilities (Lawler, 1973:24). In support of this statement, Hoy and Miskel (1964:116) note that Hackman and Lawler found that workers who had motivational needs for Maslow's higher order factors, tended to work harder.

In summary, it can be noted that Maslow bases his theory on two fundamental premises. They are (Hellriegel and Slocum, 1974:305):

1. Individuals are wanting beings whose needs depend on what they already have. Only needs not yet satisfied can influence behavior. In other words, a satisfied need is not a motivator.
2. Individual's needs are arranged in a hierarchy of importance. Once a need is relatively satisfied, another need emerges and demands satisfaction.

Maslow completely rejects the view that valued outcomes have to be related to such extrinsic rewards as food or water. He perceives an unending inner drive that constantly motivates human beings. In fact, he states unequivocally that (Maslow, 1965:8): "Everyone has the motivation to create and work, every child, every adult. This

can be assumed."

It can be said that Maslow sees motivation as an unending process caused by varying hierarchial levels of stimuli. He conceptualizes that various levels of stimuli can operate simultaneously. It is the success of lower-level outcomes that trigger the move to higher-level outcomes. He briefly refers to external rewards such as food, water, friends, or promotion, which are in reality, external outcomes that attempt to meet internal needs.

Gestalt learning theory

Gestalt psychology concerns itself with the organization of the mental processes. Learning is viewed as the rearrangement of previous ideas and experiences leading to new patterns of thought or insight.

Max Wertheimer is considered the founder of Gestalt psychology and Wolfgang Kohler and Kurt Koffka, co-founders. The initial work of these three was done in the late 1800's and the early 1900's. It is interesting to note that Gestalt psychology originally began as a brand of philosophical rationalism.

Gestaltists believe that people experience the world in meaningful wholes. They emphasize the pattern, the Gestalt, the wholeness of experience and its recollection. They oppose reductionism of any kind. That is to say, they do not believe in reducing things to the smallest of parts.

Terms often used to describe Gestalt are: holistic, molar, subjective, nativistic, cognitive, and phenomenological. The only word

that might need further clarification is the term molar. Molar, used in this context, is defined as a large segment of behavior that is goal-directed and purposive (Hergenhahn, 1976:239).

Gestalt is the German word for configuration or organization.

The definition given in the Dictionary of Education (Good, 1959:248) is:

"(Ger., lit, "configuration," "total structure," "form," or "shape") a term designating an undivided articulate whole that cannot be made up by the mere addition of independent elements, the nature of each element depending on its relationship to the whole."

This says that the Gestalt phenomenon or the phenomenological experience is different from the parts that make it up. In fact, the total is more than the sum of its parts. Each person adds something to their experience that is not contained in mere sensory input data. Gestaltists insist that this something is organization--that the brain organizes sensory information to make the experience more meaningful.

Gestalt psychology explains knowledge and recognition of items through the concept of perceptual constancy. Perceptual constancy refers to the fact that people see an object as the same object under a variety of circumstances. Even though the actual stimulation changes radically, the meaning of the object remains constant. In other words, the meaning an object conveys is much more important than the actual physical stimulation involved. Hergenhahn (1976:246) explains this by saying that, the fact the brain recognizes the same object in various circumstances, makes conscious experiences much more harmonious than if individuals had to learn to recognize an object anew each time it was

presented in a different way.

The law of Pragnanz is used as the Gestaltists' guiding principle in the study of perception, learning, memory, personality, and psychotherapy. Hergenhahn (1976:241) quotes Koffka as defining the law of Pragnanz as follows: "Psychological organization will always be as good as the controlling circumstances permit." To Koffka, the term good implies such qualities as simple, concise, symmetrical, and harmonious. In other words, there is a tendency for every psychological event to be meaningful, complete, and simple. A good figure, a good perception, or a good memory cannot be made more simple or more orderly through any kind of perceptual change or shift. To put it simply, Koffka believes that there is nothing more a person can do mentally that can make the conscious experience any more organized.

Following the law of Pragnanz, Gestaltists believe that memories tend to be complete and meaningful--even when the original experience is not. Irregular experiences tend to be remembered as regular, unique events, or they are remembered in terms of something familiar. Minor flaws or discrepancies in a memory tend to be forgotten.

Koffka reasons that if learning is defined as a behavior modification that results from experience, then each arousal of a process² can be looked upon as a learning experience. This experience-caused process can only occur in "pure" form. Each time a process is aroused, it modifies the individual. That modification influences future

²The term process in the Gestaltan context means the activity in the brain caused by an environmental experience.

experiences. After the experience-caused process occurs in "pure" form, then similar experiences result from the interaction between the process and the memory trace³ (Hergenhahn, 1976:259-260). As the memory trace becomes more fully established, it has an increasing effect on experience because it will influence all similar processes that occur in the future (Hergenhahn, 1976:279).

With repetition, the trace becomes more and more influential over the process. This is to say that as the individual solves more problems that are similar, they become a better problem-solver.

Hergenhahn (1976:260) notes that Koffka explains improvement in a skill is the result of the increasing influence of the trace on the process. He goes on to say that the stronger the memory trace, the stronger will be its influence on the process. A person's conscious experience will tend to be more in accordance with the trace than with the process. In other words, response becomes more automatic, with little or no conscious thought being given to the response. Most authorities would say at this point, that a habit has been established.

Just as the individual trace exerts a greater influence on future processes as it becomes fixed, so does the trace system exert greater influence on related processes as it becomes more fixed. The trace is composed of the numerous interrelated individual traces.

Koffka assumes that through repetition, the trace system becomes more important than the individual traces that make it up (Hergenhahn,

³Memory traces are the remnants of an environmental experience after the experience is finished.

1976:260). This is a holistic attitude. Hergenhahn (1976:260) goes on to explain this phenomenon:

"Every complex skill can be looked upon as consisting of many processes and their corresponding traces, and yet each of the individual traces have in common that they are related to the same skill.... The 'wholeness' quality of the skill comes to dominate the individual traces, thereby causing them to lose their individuality."

Gestaltists are thought of as nativists because they believe that important characteristics of the mind exist independently of experience. They believe that the brain acts on incoming sensory information so as to make it meaningful and organized (the law of Pragnanz). They do not believe that this is a learned function, but that it is the result of the brain's structure. They further believe that the organizational abilities of the brain are genetically determined and occur in every normal brain (Hergenhahn, 1976:240).

Although Gestaltists primarily stress the genetic factor, they also take into account the effects of experience. Gestaltists believe that repetition results in improvement of skill.

Gestaltists look at learning as a special problem in perception. They believe that when an individual is confronted with a problem, a state of cognitive disequilibrium is set up and continues until the problem is solved. According to the law of Pragnanz, cognitive balance is more satisfying than cognitive disbalance; consequently, cognitive disbalance has motivational properties that cause individuals to attempt to regain the balance of their mental system (Hergenhahn, 1976:248).

To motivate an individual, Gestaltists put the individual into a problem situation. The problem provides maintaining stimuli or disequilibrium which persists until the problem is solved. At this point, the drive or disequilibrium is reduced, the maintaining stimuli is terminated, and cognitive balance is obtained.

Gestaltists feel that it is important for the effect of reward and punishment to be perceived by the individual as belonging to the outcome. That is to say, they view rewards and punishments as confirming or disconfirming the attempted problem solutions (Hilgard and Bower, 1975:276-277).

Gestalt theorists also believe that they have been able to demonstrate that the learner goes from the unlearned state to the learned state very rapidly and not bit-by-bit. They further believe that a problem can only exist in one of two states--solved or unsolved. They believe that there is no state or partial solution in between (Hergenhahn, 1976:248).

Hergenhahn (1976:254) explains the problem-solving process that humans go through. He says that the individual runs through a number of "hypotheses" concerning an effective way to solve the problem. The individual thinks about all of the ingredients necessary to solve that problem. Tav then puts them together cognitively, first one way and then another, until the problem is solved. So, although Gestaltists sometimes refer to trial and error, they are referring to a cognitive perception rather than a behavioral act.

Insight is said to have developed when the individual decides

that tav has discovered the correct strategy to deal with a problem. When this solution comes, it comes suddenly. In other words, Gestaltists say that the individual gains insight into the answer to the problem.

For insightful learning to take place, it is important that the individual be exposed to all of the elements of the problem. If some of the facts are unknown to the individual, tav's behavior will seem to be blind and groping (Hergenhahn, 1976:254).

Transposition is the process of applying a principle learned in one problem-solving situation, to the solution of another situation (Hergenhahn, 1976:255). Hergenhahn (1976:260) goes a step further by explaining the Gestalt view; if the last thing a person does in a problem-solving situation is to solve a problem, then the solution becomes "etched" in that person's mind. This is based on Koffka's acceptance of the recency principle, which states that what an individual does last in a situation is what tav will do if the situation recurs.

Gestaltists believe that whatever happens to a person influences everything about tav. They believe that the environment is made up of interdependent events. This concept is labeled field theory. In psychology, field theory assumes that behavior and/or cognitive processes are the function of many variables that exist simultaneously. A change in any one of the variables, changes the effect of all of the others (Hergenhahn, 1976:263). Thus, people exist in a continually changing field of influences and a change in any one of them affects

all of the others.

In summarizing the basic Gestalt theory, it can be seen that their major concern is with the organization of mental processes. They believe that people tend to perceive organized patterns, not individual parts that are merely added together. According to them, the relationship between different parts of a stimulus gives people their meanings. They believe that all sensory input must be studied together in order to understand relationships.

Gestaltists view unsolved problems as creating an organizational disbalance in an individual's mind--a condition that is unnatural. This ambiguity is looked upon as a negative state that continues until the problem is solved. They believe that there is no in-between--problems are either solved or unsolved. To the Gestaltists, it is the unsolved problem that institutes motivation.

The Gestalt psychologists believe that the after-effects do not act automatically and unconsciously to strengthen prior acts. Instead, the effect has to be perceived as belonging to the prior act.

Gestaltists generally agree that learning takes place when the individual comes to understand the basic structure or pattern of relationships. Learning, to them, occurs when people recognize the relationships of parts to parts and/or parts to the whole. Learning is complete when experiences are perceived in a new and more meaningful way.

Bruner's humanistic theory of learning and motivation

Bruner is identified as a cognitive learning and developmental psychologist. His approach to psychology is eclectic and kernels of his thinking can be traced back to decades of great thinkers and psychologists.

He seems not to have developed a systematic learning theory as such. Instead, a generalized theory about, and an outlook concerning, learning is implicit in his various works. His principle concern is with the means whereby people actively select, retain, and transfer information. This is the essence of learning for Bruner.

According to Bruner, individuals do not mechanically associate responses with specific stimuli. Instead, they tend to infer principles or rules that underlie patterns which allow them to transfer their learning to different problems (Bigge, 1976:247). He also sees learning as being goal-directed.

His feelings on motivation are fairly dissonance-oriented. He believes that there is not much advantage in trying to go beyond such concepts as a person attempting to reduce the complexity of his environment. He believes that individuals have a drive to group things in terms of instrumental relevance.

Bruner's view of learning has two unifying themes. They are (Bigge, 1976:248-249):

1. Knowledge acquisition is an active process.
2. An individual actively constructs his knowledge through

relating incoming information to a previously acquired psychological frame of reference.

When Bruner uses the term active, he is referring to an inner process in which the individual compares, questions, and selects tav's responses. In fact, Bruner sees this selective intention of self-imposed direction as having a biasing effect on knowledge and its use.

When he uses the term, frame of reference, he means a system of representation or an internal model that gives meaning and organization to the regularities in experience and allows an individual to go beyond the information given tav. In other words, Bruner is saying that each individual is an active participant in the knowledge-getting process. The individual selects and transforms information, constructs hypothesis, and alters tav's hypothesis in light of inconsistent or discrepant evidence. He sees humans as information processors, thinkers, and creators.

Bruner places great emphasis upon the structured models of the world with which a culture equips its members. In essence, these models of the world are the experiences that an individual has, that help tav learn about the world in a way that enables tav to make predictions about what comes next (Bigge, 1976:250). Such models make it possible for people to predict, interpolate, and extrapolate further knowledge. The existence of these models of the world reflects a general tendency to categorize. Experiences are organized to represent, not only particulars, but also classes of events from which the particulars are examples.

For Bruner, learning involves three almost simultaneous processes. They are (Bigge, 1976:250):

1. Acquisition of new information.
2. Transformation of knowledge.
3. Checking the pertinence and adequacy of knowledge.

Bruner labels his view of learning as instrumental conceptualism. As mentioned, these views or beliefs are centered around two basic tenets that concern the nature of the knowing process. To recap, they are (Bigge, 1976:251):

1. An individual's knowledge of the world is based on tav's constructed models of reality.
2. Tav adopts these models from tav's culture, then adapts them to tav's individual use.

Therefore, it can be seen that an individual's perception of an event is primarily a constructive process within which tav infers a hypothesis by relating tav's sense data to tav's model of the world; then tav checks tav's hypothesis against additional aspects of the event. The individual cannot be viewed as a passive, reactive organism, but rather as an individual who actively seeks information, forms perceptual hypotheses, and at times, distorts the environmental input in order to reduce surprise and attain valued goals. Bruner sees this perception act as one of categorization that is based upon an individual making an inferential leap from observed cues to identifying a class of objects.

Learning--cognitive growth--depends upon an individual's

internalizing events into a type of storage system that corresponds to certain aspects of the environment. Through cognitive growth, an individual is able to gain freedom from stimulus control due to this mediating process. This type of mediating process transforms the stimulus prior to response. It can be said that an individual's maturing intellectual or cognitive growth is characterized by an ever-increasing independence on tav's responses from the immediate nature of the stimuli that are involved.

As has already been noted, Bruner opposes the idea that people are passive receptors of perception, concept attainment, and reasoning. He believes that each individual's acquisition of knowledge depends on an active process of construction. Consequently, it is not surprising that he equates learning with thinking (Bigge, 1976:254). For him, thinking is the process whereby an individual makes sense of the confusion of perceived facts using the processes of categorization and conceptualization.

According to Bruner, individuals categorize by concepts, such as primary colors, personality traits, size, use, and so on. Conceptualization occurs through the use of strategies.⁴

He equates intelligence with culture. He feels that, to a great extent, intelligence is the internalization of the "tools" provided by a given culture. In other words, for Bruner, the phrase culture free means intelligence free.

⁴The term strategy, means any decision-making sequence that requires mental events that are goal-oriented.

Bruner integrates his theories about learning with instructional theories. He believes that a theory of instruction must concern itself with both learning and development.

He points out that a theory of instruction is both prescriptive and normative. It is prescriptive in that it proposes rules for achieving knowledge or skill and provides techniques for measuring or evaluating outcomes. It is normative in that it sets goals to be achieved and deals with conditions for meeting those goals (Hilgard and Bower, 1975:618).

According to Bruner, there are four features that instructional theories must encompass. They are (Hilgard and Bower, 1975:618):

1. There must be a predisposition to learn.
2. There must be a structure of knowledge.
3. There must be a specific sequence to the presented materials.
4. The nature and pacing of rewards (moving from extrinsic to intrinsic rewards) must be specified.

Bruner believes that knowledge has a hierarchical structure which may be expressed in each of three modes of representation through the coding or structuring system that an individual develops. He emphasizes these three modes of representation in a developmental sequence. The three modes are (Hilgard and Bower, 1975:619):

1. Enactive--learning through action (essentially a workless learning, such as learning to ride a bicycle).
2. Iconic--based on representation through perceptual means.

A mental map that allows an individual to follow a route

from one place to another constitutes such use of an iconic code.

3. Symbolic--the translation of experience into words. This mode eventually allows the types of transformation that at the later stages, become of such great interest to Piaget, psycholinguists, and others.

Bruner says that most mature people seem to have proceeded through these three modes or systems of skills. They generally appear in the life of a child in the presented order. Each depends upon the previous one for its development. However, all three of the modes tend to interact more or less throughout an individual's life. They are partially translatable into one another.

Bruner uses the terms, coding or coding system to mean a set of contingently related, nonspecific categories that make up an individual's pattern of enactive, iconic, and symbolic representation. An individual's coding system constitutes the structure of that individual's knowledge. In other words, it is this coding system that makes it possible for a person to go beyond the information given. It allows that person to develop inventive behavior and to be creative. Most of what other theorists call transfer of learning can better be considered a case of an individual's applying learned coding systems to new events. A negative transfer of learning characterizes a case, of either an individual's misapplying a coding system to a new event or, of the absence of a coding system that could be applied.

Thus, it can be seen that Bruner sees this process of coding

as a process within which concepts are combined into generalizations or knowledge structures, which in turn allow both backward and forward predictions, judgments, and decisions. Successful coding produces a situation within which new instances can be recognized with no further learning required, and the memory of instances already encountered no longer depend upon sheer retention.

Bruner recommends a considerable de-emphasis of extrinsic rewards and punishments as learning factors. He believes that external reinforcement may possibly start a particular response, and may even lead to its repetition, but it does not nourish the long course of learning by which individuals build serviceable models of the world. Behavior comes under the control of the cognitive structure and operates more from within when it becomes more long-range and competency oriented. In other words, he believes that intrinsic rewards--good feelings about one's outcomes--are more important and effective than extrinsic rewards.

Curiosity is almost a prototype of the intrinsic motive, according to Bruner (Hergenhahn, 1976:352). He says that curiosity is an innate human motive. An individual's attention is attracted to something that is unclear, incomplete, or uncertain. Bruner further feels that satisfaction is gained by the achievement of clarity or even just the search for it--in other words, curiosity-oriented action.

Bruner distinguishes between two end alternative states that follow an individual's attempt to learn something or master some task. They are (Bigge, 1976:267):

1. Success and failure.
2. Reward and punishment.

Success and failure are inherent to the task at hand. Therefore, they constitute intrinsic motivation. This implies that the success or failure of the task is judged by the participant tavsself.

On the other hand, since reward and punishment are generally controlled by others, they constitute extrinsic motivation. Successful and unsuccessful attempts at problem-solving are seriously affected by the use of rewards and punishments.

As previously mentioned, Bruner is not in favor of external rewards; however, he does feel that it is often necessary in the initial stages of learning and problem-solving to resort to beginning with a regimen of praise and reward for each successful act. He is quick to add that the optimum motivational technique requires a gradual process of giving the rewarding function back to the task and the learner.

In summary, it can be said that Bruner believes that humans are information processors and are not merely passive receivers of facts. Knowledge acquisition is an active process that relates incoming information to previously acquired knowledge.

He emphasizes that it is an individual's models of the world--the experiences an individual has--that enable tav to predict outcomes. This helps the individual categorize particulars as well as classes of events.

According to Bruner, learning invloves acquisition of new information, knowledge transformation, and the checking of the application

and adequacy of knowledge according to the individual's personal perceptions. Thinking is equated with learning for Bruner.

Knowledge is categorized into three levels of hierarchies of a developmental sequence. They are: enactive, iconic, and symbolic. Although these are levels of knowledge, they are somewhat age-oriented.

Bruner's philosophies are diverse and eclectic. He is humanistic in his approach, insisting that intrinsic rewards, rather than extrinsic rewards, should be emphasized. He demonstrates Gestaltian views when he talks about people internalizing according to their own particular patterns (coding systems). The influence of several theories are evident in Bruner's theoretical concept. It can be said that he has taken what he felt was best from several disciplines and integrated it into a workable theory for learning and motivation.

APPENDIX

SELECTED BIBLIOGRAPHY

- Bigge, Morris L. Learning Theories for Teachers. New York: Harper and Row, Publishers, 1976.
- Campbell, John P., Dunnette, Marvin D., Lawler III, Edward E., and Weick, Jr., Karl E. Managerial Behavior, Performance, and Effectiveness. New York: McGraw-Hill Book Company, 1970.
- Chaplin, James P. and Krawiec, T.C. Systems and Theories of Psychology. 3rd ed. New York: Holt, Rinehart and Winston, Inc., 1974.
- Combs, Arthur W. The Professional Education of Teachers. Massachusetts: Allyn and Bacon, Inc., 1965.
- Good, Carter V. (ed.) Dictionary of Education. 2d ed. New York: McGraw-Hill Book Company, Inc., 1959.
- Hellriegel, Don and Slocum, Jr., John W. Management; A Contingency Approach. California: Addison-Wesley Publishing Company, 1974.
- Hergenhahn, B. R. An Introduction to Theories of Learning. New Jersey: Prentice-Hall, Inc., 1976.
- Hilgard, Ernest R. and Bower, Gordon H. Theories of Learning. 4th ed. New Jersey: Prentice-Hall, Inc., 1975.
- Hoy, Wayne K. and Miskel, Cecil G. Educational Administration: Theory, Research, and Practice. New York: Random House, Inc., 1978.
- Huse, Edgar F. and Bowditch, James L. Behavior in Organizations: A Systems Approach to Managing. Massachusetts: Addison-Wesley Publishing Company, 1973.
- Lawler III, Edward E. Motivation in Work Organizations. California: Brooks/Cole Publishing Company, 1973.
- Maslow, Abraham H. Eupsychian Management. Illinois: Richard D. Irwin, Inc. and The Dorsey Press, 1965.
- Perkins, Hugh V. Human Development and Learning. 2d ed. California: Wadsworth Publishing Company, Inc., 1974.
- Vroom, Victor H. Work and Motivation. New York: John Wiley & Sons, Inc., 1964.

UMaLT MODEL QUESTIONNAIRE #1

This questionnaire is composed of two parts. The first part deals only with the UMaLT Model (Unified Motivation and Learning Theory Model). The second part concerns itself with the application of five learning and motivation theories to the UMaLT Model.

Each question will require a ranking judgement from 5 (strongly agree) to 1 (strongly disagree). You are asked to circle the ranking of your choice. Each question will also offer you the opportunity to add comments to any questions you wish.

You are encouraged to refer to the Informational Packet should any additional information be needed. Although theory reviews are brief, they encompass the various processes or operations that are involved in learning/motivation. Those same processes are incorporated into the UMaLT Model applications.

It is requested that you return the completed questionnaire within seven days from date of reception. There are two reasons for this request for fast turn-around:

1. The presented and answered material will be fresher in your mind due to the shorter time span between questionnaires.
2. With less down time, the writer is better able to keep the flow of information psychologically current.

The following pages contain questions pertaining to the UMaLT Model itself as well as theoretical application to the UMaLT Model. Please answer all questions, adding comments if desired.

UMaLT MODEL QUESTIONNAIRE #1

Delphi Panel Member's Name _____

Date Questionnaire Sent _____

Date Questionnaire Returned _____

Please return completed questionnaire to:

Mickey Ann Parker

Teacher Corps

Department of Education

Idaho State University

Pocatello, ID 83209

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UMaLT Model Questionnaire #1Part 1--UMaLT Model

Please circle the ranking of your choice. Number 5 indicates that you strongly agree with the statement. Number 1 indicates that you strongly disagree. Please feel free to add concise comments to support your judgement if you so desire.

The processes below and on the next two pages adequately portray legitimate processes in the learning/motivation cycle as described in Module #2 of the Informational Packet.

	STRONGLY				STRONGLY
	AGREE				DISAGREE

1. Process A
(Stimulus)

5 4 3 2 1

COMMENTS:

2. Process B
(Situational Evaluation)

5 4 3 2 1

COMMENTS:

3. Process C
(Outcome/Reward Expectancy)

5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

	STRONGLY AGREE				STRONGLY DISAGREE
4. Process D (Motivation)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

COMMENTS:

5. Process E (Response)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

6. Process F (Outcome)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

7. Process G (External Evaluation)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

8. Process H (Reward)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

(UMALT Model Questionnaire #1, continued)

	STRONGLY AGREE				STRONGLY DISAGREE
9. Process I (Internal Evaluation)	5	4	3	2	1

COMMENTS:

10. The proposed UMalt Model includes all of the pro- cesses that take place during the learning/ motivation cycle.	5	4	3	2	1
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COMMENTS:

Part 2--Umalt Model Application

Festinger

The processes below and on the next two pages adequately portray legitimate processes of Festinger's motivational theory of cognitive dissonance, as described in Module #3 of the Informational Packet.

11. Process A (Stimulus)	5	4	3	2	1
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COMMENTS:

(UMaLT Model Questionnaire #1, continued)

FestingerSTRONGLY
AGREESTRONGLY
DISAGREE

12. Process B 5 4 3 2 1
 (Situational Evaluation)

COMMENTS:

13. Process C 5 4 3 2 1
 (Outcome/Reward Expectancy)

COMMENTS:

14. Process D 5 4 3 2 1
 (Motivation)

COMMENTS:

15. Process E 5 4 3 2 1
 (Response)

COMMENTS:

16. Process F 5 4 3 2 1
 (Outcome)

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

FestingerSTRONGLY
AGREESTRONGLY
DISAGREE

17. Process G
(External Evaluation)

5 4 3 2 1

COMMENTS:

18. Process H
(Reward)

5 4 3 2 1

COMMENTS:

19. Process I
(Internal Evaluation)

5 4 3 2 1

COMMENTS:

20. The proposed UMaLT Model
includes all of the pro-
cesses that take place in
Festinger's motivational
theory of cognitive
dissonance.

5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

Skinner

The processes below and on the next page adequately portray legitimate processes of Skinner's reinforcement learning theory, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE				STRONGLY DISAGREE
21. Process A (Stimulus)	5	4	3	2	1

COMMENTS:

22. Process B (Situational Evaluation)	5	4	3	2	1
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COMMENTS:

23. Process C (Outcome/Reward Expectancy)	5	4	3	2	1
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COMMENTS:

24. Process D (Motivation)	5	4	3	2	1
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COMMENTS:

(UMaLT Model Questionnaire #1, continued)

SkinnerSTRONGLY
AGREESTRONGLY
DISAGREE25. Process E
(Response)5 4 3 2 1

COMMENTS:

26. Process F
(Outcome)5 4 3 2 1

COMMENTS:

27. Process G
(External Evaluation)5 4 3 2 1

COMMENTS:

28. Process H
(Reward)5 4 3 2 1

COMMENTS:

29. Process I
(Internal Evaluation)5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

SkinnerSTRONGLY
AGREESTRONGLY
DISAGREE

30. The proposed UMaLT Model includes all of the processes that take place in Skinner's reinforcement learning theory.

5 4 3 2 1

COMMENTS:

Maslow

The processes below and on the next two pages adequately portray legitimate processes of Maslow's hierarchical motivation theory, as described in Module #3 of the Informational Packet.

31. Process A
(Stimulus)

5 4 3 2 1

COMMENTS:

32. Process B
(Situational Evaluation)

5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

MaslowSTRONGLY
AGREESTRONGLY
DISAGREE

33. Process C 5 4 3 2 1
 (Outcome/Reward Expectancy)

COMMENTS:

34. Process D 5 4 3 2 1
 (Motivation)

COMMENTS:

35. Process E 5 4 3 2 1
 (Response)

COMMENTS:

36. Process F 5 4 3 2 1
 (Outcome)

COMMENTS:

37. Process G 5 4 3 2 1
 (External Evaluation)

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

MaslowSTRONGLY
AGREESTRONGLY
DISAGREE38. Process H
(Reward)5 4 3 2 1

COMMENTS:

39. Process I
(Internal Evaluation)5 4 3 2 1

COMMENTS:

40. The proposed UMaLT Model
includes all of the pro-
cesses that take place in
Maslow's hierarchial mo-
tivation theory.5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

Gestalt

The processes below and those on the next page adequately portray legitimate processes of Gestalt learning theory, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE				STRONGLY DISAGREE
41. Process A (Stimulus)	5	4	3	2	1

COMMENTS:

42. Process B (Situational Evaluation)	5	4	3	2	1
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COMMENTS:

43. Process C (Outcome/Reward Expectancy)	5	4	3	2	1
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COMMENTS:

44. Process D (Motivation)	5	4	3	2	1
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COMMENTS:

(UMaLT Model Questionnaire #1, continued)

<u>Gestalt</u>	STRONGLY AGREE				STRONGLY DISAGREE
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45. Process E (Response)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

46. Process F (Outcome)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

47. Process G (External Evaluation)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

48. Process H (Reward)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

49. Process I (Internal Evaluation)	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
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COMMENTS:

(UMaLT Model Questionnaire #1, continued)

<u>Gestalt</u>	STRONGLY AGREE	STRONGLY DISAGREE
50. The proposed UMaLT Model includes all of the processes that take place in Gestalt learning theory.	5 4 3 2 1	

COMMENTS:

Bruner

The processes below and on the next two pages adequately portray legitimate processes of Bruner's humanistic theory of motivation and learning, as described in Module #3 of the Informational Packet.

51. Process A (Stimulus)	5 4 3 2 1
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COMMENTS:

52. Process B (Situational Evaluation)	5 4 3 2 1
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COMMENTS:

(UMaLT Model Questionnaire #1, continued)

Bruner

STRONGLY
AGREE

STRONGLY
DISAGREE

53. Process C
(Outcome/Reward Expectancy) 5 4 3 2 1

COMMENTS:

54. Process D
(Motivation) 5 4 3 2 1

COMMENTS:

55. Process E
(Response) 5 4 3 2 1

COMMENTS:

56. Process F
(Outcome) 5 4 3 2 1

COMMENTS:

57. Process G
(External Evaluation) 5 4 3 2 1

COMMENTS:

(UMaLT Model Questionnaire #1, continued)

<u>Bruner</u>	STRONGLY AGREE	STRONGLY DISAGREE
58. Process H (Reward)	5 4 3 2 1	

COMMENTS:

59. Process I (Internal Evaluation)	5 4 3 2 1
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COMMENTS:

60. The proposed UMaLT Model includes all of the pro- cesses that take place in Bruner's humanistic the- ory of learning and mo- tivation.	5 4 3 2 1
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COMMENTS:

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UMaLT MODEL QUESTIONNAIRE #1 COMPILATION

Part 1--UMaLT Model

Please circle the ranking of your choice. Number 5 indicates that you strongly agree with the statement. Number 1 indicates that you strongly disagree. Please feel free to add concise comments to support your judgement if you so desire.

The processes below and on the next two pages adequately portray legitimate processes in the learning/motivation cycle as described in Module #2 of the Informational Packet.

	STRONGLY AGREE					STRONGLY DISAGREE				
	5	4	3	2	1					
1. Process A (Stimulus)	<u>5</u>					(7)				

Process A Comments:

- A. Learning a new language is a response to some other stimulus which may be either internal or external. An arbitrary decision does not seem to be a clear illustration of an internal stimulus.
- B. For both.

	5	4	3	2	1		
2. Process B (Situational Evaluation)	<u>5</u>					(3)	(3)

Process B Comments:

- A. But I believe that Process C comes before B--in fact I can perceive a situation in which C becomes A (the stimulus). I think that B is really more closely G - the reflective process.
- B. I do not see the need to create this category process. Process I, in the cyclical nature of the model could encompass this.
- C. Motivation.

3. Process C	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
(Outcome/Reward Expect...	(4)	(1)	(1)	(1)	

Process C Comments:

- A. The illustration used is not necessarily true. The "for want of a nail" argument applies here. "Lifetime job options and earnings" could also depend on receiving a passing grade on a term paper.
- B. Your term paper/dissertation example assuming an extrinsically motivated reward - why not focus on the reward of quality (as self perceived) construction. Comment (4 as I perceive it; 2 as your example defines it).
- C. Both.

4. Process D	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
(Motivation)	(4)	(3)	(1)		

Process D Comments:

- A. I believe positive motivation should be illustrated with the positive side "weighing more heavily" than the negative side. D could also be influential in determining B and/or C.
- B. I do have problems with Figure 2 - to be consistent would it not be better to use dissonance/dissatisfaction to make the "tipping" follow? + ...-response confuses me?

5. Process E	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
(Response)	(4)	(2)	(1)		

Process E Comments:

- A. The effort that goes into the response is not necessarily proportional (directly or indirectly) to motivation, expectation of reward, stimulus, situational evaluation--the response may not be explained by any of these.
- B. I need more clarification if this is not to include F, then wherein his internal awareness of the process, or is one so aware? Perhaps this goes back to D?
- C. Both.

6. Process F	5	4	3	2	1
(Outcome)	(4)	(2)	(1)		

Process F Comments:

- A. The distinction between $F=E$, $F=H$, and $H=E$ is interesting, but I'm unsure how essential it is to the model at this point. In fact, at this point, I am more receptive to simple "stimulus-response" theory.
- B. Motivation.

7. Process G	5	4	3	2	1
(External Evaluation)	(3)	(2)	(2)		

Process G Comments:

- A. Necessary only to the extent that is available and vitalized.
- B. Learning.

8. Process H	5	4	3	2	1
(Reward)	(2)	(1)	(4)		

Process H Comments:

- A. This implies reflection which I'm not sure always takes place or is essential apart from E.
- B. I would create 2 processes here, one for external, one for internal.
- C. Learning - perhaps.

9. Process I	5	4	3	2	1
(Internal Evaluation)	(4)	(1)	(2)		

Process I Comments:

- A. It will also influence process A. Depending upon the amount and extent of the reflection.
- B. See comments on Process B, I would not differentiate.
- C. Both.

10. The proposed UMaLT Model includes all of the processes that take place during the learning/ motivation cycle.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
	(3)	(2)	(1)		(1)

Entire UMaLT Model Comments:

- A. "That may take place" but are not necessarily essential.
- B. All?? Who knows? After working through this, I don't see why you feel the need to use everyone else's theories. I like your theory in and of itself - it encompasses more than any of these because these were never intended to be comprehensive.
- C. The possibility must exist that the UMaLT Model may not include all processes.
- D. The model does not take into account cognitive developmental processes (ala Chomsky, Piaget) that affect both motivation and learning. The model does not account for structuralized theory.

Additional Comments:

- A. I wish that this section had been last rather than first, as I found when I looked at the specific theories that the definitions given to the various processes were extremely inadequate.

Part 2--Umalit Model Application

Festinger

The processes below and on the next two pages adequately portray legitimate processes of Festinger's motivational theory of cognitive dissonance, as described in Module #3 of the Informational Packet.

11. Process A	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
(Stimulus)	(2)	(3)		(2)	

Process A Comments:

- A. Do the beliefs provide the stimulus or does the dissonance provide the stimulus? How does one discriminate between "stimulus" and "motivation?"
- B. I don't see Fisteringer saying that the "beliefs are the stimulus, rather an event (perhaps internal or external) which does not fit a belief.
- C. 5 is undefined.

12. Process B	5	4	3	2	1
(Situational Evaluation)	(4)	(2)		(1)	

Process B Comments:

- A. How does the "situational evaluation" occur? To what extent is it a result of dissonance? To what extent is it a creator of dissonance?
- B. Joined with Process I - I would give this a dark shade.
- C. Not so much as Murray. It's more "values" than "situational evaluation."

13. Process C	5	4	3	2	1
(Outcome/Reward Expect...	((1)			(4)	(1)

Process C Comments:

- A. At this point in Module #3, I am aware of two (complimentary or competing?) frames of reference: (1) that the process being considered is "legitimate" and (2) that the process being considered is adequately described. Since process C is not included, I am at a loss for a response.
- B. This may exist ... - as the ... of solving a problem - the expected feeling of accomplishment.
- C. Not a factor.
- D. I would include this as a major source of cognitive dissonance as a challenge to essential beliefs by another person(s). There is a tangible reward in meeting this challenge.

14. Process D	5	4	3	2	1
(Motivation)	(6)	(1)			

Process D Comments:

- A. What this seems to be saying is "dissonance (consonance, ...) is the fuel that feeds the fire of motivation; the greater the dissonance, the more intense the motivation." Dissonance is not motivation.
- B. It's a motivational theory.

15. Process E	5	4	3	2	1
(Response)	(3)	(3)	(1)		

Process E Comments:

- A. "Taking action" or "considering action?"
- B. Again, not a category.

16. Process F	5	4	3	2	1
(Outcome)	(4)	(3)			

Process F Comments:

- A. Not sure how this differs with #13.

17. Process G	5	4	3	2	1
(External Evaluation)	(4)	(1)		(1)	(1)

Process G Comments:

- A. See #13 above.
- B. I don't see this as a part of the cognitive process central to Festinger.
- C. Not necessary.
- D. I believe that while it may not be stated explicitly there is an external "reality testing" in cognitive dissonance.

18. Process H
(Reward)

5	4	3	2	1
(2)	(2)		(1)	(1)

Process H Comments:

- A. See #13 above.
- B. Unless consonance is a reward.
- C. Not necessary.
- D. See 17.

19. Process I
(Internal Evaluation)

5	4	3	2	1
(3)	(3)			

Process I Comments:

- A. "Cyclical" seems to mean "reoccurring." "Continuous" seems to mean "without stopping." Can something be both?

20. The proposed UMaLT Model includes all of the processes that take place in Festinger's motivational theory of cognitive dissonance.

5	4	3	2	1
(2)	(3)	(1)	(1)	

Entire Festinger Application Comments:

- A. As described in the paper. It includes more processes than Festinger's theory--than necessary to explain Festinger's theory.
 - B. It's too comprehensive. Attribution theory (locus of control) fits your model better.
-

Skinner

The processes below and on the next page adequately portray legitimate processes of Skinner's reinforcement learning theory, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE			STRONGLY DISAGREE	
21. Process A	5	4	3	2	1
(Stimulus)	(5)	(1)			(1)

Process A Comments:

- A. Skinner makes a big point that stimulus is undefined and irrelevant in his theory.

22. Process B	5	4	3	2	1
(Situational Evaluation)	(2)			(2)	(3)

Process B Comments:

- A. See #13 above. I don't think Skinner would debate the existence of a situational evaluation; he would claim that we don't need to understand it in order to predict the behavioral activities.
- B. I don't think he deals with this.

23. Process C	5	4	3	2	1
(Outcome/Reward Expect ...)	(1)	(1)		(3)	(2)

Process C Comments:

- A. See #13 above. See also #22 above. It is the expectancy of reward that promote continued behavior.
- B. It would seem this would be necessary for positive reinforcement to work.

24. Process D (Motivation)	<u>5 4 3 2 1</u> (1) (2) (1) (2) (1)
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Process D Comments:

- A. Avoidance of dissatisfaction can also be a motivation. I'm not sure Skinner would make a distinction between "motivation" and "stimulus." It is not essential to his theory.
- B. I still think Skinner basically does without this idea.

25. Process E (Response)	<u>5 4 3 2 1</u> (3) (2) (2)
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Process E Comments:

- A. The only two parts of the UMALT Model explicit and essential in Skinner's theory are stimulus and response. It is, in fact, referred to as S-R.
- B. I think your choice of word (response) is unfortunate in this context.

26. Process F (Outcome)	<u>5 4 3 2 1</u> (3) (1) (1) (1) (1)
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Process F Comments:

- A. I would have omitted this process in favor of including Process E for the reason stated. Behavioral outcome and response are in my opinion, the same in Skinner's theory.

27. Process G (External Evaluation)	<u>5 4 3 2 1</u> (4) (1) (1) (1)
--	---

Process G Comments:

- A. I believe Skinner would agree (as you stated earlier) that we do things for our own satisfaction (internal evaluation).
- B. You don't elucidate on Process G - your remarks are more related to H.
- C. Not as such.

28. Process H (Reward)	<u>5 4 3 2 1</u> (6)
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Process H Comments:

No Comments.

29. Process I (Internal Evaluation)	<u>5 4 3 2 1</u> (1) (2) (3) (1)
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Process I Comments:

- A. Are you saying that Skinner would claim that "an individual can not be in a position to significantly control tav's own behavior?"
- B. I see this as a reflective process not a part of Skinner.
- C. Nothing is internal - at all to Skinner.
- D. "Black Box" understanding of learning.

30. The proposed UMaLT Model includes all of the pro- cesses that take place in Skinner's reinforcement learning theory.	<u>5 4 3 2 1</u> (2) (3) (2)
--	---

Entire Skinner Application Comments:

- A. See #25 above. Also see #20.
 - B. An important aspect of Skinner is timing in the process - but this may not be a significant problem omission.
 - C. Too comprehensive.
-

Maslow

The processes below and on the next two pages adequately portray legitimate processes of Maslow's hierarchical motivation theory, as described in Module #3 of the Informational Packet.

31. Process A	5	4	3	2	1
(Stimulus)	(3)	(2)			(2)

Process A Comments:

- A. "Stimulus" = "innate needs" (among others).
- B. In Maslow, this is confusing with Process I if I is internal.
- C. Stimuli in relation to Maslow is your word, not his.
- D. You define stimulus as an internal force. This violates virtually every standard definition of the term in American psychological theory. An "innate need" is not a "stimulus" in any generally accepted definition of "stimulus."

32. Process B	5	4	3	2	1
(Situational Evaluation)	(2)	(3)			(2)

Process B Comments:

- A. An "internal evaluation" from your point of view is not "situational"??!
- B. Again place with I.
- C. Evaluation?? - maybe situation - definitely.
- D. "Situational evaluation" is a strong element of "self-actualization" and perhaps "self-esteem." Also, the way you define "situational analysis" in the Gestalt theory comes very close to how you define "stimulus" w/Maslow.

33. Process C 5 4 3 2 1
 (Outcome/Reward Expect... (1) (2) (3) (1)

Process C Comments:

- A. From your point of view is "important" the same as "essential?"
 (Transfer this response and comment to #36.)
- B. I'd like a definition of this term.

34. Process D 5 4 3 2 1
 (Motivation) (4) (2) (1)

Process D Comments:

- A. "Determined by the internal evaluation" not the "situational evaluation?"

35. Process E 5 4 3 2 1
 (Response) (1) (2) (1) (1) (2)

Process E Comments:

- A. An individual has innate needs that do not incur a response?!?
- B. I have a hard time here - the category is not clear to me so troubles my response.
- C. Not necessary.
- D. Maslow is more concerned with processes.

36. Process F 5 4 3 2 1
 (Outcome) (2) (1) (2)

Process F Comments:

- A. I don't see the difference between #33 and #36.
- B. Would need satisfaction be an outcome? (Your model does suggest internal outcomes)

37. Process G	5	4	3	2	1
(External Evaluation)	(3)	(2)		(1)	

Process G Comments:

- A. See #13 above.
- B. O.K. in low levels of need, it's not a factor in upper levels.

38. Process H	5	4	3	2	1
(Reward)	(3)		(1)	(1)	(2)

Process H Comments:

- A. See #13 above.

39. Process I	5	4	3	2	1
(Internal Evaluation)	(5)	(1)			(1)

Process I Comments:

- A. You seem to be stating that Maslow would not distinguish among #33, 36, 38, and 39.
- B. At all stages?

40. The proposed UMaLT Model	5	4	3	2	1
includes all of the pro-	(1)		(4)	(1)	
cesses that take place in					
Maslow's hierarchical mo-					
tivation theory.					

Entire Maslow Application Comments:

- A. See #20 above.

I don't feel Maslow's hierarchy is consistent in the model-- i.e., internal evaluation is of a different type as one goes through the stages.

- C. You don't get at the needs replacing one another on higher levels, reality = perception of reality, or some people are poor choosers and never learn from mistakes.

- D. Yes, but it trivializes the Maslow model.
-

Gestalt

The processes below and those on the next page adequately portray legitimate processes of Gestalt learning theory, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE					STRONGLY DISAGREE				
41. Process A	5	4	3	2	1					
(Stimulus)	(3)	(2)	(1)						(1)	

Process A Comments:

A. "Stimulus" and "problem" are synonymous.

42. Process B	5	4	3	2	1					
(Situational Evaluation)	(5)	(1)	(1)							

Process B Comments:

A. And all of these "variables" are synonymous with "situational evaluation" but discrete from any other process.

B. ... with I.

43. Process C	5	4	3	2	1					
(Outcome/Reward Expect...)	(1)	(2)	(2)						(1)	

Process C Comments:

A. See #13.

B. Sometimes not a factor.

44. Process D	5	4	3	2	1					
(Motivation)	(4)	(2)	(1)							

Process D Comments:

A. So Process D is synonymous with Process A "stimulus?"

45. Process E (Response)	$\begin{array}{ccccc} \underline{5} & \underline{4} & \underline{3} & \underline{2} & \underline{1} \\ (2) & (2) & & (1) & (1) \end{array}$
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Process E Comments:

- A. See #13.
- B. It's really not an important factor.

46. Process F (Outcome)	$\begin{array}{ccccc} \underline{5} & \underline{4} & \underline{3} & \underline{2} & \underline{1} \\ (2) & (2) & (3) & & \end{array}$
----------------------------	---

Process F Comments:

- A. Doesn't necessarily effect repetition or continuation.
- B. See #45.

47. Process G (External Evaluation)	$\begin{array}{ccccc} \underline{5} & \underline{4} & \underline{3} & \underline{2} & \underline{1} \\ (3) & & (1) & & (2) \end{array}$
--	---

Process G Comments:

- A. See #13.
- B. Who is the judge of whether a solution is "insightful?"

48. Process H (Reward)	$\begin{array}{ccccc} \underline{5} & \underline{4} & \underline{3} & \underline{2} & \underline{1} \\ (1) & (2) & (2) & (1) & (1) \end{array}$
---------------------------	---

Process H Comments:

- A. I don't think that this outside feedback is a part - centered in I.
- B. I'd give you this if reward weren't so connotatively a payoff as in positive reinforcers.

49. Process I (Internal Evaluation)	$\begin{array}{ccccc} \underline{5} & \underline{4} & \underline{3} & \underline{2} & \underline{1} \\ (5) & (1) & (1) & & \end{array}$
--	---

Process I Comments:

- A. "Insight" is an essential part of the learning process. One knows when someone sees the "data" differently.

50. The proposed UMaLT Model includes all of the pro- cesses that take place in Gestalt learning theory.	<table border="0"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td>(1)</td> <td>(5)</td> <td></td> <td>(1)</td> <td></td> </tr> </table>	5	4	3	2	1	(1)	(5)		(1)	
5	4	3	2	1							
(1)	(5)		(1)								

Entire Gestalt Application Comments:

- A. See #20 above.
 - B. I'm skeptical that any theory will ever encompass all of Gestalt theory.
 - C. Yes, but some categories are made to fit the theory into the model.
-

Bruner

The processes below and on the next two pages adequately portray legitimate processes of Bruner's humanistic theory of motivation and learning, as described in Module #3 of the Informational Packet.

51. Process A (Stimulus)	<table border="0"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td>(2)</td> <td>(3)</td> <td></td> <td>(1)</td> <td>(1)</td> </tr> </table>	5	4	3	2	1	(2)	(3)		(1)	(1)
5	4	3	2	1							
(2)	(3)		(1)	(1)							

Process A Comments:

- A. I don't believe Bruner's theory is ... here.

52. Process B (Situational Evaluation)	<table border="0"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td>(4)</td> <td>(2)</td> <td>(1)</td> <td></td> <td></td> </tr> </table>	5	4	3	2	1	(4)	(2)	(1)		
5	4	3	2	1							
(4)	(2)	(1)									

Process B Comments:

- A. (Connected to I)
- B. Not a factor in his theory to my knowledge.

53. Process C 5 4 3 2 1
 (Outcome/Reward Expect... (2) (3) (1) (1)

Process C Comments:

No comment.

54. Process D 5 4 3 2 1
 (Motivation) (3) (3) (2)

Process D Comments:

A. I would rate this stronger on the satisfaction side.

55. Process E 5 4 3 2 1
 (Response) (3) (2) (2)

Process E Comments:

A. "Hands on approach to learning": to what extent is this "internal"; to what extent "external?"

56. Process F 5 4 3 2 1
 (Outcome) (3) (3) (1)

Process F Comments:

No comment.

57. Process G 5 4 3 2 1
 (External Evaluation) (2) (3) (1) (1)

Process G Comments:

No comment.

58. Process H 5 4 3 2 1
 (Reward) (4) (1) (1) (1)

Process H Comments:

No comment.

59. Process I (Internal Evaluation)	<u>5 4 3 2 1</u> (6) (1)
--	---

Process I Comments:

A. Connect to 3.

60. The proposed UMaLT Model includes all of the pro- cesses that take place in Bruner's humanistic the- ory of learning and mo- tivation.	<u>5 4 3 2 1</u> (3) (4)
---	---

Entire Bruner Application Comments:

A. Possibly - it doesn't include cultural factors as such, nor the role of language.

ADDITIONAL COMMENTS:

A. 2 comments:

1. I'd like to have a specific list of definitions of your terms A-I.
2. It bothers me that you wrote the learning theory summaries. Your interpretations are in some places loose and terminology that fits your model is used when the actual theorist (in my experience) never used the term or notion.

B. Some general comments:

1. Your "tav" is a source of cognitive dissonance and forces me to unnecessarily read sentences several times in order to understand the essential meaning. There are ways of writing non-sexist material without inventing words (i.e. use plural pronouns [their, them], use "one" as in oneself or one's own). McGraw Hill publishes an excellent style sheet outlining the methods available.

2. Words such as "stimulus," "response," which have commonly understood meanings in American psychology are so re-defined that they become confusing to the reader.
3. I found Module #2 very difficult to apply when dealing with specific "learning" and/or "motivational" theories. A major problem may be that Festinger and Maslow are not considered by most psychologists (to the best of my knowledge) as learning theorists. They are not ever using the same questions as in Skinner. In order to be helpful, each process described in Module #2 needs a one or two sentence definition. For instance, every time I dealt with Process B I had to read a page and a half of material to try to find a working definition.

* * * * *

May 5, 1981

Dear Delphi Panel Member:

Thank you for the in-depth responses to the first questionnaire. The seriousness of your efforts was certainly evident in the scholarly theory interpretations that several of you took the extra time to communicate.

Enclosed is the compilation of this first questionnaire. Your own answers are circled for your reference. Several points of view are evidenced in this compilation. Some of the views you may agree with--some you may disagree with. However, all offer definite food for thought.

Also enclosed you will find Questionnaire #2. You will notice that it is identical to Questionnaire #1. This will give you the opportunity to reflect on the various thoughts of the rest of the panel and, if you so desire, adjust your own answers accordingly.

The directions for this second questionnaire are identical to those of the first questionnaire. As in the first questionnaire, you are asked to return it to me within seven days--by May 12.

Again, thank you for the time and effort you are expending on this project.

Sincerely,

Mickey Ann Parker

UMaLT MODEL QUESTIONNAIRE #2 COMPILATION

Part 1--UMaLT Model

Please circle the ranking of your choice. Number 5 indicates that you strongly agree with the statement. Number 1 indicates that you strongly disagree. Please feel free to add concise comments to support your judgement if you so desire.

The following processes adequately portray legitimate processes in the learning/motivation cycle as described in Module #2 of the Informational Packet.

	STRONGLY AGREE					STRONGLY DISAGREE				
1. Process A (Stimulus)	5	4	3	2	1					
	(7)									

Process A Comments:

No comments.

2. Process B (Situational Evaluation)	5	4	3	2	1					
	(2)	(5)								

Process B Comments:

A. I still would suggest that I and B could be considered the same "box." (See redrawn UMaLT Model at end of questionnaire.)

3. Process C (Outcome/Reward Expectancy)	5	4	3	2	1					
	(3)	(4)								

Process Comments:

No comments.

4. Process D (Motivation)	5	4	3	2	1					
	(3)	(4)								

Process D Comments:

No comments.

5. Process E	5	4	3	2	1
(Response)	(5)	(2)			

Process E Comments:

A. Perhaps.

6. Process F	5	4	3	2	1
(Outcome)	(6)	(1)			

Process F Comments:

No comments.

7. Process G	5	4	3	2	1
(External Evaluation)	(4)	(2)	(1)		

Process G Comments:

No comments.

8. Process H	5	4	3	2	1
(Reward)	(2)	(3)	(2)		

Process H Comments:

No comments.

9. Process I	5	4	3	2	1
(Internal Evaluation)	(6)	(1)			

Process I Comments:

A. See comments on Process B.

10. The proposed UMaLT Model includes all of the processes that take place during the learning/motivation cycle.	5	4	3	2	1
	(2)	(3)	(2)		

Entire UMaLT Model Comments:

A. See redrawn model at end of questionnaire.

B. ...all of the processes that could take place... They are legitimate, but not all presented. They provide a framework. I cannot think of any additional processes.

C. I'm not sure anyone knows all the processes--it covers the ones it says it covers and they are part of learning and motivation.

Part 2--UMaLT Model ApplicationFestinger

The following processes adequately portray legitimate processes of Festinger's motivational theory of cognitive dissonance, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE			STRONGLY DISAGREE	
11. Process A (Stimulus)	5	4	3	2	1
	(4)			(2)	

Process A Comments:

No comments.

12. Process B (Situational Evaluation)	5	4	3	2	1
	(6)			(1)	

Process B Comments:

No comments.

13. Process C (Outcome/Reward Expectancy)	5	4	3	2	1
	(1)		(1)	(4)	(1)

Process C Comments:

No comments.

14. Process D (Motivation)	5	4	3	2	1
	(6)			(1)	

Process D Comments:

No comments.

15. Process E (Response)	5	4	3	2	1
	(1)	(5)	(1)		

Process E Comments:

No comments.

16. Process F (Outcome)	5	4	3	2	1
	(5)			(2)	

17. Process G	5 4 3 2 1
(External Evaluation)	(2) (4) (1)

Process G Comments:

No comments.

18. Process H	5 4 3 2 1
(Reward)	(2) (4) (1)

Process H Comments:

No comments.

19. Process I	5 4 3 2 1
(Internal Evaluation)	(3) (4) (1)

Process I Comments:

No comments.

20. The proposed UMaLT Model includes all of the processes that take place in Festinger's motivational theory of cognitive dissonance.	5 4 3 2 1
	(5) (2)

Entire Festinger Application Comments:

A. There has been no change in the way Festinger's theory is described in your paper and I am not aware of any change in my reaction compared to the first run.

Skinner

The following processes adequately portray legitimate processes of Skinner's reinforcement learning theory, as described in Module #3 of the Informational Packet.

STRONGLY AGREE	STRONGLY DISAGREE
-------------------	----------------------

21. Process A	5 4 3 2 1
(Stimulus)	(6) (1)

Process A Comments:

No comments.

22. Process B (Situational Evaluation)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (1) & & (1) & (2) & (3) \end{array}$
---	--

Process B Comments:

No comments.

23. Process C (Outcome/Reward Expectancy)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (1) & (1) & (1) & (2) & (2) \end{array}$
--	--

Process C Comments:

No comments.

24. Process D (Motivation)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (1) & (1) & (3) & (2) & \end{array}$
-------------------------------	--

Process D Comments:

A. = stimulus.

25. Process E (Response)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (2) & (2) & (1) & (1) & (1) \end{array}$
-----------------------------	--

Process E Comments:

A. R is important because it is the thing that is reinforced.
Unit 3 and I disagree on its importance.

B. Skinner does not deal with internal processing in his theory.
Process F is much closer to his definition of "response."

26. Process F (Outcome)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (3) & (4) & & & \end{array}$
----------------------------	--

Process F Comments:

A. This is important in that it is what is reinforced--I'm hesitant to mark it that high because your model doesn't quite define it that way.

B. In this model, Process F is Skinner's "response."

C. = response.

27. Process G (External Evaluation)	$\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (4) & (2) & (1) & & \end{array}$
--	--

Process G Comments:

A. = reinforcement.

28. Process H (Reward)	<table border="0"> <tr> <td>5</td><td>4</td><td>3</td><td>2</td><td>1</td> </tr> <tr> <td colspan="5"><hr/></td> </tr> <tr> <td>(7)</td><td></td><td></td><td></td><td></td> </tr> </table>	5	4	3	2	1	<hr/>					(7)				
5	4	3	2	1												
<hr/>																
(7)																

Process H Comments:

A. = reinforcement.

29. Process I (Internal Evaluation)	<table border="0"> <tr> <td>5</td><td>4</td><td>3</td><td>2</td><td>1</td> </tr> <tr> <td colspan="5"><hr/></td> </tr> <tr> <td>(1)</td><td></td><td>(2)</td><td>(3)</td><td>(1)</td> </tr> </table>	5	4	3	2	1	<hr/>					(1)		(2)	(3)	(1)
5	4	3	2	1												
<hr/>																
(1)		(2)	(3)	(1)												

Process I Comments:

A. = reinforcement.

30. The proposed UMaLT Model includes all of the processes that take place in Skinner's reinforcement learning theory.	<table border="0"> <tr> <td>5</td><td>4</td><td>3</td><td>2</td><td>1</td> </tr> <tr> <td colspan="5"><hr/></td> </tr> <tr> <td></td><td>(6)</td><td>(1)</td><td></td><td></td> </tr> </table>	5	4	3	2	1	<hr/>						(6)	(1)		
5	4	3	2	1												
<hr/>																
	(6)	(1)														

Entire Skinner Application Comments:

A. More than necessary.

Maslow

The following processes adequately portray legitimate processes of Maslow's hierarchial motivation theory, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE			STRONGLY DISAGREE
31. Process A (Stimulus)	5	4	3	2 1
	<hr/>			
	(2)	(3)	(1)	(1)

Process A Comments:

A. = needs.

B. I would redefine this as "innate need"--but this would create problems with the section on Skinner.

32. Process B (Situational Evaluation)	<table border="0"> <tr> <td>5</td><td>4</td><td>3</td><td>2</td><td>1</td> </tr> <tr> <td colspan="5"><hr/></td> </tr> <tr> <td></td><td>(1)</td><td>(4)</td><td>(1)</td><td>(1)</td> </tr> </table>	5	4	3	2	1	<hr/>						(1)	(4)	(1)	(1)
5	4	3	2	1												
<hr/>																
	(1)	(4)	(1)	(1)												

Process B Comments:

A. Uncomfortable with term "Situational Evaluation."

B. Much closer to "need" than "A".

33. Process C	5	4	3	2	1
(Outcome/Reward Expectancy)	(2)	(4)			(1)

Process C Comments:

A. Somewhat too "stimulus/response" oriented.

34. Process D	5	4	3	2	1
(Motivation)	(5)	(2)			

Process D Comments:

No comments.

35. Process E	5	4	3	2	1
(Response)	(1)	(3)	(1)	(1)	(1)

Process E Comments:

No comments.

36. Process F	5	4	3	2	1
(Outcome)	(2)	(5)			

Process F Comments:

A. Person's perception of the outcome is important and not necessarily in tune with reality.

37. Process G	5	4	3	2	1
(External Evaluation)	(2)	(3)		(1)	(1)

Process G Comments:

A. Agree with comment B on 1st round. ["O.K. in low levels of need, it's not a factor in upper levels.]"

38. Process H	5	4	3	2	1
(Reward)	(4)		(1)	(1)	(1)

Process H Comments:

No comments.

39. Process I	5	4	3	2	1
(Internal Evaluation)	(6)	(1)			

Process I Comments:

No comments.

- | | |
|---|--|
| 40. The proposed UMaLT Model includes all of the processes that take place in Maslow's hierarchial motivation theory. | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (1) & & (6) & & \end{array}$ |
|---|--|

Entire Maslow Application Comments:

A. More than necessary. Would help to have a taxonomy of terms.

Gestalt

The following processes adequately portray legitimate processes of Gestalt learning theory, as described in Module #3 of the Informational Packet.

- | | STRONGLY
AGREE | | STRONGLY
DISAGREE |
|-----------------------------|--|--|----------------------|
| 41. Process A
(Stimulus) | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (1) & (3) & (2) & (1) & \end{array}$ | | |

Process A Comments:

No comments.

- | | |
|---|--|
| 42. Process B
(Situational Evaluation) | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (6) & (1) & & & \end{array}$ |
|---|--|

Process B Comments:

No comments.

- | | |
|--|--|
| 43. Process C
(Outcome/Reward Expectancy) | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline & (5) & & (2) & \end{array}$ |
|--|--|

Process C Comments:

No comments.

- | | |
|-------------------------------|--|
| 44. Process D
(Motivation) | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (3) & (4) & & & \end{array}$ |
|-------------------------------|--|

Process D Comments:

A. Internal only.

- | | |
|-----------------------------|--|
| 45. Process E
(Response) | $\begin{array}{ccccc} 5 & 4 & 3 & 2 & 1 \\ \hline (2) & (3) & (1) & (1) & \end{array}$ |
|-----------------------------|--|

Process E Comments:

No comments.

46. Process F	5	4	3	2	1
(Outcome)	(1)	(3)	(3)		

Process F Comments:

No comments.

47. Process G	5	4	3	2	1
(External Evaluation)	(2)	(3)		(1)	(1)

Process G Comments:

No comments.

48. Process H	5	4	3	2	1
(Reward)	(1)	(3)	(2)		(1)

Process H Comments:

A. If rewards must be external, they are not meaningful as motivation.

49. Process I	5	4	3	2	1
(Internal Evaluation)	(4)	(3)			

Process I Comments:

No comments.

50. The proposed UMaLT Model includes all of the processes that take place in Gestalt learning theory.	5	4	3	2	1
	(1)	(5)	(1)		

Entire Gestalt Application Comments:

A. See #40. [More then necessary. Would help to have a taxonomy of terms.]

Bruner

The following processes adequately portray legitimate processes of Bruner's humanistic theory of motivation and learning, as described in Module #3 of the Informational Packet.

	STRONGLY AGREE					STRONGLY DISAGREE				
51. Process A (Stimulus)	5	4	3	2	1					
	(5)					(2)				

Process A Comments:

No comments.

52. Process B (Situational Evaluation)	5	4	3	2	1					
	(4)					(3)				

Process B Comments:

No comments.

53. Process C (Outcome/Reward Expectancy)	5	4	3	2	1					
	(1)					(6)				

Process C Comments:

No comments.

54. Process D (Motivation)	5	4	3	2	1					
	(2)					(4) (1)				

Process D Comments:

No comments.

55. Process E (Response)	5	4	3	2	1					
	(2)					(5)				

Process E Comments:

No comments.

56. Process F (Outcome)	5	4	3	2	1					
	(3)					(4)				

Process F Comments:

No comments.

57. Process G	5	4	3	2	1
(External Evaluation)	(2)	(4)		(1)	

Process G Comments:

No comments.

58. Process H	5	4	3	2	1
(Reward)	(3)	(3)		(1)	

Process H Comments:

No comments.

59. Process I	5	4	3	2	1
(Internal Evaluation)	(7)				

Process I Comments:

No comments.

60. The proposed UMaLT Model in-	5	4	3	2	1
cludes all of the processes	(1)	(5)	(1)		
that take place in Bruner's					
humanistic theory of learn-					
ing and motivation.					

Entire Bruner Application Comments:

A. See #40. [More than necessary. Would help to have a taxonomy of terms.]

ADDITIONAL COMMENTS:

- A. It's difficult to do both tasks at once: (1) agree on model, and (2) agree on theorists placement on model. The model should be firm first, then placement could follow.
- B. 1. Ditto Additional Comments A-1 (re "taxonomy" theoretical ...)
2. Ditto Additional Comments A-2--perhaps a quotation.
3. Ditto Additional Comments B-1.

June 25, 1981

Dear Delphi Panel Member:

Attached to this letter are revised Modules #2 and #3 and your third UMaLT Model Questionnaire. They are all based on a revised UMaLT Model that has been created from your suggestions.

As before, you are asked to rank the various processes for the proposed UMaLT Model. However, you will work differently with the five theories this time. There is only one question for each theory. In essence, you are asked if each theory can adequately be displayed and conceptually represented on the revised UMaLT Model, using your own interpretation of the theory. If you do not believe that the UMaLT Model adequately illustrates the theory, you are asked to explain why.

Remember: It is not important that everyone agree on theory interpretation. The panel is not required to come to a consensus on this aspect of the project. The important point to keep in mind is: Can you plot each theory on the UMaLT Model according to your own understanding of thrm? The writer's interpretations and applications are provided merely as guides and illustrations in an effort to help you understand the potential and the purpose of the UMaLT Model.

Again, it is imperative that you explain your reasons and make whatever "corrections" you believe would solve the problem for any of your rankings that are below a 4 on the agreement-disagreement scale.

Again I want to thank you for the tremendous amount of help and support you have given me on this project. I know that this has certainly infringed on your personal free time. I do, however, believe that we are now close to the end.

Sincerely,
Redacted for Privacy

Mickey Ann Parker

Module #2REVISED UMaLT MODEL DESCRIPTION AND EXPLANATION

The primary purpose of this study is to develop a schematic model that will make learning and motivation theories more comprehensible to beginning theory students. It is herein proposed that this can be done by providing a common method of displaying and integrating theories in such a way that the theories claim a common language, and can be examined and compared to further the basic understanding of their processes. It is intended that upon completion, this model should be interpretable to all who examine it, thus establishing common and necessary communication bases.

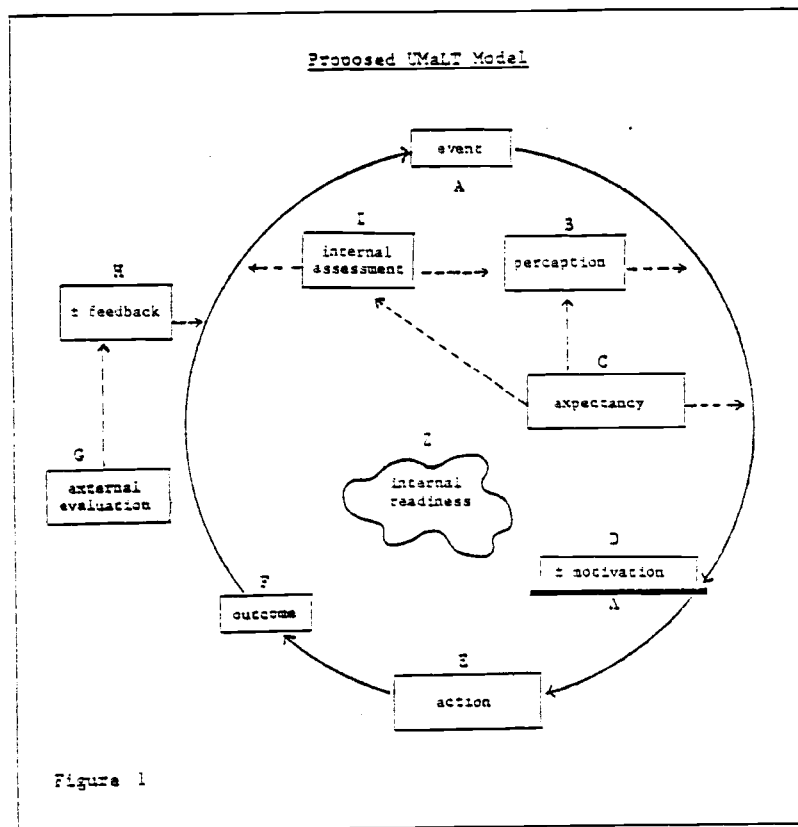
It is expected that each of the five theories presented in this study should be able to fit, in their entirety, on the completed model. Figure 1, page 2, illustrates the proposed revised UMaLT Model (Unified Motivational and Learning Theories Model), demonstrating the concept that, not only are both learning and motivation cyclical in nature, but they are both encased in the same sphere. This is in contrast to the traditional hierarchial or linear schematics of most learning and motivation theories. A hierarchial or linear method of notation indicates a stoppage of action--internal or external--at some point in the process. This model contends that a stoppage of the cycle rarely, if ever, takes place.

The proposed UMaLT Model graphically illustrates the inner and outer processes that take place continually for an individual.

All notations inside the circle (see Processes B, C, D, I, and Z in Figure 1, page 2) indicate processes that take place within the individual. This includes all affective, cognitive, and readiness operations.

The two notations that are located outside the circle (Processes G and H) are processes that take place externally to the individual. In other words, these processes generally are initiated or created by someone or something other than the individual.

Those processes depicted both inside and outside the circle (Processes A, E, and F), are operations and/or events that take place internally and/or externally to the individual.



The solid flow lines of the circle and their directional arrows indicate the direction of movement from Process A through Process E, Process F, and back around to Process A in a clock-wise progression. It can be noticed that these lines tie together those processes or occurrences that can be either internal or external for the individual.

The dotted lines indicate influence of processes upon other indicated processes. The dotted lines do not indicate movement or progression as do the solid lines. The purpose of the dotted lines is to indicate those processes that are influential in determining the strength of, the weight of, or the degree of input upon the various processes.

In order to fully understand the model, it is important that the terms that are used be clearly understood. Below is a brief taxonomy of the process terms that are used in the UMaLT Model.

Process A--Event: An external or internal occurrence.

Process B--Perception: An awareness and interpretation of the event.

Process C--Expectancy: The affective and cognitive projections of the action, outcome, and/or feedback.

Process D--Motivation: The degree of positive or negative force that influences the quality, quantity, and nature of an action.

Process E--Action: Response to an event.

Process F--Outcome: The result of an action.

Process G--External Evaluation: A judgement by someone other than the individual.

Process H--Feedback: The results--positive or negative--given to an individual by someone or something other than the individual.

Process I--Internal Assessment: The individual's personal judgement regarding tav's¹ degree of success.

Process Z--Internal Readiness: The degree of physiological, mental, emotional, social, and/or cultural maturity base from which an individual operates.

The UMALT Model illustrated on page 2 of this module, depicts the flow of processes thusly: An event (Process A)--influenced by the individual's perception of the event and the situation (Process B) and an expectancy of an outcome and possible external feedback (Process C)--leads to a degree of positive or negative motivation (Process D), which, in turn, determines the amount, the quality, and the type of effort that the individual puts forth in the action (Process E), which then effects the quality, quantity, and nature of the outcome (Process F). The individual's perception and assessment of the outcome (Process I) has the possibility of being influenced, not only by the individual's personal perceptions, but also by an external feedback (Process H), which, in itself, has been influenced by an external evaluator

¹ Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s), and is used throughout this paper in an effort to neutralize gender.

(Process G). The assessed outcome now either becomes a new event or it triggers some sort of a related event; or a totally different event takes its place, thus continuing the spherical nature of the event-action-outcome-event process.

Process Z--the individual's internal readiness--is shown on the UMaLT Model as a free floating, free form process to signify its capability to permeate and influence all of the UMaLT Model's processes. Every perception, action, assessment, prediction, decision, and judgement of the individual has the capability of being influenced by this internal readiness or level of physiological, mental, emotional, social, and/or cultural maturity.

The previous statements describe the flow of the UMaLT Model processes. However, it is important to examine each process separately to determine parameters and influences in detail.

Process A (event) is shown both inside and outside of the circle because an event or occurrence can be internal or external (e.g., A teacher can give a student a test--an external event for the student; or an individual can arbitrarily decide to think about a loved one--an internal event.)

After the event has occurred--externally or internally--the individual then considers that event according to tav's own perceptions (Process B). This perception takes into account, and is influenced by action, outcome, and feedback expectancies (Process C).

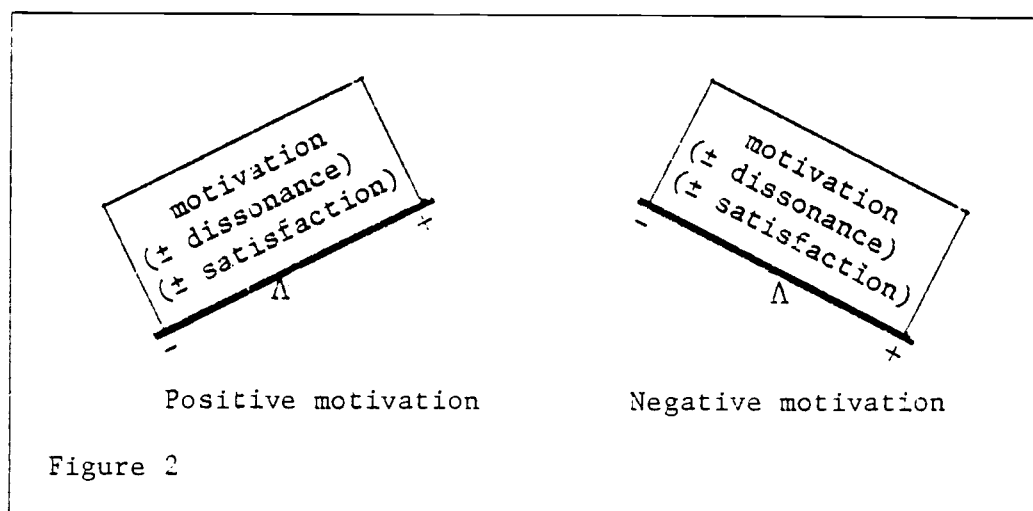
In the same manner, Process I--internal assessment--also influences the individual's perception of the situation. If tav believes that tav will feel good about the outcome, then Process I

influences Process B in such a way that Process B adds weight or strength to a positive motivation (Process D) for the individual. On the other hand, if tav anticipates that tav will not feel good about the outcome (due to unfair feedback, lack of relevance of the outcome to tav's life, or if tav believes that tav is not capable of producing the outcome to a specified standard), Process B will be negatively influenced and will, therefore, lend a negative weight to the character and strength of the individual's motivation (Process D).

Motivation--Process D--is shown inside the circle because it represents the disequilibrium that is felt internally when an individual has a need to know, to act, or to feel. These needs, in turn, drive the individual to act (Process E)--externally or internally. As previously mentioned, the potency and character of the motivational drive is determined from the inputs of B, C, I, and Z in relation to Process A.

Motivation is seen as a teeter-totter concept (Figure 2, page 7) with a positive dissonance at one end and a negative dissonance at the other end. The amount of disequilibrium determines the degree of dissonance that the individual feels. The stronger the drive, the greater the slant of the teeter-totter. The stronger the degree of positive slant, the stronger the motivation toward action, and conversely, the less the degree of positive slant, the weaker the motivation to respond.

If the positive slant goes below the central point, it then puts the strength of motivation on the negative side, thus



instituting a negative response or action. The strength of the negative response is determined by the degree of negative slant. In other words, the degree of positive or negative slant determines the strength of the positive or negative action (Process E).

As noted, Process D determines the strength and nature of the stimulated action (Process E). This action can be overt, such as tightening a bolt on a lawnmower or sharpening a pencil. It can also be internal, such as changing one's perception about a concept or the mental computation required to solve a mathematical problem. The effort that goes into the action is directly proportional to the degree and direction of the slant of the motivational teeter-totter.

Process E must not be confused with Process F--outcome. Process F constitutes the outcome of an action. In other words, Process E is the action that leads to an outcome. If an individual is in the process of hammering a nail into a board, Process E concerns itself with the act of hammering, not the end result of

the hammered nail.

Process F--outcome--can also be either internal or external. The outcome can be in the form of a mental solution, a decision, or a visible product. Process F is the result of an action.

Process G--external evaluation--does not always enter the picture. In other words, there is not always an external evaluation of the individual's action or outcome.

It is also possible that an external evaluation can take place without the individual's knowledge. Unless the external evaluator provides the individual with some sort of feedback Process H), the individual cannot incorporate that knowledge into tav's internal assessment (Process I) operation.

Process H--feedback--is also external to the responding or producing individual. Rewards are a type of feedback since they give the individual the results of an external evaluation.

Like Process G, external feedback does not always take place. An individual can go from outcome to internal assessment (Process I) without any external feedback. However, if there is feedback, the individual includes that information into the internal assessment (Process I) operation. It is at this point that the individual decides whether or not tav is content with the outcome, the feedback (if there was feedback), and whether to repeat, alter, or change the event. Process I has a great influence on Process A. The more the individual believes that tav was successful, the stronger the movement toward repeating or approximating the successful outcome. Process I is similar to Process B in that

it also is an internal judgement of the situation at that moment in time.

Process I is also similar to Process D at this point. The individual determines tav's degree of satisfaction or dissatisfaction based on tav's previous expectancies, inputs, outputs, and other attributing factors. These satisfied or dissatisfied feelings can also be considered a type of positive or negative internal reward for the individual.

The internal assessment that takes place in Process I determines the individual's next event and resulting action in response to the particular situation, or at a later date to a similar situation. Thus, the circle continues, with continual adjustments made by the individual, as tav constantly evaluates, reevaluates, and assesses, not only the immediate occurrences, but also related situations.

In summary, the proposed UMaLT Model displays the various internal and external processes that take place when an event occurs. It illustrates the direction of process flow and the various influences that some processes have on other processes. It is the strength of those influences that determine the amount and kind of effort, or degree of quality or emphasis, that weights the various direct-line processes. It can be seen at a glance which processes are internal or external to the individual, and which processes have the ability to be both internal and/or external.

Thus, there is a total interrelated picture of the various aspects of learning and motivation. Rather than depicting the

processes in a linear or hierarchial mode--which can be misleading--the proposed UMaLT Model illustrates the cyclical nature of motivation and learning.

Not all educational learning and motivational theories agree with all parts of the UMaLT Model. Some theories do not incorporate Process I--the internal assessment process; others recognize only the external portion of Process F--the outcome process; still others ignore the influence of external evaluation and the resulting feedback--(Processes G and H).

Even those theories that agree on process, oftentimes place their emphasis on different operations. Some theories emphasize Process D--motivation, whereas others stress outcome--Process F. Therefore, theories that, on the surface, seem to be the same or similar, yet emphasize different processes, take on a whole new meaning that is not always easy to discern.

Terminology is a common roadblock to understanding and comparing theory content. Process D clearly illustrates this problem. What one theory terms dissonance; another theory calls satisfaction or dissatisfaction; another uses the expression disequilibrium, still another prefers the designation drive, and yet another theory uses the word motivation. However, all of these theories are referring to the same process. This type of term conglomerate is frequently confusing to beginning theory students, affecting their ability to understand, analyze, compare, and apply and/or observe various theories. The proposed UMaLT Model is intended to help unify terminology among the theory contents and eliminate this

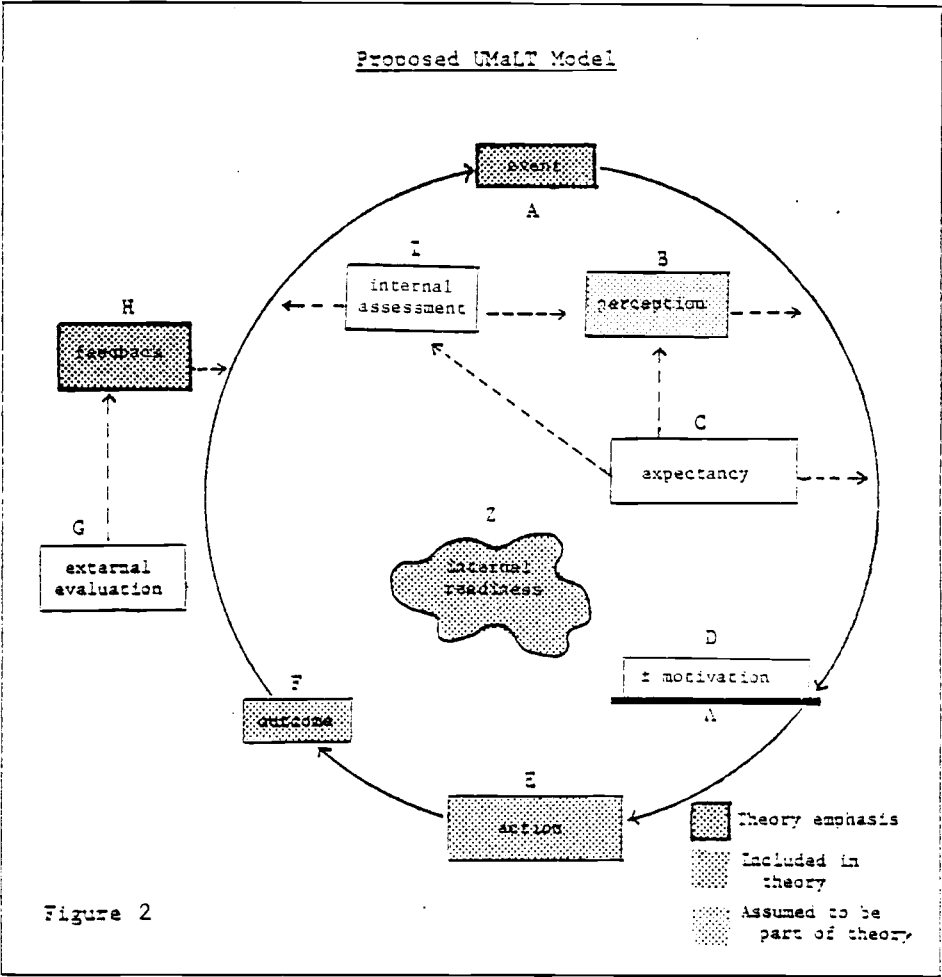
long-time stumbling block to comprehension and comparison or parallelization of the various theories.

As previously mentioned, the proposed UMaLT Model is a unified schematic model that is intended to have the capability of displaying any learning or motivational theory. In other words, the proposed UMaLT Model should be able to illustrate the plotting of all learning and motivational theories on this one schematic form, thus allowing theory comparisons.

The processes included in each theory will be identified in this manner (see Figure 3, page 12):

1. The process(es) that is/are the most strongly emphasized in each theory, will be shaded the darkest (e.g., Processes A and H in Figure 3).
2. The process(es) that is/are assumed to be included in the theory, will be given the lightest shade (e.g., Process B in Figure 3).
3. The balance of the processes that are included in the theory will be given a medium shade (e.g., Processes E, F, and Z in Figure 3).
4. Any process(es) not part of the theory will not have any shading at all (e.g., Processes C, D, G, and I in Figure 3).

In Module #3, each of the five major theories previously mentioned will be plotted on the UMaLT Model with their appropriate shadings. It is hoped that this revised version of the proposed UMaLT Model will more universally represent learning and motivation



theories and their processes.

Module #3REVISED UMaLT MODEL APPLICATION

This third module concerns itself with the application of the UMaLT Model (Unified Motivation and Learning Theory Model) to five major learning and motivation theories. Each theory will be plotted on the proposed UMaLT Model. The theories will be presented in this order:

1. Festinger's motivational theory of cognitive dissonance.
2. Skinner's reinforcement learning theory.
3. Maslow's hierarchial motivation theory.
4. Gestalt learning theory.
5. Bruner's humanistic theory of learning and motivation.

A brief literature review of each theory is presented in the fifth module, consequently, there is no effort put forth in this module to explain or substantiate theoretical content. A selected bibliography also accompanies module number five.

It is to be noted that the theory interpretations and UMaLT Model applications are the writer's own. Not all panel members will necessarily agree on theory interpretations (thus affecting UMaLT Model applications). In fact, it is not necessary to be in agreement on interpretations. It is only necessary to come to an agreement on a universally viable schematic model upon which learning and motivational theories can be adequately plotted.

Consequently, the purpose of this module--the application of

learning and motivation theories to the proposed UMaLT Model as interpreted by the writer--is to give the Delphi panel members a basic understanding of the expected plotting method and technique to be used with this model.

In the end, it is important that each of the panel experts be able to plot the theories according to their own theory interpretations. It is this capability that will advise this body of participants regarding the universality of the UMaLT Model.

Application of Festinger's motivational theory of cognitive dissonance to the proposed UMaLT Model

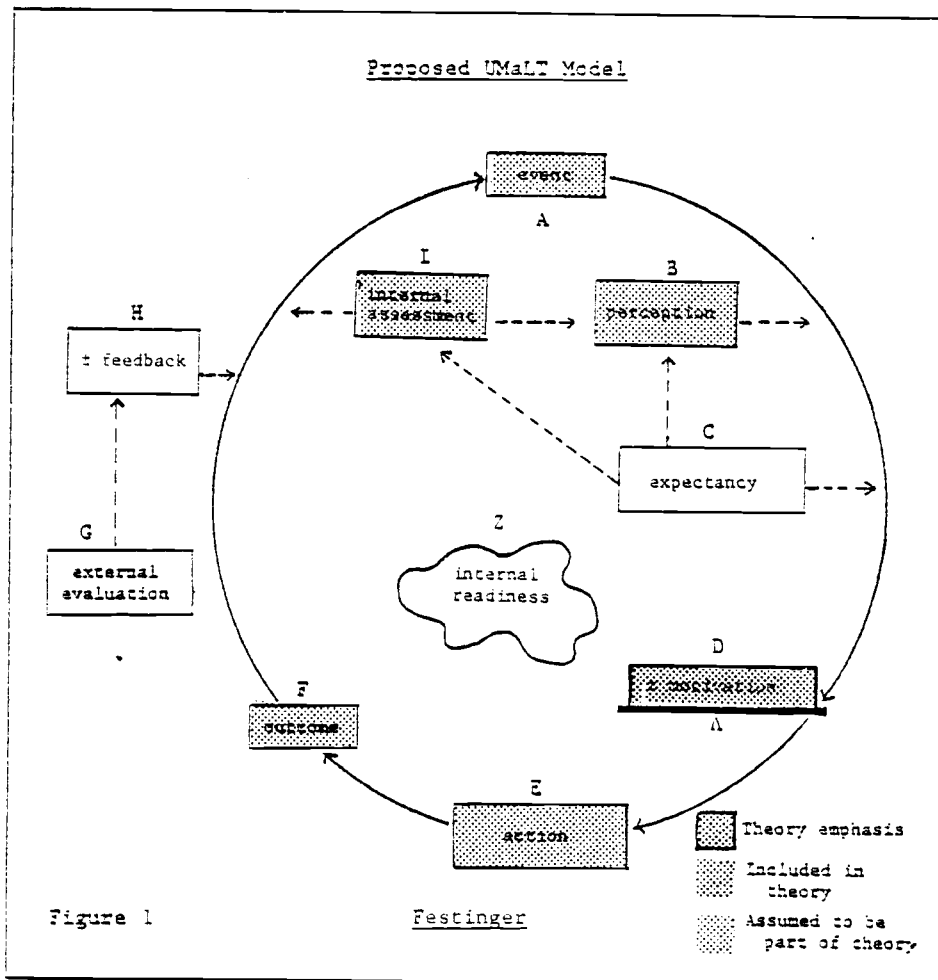
Process A:

For Festinger, challenges to an individual's beliefs are the events that provoke action. Although he seems to emphasize the internal aspects of the process, he also takes into consideration the influences of external occurrences. Process A (Figure 1, page 3) is given a medium shade.

Process B:

Process B is also given a medium shade. When the individual is determining the implications of tav's¹ beliefs, tav is evaluating the event as it affects tav at that moment in time. Festinger believes that at this point an individual considers tav's past related experiences, conflicts between conditions or beliefs, and all other information that tav deems crucial to the situation.

¹ Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s), and is used throughout this paper in an effort to neutralize gender.



Process C:

Process C is not included or not considered significant in Festinger's theory.

Process D:

Process D has been given the darkest shading because Festinger places his greatest emphasis on cognitive dissonance. Although he stresses the negative aspect of it, he does not mean negative in the same way that it is depicted on the model. He merely means an unbalance of the "teeter-totter" concept. Any time that one end of the teeter-totter is lower than the other, there is a drive within

the individual to bring it back to an even keel. Festinger calls this a negative drive.

Irrelevance, consonance, and dissonance are all Process D operations within the model. These three motivational possibilities reflect the influences brought to bear on the individual's motivation as a result of tav's evaluation or perception of tav's belief conflicts.

Process E:

Process E is given a medium shade and is indicated by Festinger when he refers to an individual's "attempting" to find ways to reduce drive; or that dissonance "instigates" a process to reduce dissonance. These statements indicate that the individual is taking action toward an outcome.

Process F:

Festinger continually refers to behavior as an outcome to reducing a negative drive. He conceptualizes behavior externally, as well as internally. It, too, is given a medium shade.

Process G:

Process G is not included or is not considered significant in Festinger's theory.

Process H:

Process H is not included or is not considered significant in Festinger's theory.

Process I:

Festinger refers to Process I--internal assessment--when he indicates that the individual "justifies" and "rationalizes" tav's

behavior. He firmly believes that individuals assess their behavior and outcomes and make adjustments accordingly--his indication that the motivation process is cyclical and continuous. Process I is given a medium shade.

Process Z:

Process Z is not included or is not considered significant in Festinger's theory.

In summary, it can be said that Festinger places his greatest emphasis on Process D--motivation. Processes A, B, E, F, and I are also included in his theory. It can also be said that he does not take into consideration, or does not consider significant, expectancy--Process C, external evaluation--Process G, feedback--Process H, or internal readiness--Process Z as relevant to motivation.

Application of Skinner's reinforcement theory to the proposed UMaLT Model

Process A:

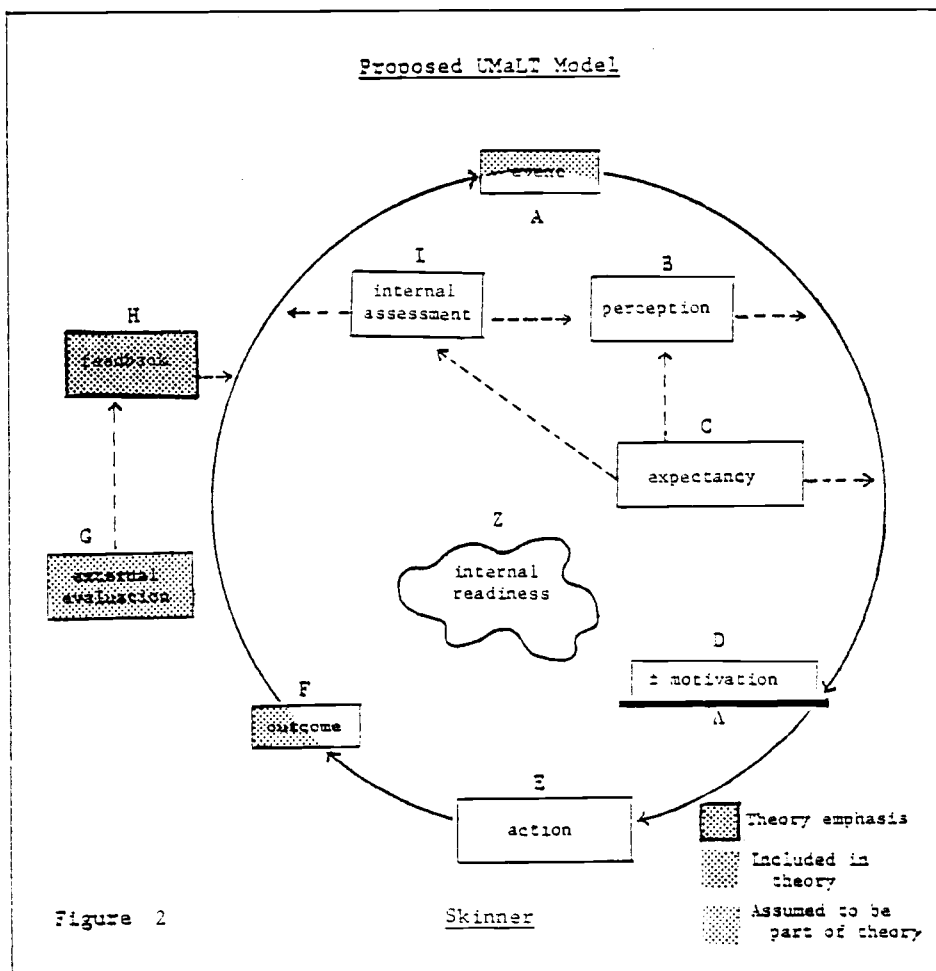
Skinner refers to stimulus frequently in explaining his theory. In most instances, the term stimulus or stimuli is translatable to the UMaLT Model term, event.

An interesting feature shows up when plotting this theory on the UMaLT Model: Respondent behavior is shown to depend upon an external event, and type S conditioning emphasizes the importance of the role of the external event (Figure 2, page 6).

Operant behavior, as Skinner sees it, depends on an unknown internal stimulus or instigator. He states that the "stimulus" is

not only unknown, but that it is unimportant to identify it in order to obtain predictable behavior.

The external portion of Process A is an important issue with Skinner, but not the most important process and is given a medium shade. The inner portion of Process A is of insignificant consequence to him and accordingly is left blank.



Process B:

Process B is not included or is not considered significant in Skinner's theory.

Process C:

Process C is not included or is not considered significant in Skinner's theory.

Process D:

Process D is not included or is not considered significant in Skinner's theory.

Process E:

Process E is not included or is not considered significant in Skinner's theory.

Process F:

Skinner uses the term response to mean outcome. His theory is built around the production of "correct" responses or outcomes. He concerns himself seriously with the strength of the outcome (strength of outcome meaning the frequency with which the outcome will be repeated).

Again, Skinner is only concerned with observable outcomes. Consequently, the inner representation of the outcome process is left blank on the proposed UMaLT Model.

Although the external (observable) outcome process is an important operation to Skinner, like the external event process, it is not the most emphasized operation in his theory. It is, therefore, indicated on the UMaLT Model merely as an integral part of the theory, and given a medium shade.

Process G:

Skinner theorizes that if one controls the feedback, one can also control behavior. In other words, he sees Process H as being

primarily determined by someone or something outside the individual who is being reinforced through feedback. Thus, Figure 2 (page 6), shows Process G as an essential part of the theory and shaded with a medium hue.

Process H:

Process H is given the greatest emphasis on the proposed UMaLT Model since this is the operation that Skinner stresses the strongest. As mentioned in the Process G explanation above, he believes that all behavior is controlled by its rewards. He uses the terms rewards, consequences, and reinforcement to mean the same as feedback. He believes that feedback can be positive or negative and that negative feedback can be considered the same as punishment. He also conceptualizes that feedback is what gives the strength (frequency of repetition) to the response (outcome).

When he refers to a reinforcing stimulus, he means feedback (a reward) that causes the outcome to become a positive stimulus (event) since it elicits a positive outcome. That is to say, a reinforcing stimulus is feedback that encourages outcome repetition.

Process I:

Process I is not included or is not considered significant in Skinner's theory.

Process Z:

Process Z is not included or is not considered significant in Skinner's theory.

In summarizing Skinner's theory placement on the proposed UMaLT Model, his two levels of processes are:

1. Process H--the operation with the strongest emphasis.
2. Processes A, F, and G--processes that he refers to frequently, but not with the same degree of emphasis that he indicates for Process H.

Although he briefly, refers to Processes D and I, he dismisses them as insignificant. Consequently, they are not accented on the UMaLT Model. Processes B, C, E, and Z are also not included in his theory, or are not considered significant, even though logic might indicate that they must exist for the theory to have potency and hang together.

Skinner basically believes in the cyclical nature of the system. He explains it through his concept of the reinforcing stimulus. In other words, although he conceptualizes that the process is generally continuous (except in a non-rewarding situation), he believes that it is the feedback operation that causes the process to continue.

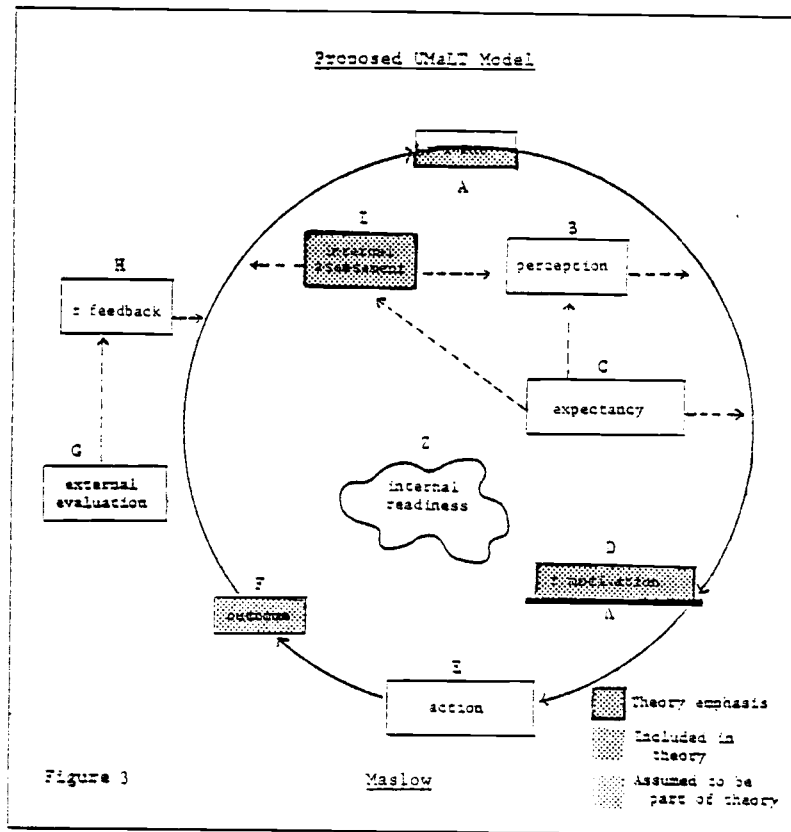
Application of Maslow's hierarchial motivation theory to the proposed UMaLT Model

Process A:

Events are internal intuitive needs in Maslow's eyes. According to him, these innate needs are the driving force for motivation. His theory places a strong emphasis on this internal operation as illustrated in Figure 3 on page 10.

Process B:

Process B is not included or is not considered significant in



Maslow's theory.

Process C:

Process C is not included or is not considered significant in Maslow's theory.

Process D:

Motivation is another major emphasis in Maslow's needs theory. The strength of the motivation--the degree of slant of the motivational teeter-totter--is determined by a previous internal assessment (Process I) as well as Process A.

Process E:

Process E is not included or is not considered significant in

Maslow's theory.

Process F:

Maslow considers both internal and external outcomes--even though he only considers internal events. Although the outcome is important in his theory, it is not paramount and is given a medium shade.

Process G:

Process G is not included or is not considered significant in Maslow's theory.

Process H:

Process H is not included in Maslow's theory or not considered significant even though he uses the term reward. His use of the term is, in reality, the same as the UMaLT Model's use of the term, outcome.

Process I:

Process I is the third strongly emphasized process in Maslow's theory. It is the individual's internal evaluation that determines whether or not a need is satisfied, thus determining the nature and strength of the new event. He uses such words and phrases as, "a sense of meaning and accomplishment"; "satisfaction of needs"; "enjoyment"; and "internal rewards" to indicate an individual's internal assessment of that individual's internal or external outcomes.

Process Z:

Process Z is not included or is not considered significant in Maslow's theory.

In summary, it can be noted that Maslow stresses three major

operations--Processes A, D, and I. He acknowledges Process F, although not with as much emphasis. He does not take into consideration or consider significant, the influences of Processes B, C, E, G, H, or Z.

Primarily, Maslow emphasizes inner processes. Except for Process I, he places little emphasis on an individual's internal judgements. He believes that the subconscious does the driving and that the individual is merely swept along.

Application of Gestalt learning theory to the proposed UMaLT Model

Process A:

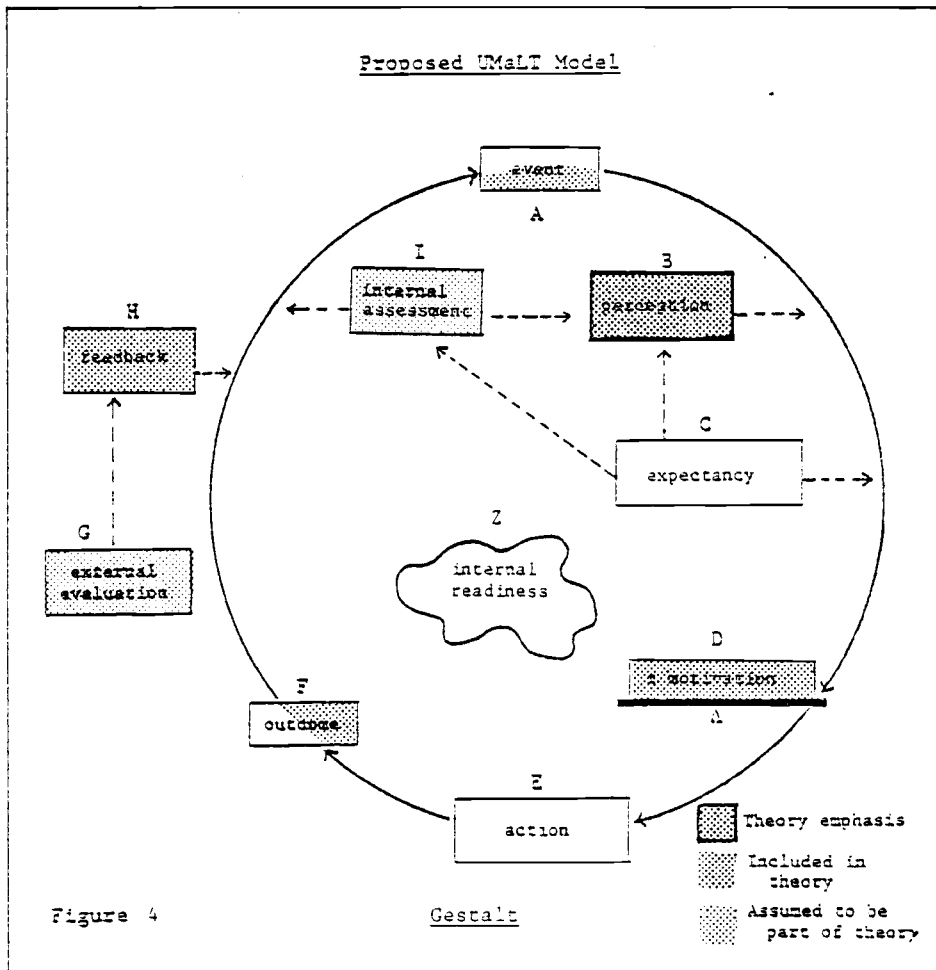
The term, problem is consistently used throughout Gestalt discussions to indicate a stimulus (an event that is an action instigator). To Gestaltists, a problem is anything that causes a cognitive imbalance within the individual. Although this "problem" may be presented to the individual externally, it is only its effect as an inner operation that Gestaltists consider of any significance. Hence, on Figure 4 on page 13, only the inner portion of Process A is noted.

Even though Gestaltists refer frequently to the "problem," this is not the process upon which the greatest emphasis is placed. Therefore it is illustrated with a medium shade.

Process B:

Process B is the operation with the most emphasis in Gestalt theory. This process--perception--encompasses rearrangement of previous ideas and experiences, perception (organization of sensory

information), processes (brain activity caused by environmental experiences), memory traces, repetition, and trace systems. None of the other four theories presented in this study break this operation into so many variables.



Process C:

Process C is not included or is not considered significant in Gestalt theory.

Process D:

Process D does not carry as much weight in Gestalt theory as it does in some of the other theories. In some Gestalt writings,

dissonance--motivation--is oftentimes referred to as a maintaining stimulus. This merely means that until the individual has come to a successful solution, they are still in a state of cognitive imbalance and thus, the original action instigation is still maintained, creating an internal imbalance. In other words, Gestaltists confirm the cyclical nature of the operations.

Process E:

Process E is not included or is not considered significant in Gestalt theory.

Process F:

In Gestalt psychology, Process F is referred to as a problem solution rather than using the UMaLT Model term, outcome. Since they consider only insightful solutions to be valid proof of learning, just the inner portion of this operation is noted on the UMaLT Model in Figure 4 on page 13. Although this is an important consideration for Gestaltists and unique to their theory, it does not carry as heavy an emphasis as does Process B--perception. Consequently, it is plotted in a medium shade on the UMaLT Model.

Process G:

Process G is assumed. Since Gestaltists so thoroughly incorporate the effects of feedback--rewards and punishments--into their learning theory, it would seem that there must frequently be external input into the feedback operation. However, the specific nature of this external evaluation is not detailed, thus resulting in plotting it as an assumption on the UMaLT Model.

Process H:

Gestalt theorists believe that the strength of an insightful solution--Process F--is influenced by its consequences (Process H--feedback--reward and punishment) of that solution. Process H is represented by a medium shade on the UMALT Model.

Process I:

Process I is assumed. Since Gestaltists view rewards and punishments as confirming or disconfirming the attempted solution--outcomes--it must be presumed that they believe that the individual evaluates, not only the outcome, but also the positive or negative feedback that is received as a result of that outcome.

Process Z:

Process Z is not included or is not considered significant in Gestalt theory.

In summary, it can be said that Gestaltists place their greatest emphasis on Process B. They also include Processes A (inner operation only), D, F (inner operation only), and H as being essential to the learning process. Processes G and I are assumed. Processes C, E, and Z are not specifically recognized or are considered insignificant in this theory.

Except for Processes G and H, Gestaltists are primarily concerned with inner operations. They believe that anything external to the individual has an inner effect and that these inner effects are the processes upon which emphases should be placed.

Application of Bruner's humanistic learning and motivation theory to the proposed UMaLT Model

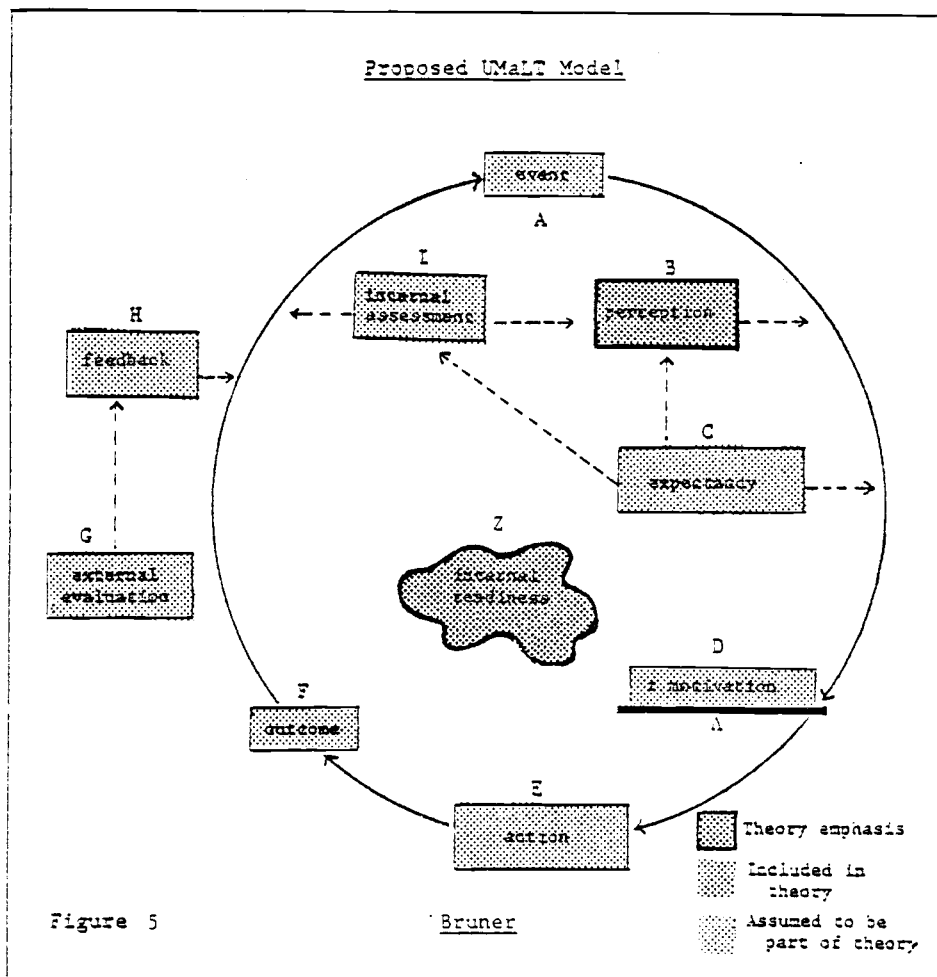
Process A:

Bruner's attention to Process A is somewhat hidden by the use of alternate terminology. He speaks of freeing the individual from stimulus control through cognitive growth. His intention is to free the individual from the necessity of depending on an external event to instigate action. He views the mature individual as responsive primarily to an inner stimulus or occurrence. Figure 5 on page 17, depicts Process A with a medium shade to indicate that although this process does not carry the strongest emphasis, it is an integral part of Bruner's theory. Both the inner and outer aspects of the operation are considered.

Process B:

Processes B represents one of the major aspects of Bruner's theory. He believes that learning takes place primarily through the influences of internal reorganizations of previous experiences, knowledge, expectancies, and skills.

Bruner uses the term, active in relationship to Process B to convey the concept that the individual actively employs inner processes to compare and question in the response selection process. Bruner's concept of human beings as information processors, thinkers, and creators is further evidence of his reliance on Process B as one of the primary keys to understanding the learning process.



Process Z:

Process Z is the other major emphasized component of Bruner's theory. He uses the phrase, frame of reference to mean internal models that encompass an individual's knowledge of the world based on tav's constructed models of reality--tav's own perceptions of tav's culture or environment. Bruner places great emphasis on these models of the world with which a culture equips its members. It is these underlying patterns that infer rules and principles within which an individual operates.

Process Z influences all of an individual's personal internal and external operations. Process B and Z are tightly interrelated. Each depends on the other for completion and potency.

Process C:

Bruner believes that individuals must have a continuously available knowledge of results in order to be effective. This indicates that the individual perpetually expects and adjusts tav's view of probable outcomes and resulting feedback. Process C is plotted, using a medium shade.

Process D:

Although Bruner is dissonance-oriented in his motivational concepts, he believes that there is not much advantage in attempting to go beyond the concept of an individual reducing the complexity of tav's environment. In other words, Bruner acknowledges the fact that there is a dissonance-related drive that propels people toward action, but he sees no use in emphasizing it unnecessarily. Consequently, Process D is given a medium shade on the UMALT Model.

Process E:

Bruner believes that individuals learn best when they are actively involved in the learning process. Although he realizes that there are internal processes that are important during the learning act, he also places considerable importance on the effect of the hands-on approach to learning. In other words, he places a certain amount of emphasis on the involved action itself.

His three modes of coding representation entail both internal and external learning action. The enactive mode represents an

external action, whereas the iconic mode represents an internal action. The symbolic mode, with its thought-to-speech concept, represents both internal and external action. Figure 5 on page 17, illustrates Process E with a medium emphasis.

It should be pointed out, however, that even though both Processes D and E are given medium shadings, Process E does carry more emphasis--especially as regards quality of outcome or knowledge attainment--than does Process D. Process D is not insignificant enough to warrant an assumption ranking, nor is Process E important enough to demand a stronger emphasis level. Consequently, they are both shown with a medium shading.

Process F:

Process F is indicated by Bruner's statements that individuals, as well as the learning process itself, are primarily goal-directed. This process is given a medium shade on the UMaLT Model.

Process G:

Like Process D, Process G does not play as strong a role as some of the other processes and yet it is not an assumed process. It is given a medium shade on the UMaLT Model.

This process only comes into play when an extrinsic reward is used, thus suggesting an external evaluation. Bruner rarely mentions the external evaluator in his writings.

Process H:

Bruner believes that extrinsic rewards should only be used in the beginning of a learning program. He places a low value on external feedback offered by someone or something other than the

learner. Even with its low emphasis, Process H is not an assumed process; and is represented on the UMaLT Model with a medium shade.

Process I:

Bruner's interest in self-evaluation as it relates to the continuing motivation of the individual is reflected in Process I on the proposed UMaLT Model. Although an individual's good feelings about tav's outcomes are an important step in the learning process, this is not as strong a point in Bruner's theory as are Processes B and Z, and so is illustrated with a medium color on the UMaLT Model.

In summary, it can be seen that Bruner takes into consideration all aspects of the proposed UMaLT Model in his learning and motivation theory. He places major emphases on Processes B and Z. The rest of the processes are plotted, using a medium shade to represent their inclusion in the theory (even though Processes D, G, and H are not high priority processes with Bruner).

The five theories that have been presented in this module represent a cross section of disciplines in learning and motivation theories. Although terminologies differ, processes are remarkably similar. The descriptions plus the actual plotting of the processes illustrate the cyclical nature of the theories, with each process leading to another process. A concept emerges that indicates that each process or operation has the capability of beginning its own interrelated/independent cycle with the original cycle continuing.

The use of a universal schematic model on which seemingly unrelated theories can be plotted and displayed, not only enables students and theorists to compare, analyze, and visually and mentally

conceptualize the various theories, it also forces a clarification, delineation, and specificity of terminology, concepts, and interpretations regarding the intents and purposes of each of the several processes included in the individual theories. Motivation and learning, and the processes they employ in order to be successful, are the most important educationally intellectual concepts to be dealt with in the field of education. It is hoped that the proposed UMaLT Model can make this intricate body of knowledge more comprehensible, observable, and usable by all those who come in contact with it.

UMaLT MODEL QUESTIONNAIRE #3

Delphi Panel Member's Name _____

Date Questionnaire Sent _____

Date Questionnaire Returned _____

Please return completed questionnaire to:

Mickey Ann Parker

Teacher Corps

Department of Education

Idaho State University

Pocatello, ID 83209

UMaLT Model Questionnaire #3

Part 1--UMaLT Model

Please circle the ranking of your choice. Number 5 indicates that you strongly agree with the statement. Number 1 indicates that you strongly disagree. Please feel free to add comments to support your judgement if you so desire.

The processes below and on the next few pages adequately portray legitimate processes in the learning/motivation cycle as described in the revised Module #2 of the Informational Packet.

	STRONGLY AGREE				STRONGLY DISAGREE
1. Process A (Event)	<u>5</u>	4	3	2	<u>1</u>

COMMENTS: _____

2. Process B (Perception)	<u>5</u>	4	3	2	<u>1</u>
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COMMENTS: _____

3. Process C (Expectancy)	<u>5</u>	4	3	2	<u>1</u>
------------------------------	----------	---	---	---	----------

COMMENTS: _____

STRONGLY
AGREESTRONGLY
DISAGREE4. Process D
(Motivation)5 4 3 2 1

COMMENTS: _____

5. Process E
(Action)5 4 3 2 1

COMMENTS: _____

6. Process F
(Outcome)5 4 3 2 1

COMMENTS: _____

7. Process G
(External Evaluation)5 4 3 2 1

COMMENTS: _____

8. Process H
(Feedback)5 4 3 2 1

COMMENTS: _____

STRONGLY
AGREE

STRONGLY
DISAGREE

9. Process I
(Internal Assessment)

5 4 3 2 1

COMMENTS: _____

10. Process Z
(Internal Readiness)

5 4 3 2 1

COMMENTS: _____

11. This revision of the proposed
UMaLT Model includes all of
the commonly accepted processes
that can take place during the
learning/motivation cycle.

5 4 3 2 1

COMMENTS: _____

Part 2--UMaLT Model Application

Plot each of the five listed theories on the revised UMaLT Model, using your own theory interpretations.

If necessary, refer to the revised Modules #2 and #3. As before, Module #3 is the writer's own theory interpretations. This is intended merely to act as a guide in the UMaLT Model plotting techniques and strategies. (There is no necessity for a consensus on theory interpretation. The concern of this project lies in the development and final validation [via a final consensus--or near consensus by the Delphi panel] of a universal schematic theory model.)

If your ranking is less than 4 on the agreement-disagreement scale, explain why you believe the theory does not "fit" the model.

The theories listed below and on the next page can be adequately displayed and conceptually represented on the revised UMaLT Model.

	STRONGLY AGREE				STRONGLY DISAGREE
12. Festinger's motivational theory of cognitive dissonance	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

COMMENTS: _____

13. Skinner's reinforcement learning theory	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
---	----------	----------	----------	----------	----------

COMMENTS: _____

14. Maslow's hierarchical motivation theory	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
---	----------	----------	----------	----------	----------

COMMENTS: _____

STRONGLY
AGREESTRONGLY
DISAGREE

15. Gestalt learning theory

5 4 3 2 1

COMMENTS: _____

16. Bruner's humanistic learning
and motivation theory5 4 3 2 1

COMMENTS: _____

UMaLT Model Questionnaire #3 Compilation

Part 1--UMaLT Model

Please circle the ranking of your choice. Number 5 indicates that you strongly agree with the statement. Number 1 indicates that you strongly disagree. Please feel free to add comments to support your judgement if you so desire.

The processes below and on the next few pages adequately portray legitimate processes in the learning/motivation cycle as described in the revised Module #2 of the Informational Packet.

	STRONGLY AGREE				STRONGLY DISAGREE
1. Process A (Event)	<u>5</u>	4	3	2	<u>1</u>
	(6)	(1)			

No comments.

2. Process B (Perception)	<u>5</u>	4	3	2	<u>1</u>
	(6)	(1)			

No comments.

3. Process C (Expectancy)	<u>5</u>	4	3	2	<u>1</u>
	(6)	(1)			

No comments.

4. Process D (Motivation)	<u>5</u>	4	3	2	<u>1</u>
	(5)	(1)			(1)

Comments:

A. I would recommend elimination of paragraph #3 on page 6 and paragraph #4 on page 6 carried over to page 7, as well as Figure 2. The "explanation" tends to be more confining than clarifying. I gave this a "1" as it is now, but would give it a "5" if changed as suggested.

5. Process E (Action)	<u>5</u>	4	3	2	<u>1</u>
	(6)	(1)			

No comments.

6. Process F	5	4	3	2	1
(Outcome)	(6)	(1)			

No comments.

7. Process G	5	4	3	2	1
(External Evaluation)	(5)	(2)			

No comments.

8. Process H.	5	4	3	2	1
(Feedback)	(6)	(1)			

No comments.

9. Process I	5	4	3	2	1
(Internal Assessment)	(5)	(2)			

Comments:

A. I still have slight reservations as to the necessity of this block, but as now defined it does suggest usefulness.

10. Process Z	5	4	3	2	1
(Internal Readiness)	(5)	(2)			

No comments.

11. This revision of the proposed UMaLT Model includes all of the commonly accepted processes that can take place during the learning/motivation cycle.	5	4	3	2	1
	(3)	(4)			

Comments:

A. I sense that something outside my awareness may still be missing. At some point, I expect that it will reveal itself.

B. I am never sure we've hit all--but I feel this is a very comprehensive model.

Part 2--UMaLT Model Application

Plot each of the five listed theories on the revised UMaLT Model, using your own theory interpretations.

If necessary, refer to the revised Modules #2 and #3. As before, Module #3 is the writer's own theory interpretations. This is intended merely to act as a guide in the UMaLT Model plotting techniques and strategies. (There is no necessity for a consensus on theory interpretation. The concern of this project lies in the development and final validation [via a final consensus--or near consensus--by the Delphi panel] of a universal schematic theory model.)

If your ranking is less than 4 on the agreement-disagreement scale, explain why you believe the theory does not "fit" the model.

The theories listed below and on the next page can be adequately displayed and conceptually represented on the revised UMaLT Model.

	STRONGLY AGREE					STRONGLY DISAGREE				
12. Festinger's motivational theory of cognitive dissonance.	5	4	3	2	1					
	(4)	(3)								

Comments:

- A. I don't think readiness is a part of Festinger's theory, and I'm not sure about perception.
- B. These are 4's instead of 5's because I am not perfectly (strongly) confident in my own understanding of the various theories. As I use this model in Ed. Psych., I may become more confident.

13. Skinner's reinforcement learning theory.	5	4	3	2	1					
	(3)	(4)								

Comments:

- A. Again, readiness is a hangup along with perception. Skinner violently opposed Gestalt concepts that rely on perception as a key to learning.

14. Maslow's hierarchial
motivation theory.

5	4	3	2	1
(4)	(3)			

Comments:

A. I feel external evaluation and feedback are not included in Maslow's model.

15. Gestalt learning theory.

5	4	3	2	1
(4)	(3)			

Comments:

A. External evaluation and feedback are not a part of Gestalt learning.

16. Bruner's humanistic learning
and motivation theory.

5	4	3	2	1
(5)	(2)			

No comments.

June 28, 1981

Dear Delphi Panel Members:

We are almost at the end of our project. There is a near consensus on all but one point. Some panel members are having problems with the motivation descriptions, definition, and illustration. Consequently, along with the compilation of Questionnaire #3, you will find attached some revised material and three questions to answer in the usual manner.

If there is an acceptable consensus or an acceptable near consensus, it can be assumed that the project is ended and that the UMaLT Model is developed and authenticated. If you have any problems in any of these areas, please comment at the end of the questionnaire.

Again, thank you for your continued patience and cooperation in this time-consuming activity. I am forever in your debt.

Sincerely,

Mickey Ann Parker

UMaLT MODEL QUESTIONNAIRE #4

Delphi Panel Member's Name _____

Date Questionnaire Sent _____

Date Questionnaire Returned _____

Please return completed questionnaire to:

Mickey Ann Parker

Teacher Corps

Department of Education

Idaho State University

Pocatello, ID 83209

UMaLT Model Questionnaire #4

There is a consensus on all but one point. Some panel members are having problems with the motivation description and explanation. It is felt that the teeter-totter concept tends to be more confining than clarifying.

The suggested alterations are questioned below, along with additional questioning of the use of the phrase, positive or negative in relation to the definition and to the UMaLT Model.

Please answer the three questions pertaining to Process D--motivation. If your answer is less than 4 on the agreement-disagreement scale, please explain your reasons.

	STRONGLY AGREE					STRONGLY DISAGREE				
	5	4	3	2	1					
1. In Module #2, eliminate paragraph 3 on page 6 and paragraph 4 on page 6 (carried over to page 7. Eliminate the last sentence of the middle paragraph on page 7. Eliminate Figure 2 (Figure 3 will become Figure 2). (Revised section attached to this questionnaire.)										

COMMENTS: _____

	5	4	3	2	1					
2. Eliminate the \pm sign that precedes the word <u>motivation</u> on the revised UMaLT Model.										

COMMENTS: _____

3. In the taxonomy of terms on page 3 of Module #2, change the definition of motivation to read: The impulse or driving force that influences the quality, quantity, and nature of an action.

5 4 3 2 1

COMMENTS: _____

Revised Page(s) 6-7 of Module #2

Motivation--Process D--is shown inside the circle because it represents the disequilibrium that is felt internally when an individual has a need to know, to act, or to feel. These needs, in turn, drive the individual to act (Process E)--externally or internally. As previously mentioned, the potency and character of the motivational drive is determined from the inputs of B, C, I, and Z in relation to Process A.

As noted, Process D determines the strength and nature of the stimulated action (Process E). This action can be overt, such as tightening a bolt on a lawnmower or sharpening a pencil. It can also be internal, such as changing one's perception about a concept or the mental computation required to solve a mathematical problem. The effort that goes into the action is directly proportional to the potency of the motivational drive.

Process E must ...

UMaLT Model Questionnaire #4 Compilation

There is a near consensus on all but one point. Some panel members are having problems with the motivation description and explanation. It is felt that the teeter-totter concept tends to be more confining than clarifying.

The suggested alterations are questioned below, along with additional questioning of the use of the phrase, positive or negative in relation to the definition and to the UMaLT Model.

Please answer the three questions pertaining to Process D--motivation. If your answer is less than 4 on the agreement-disagreement scale, please explain your reasons.

	STRONGLY AGREE					STRONGLY DISAGREE				
	5	4	3	2	1					
1. In Module #2, eliminate paragraph 3 on page 6 and paragraph 4 on page 6 (carried over to page 7). Eliminate the last sentence of the middle paragraph on page 7. Eliminate Figure 2 (Figure 3 will become Figure 2). (Revised section attached to this questionnaire.)	(6)	(1)								

Comments:

A. It was O.K. the way it was. Any educated person you give this to is going to read their own interpretation into motivation--however you explain it! There comes a time when you have to quit letting others revise your work if you ever want to get finished.

	5	4	3	2	1
2. Eliminate the \pm sign that precedes the word <u>motivation</u> on the revised UMaLT Model.	(6)	(1)			

No comments.

3. In the taxonomy of terms on page 3 of Module #2, change the definition of motivation to read: The impulse or driving force that influences the quality, quantity, and nature of an action.

5	4	3	2	1
(6)	(1)			

No comments.

August 1, 1981

Dear Delphi Panel Member:

Enclosed is the final description and illustration of the model you have all worked on for such a long time. The compilation for Questionnaire #4 is also enclosed. As you can see, though there are still some reservations regarding possible missing processes, you, as a group, feel that for now, the model is complete and authenticated.

I believe the fact that you believe that there is still room for growth and development of the model, demonstrates its adaptability and flexibility. In order for this schematic to realize its potential as a universal model, I believe it must have this capability to adapt to new concepts and ideas while retaining its original conceptual display abilities.

The title, UMaLT Model, was the "working" name for the schematic. However, in the final write-up of the study, a P will be added to the beginning of the model's name. In other words, the model will be called the PUMaLT Model (Parker Unified Motivational and Learning Theory Model) in the final writing.

Several of you have suggested that yearly learning and motivation theories symposiums should be initiated in an effort to continue theory applications to the PUMaLT Model. I am excited about this idea and hope that such meetings can be established within the next two years. I suggest that the Delphi panel and myself establish ourselves as the "PUMaLT Model core". When I get settled, I will contact each of you to discuss this further.

Again, I would like to offer my heartfelt thanks for your help with a difficult task. No doctoral student has ever had such positive support and help as I have had from all of you. I hope that you feel as I do--that the outcome of your efforts (the completed PUMaLT Model) will, in time, make a positive contribution to the field of education.

Sincerely,
Redacted for Privacy

Mickey Ann Parker

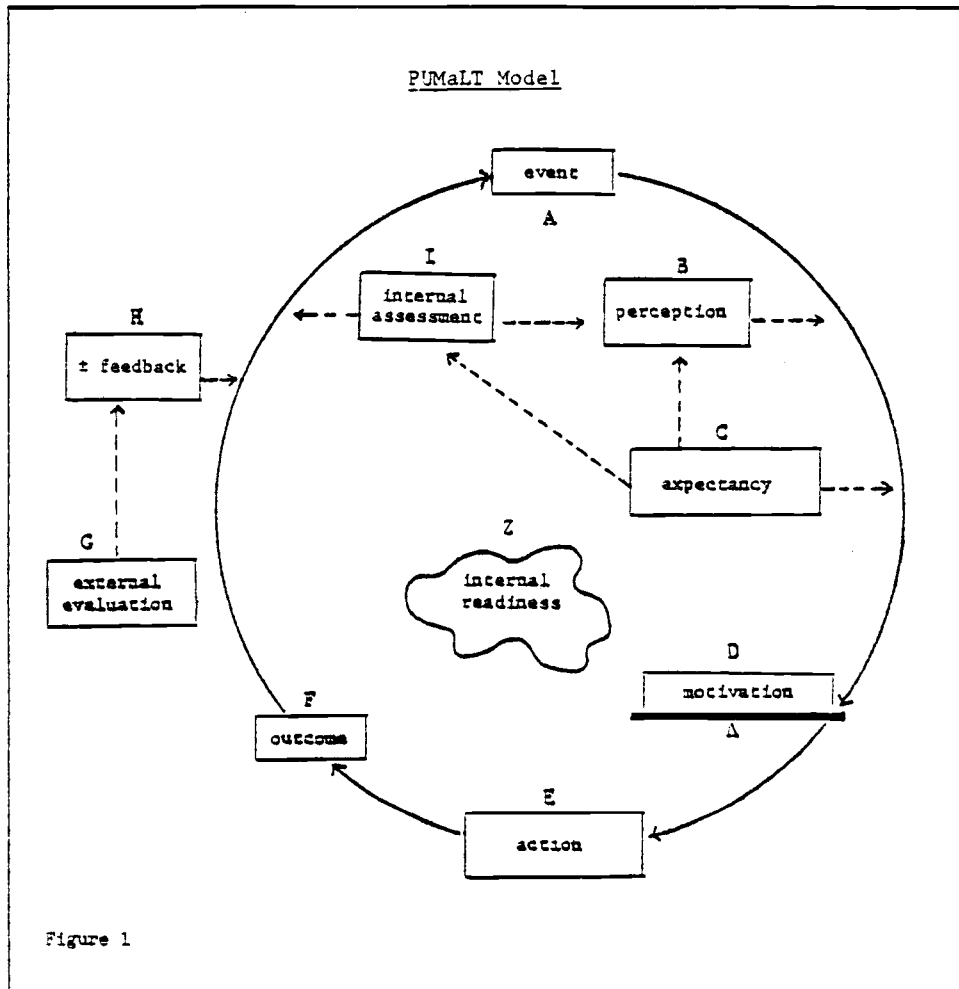
Module #2PUMaLT MODEL¹ DESCRIPTION AND EXPLANATION(Revised Revision)

The completed PUMaLT Model (Parker Unified Motivation and Learning Theories Model)--Revised Revision--is a schematic model that makes learning and motivation theories more comprehensible to beginning theory students by providing a common method of displaying and integrating theories in such a way that the theories claim a common language, and can be examined and compared to further the basic understanding of their processes. Based upon the understanding of the ten processes that compose the PUMaLT Model, this model should be interpretable to all who examine it, thus establishing common and necessary communication bases.

Each of the five theories presented in this study fit, in their entirety, on the completed model. Figure 1, page 2, illustrates the completed revised revision of the PUMaLT Model. The model demonstrates the concept that, not only are both learning and motivation cyclical in nature, but they are both encased in the same sphere. This is in contrast to the traditional hierarchial or linear schematics of most learning and motivation theories. A hierarchial or linear method of notation indicates a stoppage of action--internally or externally--at some point in the process. This model contends that a stoppage of the cycle rarely, if ever, takes place.

¹ PUMaLT Model is the name given the completed UMaLT Model.

The completed PUMaLT Model graphically illustrates the inner and outer processes that take place continually for an individual. All notations inside the circle (Processes B, C, D, I, and Z in Figure 1, below) indicate processes taking place within the individual. This includes all affective, cognitive, and readiness operations.



The two notations that are located outside the circle (Processes G and H) are processes that take place externally to the individual. In other words, these processes generally are initiated or created by someone or something other than the individual.

Those processes depicted both inside and outside the circle (Processes A, E, and F), are operations and/or events that take place internally and/or externally to the individual.

The solid flow lines of the circle and their directional arrows indicate the direction of movement from Process A through Process E, Process F, and back around to Process A in a clock-wise progression. It can be seen that these lines tie together those processes or occurrences that can be either internal or external for the individual.

The dotted lines indicate influences of processes upon other indicated processes. The dotted lines do not indicate movement or progression as do the solid lines. The purpose of the dotted lines is to indicate those processes that are influential in determining the strength of, the weight of, or the degree of input upon the various processes.

In order to understand the model, it is important that the processes be clearly understood. Below is a brief taxonomy of the process terms that are used in the completed PUMaLT Model.

PUMaLT Model Taxonomy of Terms

Process A--Event: An external or internal occurrence.

Process B--Perception: An awareness and interpretation of the event.

Process C--Expectancy: The affective and cognitive projections of the action, outcome, and/or feedback.

Process D--Motivation: The impulse or driving force that influences the quality, quantity, and nature of an action.

Process E--Action: Response to an event.

Process F--Outcome: The result of an action.

Process G--External Evaluation: A judgement by someone other than the individual.

Process H--Feedback: The results--positive or negative--given to an individual by someone or something other than the individual.

Process I--Internal Assessment: The individual's personal judgement regarding tav's² degree of success.

Process Z--Internal Readiness: The degree of physiological, mental, emotional, social, and/or cultural maturity base from which the individual operates.

* * * * *

The PUMaLT Model illustrated on page 2 of this module, depicts the flow of processes thusly: An event (Process A)--influenced by the individual's perception of the event and the situation (Process B) and an expectancy of an outcome and possible external feedback (Process C)--leads to a degree of positive or negative motivation (Process D), which, in turn, determines the amount, the quality, and the type of effort that the individual puts forth in the action (Process E), which then effect the quality, quantity, and

² Tav is an arbitrarily chosen, artificial word that takes the place of he/she, him/her, or his/her(s), and is used throughout this paper in an effort to neutralize gender.

nature of the outcome (Process F). The individual's perception and assessment of the outcome (Process I) has the possibility of being influenced, not only by the individual's personal perceptions, but also by an external feedback (process H), which, itself, has been influenced by an external evaluator (Process G). The assessed outcome now either becomes a new event or it triggers some sort of a related event; or a totally different event takes its place, thus continuing the spherical nature of the event-action-outcome-event process.

Process Z--the individual's internal readiness--is shown on the PUMaLT Model as a free floating, free form process to signify its capability to permeate and influence all of the PUMaLT Model's processes. Every perception, action, assessment, prediction, decision, and judgement of the individual has the capability of being influenced by this internal readiness or level of physiological, mental, emotional, social, and/or cultural maturity.

The previous statements describe the flow of the PUMaLT Model processes. However, it is important to examine each process separately to determine parameters and influences in detail.

Process A (event) is shown inside and outside of the circle because an event or occurrence can be internal or external (e.g., A teacher can give a student a test--an external event for the student; or an individual can arbitrarily decide to think about a loved one--an internal event.)

After the event has occurred--externally or internally--the

individual then considers that event according to tav's own perceptions (Process B). This perception takes into account, and is influenced by, action, outcome and feedback expectancies (Process C). If tav believes that tav will feel good about the outcome, then Process B is influenced in such a way that it adds weight and strength to the individual's motivation (Process D). On the other hand, if tav anticipates that tav will not feel good about the outcome (due to an expectation of unfair feedback, a lack of relevance of the outcome to tav's life, or if tav believes that tav is not capable of producing the outcome to a specified standard), then Process B will influence the character and strength of the individual's motivation (Process D) in a different manner. This expectancy of outcome, feedback, and assessment helps determine the strength and direction of the individual's motivation to act.

Process I (internal assessment) also influences the individual's perception of the situation by taking into consideration the results of former encounters. The way tav felt at the end of a similar or identical outcome, influences Process B. Whereas, Process C is a predictive expectancy, Process I is an "after-the-fact" type of reaction that helps determine the amount and character of an individual's motivation.

Motivation (Process D) is shown inside the circle because it represents the disequilibrium that is felt internally when an individual has a need to know, to act, or to feel. These needs, in turn, drive the individual to act (Process E)--externally and/or

internally. As previously mentioned, the potency and character of the motivational drive is determined from the inputs of Processes B, C, I, and Z in relation to Process A.

As noted, Process D determines the strength and nature of the stimulated action (Process E). This action can be overt, such as tightening a bolt on a lawnmower or sharpening a pencil. It can also be internal, such as changing one's perception about a concept or the mental computation required to solve a mathematical problem. The effort that goes into the action is directly proportional to the potency of the motivational drive.

Process E must not be confused with Process F (outcome). Process F constitutes the outcome of an action. In other words, Process E is the action that leads to an outcome. If an individual is in the process of hammering a nail into a board, Process E concerns itself with the act of hammering, not the end result of the hammered nail.

Process F (outcome) can also be either internal or external. The outcome can be in the form of a mental solution, a decision, or a visible product. Process F is the result of an action.

Process G (external evaluation) does not always enter the picture. In other words, there is not always an external evaluation of the individual's action or outcome.

It is also possible that an external evaluation can take place without the individual's knowledge. Unless the external evaluation provides the individual with some sort of feedback (Process

H), the individual cannot incorporate that knowledge into tav's internal assessment (Process I) operation.

Process H (feedback) is also external to the responding or producing individual. Rewards and punishments are both types of feedback since they furnish the individual with the results of an external evaluation.

Like Process G, external feedback does not always take place. An individual can go from outcome to internal assessment (Process F to Process I) without any external feedback. However, if there is feedback, the individual includes that information into the internal assessment (Process I) operation. It is at this point that the individual decides whether or not tav is content with the outcome, the feedback (if there was feedback), and whether to repeat, alter, or change the event. Process I has a great influence on Process A. The more the individual believes that tav was successful, happy, or satisfied with the outcome, the stronger the movement toward repeating or approximating the outcome again. Process E is similar to Process B in that it, also, is an internal judgement of the situation at that moment in time.

In addition, Process I is similar to Process D at this point. The individual determines tav's previous expectancies, inputs, outputs, and other contributing factors. These satisfied or dissatisfied feelings can also be considered a type of positive or negative internal feedback for the individual.

The internal assessment that takes place in Process I

determines the individual's next event and resulting action in response to the particular situation, or at a later date to a similar situation. Thus, the circle continues, with continual adjustments made by the individual, as *tav* constantly evaluates, reevaluates, and assesses, not only the immediate occurrences, but also related situations.

In summary, the PUMaLT Model is designed to display the various internal and external processes that take place when an event occurs. It illustrates the direction of process flow and the diverse influences that processes have on each other. It is the vigor of these influences that determine the amount and kind of effort, quality, and/or emphasis, that weights the various direct-line operations. It can be seen at a glance which processes are internal or external to the individual, and which processes have the capability to be both internal and external. Thus, the PUMaLT Model presents a total interrelated, interblended picture of the various aspects of learning and motivation. Rather than depict the processes in a linear or hierarchial mode, the PUMaLT Model illustrates the cyclical nature of motivation and learning.

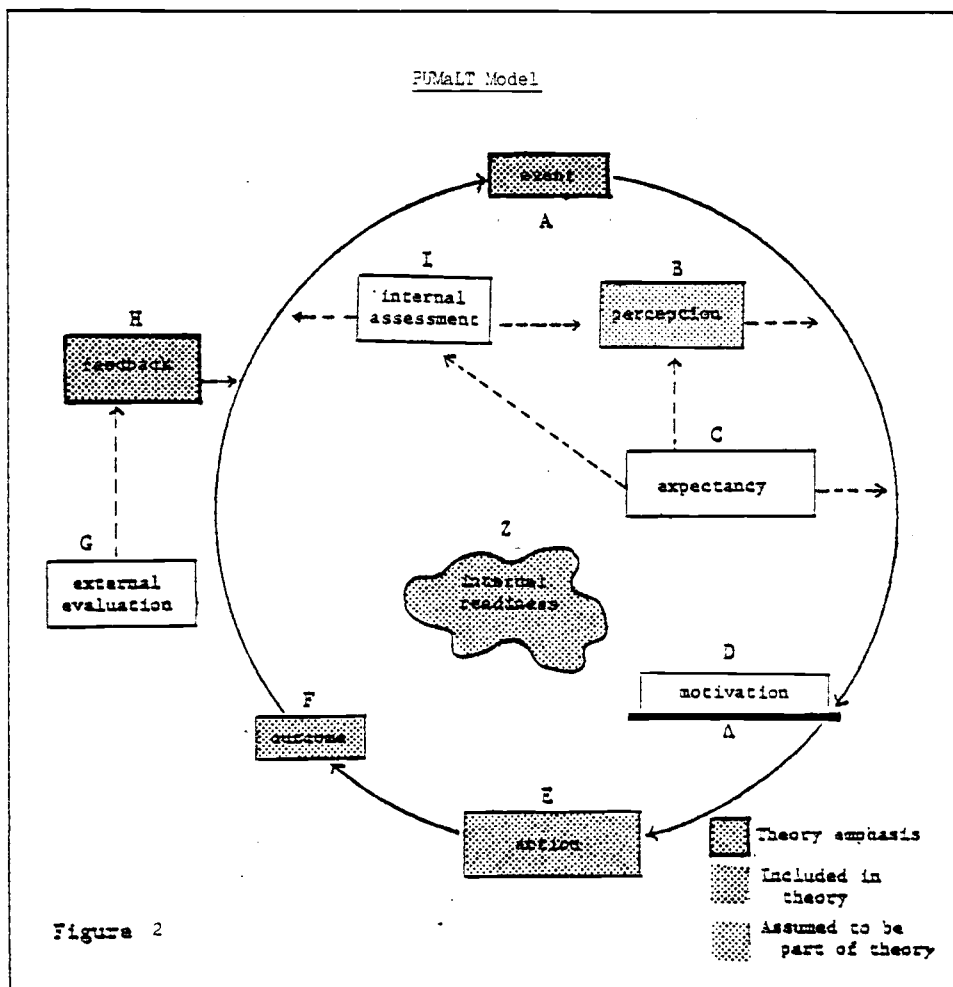
Not all learning and motivation theories incorporate all parts of the PUMaLT Model. Some theories do not agree that Process I (internal assessment) plays a significant role in the motivation or learning transaction; others recognize only the external portion of Process F (outcome); still others ignore the influence of external evaluation and the resulting feedback (Processes G and H).

Even those theories that agree on process, oftentimes place their emphasis on different operations. Some theories emphasize Process C (expectancy); whereas others stress outcome (Process F) as the most important aspect of learning or motivation. Therefore, theories that, on the surface, seem to be the same or similar, yet emphasize different processes, take on a whole new meaning that has not always been easy to discern.

Terminology is a common roadblock to understanding and comparison of theory content. Process D clearly illustrates this problem. What one theory terms dissonance; another theory calls satisfaction or dissatisfaction; another uses the expression dis-equilibrium; still another prefers the designation drive; and yet a different theory uses the word motivation. However, for all intents and purposes, all of these theories are referring to the same process. This type of "term conglomerate" is frequently confusing to beginning theory students, affecting their ability to understand, analyze, compare, apply and/or observe various theories. The PUMaLT Model unifies terminology among the theory contents and eliminates this long-time stumbling block to comprehension, comparison, or parallelization of the various theories.

When plotting theories on the PUMaLT Model, the processes are shaded according to the emphasis placed on them in the theory (see Figure 2, page 11). The processes included in each theory are identified in this manner:

1. The process(es) that is/are the most strongly emphasized in each theory, are shaded the darkest (e.g., Processes A and H, Figure 2).
2. The process(es) that is/are assumed to be included in the theory, are given the lightest shade (e.g., Process B, Figure 2).



3. The balance of the processes that are included in the theory are given a medium shade (e.g., Processes E, F, and Z, Figure 2).

4. Any process(es) not part of the theory do not have any shading (e.g., Processes C, D, G, and I, Figure 7).

In Module #3, each of the five selected major theories have been plotted on the PUMaLT Model (first revision) according to this writer's interpretation. The revisions in this final PUMaLT Model adjustment do not change the displays in any way. Therefore, Module #3 remains the same, requiring no other changes.