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THE RELATIONSHIP OF STUDENT PERCEPTIONS OF COURSE GOALS TO COURSE EFFECTIVENESS

by

Janice Arlene Ditmar Brink

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Psychology)
in The University of Michigan
1977

Doctoral Committee:

Professor Richard D. Mann, Chairman
Associate Professor Max A. Heirich
Professor Wilbert J. McKeachie
Professor James H. Robertson

Dedicated to

Swami Muktananda Paramahansa

whose transforming impact

on my life made the com-

pletion of this "bit of

consciousness" possible.

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PROLOGUE

This dissertation is one logical outcome of having spent thirty years in school, at least twenty-five of them as a student, thirteen of them as a teacher. It is also the result of having had the good fortune from kindergarten through graduate school to have had, here and there, teachers who knew that school and education had something to do with people as well as with subject matter. These were people who knew the classroom experience had to reflect the students' needs as well as the teacher's will, who knew that learning required digestion as well as ingestion, and were well aware that fear, anxiety and interference with student self-expression led to a constricted state of being rather than to an expanded state of consciousness. They also knew that the whole student was in the classroom, not just a disembodied mind. They were people who recognized that the conceptual separation between thoughts and feelings was only a conceptual separation, that in reality we all have feelings about our thoughts and thoughts about our feelings. They recognized that the classroom was an ecosystem of sorts, that classroom atmosphere is a reality which has an impact on student learning and that the emotional climate, both interpersonal and intrapersonal, cannot be ignored but must be responded to creatively if productive work is to occur.

The impact of all of this on me was that I knew from a very young age that I wanted to be a teacher, from the time that I was in kindergarten to be exact. Not that there weren't a few diversions

along the way, but they only lasted for a short time. There was a period of time during the sixth grade when I wanted to be an artist and then two years of college during which I thought I wanted to be a doctor (which I discovered really meant I wanted to be a healer). The next thing I wanted to be was a psychologist so I went to graduate school and there discovered that I had to become a certain kind of psychologist. I selected developmental psychology because I knew I was a "people-person" and because it seemed to me that growth and development (learning) was, after all, what life was really all about. During my second year of graduate school I received a teaching fellowship and the circle begun in kindergarten was complete. Yes, indeed, I did want to be a teacher and I discovered, in retrospect, that those other things I wanted to be weren't really diversions after all, but were clues to me about parts of myself that had to be included in my work and which helped to form, along with those guiding lights I described earlier, what kind of teacher I have become. After thirteen years of being (and becoming) this thing I've wanted to be, and have been becoming since I was five years old, it is impossible that this dissertation could be about anything other than teaching, and since I am a college teacher, it will be about teaching and learning in the college classroom, although I trust that much of what is said here will be generalizable to teaching in other settings as well.

CHAPTER I

CONTEXT

Introduction

The purpose of this chapter is twofold: 1) to establish the relationship of this study to my own personal evolution as a teacher, and 2) to demonstrate the relationship of this study to the domain of research on college teaching. Either presentation without the other would be incomplete. They represent the ever-present dualities of physical existence variously characterized as passive-active, personal-impersonal, subjective-objective, the inner and the outer worlds, the receptive and the creative, the yin and the yang. Either one alone represents a distortion of reality. As individuals we do not function in a vacuum. Neither is it true that we come empty to our work. True meaning results from an ongoing interaction between the one and the many. Within the person is the place of integration, the place where experience is processed, evaluated, and understood. The experience I bring to this dissertation is not only the experience of those who have done research before me. It is also the experience of being a student and being a teacher, and these last two are not experiences which occurred separately but were simultaneous, as being a teacher fostered my being a student of teaching and of the educational process. Since what we learn and, therefore, what we have to

offer is a result of our experience, and since my experience relevant to this dissertation combines what I have learned directly, and what I have learned vicariously, both are presented here as the foundation of this work.

Personal Background

From the time I began teaching, the most important concern in my professional life was to be a "good teacher." What this has meant to me has changed over time and these changes seem to reflect a developmental process, one which, it could be argued, is idiosyncratic and therefore of little general value, but one which I would nevertheless like to present: 1) because it is part of the background out of which this study grew; 2) because although it is, of course, my own unique development, I do not believe it is irrelevant to the development of others engaged in the same pursuits, caring about the same issues; and 3) because I think that it reflects an increasing understanding of the complexity of the teaching-learning situation, an understanding which parallels that of reviewers who are calling for new approaches to research which take this now-recognized complexity into account.

When I first became a teaching fellow my primary concern was that I be well prepared for class. This meant that my presentation of subject matter should be coherent and well organized, and that I understand the concepts fully enough to approach them in different ways if students had difficulty understanding the original presentation. At this time I measured my success by how I felt after each class period, self-confident and alive, or discouraged because I didn't seem

to be able to encourage interest or provide understanding of the material. Another measure of effectiveness to which I attended closely was student ratings at the end of the semester, especially the item which asked students to rate the overall effectiveness of the instructor. When I realized that this item was of more interest to me than how students rated the overall value of the course, I discovered how important it was to me to be liked and valued by the students. However, I was bothered by the discrepancy in my feelings toward those two items, especially when this discrepancy was also reflected in the students' responses. I knew there was more to teaching than being an effective person and I felt that if I was also an effective teacher and cared about the subject matter, the students should find the course as valuable as they found me effective.

This led me to questions about what made a course valuable. Clearly one thing is understanding the material. Another is that it be useful, in some way. With these things in mind I began looking at the evaluation measures I was using since student's attention to material is certainly affected by how they will be evaluated. My tests began to de-emphasize memory of the material and to focus on applying it to relevant problems. I felt that this would give me a clearer picture of whether students really understood the material or not and would also encourage them to make the material useful. It didn't take long to realize that these tests were not only measures of student achievement but also of my effectiveness as a teacher and I realized that these changes also called for some changes in the use of class time. There was no way I could know what students were doing with the material if I was the one talking all of the time, so the

format became one of brief presentations interspersed with questions designed to encourage applying and integrating the material. The challenge here was to learn to ask questions that focussed students on problems related to subject matter and not on the problem of guessing what I was thinking. These changes had two effects. First of all students began doing better on the tests: 1) because their greater activity in class gave me a clearer picture of what the snags and gaps in understanding were, to which I could then respond; and 2) because they were engaging in activities in class which were much more related to how they were being asked to perform on tests. Secondly, the scores on those two items on the course evaluations moved closer together. (It should not be assumed, however, that I was satisfied with what these scores were.)

During this time, a period of four or five years, I was part of a very active teaching fellow community, a group of approximately twenty people teaching different sections of the same course. We met together once a week to discuss our classes, teaching problems, etc. During these years one thing that became obvious to me was that there was no one mold out of which good teachers were poured. As I tried to conceptualize for myself what the characteristics of a good teacher were I found the question changing form. It became, "What would enable each person to be the best teacher he or she could be?" The answer which evolved in my mind was that a person would continually approach realizing his potential as a teacher to the extent that the role (or his perception of it) allowed the greatest integration of himself into the role. This implied that different people would be more at home with different teaching styles and would

do their best if allowed the flexibility to express these differences. For example, a person whose life was characterized by a great deal of privacy and interpersonal distance would probably be more comfortable in a teaching format which integrated this aspect of self; a person who thrived on personal contact would be more likely to blossom as a teacher in a less formal atmosphere. This belief/assumption seemed to be supported by my observations of other teaching fellows and myself as our teaching styles increasingly reflected our personal "ways-of-being" over time. Because this was an important concern for me in my own development as a teacher, I thought it might be a relevant issue in the professional and personal development of other teachers as well. By this time I was not only teaching but working in the Michigan College Teacher Training Program, meeting with teaching fellows in five different departments of the University and this seemed like an ideal opportunity to investigate this issue by doing a dissertation on the developing identity of teachers. After two years of work, instruments developed, partial data collection completed, this project died a death shared by many projects because the subject population wouldn't cooperate in great enough numbers. Meanwhile my own teaching was increasingly reflecting the outcomes of this belief. My teaching style and general interpersonal style were more integrated and I was teaching courses which I had designed and which therefore reflected my own interests more completely.

At this point began the most recent broadening of my conceptualization of the educational process. Yes, I was a better teacher when I was teaching what I wanted to teach, and yes, I had to be able to be me in the classroom--but I wasn't the only person in the class-

room and the reason I was there, after all, had to do with other people's learning. So began what has become an ongoing attempt to be an active, creative partner in a learning situation which involves many people besides myself, a situation which demands for its success that it reflect my goals and student's goals, my work style and their work styles, a situation in which all of us recognize that we are there to work and that our ability to work and learn depends on being there as whole people, sensitive and responsive to each other, welcoming and learning from our differences rather than simply tolerating or hiding them. It demands a level of two-way communication often not present in college classrooms, recognizes and responds to the fact that the emotional atmosphere contributes to individual receptivity and ability to work effectively. Such an approach requires an acceptance that every situation is a learning situation, that there are many important goals which can be pursued simultaneously, and that ulitmately the learning which occurs is maximized to the extent that the number of separate realities present in that the classroom can merge into one shared reality. It is out of this ongoing attempt to understand the realities of the classroom and to be an effective teacher that this dissertation has grown.

Review of Research Literature

In the preface to the Second Handbook of Research on Teaching (Travers, ed., 1973), Travers comments that, "Those who participated in the first Handbook would never have guessed that, a decade later, authors of the Second Handbook would be having even greater difficulty finding significant research to report than did their pre-

decessors" (p.vii). This was one of the first statements I encountered as I began the search for research literature which would contribute to the background for this study. Although I had no reason to doubt the validity of Travers' comment, it seemed to me that I should do some checking of this domain for myself. I began by reading the relevant chapters in the first Handbook (Gage, ed., 1963) and in the Second Handbook and found that it was indeed as Travers described, "...that although there has certainly been an improvement in the statistical design of studies over the last decade, a corresponding improvement in conceptual design is often not apparent." And of "Of what avail is it to apply excellent statistical design to poorly conceived research?" (Travers, p.vii). Undaunted, I betook myself to the libraries and for six weeks perused the abstracts of work done in the three to five years since the appearance of the Second Handbook, following up those studies which appeared to have some relationship to what I wanted to do. I found that conditions had basically not changed in the years following the Second Handbook. Traver's statement continues to be an accurate summary of the state of research in higher education with a few notable exceptions. The literature review which follows will focus on criticisms of the research and will follow the format used by Trent and Cohen (1973) in their review of research on teaching in higher education.

Trent and Cohen (1973) divide their review into five categories, three of which are relevant to this study: Teaching Technology and Methods, Student Characteristics and the Learning Process, and Evaluation of Teaching. These categories reflect issues which arose naturally in my own concern about teaching effectiveness and are

embedded in the description given previously. I would like to consider each of these briefly, examining their relevance to the study which follows.

Teaching Technology and Methods

It seems clear to me that the issue of teaching methodology - what to do to achieve the goals we have as teachers - is important to all of us concerned with effective teaching. It is also an issue which has generated a great deal of research because "How to..." questions are some of the first questions asked. However, there have been ongoing problems with the research in this area because the questions researchers have asked have been too general and there are an almost impossible number of variables to attempt to control or examine. Dubin and Traveggia (1968 - as quoted in Trent and Cohen) after reanalyzing 96 studies of various teaching methods which were done during the past forty years, reported that as far as knowledge outcomes are concerned these studies cancel one another out. For each study in which a particular method was found to be advantageous, another study exists which demonstrates the reverse to be true. They concluded that it was time to reconceptualize the entire problem, a conclusion drawn by McKeachie (1961, 1962, 1963) more than a decade earlier when he pointed out a number of times that different methods are easier for different teachers, are more appropriate for certain goals and appeal more to certain students. He and Kulik (1975) gave further substance to this conclusion in a more recent review. In a discussion of the effects of methods which emphasize student interaction and autonomy, they point out that student-centered discussions

have been found to be consistently superior to instructor-centered discussions on measures of attitude and motivation, and on measures of critical thinking and other higher level cognitive outcomes. They conclude that "... student interaction is an important variable affecting college level learning. Choice of class size, teaching method and technological aids should depend on one's goals. Factual learning can be achieved in a number of ways.... Learning to use facts to solve problems, evaluate outcomes, or make decisions is likely to be facilitated by opportunities to express ideas in an interactive situation" (p. 188). It is this complexity of interaction among methods and goals affected by teacher and student preferences which makes it difficult to find results which are consistent from study to study.

Student Characteristics and the Learning Process

Since the classroom is composed of students who are there to learn, it makes sense that a concern with teaching effectiveness would lead to questions about how various personality variables are related to the learning process. However, in this area of research as in the area discussed above, findings in various studies contradict one another. Attempts to relate personality variables such as introversion-extroversion, anxiety level, sociability and emotional balance to academic achievement led to no consistent results. Studies of student's attitudes toward school indicate some relationship to achievement. However, the reviewers (Trent & Cohen, 1973) conclude that "although attitude is an important variable in learning, no instruments have been developed which adequately measure it in relation to a specific learning experience" (p. 1006). The majority of studies in this area

in the last decade have focussed on overall personality change from college matriculation to graduation or on specific groups, such as black students, women, student activists, etc., examining differences within these groups related to overall college success. Since there has been little consideration of how these variables function within a specific classroom in relation to specific goals or to a specific teacher, they have little relevance to questions relating to teacher effectiveness.

Evaluation of Teaching

The bulk of research relevant to those of us concerned with effective teaching is to be found in studies which attempt to evaluate teaching effectiveness directly. These studies fall primarily into three categories: 1) observational studies in which teachers are rated by observers not involved in the classroom; 2) studies using student ratings of instructors; and 3) studies which focus on student growth as the primary criterion for teacher competence. Here again the response is one of disappointment.

Classroom observational studies which make up the bulk of this research have been severely criticized by a number of writers. As the following examples demonstrate, the issue underlying most of the criticism is that the frame of reference of the rater effects the observations made.

a. Ryans (1960) states that the variation in values underlying descriptions of desirable teaching goals makes it extremely difficult to describe effective or ineffective teaching with any assurance.

b. Sorenson and Gross (1967) point out that there can be no single fixed teacher-ideal and that persons with different concepts of the teachers will regard the same teacher differently.

c. Mouly (1969) further states that when teaching is evaluated not by the results it produces but by characteristics of the act of teaching or with reference to the personal qualities of the teacher, these evaluations are not measures of teaching effectiveness but subjective ratings of performance or personality.

d. McNeal and Popham (1973) affirm this view, concluding in their review that observation instruments "...are most useful for describing the teaching act rather than for identifying instructional variables of great power or for judging effective teachers" (p. 221). They also point out that teachers may be labeled ineffective not because students fail to achieve but because their achievement occurs in directions not valued by the rater (p. 229).

e. Tolov (1973) concludes that "...any discussion of research on teacher effectiveness must also take into account the rater dimension" (p. 104).

Studies involving student ratings of teacher effectiveness have received similar treatment. In attempting to account for why there is so much contradiction among these studies, Trent and Cohen (1973) conclude that "students' perceptions of teachers are more a function of internal frames of reference or value systems than of concrete teacher characteristics" (p. 1043). McKeachie, et al.,

(1971) in a study of the validity of student ratings concur with Trent and Cohen concluding that "...the major slippage in our validity studies is in the differing goals of teachers and students" (p. 444). They go on to state that when asking which teachers are most effective we also must ask, "For which students?" and "For which goals?", a comment consistent with Boocock's (1966) conclusion five years earlier when he stated, "All that does seem clear at this point is that there does not seem to be any one type of teacher or teacher-student relationship that is 'best' for all kinds of learning and all kinds of students" (p. 9). In summing up, Trent & Cohen conclude that student evaluations give useful information about a teacher's personal effectiveness, about the rapport between teacher and students, and about the organization and management of a particular course, but not about effectiveness in relation to student learning. Kulik and McKeachie (1975), however, after reviewing a number of studies specifically investigating the relationship between student ratings and student achievement found studies that showed very high positive correlations and moderate correlations as well as very high negative correlations and no relationship at all. They point out that the strong relationships are found when sample sizes are small. The moderate and low correlations occur when sample sizes are more adequate. Their conclusion is that the most impressive thing about the studies which relate student achievement to student ratings of instructors is the inconsistency of results, leaving the issue of the usefulness of student evaluations for judging the effectiveness of the teacher in relation to student learning open for further discussion and research.

This brings us to the final category, those studies using student growth as the criterion for effective teaching, and here again we find the work disappointing. First of all, there are very few studies in this category. Out of 1000 studies of teacher effectiveness in a 1967 bibliography there were only twenty in which student growth was the criterion of teacher effectiveness (Burkhart, 1969, as quoted in Trent and Cohen, 1973). Secondly, in order to use student growth as a criteria the state of performance testing must be greatly improved. Here again the conclusion is similar to those already stated: "Apparently much more is to be learned about the effectiveness and proper mix of instructional objectives, performance tests and teacher characteristics on all levels" (Trent and Cohen, 1973, p. 1051).

Summary

My decision to focus on evaluation of the research rather than on the specific content is not a reflection of negativity on my part, but rather a reflection of what is consistent in the conclusions drawn by researchers and reviewers. There is not only a consistency of dissatisfaction with the state of the research. There is also a remarkable degree of agreement about what is wrong. This agreement centers around the lack of an adequate conceptual model to which research in all areas can be related. This is not meant to imply that there are no existing conceptual models out of which research on teaching has grown, but rather that these models are incomplete. After discussing three such models, the behavior control model, the

discovery-learning model and the rational model, Nuthall and Snook (1973) reach a number of conclusions which not only support the criticisms raised thus far but which also may help explain why it is so difficult to find consistency in research results. They make the following points:

1. Each model includes assumptions about teaching and learning which differ from model to model. These assumptions are not tested by the research which the model generates. The outcome of this is that research which is generated by a given model is necessarily tied to that model, and cannot become part of a unified body of empirical knowledge existing separately from the model.
2. Research which has attempted to avoid the models, such as observational research, is often misunderstood or ignored except by those doing similar studies because, since there is no interpretive framework, no one is quite sure what the data mean or how they might be put to use.

Clearly, as Nuthall and Snook go on to point out, this state of affairs leaves the researcher on the horns of a dilemma. If he chooses to work within a given model his research will have little significance or influence outside that model. If he works outside a model there is the risk that no one will know what to do with his data. In the face of this seeming impasse, they identify two alternatives which remain open.

1. "Researchers may conclude that teaching is a practical activity which can never become the object of meaningful empirical research and revert to more fundamental

psychological, sociological and philosophical studies of selected aspects of teaching." or

2. "Researchers may conclude that the deficiencies of model-dominated research are the result, not of models per se, but of inadequate models. They may attempt, therefore, to develop functional models of teaching which are more suited to the complex phenomena of classroom teachers." (p. 72)

Certainly this latter approach is the most challenging and it is also the approach being called for by those who, like Travers, Trent and Cohen, Nuthall and Snook, McKeachie, and many others want research in this area to have an impact on teachers and on institutions, an impact which can only be expected if research results become more consistent and reflect more completely the complexity of the teaching-learning situation.

CHAPTER II

TOWARD A MORE COMPREHENSIVE MODEL OF COLLEGE TEACHING

> Once upon a time six blind men were sitting and chatting. An elephant came along. When the elephant driver saw the blind men on the road he stopped the elephant in front of them so that they could "see" it. One held its trunk and said, "The elephant is just like a hose."
>
> A second one held its ear and said, "The elephant is just like a winnowing basket."
>
> A third held its tail and said, "No, the elephant is just like a broom."
>
> The one who held its tusk said, "No you are all wrong. The elephant is just like a stick,"
>
> "No, it's not!" shouted the one who held its leg. "The elephant is no different from a pillar."
>
> "You're obviously out of your minds," said the one who rubbed its abdomen, "the elephant is just like the underside of my washtub."
>
> And they started to argue, each one convinced that only he knew the truth. Then the elephant driver explained that each of them had only partial knowledge and that the truth was the sum total of all the parts.
>
> (As told by Swami Muktananda, 1970)

It might be said that each of these blind men has a model or theory about what an elephant is like. His theory is based on what he is capable of perceiving, and his confidence in his own perception is unshakable. This state of affairs is remarkably similar to that encountered many places in the literature and research on teaching. Study after study appears, stimulated by the work of a previous writer, whose conclusions are questioned and the writer-researcher of the later study is often found to say something like, "It's not at all

like X said in his study. It's like this." And they begin to argue - debate it's called in polite circles. These "debates" are often great wastes of energy because they are talking about studies in which the proportion of the variance accounted for, even by significant results, is very small. They are talking about studies which focus on one or two factors in a situation composed of many, a situation in which these many factors interact in such complex ways that it may be true to say that each research situation, each teaching situation, like any situation, is totally unique and can never be replicated. If this is true, then the important task is to identify as many of these factors as possible, since they probably exist in each situation, and to learn as much as we can about how they interact. This will give us ultimate flexibility as teachers to respond to each classroom situation as a completely unique and yet quite understandable reality.

An adequate model of the teaching-learning situation should help the teacher and researcher to both understand and organize the complexity of the classroom experience without sacrificing the flexibility required to describe its ever-changing nature. (To paraphrase Heraclitus, you can't step into the same classroom twice.) Such a model would recognize that the classroom is an eco-system. Its subsystems are people, teacher and students, who bring to this situation their own specific organizations of reality. The elements of this composite reality include all of the variables discussed and investigated by teachers and researchers: teaching methods; subject matter; course goals; class size; classroom organization or structure; classroom atmosphere; roles; types of students and student character-

istics such as skills, motives, emotional states, work styles, personal styles, values, goals, needs; types of teachers and teacher characteristics, such as goals, personal style, values, needs, presentation of self; and outcome measures such as grades, satisfaction, and attitudes. This list is meant to be illustrative, not exhaustive. The interactions among these elements are a result of the intersecting meaning systems of all the people present. It is this last statement which I would like to pursue in greater depth, followed by an examination of its implications for both teaching and research.

From the point of view of both teachers and students, performance in and satisfaction with a course are important variables. Pervin (1968) points out that both are a function of individual-environment fit, i.e., a function of the interactions among the individual, task and situational variables. He goes on to state that the same external variable has different effects on different people and that the individual and the environment are in a constant state of mutually influencing one another. We may be able to accept that what Pervin states is true but understanding why it is true and how it functions requires that we focus on the perceptual reality, the individual meaning system, of the person. All organization and understanding of what is going on "out there" takes place within the individual, filtered through his values, his present emotional state and his concepts. What he is able to take in is directly related to how open he is, how comfortable he is in the situation and how flexible the boundaries of his conceptual systems are.

This approach was explicated quite fully in a fine little book, basically ignored and now out of print, available only on

microfilm. The Association for Supervision and Curriculum Development, in 1962, invited Earl Kelly, Carl Rogers, Abraham Maslow and Arthur Combs to write the Yearbook for that year. They produced a jewel of unrecognized value entitled Perceiving, Behaving, Becoming: A New Focus for Education, a booklet I would recommend as a basic handbook for all teachers. Following are a few representative quotations:

Earl Kelly: "...perception is the stuff of growth for the psychological self. The perception process is the only avenue by which the self can be fed." (p. 14)

Carl Rogers: "...The self and personality emerge from experience... One becomes a participant in and an observer of an ongoing process...rather than being in control of it." (p. 26)

Abraham Maslow: "To the extent that perception is desireless and fearless, to that extent is it more veridical, in the sense of perceiving the true or essential or intrinsic whole nature of the object (without splitting it up by abstraction)." (p. 41)

Arthur Combs: "The degree to which any perception will affect behavior depends upon its personal meaning for the individual." (p. 61)

"Perceptual psychologists have stated as a basic axiom that...all behavior is a product of the perceptual field of the behavior at the moment of action. That is to say, how any person behaves will be a direct outgrowth of the way things seem to him at the moment of his behaving. To change behavior in this frame of reference requires that we understand the nature of the individual's perceptual field. Knowing the meanings that exist for a particular person, we may be able to create the conditions which will facilitate changes in his behavior." (p. 50)

"Behaving and learning are the products of perceiving." (p. 67)

"How a person behaves at a given moment is a direct expression of the way things seem to him at that moment. People do not behave according to the facts as they seem to an outsider." (p. 67)

And finally: "If behavior is a function of personal meanings then perceptions must become the center of the teacher-learning situation." (p. 68)

Statements such as these must form the foundation of any model which attempts to understand or describe the complex interactions of personal and interpersonal space. In fact, it may not be possible to create a model with much more structure than this if it is to be flexible enough to handle every possible permutation and combination of variables. The function of the model should not be to focus the teacher or researcher on a limited part of it. This is what past, inadequate models have done. Its function should be to aid the teacher and/or researcher to maintain an awareness of the totality at all times, even if he chooses to focus on a specific part of the whole. This leaves us with a dilemma. There is a call for a more comprehensive model. If this is interpreted to mean a more complex conceptual system composed of many statements about the variables and their interrelationships, then we are in trouble, because as an old Sufi saint named Samuel Lewis said in the film Sunseed, when we are faced with a problem our concepts stand in the way of our solutions. Our concepts are only concepts. Therefore if we create a system which multiplies the existing concepts, we create a more intricate frame-work with which to view reality, but we do not necessarily see reality more clearly.

I would argue that a more adequate model is a simpler model, a model which recognizes that we are creating the world as we perceive it by imposing meaning on our perceptions, meaning which comes from "...our previous experiences, our assumptions, and our purposes (i.e., needs)" (Postman and Weingartner, 1969, p. 90). It would be a model which would fit all of our "realities" and would make what we learn about one system generalizable to all. The classroom would

be seen as a microcosm, smaller than the whole but functioning according to the same principles, the central principle being that meaning comes from within the individual, that behaving and learning are the products of perceiving.

As teachers we would then be aware that our job has many components beyond that of our subject matter. If we care about that which we are teaching then part of our task is to help create a learning environment which is, as Maslow pointed out, desireless and fearless. Then we and our students will become increasingly open and receptive. We, as well as our students, will be participants in and observers of the ongoing process. We, as well as our students, will be learners, and our special goal will be to gain a more complete understanding of the educational process. We will have student-centered curricula and student-centered classrooms, not only because it is good for motivation but because, as Postman and Weingartner (1969) have pointed out, we don't have any other choice. An interesting thing about this posture toward teaching and learning is that it is from our perspective as teachers that the classroom is student-centered because it is the student's perceptual framework which we want to affect, to broaden, to make more open. From the student's point of view this same classroom might very well be perceived as teacher-centered if the students perceive the teacher's perceptual framework to be the primary aid to their expansion. From an external observer's point of view this same classroom might be seen as person-centered. This way of experiencing the classroom is much like looking through a kaleidoscope, in which the elements remain the same but

the patterns constantly shift depending on whose eyes we see it through.

Teaching when viewed from such a perspective becomes greatly influenced by our assumptions about what is possible. (Not that this isn't always true, but we become more aware of the part we play in this process.) Postman and Weingartner conclude that because each individual perceives what is "out there" in a unique way we as teachers who realize this must "scrap" all of our old ways of proceeding and accept that the outcome of all teaching will be X number of unique learnings (X=# of students in a class) and that we will never be able to say what our "class has learned, since there is no such 'thing' as a 'class', only 22 or 34 or 43 individual perceivers" (p. 93). This kind of statement makes it appear that we are dealing with a duality which forces us to chose between "class" or "individual" as our framework for teaching. It seems to me that the model presented here allows us to incorporate both if we want to. We don't have to accept as inevitable the degree of separation implied in this description given by Postman and Weingartner. We might aspire to have this set of X individuals become a group, that is, to be become more one, more unified. This would happen not by trying to impose the perceptual framework of one person on everyone but by facilitating a sharing of these separate realities, at least to the extent that they are relevant to the particular class in question. To the degree that each person's reality contains an awareness of another's, unity is achieved. If 30 people leave a class knowing not only what the teacher's meaning system is, but what meanings others in the class have given to what has transpired there, something more has occurred than 30 individuals leaving with 30 separate learnings.

If we accept as one definition of learning that given by Postman and Weingartner, "The ability to learn can be seen as the ability to relinquish inappropriate (incomplete?) perceptions and develop new - and more workable - ones" (p. 90), then certainly, when exposed to the same situations we may all "learn" different things because different inappropriate perceptions may be affected. However, we would also be leaving that "learning situation" with realities which are more shared than when we came into it. We can aid this process of creating a more unified reality in the classroom by fostering communication aimed at achieving common purposes and shared assumptions. If the goals of the class are shared by all of the participants, i.e., if everyone's needs are being met at least some of the time, we have helped create a situation in which people can be more "desireless" and more "fearless", conditions necessary if people are to be able to relinquish old and safe, but limiting, percepts.

What effects, then, would such a model have on the researcher? How would he approach his task differently? Ideally, he would approach his task more openly. He would see his work as valuable primarily if it helped teachers. He would agree with Dewey (1929) that the value of research findings and scientific conclusions is determined by the degree to which they help the teacher to do his job more intelligently and more flexibly. Dewey maintains that scientific findings can help the teacher to be better adapted to dealing with individual situations by drawing the teacher's attention to certain observations which might otherwise escape him; by enabling the teacher to more fully interpret what is going on in the classroom, taking into account factors often hidden from view; and by seeing more

of the complex interrelationships thus allowing him more alternatives for action. Obviously much of the research has not accomplished this for reasons cited in the previous chapter.

There is one research effort which has achieved this goal to an extent seldom achieved and it stands as a model of what is possible for those who aspire in this direction. It is the work of Mann and his associates reported in The College Classroom: Conflict, Change, and Learning (1970). Central to their effort was the search for a new conceptualization of the process and goal of education, and a desire to broaden the conception of what is happening between students and teachers. The idea that guided them was that "...the proper goal of the college classroom is 'work', and only by understanding the obstacles to work that flow from the complexity of the teacher's task, the student's diversity, and the nature of group development can the teacher make his optimal contribution to this goal" (p.vi). Their methodology was that of the intensive case study rather than a survey of many classrooms. The data came from a combination of quantitative, observational techniques and from a qualitative analysis of classroom transcripts and student interviews. It was directed primarily toward answering two important questions:
(1) What is the role of emotion in the teaching-learning process?
(2) What is the role of the teacher?

A typology was developed called the "teacher-as typology." It was presented as only "...one possible way of carving up the diverse intentions, behaviors and perceptions that constitute the teacher-student relationship..." (p. 2). This typology proved to be very useful in the study which is part of this dissertation, and

is presented briefly here.

1. The Teacher as Expert has mastered a certain defined area of knowledge.

2. The Teacher as Formal Authority represents institutional goals and functions as an agent of control and evaluation, setting standards for and evaluating performance.

3. The Teacher as Socializing Agent represents a discipline in which he is invested and into which he is interested in recruiting new members.

4. The Teacher as Facilitator works to help students achieve their own goals and to overcome obstacles to learning.

5. The Teacher as Ego Ideal functions as a model for students in the process of their own development.

6. The Teacher as Person is a full self, not limited to role specifications.

Use of this typology can help a teacher think about how he wants to divide his efforts in the classroom, about the relative importance of these aspects to him, and about how to define his task. He could also use this typology as a way to discover what expectations his students have for him, thereby providing himself with a picture of the interaction of his set of priorities with the students' differing ideas about the best possible student-teacher relationship, excellent information to help in moving toward the goal of a shared and mutually valued reality.

Another major contribution of this work is what it adds to our understanding of the affective process in the classroom, an important element of which is simply liking or not liking what is going on (p. 21). However, the examination of the affective-interpersonal issues of the classrooms went far beyond this, asking questions concerning, "(a) the various histories, both familial and educational, which students bring with them, (b) the expectations and hopes which

students have for the class, (c) the development of the student's view of his teacher, the class, and of his own performance, and (d) the one or more ways the student tries to adapt to reality as he perceives it" (p. 144). The outcome of these questions was the division of students into eight categories on the basis of their behavior in the classroom. These categories represent not only classroom behavior but also the meaning systems these students bring to the classroom. The information used to construct these categories incorporates the elements which contribute to individual meaning as discussed by Postman and Weingartner (quoted previously). The descriptions which follow are greatly abbreviated.

1. Compliant students are task-oriented with few interfering emotions, dependent on external motivation.

2. Anxious-dependent students have feelings of intellectual incompetence, are anxious about grading and evaluation and are unsure of themselves in the social sphere.

3. Discouraged workers are independent and introspective, often dissatisfied with themselves, blaming themselves when things go wrong. Although depressed about human nature in general, they have a sense of their own inner strength.

4. Independent students are older and look at the material more objectively. They show a degree of detachment from teacher and class, have good integrative abilities and want to be free to express their own ideas.

5. Heroes see themselves as exceptional people, place a high value on private work, are intelligent, creative, and internally motivated and want to relate to the teacher as a person.

6. Snipers are defensive and non-introspective, have low self-esteem and are pessimistic about having fruitful relationships with authority figures.

7. Attention-seekers have a social rather than an intellectual orientation in class. They want the teacher to be nurturant; other people's opinions are important to them; and they try to deny thoughts that are threatening.

8. Silent students have a distant, remote relationship to the teacher. They see the teacher as acting out of his own needs, indifferent to the needs of students and therefore threatening to their identities.

Here, again, is a typology which might be helpful to teachers, but it is presented with the awareness that it should not be used to stereotype students. "Since the clusters are derived from the interaction process in a particular class, we would not expect that a given student would necessarily appear in the same cluster in his other courses. Students have radically different reactions to different teachers and subject matter, and their interpersonal styles also change with growth over time..." (p. 145-6).

To accompany these two typologies, there is a chapter called "The Natural History of the Classroom" which describes the growth and developmental stages which characterize this particular "organism." Finally, there follows an excellent discussion of the nature of work which is described as being composed of the following ingredients: "(a) a particular teacher with a particular way of viewing the task and of dealing with students, combined with (b) an array of quite different students each with his own view of the task and his characteristic interpersonal style; to yield (c) a human group which develops its own unique techniques for maximizing (and for blocking) the collective ability to work toward common tasks and affective goals" (p. 293). Following this description are two comments relevant to statements made earlier in this chapter about the nature of conceptualization and research. "First, any statements we make about the nature of work in general will need to be rather vague and abstract. Second, any effort to understand both work and the various

impediments to work will need to be quite limited in scope, applying to a particular combination of task dimension, teacher, student subgroups and developmental phases" (p. 274).

There is throughout this work a recognition of the uniqueness of each situation and a demonstration of how the researcher can function flexibly within this awareness to produce data and conceptualizations helpful to the teacher. At no point is an awareness of the complexity of the domain being studied sacrificed or lost sight of. This study, more than any other research attempt, meets the criteria discussed by Dewey and provides an excellent foundation for future work in this area.

The study which follows is an examination of a different subset of the intersecting realities of students and teachers than found in the work of Mann, et al. Its focus is on the classroom task(s) or goals as perceived by students and teacher, and the questions explored center around the relationship of outcome variables such as student performance and satisfaction to the perceived task reality of the classroom. Of primary importance is the intersection of the teacher's reality (his particular way of viewing the task) with the students' realities (their own particular views of the task). The data as reported and analyzed reflect this interaction from the point of view of students only and focus on the importance of the student's reality rather than on the particular content of this reality.

CHAPTER III

A STUDY OF THE RELATIONSHIP OF STUDENT GOAL PERCEPTIONS TO STUDENT PERFORMANCE IN AND SATISFACTION WITH COURSES

INTRODUCTION

This study is the result of a number of intersecting concerns and beliefs. The overriding concern is with effective teaching and a desire to provide teachers with information that will help them understand more completely what is happening in their classes. I believe that some of this information must come from students since they are the other primary participants in the educational process, and it is their perceptual reality which the teacher is trying to effect. Therefore, information about this part of the reality of the classroom should be helpful.

These concerns were reflected in my life. At the time the data were collected for this study I was a member of the Committee on Evaluation of Teaching at the Residential College of the University of Michigan. The committee was composed of eight people, four students and four faculty members, representing different subject matter areas. Our task was to construct and administer a course evaluation form to students in all the classes of the Residential College. The challenge was to construct a form which was general enough to meet the needs of diverse teachers, students, subject matters and class

formats while at the same time providing information specific enough to be useful to each teacher. This provided me with an excellent opportunity to try to integrate my belief that research should be useful to teachers with my desire to prod them to look at their classrooms in a slightly different way. This led to the construction of a course evaluation form, part of which is used in this study, other parts of which were included by requests from instructors and students but were not directly relevant to the design of this research.

The primary goal of the study which follows is to demonstrate to teachers the importance of students' perceptions with relation to student performance in and satisfaction with the course. The part of the student's perceptual reality which is most closely attended to here is his conception of course goals - his own goals and the teacher's goals. The degree to which these realities intersect will be examined in relation to student satisfaction with the course and to student performance, as seen by the student and by the teacher.

RESEARCH METHODOLOGY

Research Population and Data Collection Procedure

The participants in this study were the students and teachers of 26 classes at the University of Michigan's Residential College. Data were collected originally from about 50 classes. The classes used in the study were unwittingly selected by the individual instructors since the failure of an instructor to fill out the part of the evaluation form relating to his goals invalidated the data from his class for the purposes of this research. The actual research population consists of 277 students, 65% of the total enrollment in

these 26 classes. In some classes the percent of students responding was much higher, in some much lower, ranging from 100% to 25%. This difference in student response is accounted for by differences in administration of the evaluation form. Although instructors were asked to have students fill these forms out in class, many did not wish to sacrifice an hour of class time for this purpose. Instead they gave students the forms to fill in at their convenience. Since this was an end of the semester evaluation process, it was most convenient for many students not to fill out the form unless the instructor made its importance clear and reinforced this with some procedure which enabled them to identify students who had not turned in the evaluation form by a given deadline. This required extra effort on the part of the instructor since student names were not on course evaluation forms. Therefore, it could be postulated that courses which have the highest return of student evaluations are those whose instructors cared most about feedback from students.

This raised some question about the representative quality of the data since it seemed possible that students who turned in the forms in certain classes might differ on relevant variables from those who did not turn in the forms. Since student I.D. numbers were on the forms, it was possible to identify which students had filled out forms and which had not, and by comparing these two groups within the classes and for the whole population, to determine if there was any difference between these groups on course grade and SAT scores. Although the grade point was slightly lower for the "no evaluation" group this difference was not significant. The mean SAT score for each group was almost idential (no evaluation = 1231.7; evaluation group = 1233.9)

These are the only two variables on which the two groups could be compared since they were not part of the evaluation form itself. If, indeed, the students who did not fill out course evaluations self-selected themselves out of the data who might they be and what effects might this have on the data? One possibility is that they are disaffected students who have done less well in the class and therefore didn't care enough to invest the time required to fill out the form and return it. This possibility is supported by the fact that the grade point is slightly lower for group who didn't fill in evaluations although the SAT scores are not. However, since there are a number of classes in the sample in which the return rate ranges from 85 to 100%, this does not seem to be an issue of great concern.

The instrument was introduced to the students by the following letter:

> Just a few words about this form. Its most important use is to give instructors the kind of information they need to improve their teaching. Since you are primary participants in this process, feedback from you is an absolute necessity. The length of this form is a direct reflection of the variety and extensiveness of the information we as teachers need in order to make informed and carefully considered judgments of what we are doing. Our own perceptions are not enough. They only reflect one of the perceptions relevant to the class, and they may be inaccurate. Don't feel inhibited by the format or limited to respond only in the categories provided. Clearly, one form cannot match every conceivable type of class perfectly. Any additional thoughts or comments will be welcomed. If the margins aren't big enough, the backs of the pages should be. The important thing is that you tell your instructors what you think they need to know in order to become better teachers.
>
> Another thing, I'd like you to know is that I'm using the data from this semester's evaluations for my dissertation research. I hope that it will help provide a more meaningful context in which to consider the outcomes for any particular class. It is for the purpose of this research that you are asked to put your I.D. number on the form. It will be clipped off before the forms are returned to instructors, and as usual this will not be done until instructors have turned in their evaluations of your work in the course.

This gave students prior knowledge of the ways in which the information would be used. As was traditional, they were assured that they would remain anonymous and that the instructor would receive these evaluations only after grades for the class were turned in. This was done to allay any fears that the instructor might punish the class or individuals, consciously or unconsciously, if he perceived his evaluations to be negative.

Faculty members were introduced to the form in a similar way. They were asked to respond only to specific items, especially to check the course goals which were most important to them and were reminded that the evaluation of a course could not be complete without the perspective of the faculty member. The instructions which faculty members were given for the administration of this form are included in the appendices (Appendix A).

Both faculty and students were aware that the course evaluations were designed not only to help an instructor improve his teaching but were also used by the executive committee of the college in making decisions about rehiring.

Description of the Instrument and the Variables

The instrument used for data collection was, as previously stated, created just prior to this study and therefore underwent no pretesting. This seemed unnecessary in many ways since its primary function was to provide direct feedback to instructors from their students. This is not to say that if this instrument were to be used again that it could not be improved, especially for research purposes.

The items from the evaluation form which were used in this study are found in Appendix B. I will describe them briefly here in relation to the main variables of the study. The first item is a list of twenty-nine goals, from which the students were to select not more than ten which were important to them and not more than ten which were important to the instructor. Instructors were also asked to select the most important goals for their class from this group, again not more than ten. This list of goals was generated by the committee in consultation with other faculty members. We wanted the list to be specific enough to fit individual classes, yet general enough to be relevant for a wide variety of subject matters and teachers. The resultant list seemed to us to provide an adequate selection of goals in four general goal categories: goals related to subject matter; goals related to work skills; goals related to interpersonal skills; goals related to interpersonal skills; and goals related to personal growth and development.

The information from this list of goals was condensed into three variables.

1. Correct perception of instructor's goals (Corrgoal), was scored as the percent of instructor's goals perceived correctly by the student and was obtained by comparing the instructor's list of goals for the course with the student's list of instructor's goals (perceived instructor's goals).
2. Goals actually shared with the instructor (Shargoal), was obtained by comparing the instructor's goals with the student's goals and was scored as the percent of actual instructor's goals shared by the student.

3. Goals thought to be shared with the instructor (Thotshar), represents the student's internal reality obtained by comparing the student's own goals with his list of perceived instructor's goals, and scored as the percent agreement between the two.

These three variables represent the ways in which student goals, instructor goals, and student perceptions of instructor goals intersect, and are illustrated below (Figure 1).

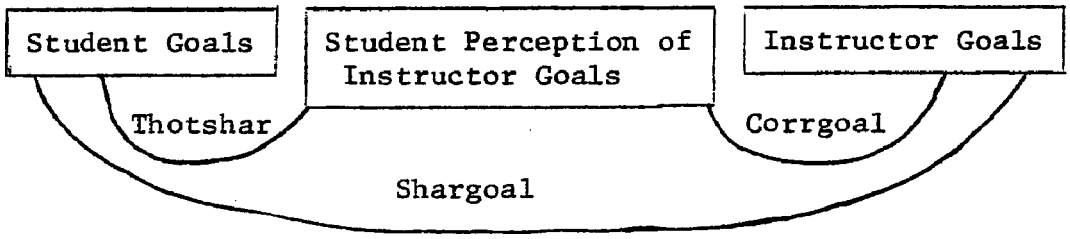


Figure 1: Goal Variables as Intersections of Primary Goal Measures

The focus of this study is on the intersections as they occur for the student in relation to the instructor rather than in relation to other students. It is clear, however, that in a class where there is high sharing of the instructor's goals by students, there will also be a greater consensus about goals among students.

The next set of variables center around the issue of the student's satisfaction with the course. Each of these measures of satisfaction is related to needs which the student brings to the course with him and the satisfaction of these needs or wishes is one element affecting his ability and/or his desire to do work. The course-related needs recognized in these items have to do with: 1) the general kinds of goals the student wishes to pursue, 2) the way class time is spent, 3) the kind of role(s) the teacher plays, 4) the role(s) the student plays and 5) the general expectations the student has for the class. These were represented by the following items.

Satisfaction scores were obtained by comparing the student's perception of classroom reality with what his preference (desires) were, except for the final item in which he was asked to express directly the degree to which his expectations for the course were satisfied.

1. Satisfaction with course goals was derived from item two using the sum of differences squared as an indication of the fit between actual goals (as perceived by the student) and preferred goals.
2. Satisfaction with class time was derived from item three in the manner described above.
3. Satisfaction with course characteristics was derived from item four using the percentage of agreement between actual characteristics as perceived by the student and characteristics he would have preferred.
4. Satisfaction with teacher role was derived from item five in the manner described above.
5. Satisfaction with student role was derived from item six in the same manner.
6. Satisfaction of student expectations was measured directly in item twenty four on which students were asked to describe their satisfaction on a 1-5 scale.

From this group of variables a composite variable called Overall Satisfaction (oversat) was created by summing the six variables just described after they had been equally weighted by transformation into quartiles. The individual satisfaction items were correlated with overall satisfaction within a range of .57 to .66 with a median of .63 (Appendix C).

The final group of variables were outcome measures:

1. Students were asked to indicate their overall motivation, interest in the course, time spent on course work, and effort put into the course, by comparing the particular course being evaluated to their other courses, ranking it on a 1 to 4 scale, assuming a full course load to be four courses.
2. Grade: In the Residential College, courses are graded on a pass-fail basis accompanied by written evaluations. These evaluations were transformed into a 1-5 scale for the purposes of this study. The following procedure was used: two people read the entire group of faculty evaluations of the students in each class to get an idea of the range within the class. Then each person separately went back over each student's evaluation and assigned a number to it ranging from 1 to 5, 5 being the equivalent of failure. Any disagreements between the two raters were resolved by mutual agreement, taking the evaluations in question and comparing them to other evaluations to which each rater had assigned the same number.
3. Student rating of his own performance in the class on a 1-5 scale.
4. Rating of the overall effectiveness of the instructor on a 1-5 scale.
5. Rating of the overall value of the course on a 1-5 scale.

Design and Data Analysis

The primary questions of concern here are questions about the relationships of these variables to each other and about the effect of differing relationships among them on classroom reality. As this suggests this study is primarily exploratory, addressing itself to questions such as the following:

1. What are the effects of sharing or not sharing the instructor's goals on student performance in and satisfaction with the class?

2. What are the effects of perceiving the instructor's goals correctly or incorrectly?

3. How do the goal variables interact with the satisfaction and outcome variables?

4. What information, if any, can this study provide about effective teaching?

5. What implications, if any, does this study have for the quasi-model suggested earlier?

It is these open-ended concerns which will direct my approach to the data.

The design of the study places certain limitations on the way these questions can be answered. This is a one-time-only, end-of-the-course evaluation form. Therefore, there is no direct information about ongoing classroom process or communication within the class. Anything which is said about these issues must be an inference based on the outcome of the data analysis. Also, there is no direct measurement of student performance in relation to the goals specified by either the student or the instructor. Therefore, any conclusions drawn about teaching effectiveness as related to student learning can only come from considerations of course grades or of the student's evaluation of his own performance. This then

leaves this study open to the charges often leveled at the use of student evaluations as measures of teaching effectiveness. We will have information about student satisfaction in relation to the goals and/or needs mentioned above and this information will certainly reflect on the student's experience of a given teacher and a given class, but it is true that there is no direct measure of student learning. However, student satisfaction is not unrelated to student learning; an instructor whose students leave the course with a high level of satisfaction in relation to the course-related needs discussed earlier is also likely to have had students leave the course having learned more than if they were less satisfied. This is especially true since the areas of satisfaction measured here are directly related to goals. Certainly all of these goals are not directly related to subject matter or course content, but they are in the service of these more traditional goals since student satisfaction on these other dimensions produces that condition of openness ("fearlessness" and "desirelessness") which makes for optimal learning. In the context of these acknowledged problems, an attempt will be made to comment on certain conditions of effective teaching and on the usefulness, importance, and validity of feedback from students about instructors and their courses.

The data analysis is divided into two parts beginning with the large population of 277 students, moving next to a population of nine classes (n=155) in which the class as a unit is a primary focus. It is hoped that this movement from large scale to small scale analysis will provide information about the usefulness of the goal variables for thinking about the individual student as well as about

the class. The data analysis is primarily correlational, with analyses of variance used to determine whether the differences found across classes are significant.

RESULTS

Total Population

The purpose of this section is to describe the relationships which appear among the study variables before taking a closer look at a specific group of classes. All of the goal measures are significantly related to one another ($p < .001$), the relationship between corrgoal (goals perceived correctly) and shargoal (goals shared with instructor) being the strongest (Table 1).

TABLE 1

RELATIONSHIP OF GOAL MEASURES TO ONE ANOTHER

	Corrgoal	Shargoal	Thotshar
Corrgoal	1.00	.69*	.41*
Shargoal	.69*	1.00	.36*
Thotshar	.41*	.36*	1.00

*Significant at .001 level.

The importance of correctly perceiving the instructor's goals in order to actually share them is obvious. Thotshar (student's perception of goals shared) is significantly correlated with both

corrgoal and shargoal but is less related to each than they are to each other.

When the relationships among the satisfaction measures are examined, all are found to be significantly correlated with one another, the correlation coefficients ranging from .14 to .43 with a median of .30 (Appendix C). Overall satisfaction (oversat), the composite satisfaction measure created from these measures, correlates with each measure within a range of .57 to .66. Of the six original satisfaction measures, satisfaction of student expectations is the most powerful. It is the only satisfaction measure whose relationship to other study variables is consistently as high as that of overall satisfaction. If one measure were to be chosen as the best approximation to overall satisfaction it would be satisfaction of student expectations, but for this study we will use the more reliable and stable measure, oversat, rather than focus on the component items of this variable.

Motivation, interest in the course, time spent on course work, and effort put into the course are also found to be significantly related to one another ($p < .001$), with the strongest relationships occurring between motivation and interest ($r = .78$) and between time and effort ($r = .70$). The members of each pair of variables appear to be measuring essentially the same thing as indicated by the almost identical correlations with other study variables within each pair (Appendix D). Since this is the case motivation and effort have been selected to represent each pair as a means to further simplify the data.

A further step in this direction would be to include overall satisfaction (oversat) among the outcome variables. Since student satisfaction is one possible outcome of the educational process and since oversat correlates more highly with the outcome variables than with the goal variables, its inclusion in this group seems defensible. It is also possible to consider each of the outcome variables, with the exception of grade, to be satisfaction variables: satisfaction with the course, with the instructor, and with oneself. Grade is significantly correlated with each of the other outcome variables, but the correlations are generally considerably lower than are the correlations of the other outcome variables with one another (Table 2). The only exception is the relationship between grade and the students' evaluation of his own performance (r = .44).

TABLE 2

RELATIONSHIP OF OUTCOME MEASURES TO ONE ANOTHER

	Grade	Student Eval of own Performance	Effectiveness of Instructor	Value of Course	Oversat
Grade	1.00	.44**	.14*	.27**	.15*
Student Evaluation of own Performance	.44**	1.00	.39**	.53**	.44**
Effectiveness of Instructor	.14*	.39**	1.00	.54**	.58**
Value of Course	.27**	.53**	.54**	1.00	.58**
Oversat	.15*	.44**	.58**	.57**	1.00

*Significant at .01 level
**Significant at .001 level.

When the relationship between goal measures and outcome measures is examined, all outcome measures are found to be significantly related to all goal measures, with the exception of grade which is significantly related only to thotshar (Table 3), and this relationship can hardly be considered meaningful with so little of the variance accounted for (r = .12).

TABLE 3

RELATIONSHIP OF GOAL MEASURES TO OUTCOME MEASURES

	Corrgoal	Shargoal	Thotshar
Oversat	.19***	.21***	.42***
Student Evaluation of Own Performance	.12*	.12*	.26***
Effectiveness of Instr.	.14**	.14**	.36***
Value of Course	.25***	.29***	.36***
Grade	.09	.08	.12*

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

There are a number of reasons why grade might not be expected to correlate highly with the goal measures. First of all, these courses were not originally graded. Grades were deduced from the instructor's written evaluations of students. Secondly, this is a population of very select students, at least as measured by SAT scores. The mean SAT score for this group of students is 1234. This may partially account for the deduced grade point being very high, 3.31 when 4 equals A, with a standard deviation of only .82. This small amount of variation in grade would make it difficult to obtain significant

relationships with other measures. Finally, there is no way to determine whether students were actually graded in relation to the course goals specified by the instructor on this evaluation form. If this had been a longitudinal study with instructors specifying the goals they were working toward from the beginning and on which students would subsequently be evaluated, there would certainly be a higher relationship between grade and goal measures than that obtained here where at the end of the term instructors were selecting from a list those goals which seemed to be the best approximation to their actual goals.

Another result to be noted in Table 3 is that thotshar, the student's perception of sharing the instructor's goals, is consistently more highly related to the outcome variables than are the other two goal measures. There are a number of factors which may account for this. First of all, thotshar scores are derived from an intraindividual comparison while corrgoal, correctly perceived instructor's goals, and shargoal, shared instructor's goals, are derived from interindividual comparisons, a factor which would add to the error variance in comparisons with these two variables. Secondly, it is possible to view thotshar as a satisfaction measure, since it is derived in much the same way as other satisfaction measures. It is a comparison of the student's goals with what he perceives the instructor's goals to be. This possibility is also supported by the fact that thotshar is much more highly related to overall satisfaction than are corrgoal and shargoal. In fact, the highest correlation shown with thotshar is the correlation with oversat, overall satisfaction, ($r = .42$). If indeed, it is simply another

measure of satisfaction, it is a much less powerful measure than oversat, its correlations with other outcome/satisfaction measures being generally much lower than those of oversat (Table 4). Oversat and value of the course give a greater appearance of possibly measuring the same thing than do oversat and thotshar. As can be seen from Table 4, oversat and value of the course are more highly related to each other than either is to thotshar, and their relationships to the other outcome variables are more similar than is the relationship of thotshar to these variables. Therefore, although there are indications that thotshar may simply be another satisfaction or outcome variable, the question cannot be resolved on the basis of this data and will be examined in greater depth in the consideration of the nine selected classes.

TABLE 4

COMPARISONS OF THOTSHAR, OVERSAT AND VALUE OF COURSE WITH OUTCOME VARIABLES

	Thotshar	Oversat	Value of Course
Grade	.12	.15*	.27**
Student Eval. of Own Perf.	.26**	.44**	.53**
Effectiveness of Instructor	.26**	.58**	.54**
Value of Course	.36**	.57**	1.00
Oversat	.42**	1.00	.57**
Thotshar	1.00	.42**	.36**
Motivation	.28**	.52**	.70**
Effort	.16*	.38**	.37**

*Significant at .01 level
**Significant at .001 level

Summary

An examination of the data from the total population has made it possible to condense the data into two general categories: goal variables and outcome variables. Overall satisfaction, the only satisfaction variable to be included in further discussions, will be included among the outcome variables. The result of these decisions will be to simplify the data array for the nine class comparisons to follow.

Nine Class Population

The nine classes which provided the most complete data were selected from the larger sample for closer study with the hope that a careful examination of a small group of classes would provide information about the usefulness of the goal and outcome variables for understanding individual classrooms. The criteria for selecting these classes were: 1) that more than sixty percent of the class or more than twenty students in the class (not to equal less than fifty percent) returned evaluation forms, and 2) that a minimum of ten students responded in each class selected (Table 5).

TABLE 5

NUMBER AND PERCENTAGE OF STUDENTS RETURNING EVALUATION FORMS IN THE 9-CLASS ANALYSIS GROUP

Classes / Students	A	B	C	D	E	F	G	H	I
#Ss Returning Forms	16	24	15	11	14	13	19	15	28
% Ss Returning Forms	84	55	63	65	100	72	86	71	57

That the student population in these classes adequately reflects the larger population is suggested by the almost identical means and standard deviations of the two populations on the variables studied. (Table 6). An examination of the differences between means showed no F-scores approaching significance.

The classes which met the selection criteria had certain aspects in common. All of these classes were electives, a factor which would lead us to expect a high degree of interest on the part of students entering these classes and therefore fewer differences among these classes at the outset than if some of the classes in this group had been required. All were undergraduate courses composed primarily of freshmen and sophomores. All of the classes in this group were taught by experienced instructors, except for one, Class D, whose instructor was teaching for the first time. There were no language classes in this sample. Three classes were humanities classes (B, H, I); three were social science classes (A, F, G); and three were natural science classes (C, D, F).

In two of the nine classes, C and I, the grade point of those who did not turn in evaluations was significantly lower than for the students who did turn in evaluations. In the other seven classes there was no difference in the grade point of these two groups.

In order to determine whether there were indeed differences among these classes which would justify further comparisons among them, a one-way analysis of variance of class means (Table 7) was done for thirteen of the study variables. Eight were found to have F-scores which were significant at the .001 level, two at the .05 level (Table 8). From this group of ten variables whose means were

TABLE 6

MEANS AND STANDARD DEVIATIONS OF STUDY VARIABLES FOR TOTAL POPULATION AND FOR 9-CLASS ANALYSIS GROUP

	26 Classes (n=277)		9 Classes (n=155)	
Variable	MEAN	S.D.	MEAN	S.D.
Grade (A=4)	3.31	.82	3.36	.74
SAT	1233	138	1224	145
Corrgoal	48.2	17.0	52.0	15.8
Shargoal	46.9	16.6	50.0	16.3
Thotshar	67.8	21.4	68.9	20.6
Satis w/goals	17.5	5.1	17.6	5.1
Satis w/class time	21.6	6.7	20.7	6.8
Satis w/course characteristics	73.1	28.6	73.4	29.2
Satis w/teacher role	80.1	27.4	79.8	27.4
Satis w/student role	68.2	29.8	67.3	29.9
Satis of Expectations	2.8	1.0	2.8	1.0
Student evaluation of own performance	2.6	.9	2.6	.9
Effectiveness of Instructor	3.0	.9	3.0	.9
Value of Course	2.9	1.1	3.0	1.1
Overall Satisfaction	17.2	4.1	17.0	4.1

TABLE 7
STUDY VARIABLE MEANS FOR CLASSES IN 9-CLASS ANALYSIS GROUP

Variables \ Classes	A	B	C	D	E	F	G	H	I
Corrgoal	43.00	47.92	55.60	45.00	53.23	62.21	65.42	43.17	51.11
Shargoal*	44.00	46.67	52.27	37.50	49.38	59.71	64.58	40.50	50.71
Thotshar*	70.81	64.92	66.33	52.25	77.69	71.50	78.63	64.28	70.15
Satis w/goals	18.37	19.00	18.27	13.75	17.07	19.36	18.58	17.21	16.04
Satis w/class-time	22.94	21.26	23.00	14.83	20.21	21.36	20.47	22.36	19.19
Satis w/charact*	88.31	72.83	64.07	36.33	62.00	79.00	86.31	84.64	74.71
Satis w/teacher role*	96.12	75.67	79.80	34.42	80.71	84.36	85.21	85.93	84.00
Satis w/Student role	73.06	58.08	65.60	58.42	76.43	68.58	81.52	71.64	59.30
Satis of expecta-tions*	3.19	2.71	2.80	1.67	3.36	2.86	3.06	3.07	2.74
Student evaluation of own performance*	3.00	2.46	2.67	2.17	3.08	2.50	2.72	2.78	2.19
Effectiveness of Instructor*	3.62	2.75	2.87	1.50	3.50	3.07	3.44	3.00	3.00
Value of course*	3.44	3.00	2.40	1.67	2.92	3.00	3.47	3.00	3.31
Overall satis*	19.19	16.87	17.06	11.33	17.43	17.57	18.40	18.28	16.08

* F-score significant to at least .05 level

significantly different across classes, an overall effectiveness score was derived for each class by summing the rank positions of the classes on each of these variables, excluding overall satisfaction, since three of the satisfaction measures of which it is a composite were already part of this score. In this way a rank order of these classes on overall effectiveness was obtained (Table 9).

TABLE 8

ONE-WAY ANALYSIS OF VARIANCE OF CLASS MEANS (9-CLASSES) ON STUDY VARIABLES

Variables	F-Ratio	F-Probability
Grade	1.02	.42
Corrgoal	5.20	.001
Shargoal	5.43	.001
Thotshar	2.22	.03
Satis w/goals	1.88	.07
Satis w/class time	1.94	.06
Satis w/course char	5.08	.001
Satis w/teacher role	6.73	.001
Satis w/student role	1.52	.16
Satis of expectations	3.63	.001
Stud evaluation of own performance	1.98	.05
Effectiveness of Instructor	9.81	.001
Value of Course	4.69	.001
Overall Satisfaction	5.06	.001

TABLE 9

RANKS OF 9-CLASS ANALYSIS GROUP ON STUDY VARIABLE MEANS AND OVERALL EFFECTIVENESS

Variables \ Classes	A	B	C	D	E	F	G	H	I
Corrgoal	9	6	3	7	4	2	1	8	5
Shargoal	7	6	3	9	5	2	1	8	4
Thotshar	4	7	6	9	2	3	1	8	5
Satis w/course characteristics	1	6	7	9	8	4	2	3	5
Satis w/teacher role	1	8	7	9	6	4	3	2	5
Satis of expectations	2	8	6	9	1	5	4	3	7
Student evaluation of own performance	2	7	5	9	1	6	4	3	8
Effectiveness of Instructor	1	8	7	9	2	4	3	5	5
Value of course	2	4	8	9	7	4	1	4	3
Overall Effectiveness Score	29	60	52	79	36	34	20	44	48
Rank on Overall Effectiveness	2	8	7	9	4	3	1	5	6

Use of the effectivenss scores provides us with two kinds of helpful information. It spreads the classes out over a range of 59 points and makes some natural groupings of the classes apparent. At the low end of the range, class D is separated from the rest of the group by a point gap which is more than twice that of the average distance between these classes. This is the class whose instructor had no previous teaching experience. The rest of the classes appear to fall into two natural groupings of four classes each. In Group 1 (the four classes with highest effectiveness scores) classes A, F, and E are clustered within 7 points of each other. Class G, which has the highest effectiveness score, is separated from the first class in this cluster by 9 points. In Group 2, which is separated from Group 1 by 8 points, classes H, I, and C are clustered within 8 points of each other with class B removed from this cluster by 8 points at the low end of this group (Figure 2).

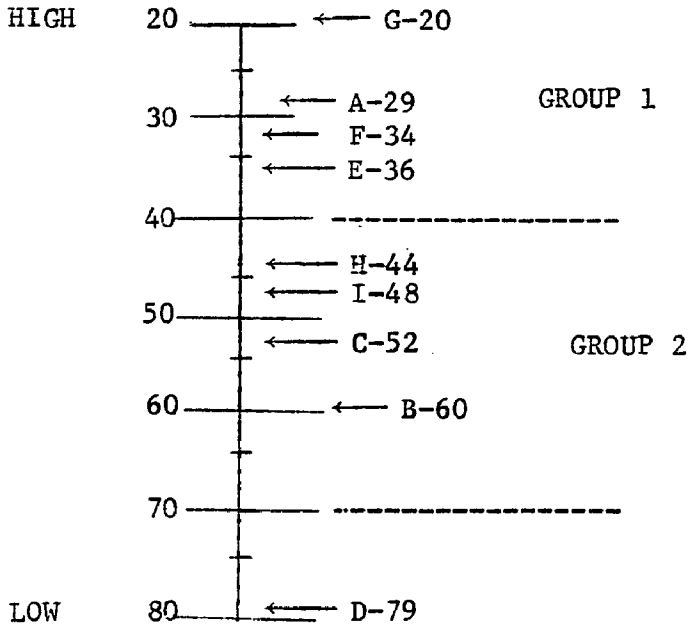


Figure 2: Arrangement of Classes by Effectiveness Scores

If these two groups of classes (three, if class D is considered to be a group by itself) are properly seen as representing different degrees of effectiveness, then we would expect to find some other consistent differences between them. This issue will be more profitably pursued after a further examination of the variable thotshar and the part that it plays in this analysis.

Thotshar, the student's perception of sharing the instructor's goals, in fact turned out to be the key variable in the exploration which is reported below. It is an interesting measure both because it discriminates between classes and because of its complexity. Following its trail through the data proved to be an intriguing and fruitful process from which emerged two themes which appear again and again in the following discussion and which are at times difficult to separate. These are the themes of thotshar as process and thotshar as measure. These themes are essentially the two sides of a single coin. It is the process of thotshar that we are trying to measure; the measure, thotshar, was created to measure this process. The questions of primary interest to me as a teacher have to do with the process. Does it make a difference if a student thinks he shares his instructor's goals or not? What effect does this personal and sometimes private, construction of the classroom reality have on his performance in and on his satisfaction with the course, and how are these things affected if this construction of reality is incorrect, e.g., if he thinks he shares the instructor's goals when he actually does not? However, these questions about thotshar as a process cannot be pursued without examining thotshar as a measure. Does it, in fact, measure this process or is it the by-product of some other of the many

variables operating in such a complex situation, e.g., satisfaction with the class, or a halo effect produced by a charismatic instructor? Questions such as these guide the investigation which follows.

The question was raised earlier as to whether thotshar is simply another measure of student satisfaction. The answer to this question is important because it will indicate the extent to which thotshar can be regarded as a reflection of the students' perceptual reality with regard to course goals. It has already been shown that thotshar is related to student satisfaction in the total population (n=277). This relationship is confirmed by the subsample of nine classes (n=155). As with the total population, thotshar is more highly related to the satisfaction measures than are the other two goal measures and among these measures its highest correlation is that with overall satisfaction. (Table 10).

TABLE 10

RELATIONSHIP OF GOAL MEASURES AND OVERSAT TO SATISFACTION MEASURES FOR 9-CLASS ANALYSIS GROUP

	Corrgoal	Shargoal	Thotshar	Oversat
Student Evaluation of own Performance	.05	.08	.30***	.40***
Effectiveness of Instructor	.07	.09	.24**	.62***
Value of Course	.18*	.28***	.34***	.56***
Overall Satisfaction	.12	.17*	.38***	1.00

*Sifnificant at .05 level
**Significant at .01 level
***Significant at .001 level

It is also true for the subsample as well as for the total population that the correlations of oversat with the other measures are much higher than the correlations of thotshar with these same measures, again indicating that if thotshar and oversat are measuring the same thing, thotshar is the weaker of these two measures.

The students in this nine class subsample were divided into high medium and low groups on effectiveness of the instructor and on value of the course and a one-way analysis of variance was done to compare the means of these groups on the goal measures. (Tables 11 and 12). The means for corrgoal (correctly perceived instructor's goals) are not significantly different for these groups in relation to either effectiveness of instructor or value of the course. The means for shargoal (shared instructor's goals) are also not significantly different for effectivenss of the instructor. They are, however, significantly different for value of the course. The thotshar means are significantly different in relation to both of these variables.

TABLE 11

ONE-WAY ANALYSIS OF VARIANCE OF GOAL MEASURE MEANS FOR GROUPS HIGH, MEDIUM AND LOW ON EFFECTIVENESS OF INSTRUCTOR

	Low	Med	High	F-Ratio	F-Probability
Corrgoal	49.23	52.66	52.98	.68	.51
Shargoal	46.94	50.64	50.75	.72	.49
Thotshar	58.83	70.97	72.70	5.64	.004

TABLE 12

ONE-WAY ANALYSIS OF VARIANCE OF GOAL MEASURE MEANS FOR GROUPS HIGH, MEDIUM AND LOW ON VALUE OF THE COURSE

	Low	Med	High	F-Ratio	F-Probability
Corrgoal	49.49	51.30	54.62	1.42	.25
Shargoal	45.70	48.35	54.36	4.06	.02
Thotshar	60.05	69.98	73.74	6.20	.003

This analysis of variance lends support to the importance of sharing the instructor's goals if the course is to be perceived as valuable by the student. It is also clear that if thotshar is more than a satisfaction measure, it is also important whether or not the student thinks he shares the instructor's goals, both with respect to his evaluation of the instructor's effectiveness and the value of the course. It is, however, at this point still not clear exactly what is being measured by thotshar.

In order to further pursue this issue, the relationship between thotshar the relationship between thotshar and overall satisfaction was examined more carefully. When each of the nine classes in this sample was looked at separately, thotshar and oversat were found to be significantly related to each other only in the four classes highest in overall effectiveness (Table 13). This is the first evidence that thotshar may be measuring something different from satisfaction. In fact, the correlations between thotshar and oversat divide the nine classes into the same three groups which were produced by the overall effectiveness scores. Once again Class D stands by

TABLE 13

CORRELATIONS OF GOAL MEASURES WITH OVERSAT FOR 9-CLASS ANALYSIS GROUP

Class-Rank	G-1	A-2	F-3	E-4	H-5	I-6	C-7	B-8	D-9
Corrgoal/ Oversat	-.07	-.07	.01	.58*	-.08	.23	-.10	.17	.04
Shargoal/ Oversat	.27	.11	.18	.38	-.11	.11	.49*	-.16	.29
Thotshar/ Oversat	.73**	.47*	.49*	.55*	.20	.22	.14	-.01	.42

*Significant at .05 level
**Significant at .001 level

itself showing a different pattern from all the other classes. Its thotshar/oversat correlation is higher than that of any class except for those classes in the high effectiveness group, but it is not significant ($p = .10$).

If thotshar is only a measure of student satisfaction there is every reason to expect it to be related to overall satisfaction in all of the classes. The fact that this is not the case suggests that something other than satisfaction is operating here. In an attempt to ferret out the meaning of this discrepancy, these two groups of classes, the group with high thotshar/oversat correlations (High Group) and the group with low thotshar/oversat correlations (Low Group), were examined in depth in order to determine what other factors distinguish these two groups of classes from one another.

The first difference which is apparent is that the means of eight of the study variables (all of the goal measures, all of the outcome measures, except grade and value of the course, plus satis-

faction with student role) are significantly higher for the High Group (Table 14). The remaining six mean scores are also higher for the high group although not significantly so.

TABLE 14

ONE-WAY ANALYSIS OF VARIANCE OF STUDY VARIABLE MEANS FOR GROUPS HIGH AND LOW ON RELATIONSHIP BETWEEN THOTSHAR AND OVERSAT

	High Group (n=62)	Low Group (n=82)	F-Score	F-Probability
Grade	3.40	3.36	.10	.75
Corrgoal	56.35	49.59	6.73	.01
Shargoal	54.98	48.04	6.99	.01
Thotshar	74.81	66.84	5.80	.02
Satis w/goals	18.37	17.57	1.01	.32
Satis w/class time	21.24	21.10	.02	.90
Satis w/course characteristics	79.79	73.90	1.67	.20
Satis w/teacher role	86.79	81.09	2.15	.14
Satis w/student role	75.36	62.28	6.83	.01
Satis of expectations	3.11	2.88	4.02	.05
Stud Eval of own performance	2.82	2.47	5.12	.03
Effectiveness of Instructor	3.42	2.90	17.96	.0001
Value of course	3.25	2.99	2.36	.13
Oversat	18.21	16.91	4.33	.04

This is consistent with the fact that the classes in this group are also the ones with the highest overall effectiveness scores.

The second place where differences between these two groups appear is in the correlations among goal measures, and between goal measures and outcome measures (Table 15). The most striking correlational difference between the two groups (other than that of thotshar and oversat by which they are defined) is that between corrgoal and shargoal. Although this correlation is highly significant in both groups ($p < .001$), the correlation, $r = .80$, in the high group accounts for four times the variance accounted for by $r = .42$ in the low group. Thus, students in the high group who perceive their instructor's goals correctly are much more likely to share them than are students in the low group, and if they share their instructor's goals they are also more likely to think that they share them, as shown by the shargoal/thotshar correlations in which twice the variance is accounted for in the high group.

Although there is no significant difference between the high and low group means for satisfaction with student role, there is a striking difference in the relationships found between this variable and the goal variables in the two groups. Only in the high thotshar/oversat group are corrgoal and shargoal significantly related to satisfaction with student role, and although thotshar is significantly related to the students' satisfaction with their role in both high and low groups, much more of the variance (6x) is accounted for in the high group. It is not clear at this point what this means about differences in the dynamics of these classes. However, it is part of a growing picture of the classes in the high thotshar/oversat

TABLE 15

CORRELATION OF GOAL MEASURES AND OVERSAT WITH STUDY VARIABLES FOR GROUPS HIGH AND LOW ON RELATION BETWEEN THOTSHAR AND OVERSAT

	Corrgoal		Shargoal		Thotshar		Oversat	
	High	Low	High	Low	High	Low	High	Low
Corrgoal	--	--	.80***	.42***	.31**	.46***	.03	.05
Shargoal	.80**	.42***	--	--	.41***	.28**	.15	.01
Thotshar	.31**	.46***	.41***	.28**	--	--	.54***	.11
Satis w/student role	.26*	.07	.34**	.16	.56***	.23*	.51***	.64***
Satis of student expectations	.06	.02	.18	-.03	.25*	.09	.53***	.62***
Student Evaluation of own performance	.01	.01	.07	-.07	.40***	.18	.49***	.30**
Effectiveness of Instructor	-.05	-.02	.07	-.23*	.26*	.01	.42***	.49***
Value of course	.15	.13	.33**	.08	.35**	.21*	.59***	.39***
Overall satis-faction	.03	.05	.15	.01	.54***	.11	--	--

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

group showing a greater interconnectedness among the various elements of the classroom consciousness than do the classes in the low group.

The picture of the greater interconnectedness of elements continues to be supported as we consider other variables. Value of the course is also related to sharing the instructor's goals only in the high group. In the low group the only significant correlation between either corrgoal or shargoal and an outcome measure is that between shargoal and effectiveness of the instructor, and this correlation is a negative one, the only significant negative correlation in this matrix. When these correlational differences were pursued within the individual classes, it was found that there were almost five times as many significant positive correlations between goal measures and outcome measures in the high group as in the low group (Table 16).

Further evidence that thotshar and oversat are indeed measuring different things can also be seen in Table 15. Thotshar is much more highly related to all outcome measures in the group which shows the high relationship between thotshar and oversat. Overall satisfaction, on the other hand is highly related to the outcome variables in both the high and low groups, with correlations in the low group being higher as often as is true for the high group.

The final difference between the high and low groups appears in the degree of consensus among students about the goals of the class and about their relationship to these goals. The consensus among students in the high thotshar/oversat group about what their goals are and about what they think their instructors' goals are is considerably higher than in the low thotshar/oversat classes

TABLE 16

CORRELATIONS BETWEEN GOAL MEASURES AND OUTCOME MEASURES
FOR THE NINE INDIVIDUAL CLASSES

	HIGH				LOW				
	G-1	A-2	F-3	E-4	H-5	I-6	C-7	B-8	D-9
Corrgoal/Satis w/stud role	-.12	.22	.20	.62**	.15	.22	.05	-.07	-.11
Shargoal/Satis w/stud role	.18	.13	.44	.61**	.44	.22	.07	.15	.09
Thotshar/Satis w/stud role	.49*	.50*	.59**	.63**	.10	.47**	.18	.12	-.01
Corrgoal/Stud Eval own Performance	.02	.09	.01	.76**	.01	.03	-.08	.30	-.10
Shargoal/Stud Eval own Performance	.14	.10	.46*	.53*	-.34	.12	-.23	.35	.29
Thotshar/Stud Eval own Performance	.51*	.15	.46*	.84***	.49*	.11	.01	.50*	.17
Corrgoal/Satis of Expectations	.11	-.04	-.31	.61**	.11	.24	-.63**	.26	-.15
Shargoal/Satis of Expectations	.47*	-.01	.10	.54*	-.22	.05	.04	-.04	.20
Thotshar/Satis of Expectations	.65**	.01	.09	.12	.40	.14	-.22	.12	.09
Corrgoal/Effectiveness of Instructor	.31	-.11	-.23	.52*	-.22	.23	-.31	.04	-.26
Shargoal/Effectiveness of Instructor	.25	-.10	.38	.39	-.42	-.25	-.37*	.03	.09
Thotshar/Effectiveness of Instructor	.47*	-.04	.30	.44	.27	-.03	-.08	-.02	.03
Corrgoal/Value of Course	.02	.14	.01	.61*	.22	.23	.55**	-.46*	-.05
Shargoal/Value of Course	.45*	.30	.47*	.38	-.20	-.02	.19	.29	.26
Thotshar/Value of Course	.50*	.02	.31	.53*	.15	.06	.52**	.01	.24

Table 16 (continued)

	HIGH				LOW				
	G-1	A-2	F-3	E-4	H-5	I-6	C-7	B-8	D-9
Corrgoal/Oversat	-.07	-.07	.01	.58*	-.08	.23	.17	-.01	.04
Shargoal/Oversat	.27	.11	.18	.38	-.11	.11	-.16	.50*	.30
Thotshar/Oversat	.73***	.47*	.49*	.55*	.20	.22	-.01	.14	.42

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

(Table 17). In the high group the top ten student goals are shared by 64 percent of the students, while in the low group the top ten student goals are shared by 55 percent of the students. This is also true of the instructor's goals as perceived by the students. The differences between these percentages were found to be significant using the Students' t-test for independent samples ($p < .05$). The difference in consensus is even more evident when we consider the

TABLE 17

AVERAGE PERCENTAGE OF THE TOP 10 GOALS IN HIGH AND LOW ANALYSIS GROUPS AND IN CLASS D-9

	High	Low	D-9
* Students Goals	64%	55%	40%
* Perceived Instructors Goals	64%	55%	58%

*Differences between High and Low Groups Significant at .05 level

percentage of the top ten goals shared by more than 50 percent of the students in each group (Table 18).

TABLE 18

AVERAGE PERCENTAGE OF TOP 10 STUDENT GOALS AND PERCEIVED INSTRUCTOR'S GOALS SHARED BY MORE THAN 50% OF THE STUDENTS

	High	Low	D-9
* Student Goals Shared by + 50% of Students	82%	58%	30%
* Perceived Inst. Goals Shared by + 50% of Students	82%	54%	80%

* Differences between High and Low Groups significant at .05 level

In the high group 82 percent of the top ten student goals were shared by more than 50 percent of the students. In the low group this was true for only 58 percent of the top ten goals. There was also a much higher consensus among students in the high group about the goals perceived to be the instructor's goals. This perception was shared by 82 percent of the students in the high group but by only 54 percent of the students in the low group. These differences were also found to be significant at the .05 level. The percentage of instructor's goals perceived correctly and shared by more than half the students in the class is also greater for the high group although these differences are not of the magnitude described above and are not significant (Table 19).

TABLE 19

AVERAGE PERCENTAGE OF INSTRUCTOR'S GOALS SHARED AND PERCEIVED CORRECTLY BY MORE THAN 50% OF THE STUDENTS

	High	Low	D-9
Instructor's goals shared by + 50% of students	65	48	20
Instructor's goals perceived correctly by + 50% of students	63	51	50

It is interesting to note the ways in which Class D, the class lowest in effectiveness, differs from the high and low thotshar/oversat groups on the issue of consensus. Although there appears to be a high degree of consensus among the students about what the instructor's goals are, there is little sharing of goals among

students or between students and the instructor. This is surely a key to the overall dissatisfaction with this class expressed by the students.

It is also interesting to note that in the low group in which the consensus among students about course goals is lower and in which the goal measures are much less related to outcome measures the traditional correlations with grade are found to be significant (Table 20).

TABLE 20

CORRELATIONS OF GRADE WITH STUDY VARIABLES FOR GROUPS HIGH AND LOW ON THOTSHAR/OVERSAT RELATIONSHIP

	High	Low
SAT	-.07	.22*
Motivation	-.03	.32**
Corrgoal	-.16	.08
Shargoal	-.08	.10
Thotshar	.22*	.17
Satis w/stud role	.07	.16
Satis of Expectations	.28*	.19*
Stud Eval of own Performance	.59***	.42***
Effectiveness of Instructor	.27*	.17
Value of Course	.27*	.37***
Overall Satisfaction	.28*	.16

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

Only in the low thotshar/oversat group is course grade significantly correlated with SAT scores and with motivation. It is also much more significantly related to value of the course in this group. In the high thotshar/oversat group, where the consensus among students is greater, where the mean scores of the study variables are generally significantly higher, and where goal measures are more significantly related to outcome measures, grade shows no relationship to traditional variables like SAT and motivation and its relationship to value of the course is less than for the low group. However, in the high group grade is significantly related to other variables to which it is unrelated in the low group, namely; thotshar, effectiveness of the instructor, and overall satisfaction. It is also correlated more highly with satisfaction of expectations and with the students' evaluation of their own performance than in the low group. This suggests that in classes where there is greater clarity about and sharing of goals and where there is generally greater consensus among the students, aptitude, as measured by the SAT, and motivation become less important as determining factors in a student's performance. However, when there is less clarity about goals and a lower consensus among students these factors may enter more strongly into their performance.

At this point we have identified a number of ways in which the high and low thotshar/oversat groups differ. These differences seem to be related to thotshar as a process, since many of these differences are differences in the relationship of the various outcome variables to thotshar, i.e., to whether or not the students perceive themselves to be sharing the instructor's goals. However, before

accepting that these differences do indeed relate to the process, it seems desirable to first directly explore alternative explanations for the significant positive correlation between thotshar and oversat in the high group. If these explanations can be rejected, then we can more comfortably settle into an explanation which accepts that the measure thotshar is indeed measuring the process in which we are interested.

One possible alternative explanation for this finding is that it is an artifact of skewed scatterplots, that most of the students in the four classes of the high thotshar/oversat group are very pleased with the class, leading to generally high, possibly almost identical, thotshar and oversat scores with only a few low scores, thus providing high correlations but little scatter. When the scatterplots for the high classes are examined, they lend no support to the above hypothesis. All four classes show a scatter across the range of scores and none are pulled into linearity by one or two greatly deviant scores.

A second alternative hypothesis grows out of what is sometimes thought to be the particular nature of students at the Residential College. The College is experimental in nature and had, at the time this data was collected, a number of courses and instructors who were personally and interpersonally oriented in their course content and approaches to teaching. It seems possible that knowing this about the College, students who have this same orientation choose to enroll there. It might then be that such students would prefer the classes and instructors where personal and interpersonal goals are stressed. If so, it could be hypothesized that the high oversat/thotshar classes

are such classes and that the low thotshar/oversat classes are classes in which the students' goals would deviate more from the perceived instructor's goalsbecause the instructors are not process-oriented enough to suit the students, i.e. student goals are personal and interpersonal goals, while the instructor's goals are more traditional goals such as content goals.

In order to examine this possibility the following procedure was used. Five content goals and five process goals were selected from the total group of twenty-nine goals. Then the percentage of students who selected each of these goals as their own goal was plotted for each class along with the percentage of students who selected these goals as their instructor's goals. This provided the opportunity to visually scan this goal domain to see if there were greater discrepancies between student goals and perceived instructor goals in the low correlation group of classes. It was found that in both the high correlation and low correlation groups the differences between student goals and perceived instructor goals were similar. The kinds of goals which students in these classes perceived to be most important for themselves and for their instructors depended more on the type of class being considered, i.e. science, social science, or humanity, than on which group it belonged to. Content goals predominated in the science and humanities classes for students and for instructors as perceived by students. In the social science classes content and process goals were quite equally balanced. Thus, the difference between these two groups does not seem to be accounted for by a preferred orientation toward process goals on the part of the students.

The third possible explanation for the thotshar/oversat correlational difference between the high and low groups of classes is based on regarding thotshar and oversat as measuring different things, i.e., seeing thotshar as not only another measure of satisfaction, but rather as a measure of the students perception of the degree to which they share the instructor's goals. It is this explanation that accepts that the measure, thotshar, does indeed measure the process just described. If this is the case, then it seems likely that classes in which thotshar is not correlated with oversat might be classes in which a greater number of students are misperceiving the goals of the instructor, thinking that they in fact share their instructor's goals when they actually do not. Were this the case, we would expect greater dissatisfaction in these classes possibly accompanied by a sense of bewilderment since students who think they are on the same wavelength as their instructor may not at all be getting what they expected out of such a class. There appears to be much supportive evidence for this explanation, including some of the previously mentioned differences between the high and low groups which will here be reiterated briefly in order to create as complete a picture as possible.

First of all, shargoal and corrgoal means are significantly higher for the high correlation group, indicating that students in these classes are more likely to perceive the instructor's goals correctly and to share them than are students in the low correlation group. Secondly, as also mentioned above, the correlations between corrgoal and shargoal and between thotshar and shargoal account for a great deal more variance in the high correlation group, indicating

that when students in these classes perceive the instructor's goals correctly they are much more likely to share them and when they share them they are also more likely to think that they share them.

In order to get a clearer understanding of what accounted for the lack of relationship between thotshar and oversat in the low group the scatterplots were consulted once again. The students who deviated from the linear regression line in these classes were identified and their course evaluation forms were examined individually. The "off-diagonal" students fell into two groups, those with high thotshar and low oversat scores in the upper left of the scatterplot, and those with low thotshar and high oversat scores in the lower right of the scatterplot (Figure 3).

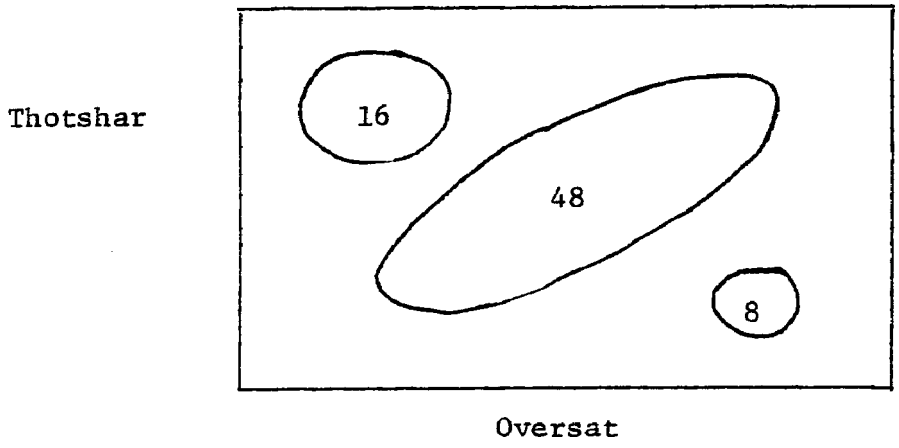


Figure 3: Scatterplot Configuration for Classes Showing No Relationship Between Thotshar and Oversat

Two thirds of the students who deviate from the diagonal (total = 24) are found in the group with high thotshar and low oversat scores and it is also this group which provides the most interesting data. Of these sixteen people, 69 percent are found to have greater differences between thotshar and shargoal scores than the mean difference between

these scores for the entire class. Shargoal scores are lower than the class mean for 63 percent of this group as is satisfaction with student expectations, while satisfaction with student role is lower than the class mean for 75 percent of these students. These students tend to be less correct about the extent to which they share their instructor's goals than are other students in their classes and it seems likely that this discrepancy, this misperception, would greatly contribute to their dissatisfaction.

Looking more closely at the evaluation forms, at student comments and at items not included in this study which asked about communication within the class, more information is added to round out this picture. Fifteen of the sixteen students were intensely dissatisfied and their dissatisfaction seemed to have a central theme dealing with lack of communication and lack of cohesiveness within the class. All fifteen said that their classes functioned poorly as a group, that they were not cohesive enough, and that there was not enough communication among students in the class. All but three felt that there was insufficient communication between students and the instructor and that the instructor was not responsive to student desires pertaining to the structure and/or content of the class. These findings may help to explain the difference in consensus among students in the high and low thotshar/oversat groups mentioned previously, in which it was found that a much larger percentage of goals were shared by more than 50 percent of the students in the high group, and also that there was a much greater consensus about the instructor's goals in these classes.

For the other one of these sixteen students it became evident that his low oversat score did not actually indicate low satisfaction. He stated that he had different priorities than those the course was focussed on because of his particular career interests but went on to state that he was very happy with the class for what it was.

In contrast to the picture presented by the high thotshar/low oversat students, the eight students in the low thotshar/high oversat group all felt that there was sufficient communication among students and between students and the instructor. They also felt that contributions by students were taken seriously by the instructor and by other students, and in the space provided to comment on the weaknesses of the instructor, none of these students listed any weaknesses. The few criticisms they had were aimed at other students for not working hard enough or for wasting class time with "stupid comments". It seems that these students may be more teacher-oriented and less peer-oriented than the students in the high thotshar/low oversat group.

Summary

An examination of the data from the total population indicated that the goal measures, corrgoal (correctly perceiving the instructor's goals), shargoal (actually sharing the instructor's goals), and thotshar (thinking one shared the instructor's goals), were all significantly related to one another, as were the outcome measures. It further showed that the goal measures and outcome measures were also all significantly correlated, with the exception

of grade which was correlated only with thotshar. The highest correlation between a goal measure and an outcome measure was the correlation between thotshar and oversat. This finding plus the fact that thotshar correlations with outcome measures were considerably higher than those of the other goal measures, led to the question of whether thotshar might be another measure of student satisfaction. This became one of the central questions in data analysis which followed.

The main body of the data analysis consisted of a detailed examination of a subsample of nine classes. Here too, thotshar was the most powerful of the goal measures and at first glance it seemed again that it might just be another satisfaction measure. It became clear that there were two interwoven thotshar themes which had to be pursued simultaneously, thotshar as measure and thotshar as process. No conclusions could be drawn about the part played by the student's perception of sharing the instructor's goals if the measure thotshar was not, in fact, measuring this process. In the pursuit of an answer to this question, the correlations between thotshar and oversat were examined in each of the nine classes separately. If these two measures were measuring the same thing they should be correlated in every class. This did not prove to be the case, and this was the first indication that these two measures were each measuring something different. The nine classes were divided into two main groups on the basis of this finding and on the basis of effectiveness scores derived from a summing of the ranks of the means of those variables which were significantly different among the classes. Both of these methods produced the same two primary groups which were

called the high thotshar/oversat group and the low thotshar/oversat group. Class D was excluded from either group because its effectiveness score was so much lower than all of the other classes that it did not fit naturally into either group.

At this point there were two main questions which dominated the rest of the investigation: 1) In what ways did the high and low thotshar/oversat groups differ from one another 2) Having identified these differences, could alternative explanations for the significant correlations between thotshar and oversat be rejected and, if so, could these differences then be related to the process of thotshar? Two alternative explanations were explored:

1. That the high correlations were due to skewed scatterplots;

2. That the low thotshar/oversat classes were classes in which student goals would deviate more from the perceived instructor's goals because of a possible student bias for process-oriented courses.

Neither of these alternative explanations were supported by the data.

This made it possible to accept that thotshar was measuring the student's perception of sharing the instructor's goals and the differences between these two groups of classes could be examined and understood in this context. The following picture of these two groups emerged from an examination of their differences. The group of classes with high thotshar/oversat correlations appear to be classes in which student satisfaction is generally high. Instructors are seen as effective. Students are generally satisfied with their role in class and feel that they share the instructor's goals. There is greater consensus among students in these classes about what their goals and the instructor's goals are and there is greater

accuracy in their perception of the instructor's goals and in their perceptions of whether they share these goals with the instructor or not. It seems likely that there is generally more communication among students and between the instructor and students in order for this degree fo consensus and accuracy to be achieved. The low thotshar/oversat classes, on the other hand, show less accurate perceptions of instructors' goals, less actual sharing of these goals and a less accurate perception (thotshar) of whether the instructor's goals are shared or not. There is also less consensus among students about course goals, less satisfaction about their role in the course, and a clear message from a sizable group of students that the level of communication in the classroom was not satisfying to them and that their instructors were not as responsive to student input as they might have wished.

CHAPTER IV

DISCUSSION

This study was an attempt to examine the relationship of student perceptions, specifically the perceptions of course goals, to student performance in and satisfaction with the course. It grew out of a model of human behavior which assumes that individuals act out of their constructions of reality. When applied to the classroom, this model suggests that the degree to which a student's construction of this reality fits the instructor's affects his performance in the class. In the context of this study, the fit between the instructor's reality and the student's is more than an issue of whether or not the student perceives the instructor's goals correctly. It is also important whether these goals are shared by the student and at least as important, in the context of the model, whether or not the student perceives himself as sharing his instructor's goals, especially in relationship to his satisfaction with the course. And clearly, since a student does not operate within a vacuum, but in relationship to the instructor, we return again to the importance of the accuracy of this perception.

At this point the primary concern is whether or not this study has been able to shed any light on these issues and, if so, in what ways this work can be helpful to teachers in the classroom.

In order to answer this question, it is important to apply the criticisms of classroom research discussed earlier to this study. Such a critical overview will provide the context for considering the usefulness of the ideas and findings discussed here for the classroom teacher.

In reviewing this study it is obvious that many of the problems confronted by researchers in the past are also problems here. These problems find their origins in the complexity of the classroom situation and in the variety of ways in which the multiplicity of factors operating there interact with one another. It is the very richness of the situation studied which gives rise to many sources of error. Although an attempt was made to reduce error by using the individual student's construction of the classroom reality as the basis for study, the fact that the study focussed on only certain selected factors left room for much unaccounted for variance, testified to by the generally small amount of variance accounted for by significant correlations.

The correlations between goal measures and performance measures were consistently very low, with only thotshar (the students' perception of whether they share the instructor's goals) showing a significant relationship to either grade or to students' evaluations of themselves; and this relationship with thotshar occurred only in the high group of classes where there was more accuracy in the students' perceptions of whether they shared the instructor's goals, and in which, therefore, the goal measures were more often significantly related to the outcome measures. It is possible that

these relationships would have been greater if student performance had been evaluated in relationship to the goals specified. Since this was not the case, it is not surprising that course grade shows little relationship at all (very little variance accounted for even in significant correlation with thotshar) with the goal measures. It also makes sense that the student's own evaluation of his performance, done simultaneously with this course evaluation form, would show a greater relationship to thotshar since his evaluation of himself might well have been influenced by considering these goals first. However, since this relationship doesn't occur in the group in which thotshar and overall satisfaction are unrelated, once again it seems that the accuracy of the student's perceptions is a relevant factor.

Another source of error can be traced to the fact that the goal statements were not the contributions of individual instructors based on their actual course goals. Instead, at the end of the course, they selected from the provided list of goals those which best represented their own specific goals. It seems quite possible that had individual instructors presented their students with a list of goals in which their own stated goals were embedded, students would have been able more accurately to identify their instructor's goals and determine whether they shared them or not. However, in spite of this problem, the differences which appeared among the nine classes studied indicate that the goal statements used were of enough value to allow for the expression of the issues with which the study was concerned; i.e., differences in the sharing of instructor's goals which related to outcome measures did appear among classes and among groups of students within classes.

Another source of unaccounted for variability is to be found in student personality factors such as anxiety level, motivation, preferred teaching styles, preferred learning environments, etc. Some of these differences, although tapped by the satisfaction measures, eg., satisfaction with teacher role, with student role and with use of class time, were nevertheless likely to have served as sources of variance since they were collapsed into an overall satisfaction measure and did not serve to differentiate among students in a more specific manner. Also, the fact that classes were the basic unit of study rather than groups of students sharing similar characteristics led to omitting some available data which might have accounted for more of the variance.

In spite of these problems there were some interesting outcomes, outcomes which seem most valuable as suggestions about where our attention might be focussed, rather than as answers to specific questions about such things as classroom design. For me, as a researcher and teacher, the most interesting data emerged when the off-diagonal students were identified and looked at individually, making it possible to use some of the qualitative data available in the course evaluation forms. It was the examination of these students which gave clarification and meaning to the relationship between the perceived sharing of intructors' goals (thotshar) and overall satisfaction. Without this data we could only guess or try to infer what a positive relationship between these variables implied about the classes in which it was found, as compared to the classes in which this relationship did not exist. This process of identifying groups of students with similar characteristics was

one of the valuable procedures used by Mann and his associates in their study of the college classroom and suggests one direction which further research in this area might take. For example, this study might be followed by one which identified a group of students who showed little or no discrepancy between their perceptions of sharing the instructor's goals (thotshar) and the degree to which they actually shared the instructor's goals (shargoal) and a group of students for whom this discrepancy was large. An examination of the relationships of shargoal and thotshar to performance and satisfaction measures in these two groups would give more direct information about the effect of inaccurate perception of sharing the instructor's goals on students' relationship to the class. A similar comparison might be made between a group of students with high corrgoal (correctly perceived goals) and high thotshar scores and a group with high corrgoal and low thotshar scores to study the effect on students of perceiving the instructor's goals correctly while at the same time perceiving that one does not share these goals with the instructor. These kinds of comparisons would be useful to teachers and if done by teachers would give them useful information about their classes and their students.

If teachers could identify students who perceived course goals incorrectly and/or who did not share them, they might be able to affect the relationship of these students to the course and thereby have a more positive effect on their learning. It would provide teachers with an opportunity to correct student misperceptions and to respond to students having different goals in ways which might help to incorporate some of these goals into their course

work and/or help them to see and experience the value of those goals already important in the course. Knowing this information about students would give instructors greater potential to affect internal variables such as motivation in a positive way. If the students goals ("desires") can in some way be incorporated into his work, the situation will become more "desire-less" for him, and the recognition that the teacher is responsive to his desires should make the situation more "fearless", conditions which, according to Maslow, will lead to the kind of openness and receptiveness which facilitate more accurate perceiving and which will therefore aid the learning process itself. No matter what subject matter is being taught, these issues are relevant. Teachers are there to help others learn. In order to do this, adequate information is needed about the student's perceptual reality as it relates to the class so that the teacher can help to create the most conducive environment possible for the "work" of learning.

EPILOGUE

I came to this research skeptical that the things I cared about as a teacher could be measured using the traditional techniques of the researcher. Mixed with this skepticism was the feeling that research was, therefore, not often time well spent. Because of these attitudes and feelings, I approached the task of the dissertation grudgingly and with little enthusiasm. I am finishing this task, however, with a new respect for the process of research and for the committed researcher who constantly faces the difficulties posed by trying to measure and describe complex human situations. I am also finishing it with an understanding of its place in my own education. It was not only a logical outcome of my experiences as a student and teacher, but, in retrospect, clearly an essential element in my own education. It shared the elements of other positive educational experiences described in the prologue. Once again, I had the good fortune of having excellent teachers, teachers who taught me as a whole person. Consequently, I learned about myself as well as learning about research, and I also learned more about teaching from the way these master teachers taught me. I learned the importance of not indulging student resistance to the task - recognizing and acknowledging it and helping students to overcome this resistence, yes - but not indulging it. I learned the value and need for discipline in work from this experience more

than from any other part of my education. And, finally, I learned how to do research, how to follow a trail through complex and often confusing data to tease from it the story it has to tell. I hope what I have learned here will make me a better teacher, more able and willing to help those students who want to do research and more able to help those who do not recognize its value.

I came to this task hoping to do work which would be helpful to others who are teachers. I leave it feeling that I have learned more from this process than will any reader. Therein lies its value for me. Whatever value it has beyond that is due to those who taught me.

APPENDIX A

INSTRUCTIONS FOR ADMINISTRATION OF THE EVALUATION FORM

RESIDENTIAL COLLEGE

Dear Friends:

I'd like to make a few brief comments on the administration of and background for these forms. The main purpose of this committee is to provide you with information which will help you with your teaching. Since we cannot prepare specific forms for each discipline or special courses, we've taken our task as one of providing the kind of general and contextual information which teachers need for decision-making about courses. How our students perceive our goals and our classes is important to the judgments we make about how to teach the class the next time around.

1. In order to get our students' perceptions and in order for them to take this task seriously as part of their responsibility toward us, it is necessary for each of us to tell them that this information is important to us. It is also important not to influence them as they begin with our views about the class since we all know those. We need theirs!

2. Please have students fill out these forms in class if at all possible. If not, make some arrangement with them that they turn the forms in to the administrative secretary and have their names checked off the class list there. In order to get good returns, we suggest that students be told that they will not receive evaluations until their course evaluations have been turned in. This has worked well for a number of us in the past.

3. Feel free to add your own course-specific items to the form. Have them respond to issues important to you but not covered in the form on the back of the last page or two. These items which you add will also help us to see areas in which we might add to or modify the present form.

4. After the forms are filled out, have someone return them to the administrative secretary.

5. Since tabulation was such a gigantic task, we've thought of a plan to share the work more broadly with the community. We would like each of you to find a student from your class who would be willing to do the gross tabulations of the form. We will have work sessions in Room 164 on April 14, 15, 19, 20, 21 at 8:30 p.m. to do these tabulations. There will be at least one member of the committee there to help and answer questions. It will be about 1 1/2 hours time for each student. Please write the student's name and phone number on the front of the envelope and we will call them if they don't appear on one of these evenings.

6. Please fill out your own form and include it in the envelope with the class forms.

7. Finally, as you may already know, I'm doing my dissertation research on the data from these evaluations. I hope that it will help to make these forms more useful to all of us. We need a background against which to view our own classes and the committee just doesn't have time to create such a tapestry. I'm going to try, and if it's successful, these forms should prove even more valuable to us all.

Thank you.

Jan Brink for the Committee
on Evaluation of Teaching

APPENDIX B

COURSE EVALUATION FORM ITEMS

1. The following is a list of educational goals which, while not exhaustive, hopefully contain some goals relevant to any course being taught. You are asked to make the following judgments while considering this list. Please read the entire list before you respond.

a) Check those goals (not more than ten) which were most important to you as a student in this course.
b) Check those goals (not more than ten) which you feel were most important to your instructor.

	STUDENT	INSTRUCTOR
1. Mastery of specific facts, concepts, theories of methodology.		
2. Awareness of the complexity of the domain being studied.		
3. Ability to interpret data using the conceptual framework of the discipline.		
4. Ability to analyze and evaluate course material using relevant criteria and/or evidence.		
5. Ability to synthesize, integrate and relate various course material.		
6. Ability to select and use appropriate tools and methods.		
7. Ability to apply course content to other courses and to "real world."		
8. Ability to take frame of reference of "professionals" in the field... think like a philosopher, a historian, etc.		
9. Ability to ask meaningful questions.		
10. Ability to observe accurately and completely.		
11. Ability to translate knowledge into appropriate action.		

	STUDENT	INSTRUCTOR
12. Ability to accurately generalize from one's own experience.		
13. Development of an aesthetic appreciation for the work in this particular field.		
14. Increased curiosity.		
15. Excitement and interest in the subject matter.		
16. Increased openness to ideas and opinions differing from one's own.		
17. Increased tolerance for questions and issues without definite answers.		
18. Involvement in the course.		
19. Increase in social and political concern.		
20. Ability to develop and implement one's own goals and interests.		
21. Ability to evaluate self as learner to develop standards by which to evaluate one's own learning and performance.		
22. Increased ability to communicate own ideas.		
23. Increased feelings of independence and influence.		
24. New respect for one's own capacities.		
25. Increased ability to listen to others.		
26. Discovery that this field is or is not for you.		

	STUDENT	INSTRUCTOR
27. Increase in sensitivity to interpersonal dynamics.		
28. Increased understanding of group interactions and the way groups work.		
29. Increased understanding of other people in the class.		

2. Rank order the following categories of goals. (1=most important... 4=least important.)

   a) In the order which best represents this course.
   b) In the order which describes the emphasis you would have preferred.

Categories of Goals	Actual	Preferred
1. Mastery of Content		
2. Personal growth and development		
3. Development of interpersonal skills		
4. Development of work skills (i.e., research techniques, communication, skills, etc.)		
5. Development of motivation for further learning		

3. Rank order the class time spent during the semester on the following:

Class	Actual	Preferred
1. Lecturing and/or demonstrations		
2. Discussion of assigned material		
3. Discussion of the dynamics of the class		
4. Discussion of personal experience		
5. Creating a relevant common experience (field trips, role playing, films, etc.)		
6. Practicing skills		
7. Other (Specify)		

4. Given the following list of course characteristics

   a) check those which characterized this course.
   b) check those which characterize the best course for you.

Course Characteristics	Actual	Best
1. New information is mastered		
2. I have a chance to pursue my own interests		
3. The class becomes a cohesive unit and accepts shared responsibility for the class		
4. The instructor has the whole course planned from the beginning		
5. Expression of feelings is as appropriate as the expression of thoughts and ideas		
6. The instructor gives a lot of helpful feedback		
7. Other (Specify)		

5. The following list describes various aspects of the teaching role.

   a) Check those aspects which represent the role played by your instructor.
   b) Check the aspects which describe the way you would have preferred that your instructor play the teaching role.

Aspects of the role	Actual	Preferred
1. Expert in subject matter (preparer and organizer of material)		
2. Formal Authority (defines structure, sets standards of performance, evaluates performance)		
3. Socializing Agent (recruiter for the discipline)		
4. Facilitator (worked to help students achieve their own goals and to overcome obstacles to learning)		

Aspects of the role	Actual	Preferred
5. Ego Ideal (model for students own development)		
6. Person (a full self, not limited to role specifications)		
7. Initiator		
8. Impartial Observer		

6. The following list describes various aspects of the student role.

   a) Check those aspects which best describes your behavior in class.
   b) Check those aspects which describe how you would most like to be in the class.

Aspects of the Role	Actual	Preferred
1. amateur, notetaker, memorizer		
2. impartial observer		
3. active participant		
4. independent learner		
5. initiator		
6. discipline apprentice		
7. involved listener		
8. discouraged worker		
9. person		
10. sniper		
11. other (specify)		

24. Were your expectations with regard to this course or section satisfied (1=greatly; 5= not at all) 1 2 3 4 5

25. Assuming a normal load of four courses, rank this course in terms of the following (1= highest; 4=lowest)

   a) interest 1 2 3 4
   b) time 1 2 3 4
   c) effort 1 2 3 4
   d) motivation 1 2 3 4

	Excellent				Poor
30. Rate your overall performance in this course	1	2	3	4	5
31. Rate the overall effectiveness of the instructor	1	2	3	4	5
32. Rate the overall value of the course for you	1	2	3	4	5

APPENDIX C

RELATIONSHIP OF SATISFACTION MEASURES TO ONE ANOTHER

	Sat w/ cse goals	Sat w/ Class time	Sat w/ cse char	Sat w/ teach role	Sat w/ stu role	Sat of stu expec
Sat w/ cse goals	1.00	.43**	.30**	.38**	.26**	.24**
Sat w/ class time	.43**	1.00	.29**	.31**	.14*	.21**
Sat w/ cse char	.30**	.29**	1.00	.36**	.25**	.35**
Sat w/ teach role	.38**	.31**	.36**	1.00	.23**	.39**
Sat w/ stu role	.26**	.14*	.25**	.23**	1.00	.36**
Sat of stu expec	.24**	.21**	.35**	.39**	.36**	1.00
Overall Satisfaction	.63**	.60**	.63**	.66**	.57**	.66**

*Significant at .01 level
**Significant at .001 level

APPENDIX D

RELATIONSHIP OF GOAL, SATISFACTION AND OUTCOME MEASURES TO INTEREST, TIME, EFFORT AND MOTIVATION

	Interest	Motivation	Time	Effort
Corrgoal	.27**	.26**	.09	.10
Shargoal	.32**	.26**	.08	.10
Thotshar	.27**	.28**	.13	.16*
Sat w/ cse goals	.25**	.28**	.13	.21**
Sat w/ class time	.16*	.20**	.14*	.21**
Sat w/ cse char	.39**	.40**	.19**	.31**
Sat w/ tch role	.33**	.38**	.14*	.24**
Sat w/ stud role	.27**	.30**	.09	.18**
Sat of expec	.45**	.48**	.36**	.40**
Overall Sat	.47**	.52**	.27**	.39**
Grade	.19**	.23**	.11	.09
Stu eval of own perf	.35**	.43**	.32**	.36**
Effect of inst	.42**	.47**	.24**	.33**
Value of Cse	.66**	.70**	.34**	.37**
Interest	1.00	.78*	.29**	.35**
Time	.29**	.37**	1.00	.70**
Effort	.35**	.48**	.70**	1.00
Motivation	.78**	1.00	.37**	.48**

* Significant at .01 level
** Significant at .001 level

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