AN APPLICATION OF THE CRITICAL INCIDENT

TECHNIQUE TO TEACHING

by

DOUGLAS GORDON CRAWFORD

B.A., University of British Columbia, 1957

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Department

of

PSYCHOLOGY

We accept this thesis as conforming to the

required standard

THE UNIVERSITY OF BRITISH COLUMBIA
September, 1961

In presenting this thesis in partial fulfilment of

the requirements for an advanced degree at the University of

British Columbia, I agree that the Library shall make it freely

available for reference and study. I further agree that permission

for extensive copying of this thesis for scholarly purposes may be

granted by the Head of my Department or by his representatives.

It is understood that copying or publication of this thesis for

financial gain shall not be allowed without my written permission.

Department of __Psychology__

The University of British Columbia,
Vancouver 8, Canada.

Date__September, 1961.__

ABSTRACT

The purpose of the study was to report on an adaptation of the Critical Incident Technique to university teaching with specific reference to its usefulness for:

1. Determining the "critical requirements" of university teaching as evolved from the descriptions of lecturer behavior by university students;

2. Studying the relationship between information on teaching obtained by "critical incidents," and supplementary information given as 'opinions' derived from general experience;

3. Educing a set of practical recommendations that may be of value to lecturers in the improvement of their university teaching practices.

Volunteer fourth year Arts students were employed as the source of criterion data. The data were recorded in the form of "critical incidents" and supplementary information in the form of 'opinions.'

Three classifications were applied to these data. Two classifications were made of the critical incidents, one being based exclusively on descriptions of lecturer behaviors; the other on the reported result of the lecturer behaviors. The third was applied to the opinion information. All these data were systematized according to a progression of more inclusive categories.

From the first two classifications, two lists of "critical requirements" were evolved. In addition, the 'practical recommendations' were based on these data.

A summary of implications and conclusions was included, as well as suggestions for future research possibilities.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGMENT

CHAPTER I

INTRODUCTION

Statement of the problem. This present study arose out
of the observation that there seemed to be a consistent pattern
of lecturer behaviors described anecdotally by university stu-
dents which they deemed as examples of either good or poor
teaching techniques. A survey of the literature indicated that
few reported attempts had been made to use university students
as critical observers of their lecturers.

Without attempting to resolve the problem of student
capability in judging the total effectiveness of the instruction
they receive, it is clear, states Riley (1950, pp. 31-33), that
inescapable obligations rest upon the professor in return for his
relative immunity from criticism. He asserts that a student's
ideas of good teaching, of ideal instructional characteristics,
are part and parcel of any teacher's daily routine. He adds
further that:

> The importance of professorial awareness of student
> attitudes toward instruction is made all the greater by
> contemporary trends in higher education. Higher educa-
> tion has come out into the open; the new pragmatic
> demands, the functional and utilitarian concept of
> higher education, coupled with a heightened impersonal-
> ity in the classroom and heterogeneity in class composition,
> intensify the need for and difficulty of catalyzing student
> thinking.

If...the popular democratic and pragmatic concept
of a college education is worth pursuit, then student
definition of the classroom situation is worth knowing...
Either we change our concept of higher education or the
professor must include in his definition of the class-
room situation his own reflection as seen in the student's
eyes.

Buxton (1956, p. 354) admits that while much is obscure
about the determiners of student ratings of instruction...that
whatever verbal defenses college teachers may have, very few of
them can really be indifferent to what their students think. He
cites the Brooklyn College study[1] as giving support to his view.

Ryans (1952, p. 27) is critical of research in the area of
teacher effectiveness, and blames its sterility largely on diffi-
culties inherent in defining criteria adequately and obtaining
criterion measures of teacher competence. He feels that serious
attention to the criterion problem demands decisions regarding
both the description of the criterion to be adopted and the
criterion measure or measures to be employed. These decisions,
he emphasizes, should be based insofar as possible on empirically
supported considerations. He discusses the distinction between
immediate, intermediate, and ultimate criteria and emphasizes
the need for specifying which kind of criterion one attempts to

---

[1]This study is reported in some detail by Riley (1956,
pp. 108-123)

predict.[2] He points out that the choice of 'criterion measure'
also rests upon the judgment of the researcher. The alternate
methods of obtaining criterion data usually available must be
chosen in the light of technical considerations and practical
convenience. For example, one decision may involve a choice
between direct and indirect measures of criterion data. The
direct approach would be exemplified by observations of ongoing
criterion behavior. Obtaining data relative to the outcome of
criterion behavior illustrates the indirect approach.

As a means of obtaining criterion data relevant to teach-
ing effectiveness at the university level, it was decided to use
a direct approach, specifically, Flanagan's Critical Incident
Technique. An essential feature of this technique is to lend
empirical support to rating procedures, and although Flanagan
primarily evolved the technique as a means for objectifying
rating and assessment procedures, he himself states that (1954b):

> The critical incident technique is essentially a
> procedure for gathering certain important facts concern-
> ing behavior in defined situations. It should be
> emphasized that the critical incident technique does
> not consist of a single rigid set of rules governing
> such data collection. Rather it should be thought of
> as a flexible set of principles which must be modified and
> adapted to meet the specified situation at hand.

---

[2]He mentions one study involving a generalized classi-
fication of pupil behavior which included immediate criteria
data such as "manifestations of pupil interest...," intermediate
criterion data, such as "manifestations of accomplishment upon
completion of pupils exposure to a particular teacher," and
ultimate criterion data, such as "manifestations of occupational
and social adjustment and accomplishment...."

The essential features of this technique are discussed below in Chapter II, as are the other methods that have been used for the purpose of teacher appraisal. It is the intention of this study to report on an adaptation of this technique to university teaching with specific reference to its usefulness for:

1. Determining the "critical requirements" of university teaching as evolved from the descriptions of lecturer behavior by university students;

2. Studying the relationship between information on teaching obtained by "critical incidents," and supplementary information given as opinions derived from general experience;

3. Educing a set of practical recommendations that may be of value to lecturers in the improvement of their university teaching practices.

It is to be noted that this present inquiry was not designed to identify for administrative action good and poor instructors on the basis of student judgments. Rather its purpose was to elicit some practical recommendations that would be of value to instructors by acquainting them with the degree of their acceptance by their audience. Thus, precautions were taken to avoid any direct references being made that would actually identify university instructors.

The data were collected from 80 volunteer fourth year Arts students, who were selected, as is described below, from among a total of 375 students registered in the faculty.

CHAPTER II

REVIEW OF THE LITERATURE

Methodological approach. Reviews of the methodological

approach to teacher appraisal have been prepared by Beecher

(1949) and Barr (1948). These summaries are concerned primar-

ily with the study of elementary and secondary school teachers,

but Beecher, in addition, reviews several studies at the college

level. As a result of his survey, he lists five methods for

teacher appraisal:

    1.   Supervisors' and administrators' expectations
        representing for the most part assembled lists of
        desirable qualities.
    2. Rating scales and observational techniques.
    3. Predictive appraisal of training institutions.
    4. Studies of pupil opinion and reaction.
    5. Diagnostic and anecdotal methods.

Current rating scales are criticized by Travers (1950)

as being invalid measures of teacher effectiveness, in that they

are based upon varying frequency of contact between the rater

and the teacher. Smit (1951) criticized all studies based on

judgments of educational experts or students only. In her

view there has been a loss of validity of results because of

the use of unrepresentative samples, a lack of objectivity in

judgments, and situational goals have been inadequately defined

for the judges. Further, she pointed out, the manner in which

the data are requested, the questions asked and instructions presented to judges may limit the kinds of factors the judges report, and the meaningfulness of the information they supply. Completely unstructured questions, in her view, led to vague generalizations. Conversely, if judges are given overly specific instructions, other important factors may be over-looked. She felt that in order to "equate judgments" the goals of the teaching situation should be clearly defined, and used as a basis for their (the judges) evaluations.

Ryans (1960, p. 371) concluded that there are two very important reasons why effective and ineffective teachers have not been described with any assurance. First; there is a wide variation in the value concepts underlying descriptions of desireable teaching objectives. Second; there are differences in teacher roles at different educational levels, in different subjects, and with different pupils. In addition to these considerations acting as a deterrent to the study of teacher effectiveness, he alleged that there is a paucity of knowledge concerning the patterns of behaviors which characterize individuals employed as teachers. He asked researchers rather than direct their efforts to the recognition of "good" teachers, that they identify and estimate some of the major patterns of personal and social characteristics of teachers.

With this in mind, one of the lines of attack of the
Teacher Characteristics Study, chaired by Ryans, in the iden-
tification and description of specific teacher behaviors and
the major dimensions they comprise, consisted of collecting
"critical incidents" of teaching, or critical behaviors, of
both elementary and secondary school teachers.

The Critical Incident Technique. The critical incident
technique is described by Flanagan (1954b) as:

> ...a set of procedures for collecting direct observa-
> tions of human behavior. (A procedure) for collecting
> observed incidents having special significance and
> meeting systematically defined criteria.
> An incident is any observable human activity suffi-
> ciently complete in itself to permit inferences and
> predictions to be made about the person performing the
> act.
> To be critical an incident must occur in a situation
> where the purpose or intent of the act seems fairly
> clear to the observer and where its consequences are
> sufficiently definite so as to leave little doubt con-
> cerning its effects.

He formalized the critical incident approach into a well de-
fined technique which he described in a number of articles
(1950, 1952a, 1954b, 1956c). The individuals from whom
incidents are requested generally are asked to report or
write down all of the incidents that they can think about,
and in most settings the range of individuals who may be asked
to participate usually extends beyond those who may be directly
engaged in the occupation. He assumes, then, that the observer

can recall those critical incidents which may be characterized as indicating effecient or inefficient performance in that field. Thus, in the field of teaching, an example of an incident which was described as reflecting good or effective teaching was the following:

> "The lecturer explained his lateness was due to the distance he had to come between lectures. He was willing to consider questions after the hour, since it was the last of the afternoon, and expressed a desire to see students individually in his office to discuss course material and help them get as much as possible out of it."

Another incident illustrating ineffective teaching was:

> "Due to a particular interest of the lecturer in specific course material, he used special terms he alone knew, he lectured so quickly that there was no time to get anything down, and gave no chance to ask questions."

As can be seen, each critical incident can contain a number of "critical behaviors."

The procedure involved in using this technique is, essentially, to determine by scrutinizing the observer's reports the number of specific incidents described; extract the discrete behavioral descriptions; and inductively derive a progression of more inclusive categories in which to classify them. Thus, one begins with an unclassified number of critical incidents, from which are derived a number of critical behaviors which are in turn classified according to the degree of their similarity. These behaviors are the "specific actions of the

individual" (1954b), and are, where possible, grouped into
"critical requirements". Flanagan (1950) describes the critical
requirements of an activity as being those that are crucial in
the sense that they have been frequently observed to make the
difference between success and failure in that activity. In
order to establish valid critical requirements he lists 5
specific conditions to be satisfied:

1.   ...that actual observations be made of the on-the-
     job activity and the product of such activity.
2.   The aims and objectives of the activity must be
     known to the observer....
3.   The basis for the specific judgments to be made by
     the observer must be clearly defined.... All obser-
     vers must have the same criteria for making judgments....
4.   The observer must be qualified to make judgments regard-
     ing the activity observed....
5.   ...reporting (must be) accurate. The principal pro-
     blems here are those of memory and communication.
     It is also important that the observer's attention
     be directed to the essential aspects of the behavior
     being observed.

These critical requirements are then progressively grouped into
more inclusive categories, termed, for the purposes of this paper,
classes, sub-areas, and major areas. These steps are illustrated
in detail in Chapter III.

For the purposes of the extensive Teacher Characteristics
Study (Ryans, 1960), the reports of critical incidents were sub-
mitted by persons closely associated with teaching, and were
based upon first-hand knowledge of acts of teachers in specific
situations. The researchers defined a "critical incident" as:

...any observable teacher behavior or act which might
make the difference between success or failure in some
specified teaching situation.

In order to formalize and systematize the critical teacher behavior study the authors made use of a Critical Incidents Blank based on the reports of Flanagan and his co-workers at the American Institute for Research (1954b). Each objective description of a specific teacher behavior was transcribed to a separate record card. These cards were sorted and classified into appropriate categories in five steps:

1. identification of the salient features in each incident of teacher behavior reported;
2. derivation of a rough classification scheme for the reported incidents to facilitate ordering of the data;
3. classification of each critical behavior into one of these categories;
4. derivation of a generalized descriptive statement covering each category;
5. final refinement of the classification scheme and preparation of generalized descriptions of the principal classes of teacher behaviors. (Ryans, 1960, p. 81).

The authors concluded this portion of their study of elementary and high school teachers by emphasizing that they placed considerable emphasis on the list of behaviors derived from the collection of critical teaching incidents. In their view, this approach to the identification and description of significant teacher behaviors was basically more sound than the frequently employed procedure of asking educators or others to name the traits or qualities they believe to be desirable for teachers. They believed further that the critical incidents technique represented an effort to determine the basis of value judgments, to objectify descriptions of teacher behavior, and provide an operational frame of reference for the assessment of teacher behavior (Ryans, 1960, p. 83).

The critical incident technique has been applied to many job areas in the past, as for example to airline pilots (Gordon, 1949) and dentists (Wagner, 1950). Stoyva (1956) used it with a view to providing an empirical criterion of performance of the trolley-bus operator's job. DeVries (1957) conducted systematic and objective study of training needs in the field of real estate selling using this technique. He found, in addition to information gleaned directly from critical incidents as such, items of "general information" provided supplementary information which proved to be a useful adjunct to the critical incident technique.

Smit (1952) selected this procedure and adapted it to investigate the requirements necessary for effective teaching in general psychology courses. Data derived from four different groups, consisting of both students and instructors, were analyzed to determine if differences existed in their observational reports. As might be expected, she found:

> ...sufficient significant differences in judgments of criticalness and relevance of behavior between students and faculty to warrant further investigation concerning reasons for this, and its effects on studies based on student or faculty evaluations alone.

She concluded that the requirements for effective teaching in general psychology courses involve more than skills necessary to the presentation of lecture material. Her findings are summarized under five headings as follows:

a) Behaviors related to aiding the individual student with both educational and personal problems are critical to effectiveness.

b) The importance was stressed of encouraging students to think as well as memorize and accept, and to evaluate the products of their own and others thinking.

c) The recognition of student needs in the classroom in addition to extending aid after class hours was a critical area.

d) The study revealed the need for teacher training in both expository and other classroom methods, and emphasized the need for instructors to develop the requisite skills in other than lecturing methods.

e) A further problem area revealed in her study included the necessity of helping students to clarify their aims and understanding of the learning process.

She found that the value of Critical Requirements derived from her research, in addition to providing instructive and informative to faculty and administrators, lies in their forming the basis for the development of instruments to measure teacher behavior objectively and quantitatively.

Guthrie (1959, p. 32) contends that one is faced with the same difficulty in evaluating teaching that would be encountered in evaluating the performance of violinists. He protests that value judgments cannot be reduced to the reading of points on a scale in which a very high concensus among observers can be obtained. He asserts that:

...if we define a scientific fact as a state or event so described that all qualified observers will accept the description, the difference between fact and value becomes a relative one.

He maintains that judgments are being continuously made about teaching performance by students, colleagues and by the teacher himself, but the student observers have one advantage which colleagues do not share--they are present at the performance. However, Buxton (1956, p. 348) reports a factor analytic study by Guthrie indicating that impact of the instructor on his student is but one of three dimensions that are significant in the total evaluation. The other two are his impact on his profession, by way of research and scholarly productivity, and his impact on his colleagues.

It is this first 'dimension', then, the "impact of the instructor on his student" that was used as the source of criterion data for this study. Unquestionably the use of non-trained student observers, in the sense of their having no supervised training in behavioral observation and assessment, inevitably led to considerable judgment variance. Moreover, their assessments were likely influenced by the casual nature of the observations and by biases resulting from criterion deficiency and contamination. The latter likely contained among its sources what Ryans (1960, p. 30) refers to as "opportunity bias", resulting from differences in opportunity for production of behavior among different individuals being observed. During a given time sample no situation may have occurred in which teacher 'A' was able to demonstrate certain

characteristics that she (he) actually possessed. This source

of bias was minimized, however, in this inquiry since observers

were not asked to record lecturer actions over any pre-planned

time schedule. Indeed, it was assumed that the incidents re-

ported were selected at random from the total behavioral

repertoire of the instructor. However, another source of

criterion contamination likely operating was the various rating

biases, such as those associated with the "halo effect". In

any event, without attempting to resolve the question of the

validity and reliability of student judgments, it does seem to

this observer unrealistic and naive to assume, as does Smit

(1952), that mere "knowledge" of criteria upon which to base

judgments is going to effect "equivalence" of judgment.

Reliability and Validity of Student Judgments. While

student evaluations of instructors have a high degree of

face validity, attempts to relate them to other criteria of

teaching excellence have been disappointing. McKeachie and

Solomon (1958) established as a criterion measure 'interest

arousal'. Their data did not indicate a very consistent rela-

tionship between student ratings and student interest, as evi-

denced by selection of advanced courses given by the instructor

being rated.

Riley (1950, p. 28) acknowledged that the crucial

objection to the use of student ratings has usually centered

around the problem of reliability, i.e., the ability of students

to make unbiased, consistent judgments of a teacher's performance.

The literature directs specific criticism at such demographic

characteristics of students as their age, academic success, and sex.

The evidence that such demographic characteristics of students affects their evaluations is conflicting and inconclusive. Remmers & Elliot (1949) concluded that grade, sex, and maturity (in terms of freshman or senior status) had no effect on ratings. However, graduate students, they found, rated their instructors higher than did undergraduates. Using a relatively small sample of students to rate psychology instructors, Bendig (1952) differed with their findings. He found that women were somewhat more critical than men of a male instructor, and advanced undergraduates more critical than beginners. He contended that the nature of course content is crucial in determining the quality of evaluation.

Drucker & Remmers (1951) presented tentative findings to support the view that ratings of instructors do not change with the maturity of the rater. Indications were that alumni ten years out of college agreed very closely with current undergraduates as to what instructor traits were significant in the quality of instruction.

Anikeef (1953) calculated rank-order coefficients of correlation between the mean grade a number of instructors gave their students and the mean rating they received from students, and found a close positive correlation. He found

grading leniency correlated highest with most rating scores on
the freshman-sophomore level, and lowest on the junior-senior
level. The low correlation found at the latter level, he
believed, could be attributed to the more homogeneous grouping
resulting from the selection process in operation at the lower
levels. A difficult research problem related to merit ratings
and grade earned is discussed by Buxton (1956, p. 352). Since,
as he points out, a grade earned by a student is evaluated
partly or largely in terms of expectations, it might be that
students achieving "above", in terms of self-perception of
ability level, would regard their instruction favourably,
and vice versa. He reported Guthrie's findings to suggest
that the generally abler students, as defined by grade-point
average, do not give higher ratings.

Thus, it was decided in the light of the above, both
to use student judgments as being relevant to the establish-
ment of one criterion of lecturer effectiveness, and to use
the critical incident technique to assist in the derivation
of the behavioral components of the criterion. Of course an
unavoidable circularity is inherent in this approach. That is,
criterion measures (critical behaviors) cannot be chosen until
decisions have been made regarding the nature of the criterion;
and some of the judgments relative to the criterion must remain
tentative until reliable estimates of the hypothesized behav-
ioral dimensions have been made.

It was the aim of this present study, then, to isolate simple behaviors or "first-order behavior dimensions" such as particular motor or verbal responses or combinations of behaviors of varying degrees of complexity, which might represent significant or salient components of effective university lecturing. It seemed, for the reasons stated above, that the critical incident technique was admirably suited for this purpose.

CHAPTER III

THE APPLICATION OF THE CRITICAL INCIDENT TECHNIQUE

The specific application of the critical incident tech-
nique to the problem of the determination of the critical
requirements for university instruction at the fourth year
Arts level is discussed on the following pages. The reasons
for selecting this technique have been outlined above.

Preparation of Instructions and Recording Forms. It
was decided, because of the large number of available observers,
to collect the data on a specially prepared record form, sent
to each observer, rather than by a personal interview. It was
necessary to contact each subject by telephone, gain their
cooperation, and instruct them both verbally and by written
instructions, the latter being sent with the mailed record form.
In composing and preparing the instructions and recording forms,
several variables have been found to effect the observer reports.
First, maximum cooperation of observers could be assured only if
the anonymity of all parties was protected. The methods for
this safeguard were explained both verbally over the telephone
and in the copy form. Second, the observers must clearly under-
stand that the data being collected is behavioral, that is, the
important information is an accurate and complete description
of what the person being observed did. This feature was em-
phasized in the instructions both by a concrete example, and

by repetition. Respondents were asked to describe actual experiences which illustrate good and poor lecture technique; to think of actual incidents of behavior on the part of their lecturer that applies to the effective or non-effective delivery of a lecture; to describe exactly what the lecturer did. Third, the objectives of the area being observed must be clearly in front of the person making judgments. It was stressed that the student's observations should be recorded upon the basis of the result of an instructor's action in reference to whether the action represented effective or ineffective lecture technique. Respondents were reminded that their evaluation of the goodness or poorness of the lecture was not to be in terms of whether they were personally impressed by the subject material being delivered, but solely in terms of lecture procedure as manifested by their lecturer.

In order to clarify these points, the observers were asked to include the reasons why they considered the behaviors effective or ineffective. It was hoped that these statements would indicate whether or not the judgments of criticalness and relevance were made according to the requirements outlined above.

In addition to these problems which are more or less specific to this particular technique, more general problems of motivation, both immediate and continuous, and the establishment of rapport had to be considered.

In order to maximize the response-rate, the copy forms were enclosed in stamped, addressed, return envelopes, and the respondents were assured of anonymity and confidentiality. However, it was impossible to follow-up non-respondents unless each copy form had some identifying feature, which, of course, may have generated some suspicion that the enquiry was not confidential. Indeed, it was necessary to send a follow-up request due to a poor initial response.

The copy forms consisted of four sheets of paper, $8\frac{1}{2}$" x 14", divided equally into twelve spaces approximately three inches in depth. There were six spaces available for recording incidents related to good or effective lecture procedure, and six for the description of poor or ineffective procedures. The first page of the forms consisted of the instructions which can be found in Appendix A. The last page was headed 'Supplementary Information', where the respondent was asked to:

> ...please state your opinions regarding good and
> poor university teaching as derived from your own
> experiences, but which you cannot relate to a
> specific incident. This information is designed
> to supplement the "incidents" material and should
> not be a mere restatement of it. Try to avoid any
> reference to the incidents you have described while
> trying to form your opinions.

These forms were mailed to 239 fourth year Arts students who had been successfully contacted, and who had agreed to

participate in the study. The remaining 136 names had been called a minimum of four times, and for various reasons could not be reached. Each student was told, in part, over the telephone:

> ...(the study) involves an analysis of lecture technique as demonstrated by your various lecturers in the courses you are taking yourself, or lecture behavior described to you by your friends....

After a period of approximately one month, those students who had failed to send in their forms were sent a reminder. At the close of the academic session, or immediately thereafter, 97 forms had been returned, 80 of which contained useful material. The response rate was 40.6%.[3]

Selection of the Sample. It was decided to collect the critical incidents from students registered in fourth year Arts since, because of their broad exposure to lecture situations, they would have the largest repertoire of incidents from which to draw. Further, it was hoped that at this academic level, the students would be able to report critical behaviors and their results which were based upon the goals of the teaching situation, and be able to keep separate their

---

[3]Mosser (1958, pp. 178-180) discusses such variables contributing to the proportion of respondents replying to mailed questionnaires as: the nature of the population, the subject of the survey, its sponsorship and the success of interest arousal. He points out that "strenuous efforts" are usually needed to bring the response rate above about 30-40%.

opinions and report these on the Supplementary Information page provided for that purpose.

Since the literature is inconclusive concerning the effect of demographic data on student ratings of instructors, as discussed above, and since course of study[4] may in part determine the quality of student evaluation it was necessary to see if our sample was representative in terms of course of study. By referring to the registration cards of all the fourth year Arts students, it was possible to place each student into one of four categories on the basis of their indicated major or honours course. The Library of Congress scheme was used as a basis for this classification.

This scheme divides traditional courses of study into five broad categories as follows:

1. Humanities. Includes Languages and Literature, Philosophy, and History.

2. Social Sciences. Includes Economics and Political Science, Anthropology, Sociology, Psychology, Geography, Commerce and Business Administration, Social Work, and Education.

3. Sciences. Includes Chemistry, Physics, Applied Science and related fields.

4. Biomedical. Includes the Biological Sciences and Medicine.

5. Fine Arts. Includes Fine and Applied Arts, Architecture and Planning, Music, Costume and Dance.

Since the student respondents were requested to indicate their course of study on the copy form they returned, they too were

---

[4]See Bendig's findings, page 15 above.

similarly classified. Using chi square, it was possible to test the hypothesis that the number of students enrolled in the various courses of study as indicated on the copy forms was proportionate to the number similarly enrolled in the population (i.e., fourth year Arts students). The numbers and proportions enrolled in the various categories are listed in Table 1 below. The population proportions, then, were used to derive the 'expected numbers', listed in Table 2 below (see page 34) for the calculation of chi square. The value obtained for the latter did not approach significance at the .05 level, hence the respondents likely were a representative sample of fourth year Arts students in terms of their course of study.

Due to the difficulty encountered obtaining an adequate sample size it was not possible to make use of population stratification and thereby increase the representativeness and precision of the sample.

Classification of behaviors. After all the incidents had been gathered, it was necessary to classify the incidents so described according to a progression of more inclusive categories, as was outlined above. Since it was desired to have the classification scheme develop from the data rather than from any preconceived notions of the investigator, the classification was to be built inductively, beginning with the actual behaviors reported by the observers.

Three major classification schemes were applied to the
data. The first one was based solely on student descriptions
of lecturer behaviors. That is, the progressively more inclusive
categories of this scheme had only a behavioral basis. The
second was based exclusively on the result of the particular
lecturer action described. Obviously, only those reports
which included a result (62% of the behaviors) were useful
for this scheme.

The third classification scheme was applied to data
reported in the form of general opinions, in the main found on
the Supplementary Information page of the copy form. These
latter descriptions were exclusively reported in the future
imperative tense, and frequently took the form of a directive
either to the lecturer or to the classroom situation.

The first step in the classification of the data was the
isolation of critical behaviors from the critical incidents.
As was illustrated above, an incident frequently contained more
than one critical behavior, hence the copy forms were read,
and the behaviors underlined in coloured pencil. These behav-
iors, along with their result, if any, were typed on 3"x 5"
cards. It was noted whether the actions described were speci-
fied by the observers as being either effective or ineffective.
All behaviors which were exactly alike or seemed to refer to
the same kind of action were grouped together in the same
'sub-class'. These sub-classes were stated in terms as close
to the original behaviors as possible, and represent "the first

level of generalization which covers closely similar specific behaviors" (1954b).

The next step involved grouping the various sub-classes into 'classes' and thence into 'sub-areas'. These groupings were in terms of generalized descriptions of the more elemental items subsumed under them. Thus, for example, each of the four classes:

1. use of blackboard
2. use of slides
3. use of maps and charts
4. discrete references to use of audio-visual techniques

all subsumed descriptions of lecturer behaviors which were capable of further division into sub-classes, such as was described above. Further, these four classes were all, in turn, subsumed under the sub-area: Audio-Visual Techniques, one of the seven sub-areas comprising the major area: Teaching Methods.

The following example of classification was selected to illustrate the methods and difficulties involved in making the successive abstractions required by this technique. While the validation of this classification scheme cannot be assessed by this study, possible validation procedures are discussed in Chapter IV.

Example illustrating the placement of behaviors in sub-classes. Incident number 90 read as follows:

"The lecturer mumbled and failed to look at the class as he lectured."

The behaviors extracted were:

    1.   mumbled
    2.   failed to look at class

Behavior 1 was placed in:

    <u>sub-class (d)</u>
    spoke indistinctly, mumbled;
    <u>class 1</u>
    quality of voice;
    <u>sub-area A</u>
    The Lecture Method;
    <u>major area A</u>
    Teaching Methods.

Behavior 2 was placed in:

    <u>sub-class (b)</u>
    does not face class;
    <u>class 2</u>
    position in front of class;
    <u>sub-area A</u>
    Temperamental, Dynamic, & Motivational Traits;
    <u>major area B</u>
    Personality Traits.

The sub-classes were defined in specifically limiting terms, for example, "spoke indistinctly, mumbled" is in terms of whether the individual did or did not. Where no two reports of a lecturer behavior were described in exactly the same terms, but which satisfied the investigators that they in all likelihood alluded to a closely similar lecturer behavior, they were included in a miscellaneous sub-class. These closely similar elemental critical behaviors listed as 'miscellaneous references' were included as an addend to each class, and are found in Appendices B, C, and D. The following example illustrates the kinds of behaviors that are subsumed under sub-classes termed 'miscellaneous references.'

Example illustrating behaviors subsumed under the sub-class "miscellaneous references".

"Miscellaneous references to use of notes"[5] subsumed the following six behaviors:

1. returned to office to retrieve notes
2. dropped notes on floor, class waited until all picked up
3. sought for exact quote in notes, failed to find it
4. forced to return to notes after ad lib
5. consulted notes when realized proof incorrect
6. dictated notes if seemed necessary

An attempt was made to increase the accuracy of categorizing "closely similar specific behaviors" by spreading the descriptions of lecturer actions over a five point scale in terms of their relative degree of opinionation. That is, a concrete 'critical behavior' at one pole, and an opinionated abstraction of a behavior at the other. For example: "The lecturer used a class member to demonstrate the effect of centrifugal force" is a description in terms of concrete lecturer behavior. "The lecturer frequently used members of the class in demonstrations" is an example of an opinionated abstraction of an act. However, it was found that after a time lapse of several months it was only possible to sort behaviors as to degree of opinionation with a 7% error, hence this phase of the classification was abandoned.

---

[5]To be found in Appendix B, page 99, item 5(c)

It was possible to group all of the data classified
solely in terms of lecturer behavior into two major areas,
namely, _Teaching Methods_, and _Personality Traits_.

It was noticed that on the basis of this behavioral
grouping lecturer actions were judged as either effective or
ineffective examples of teaching practice. However, the results
of any one action received a wide range of interpretation.
Hence, it was decided to group behaviors on the basis of the
similarity of the reported result. By this means it was hoped
to uncover behavioral trends which had similar results. Two
additional major areas were elicited from this second approach
to the classification, namely, _Mastery of Subject Material_ and
Emotional Reactivity.

The kinds of behaviors subsumed under these various
major areas are discussed below in Chapter IV, pages 40-42.

No new major or sub-areas were evolved from the classi-
fication of the general opinion data. Indeed, considerably
fewer sub-areas were required to satisfactorily systematize
these reports.

For ease of handling, when the classification was com-
plete, the information on each 3" x 5" card was transposed onto
5" x 8" cards which summarized concisely the major area, sub-
area, class and sub-class of each critical behavior. An accur-
ate restatement of the behavior itself and its result, if any,

and whether it was deemed effective or ineffective completed the data condensation.

Derivation of Critical Requirements and Recommendations.
Two lists of critical requirements were derived, one for each of the behavioral and result classification schemes. The lists consist of only specific behaviors, or of "first-order behavior dimensions," such as particular motor or verbal responses and combinations of behaviors of varying degrees of complexity. Elemental behaviors, listed as 'miscellaneous references,' and found in the Appendices under each class, were not included as critical requirements, since one of the criteria for acceptance as a critical requirement is that the behaviors must "have been frequently seen to make the difference between success or failure...." It was arbitrarily decided to include as critical requirements either two or more similar critical behaviors (behavior classification scheme), or two or more similar critical behaviors having a common result (result classifications scheme).

It was found that varying results were elicited from identical or very similar critical requirements. With a view to uncovering the broad trends in the results ensuing from similar lecturer behaviors, it was decided to derive a set of recommendations based on a grouping of closely similar critical requirements. Further, it would be possible to determine where the critical requirements used as the basis for these recommendations occurred on the list of critical requirements which was

developed from the behavioral analysis. Hence, by comparing

every critical requirement listed in Table 12, p.68 with every

other one, the list of 'practical recommendations' was developed.

The criteria for grouping the closely similar requirements was,

as far as was practical, identical to that used throughout the

study for grouping lecturer behaviors.

The following example illustrates this grouping and

traces the derivation of the results accompanying each recommen-

dation.

Example illustrating the grouping of critical requirements
and tracing the derivation of results accompanying the recommen-
dations.

Referring to Table 12, p.68, critical requirement
#1 of major area A., sub-area A., reads:

"used audio-visual techniques, class demonstrations 1(a)."

The "1(a)" refers to the class, and sub-class of
this behavior found in Table 9, p. 54. As can be
seen from Table 12, this behavior was considered
effective, and as is listed in Table 9, p. 54
under the effective column of class 1, major area A.,
sub-area A., the results of this behavior read:

"aroused interest, enthusiasm, attention; relieved
boredom."

As can be noted from Table 9, there were a total of
74 various behaviors reported which effected this
result. Appendix C, p.137 lists all of these behaviors
under class 1 of major area A., sub-area A.

Referring again to Table 12, it can be seen that
critical requirement #1 of major area B., sub-area
A., also reads:

"used audio-visual techniques, class demonstrations
1(a)."

This behavior was also considered effective, and once again by referring to Table 9, p. 56, under the effective column of class 1, major area B., sub-area A., the results of this behavior read:

"facilitated learning and correlating material; clarified; familiarized student with material."

In this case, there were a total of 73 behaviors which led to this result, and as above, these too are all listed in Appendix C, p.150 under the effective column of class 1, major area B., sub-area A.

Similarly, from Table 12, major area C., sub-area A., class #13 reads:

"used slides or practical demonstration 2(c)."

This behavior was sufficiently similar to the above two to be included as contributing to this recommendation. The result of this behavior, as listed in Table 9, p.57 under the effective column C., A., #2 reads:

"did not waste class time (saved time)."

A total of 15 recommendations were gleaned from this analysis and are listed in Chapter IV along with a short discussion of their implications.

CHAPTER IV

FINDINGS AND DISCUSSION

Evaluation of Recording Forms. Since only 62% of the
total number of critical behaviors reported included a result,
chances are that more stress should have been placed in the
instructions on the observers making their judgments on the
basis of the result of the instructors actions. As mentioned
above, it was hoped that observer's statements of the results
would assist in determining whether judgments were made accord-
ing to the requirements in the instructions. Smit (1951) found
that the results of the critical behaviors "greatly assisted"
in the process of their classification. It was found in this
enquiry that the reasons given by the observer for considering
a particular action effective or ineffective did not assist in
the actual classification of the critical behaviors. However,
'results data' did make possible a broader analysis of critical
lecturer actions, and were used both as the basis for one of
the three classification schemes of this study, and to derive
a set of 'recommendations'.

It is feasible that the failure to include 'results'
with descriptions of critical behaviors may have been in part
due to the failure to clearly establish the situational goals
for the observers. In addition, since there may be a disparity

between the aims of lecturers and students in the classroom,
this could have further exacerbated the difficulty for some
respondents to include whether they considered "his actions
justified" and whether the incident " led to a successful or
an unsuccessful result."

A further need for clarification of instructions was
suggested by the fact that 151 of the 917 critical behaviors
reported (16.4%) were found on the Supplementary Information
page of the copy form. It will be recalled that this page
was to be used for recording general opinions regarding good
and poor university teaching which could not be related to a
specific incident. Perhaps more deliberate structuring of the
copy form with more rigid specifications as to the correct
placement of critical incidents would have ameliorated this
problem. Moreover, the presence of incident data on this page
could indicate that the differences between a concrete critical
incident and a more abstracted opinionated description should
have been more clearly delineated.

Adequacy of Sample. It was originally proposed to solicit
critical incidents of lecturer behavior from a stratified random
sample of fourth year Arts students enrolled in various courses
of study. However, due to the practical difficulties outlined
above reports were requested from as many students as could be
reached. Table 1 shows the proportion of students enrolled

TABLES 1 AND 2

TABLE 1

TOTAL NUMBER AND PROPORTION OF STUDENTS ENROLLED
IN COURSES OF STUDY

Course of Study	4th Year Arts	%	Sample	%
Humanities	146	39.0	34	43.6
Social Sciences	89	23.6	19	24.4
Sciences	83	22.2	19	24.4
Biomedical	57	15.2	6	7.6
TOTAL	375	100	78*	100

*Two respondents failed to indicate course of study.

TABLE 2

OBSERVED AND EXPECTED NUMBERS ENROLLED IN FOUR
CATEGORIES ASSUMING A UNIFORM DISTRIBUTION IN
THE POPULATION

	CATEGORIES				
	Humanities	Social Science	Science	Biomedical	Total
Observed Numbers	34.0	19.0	19.0	6.0	78
Expected Numbers	30.4	18.4	17.4	11.8	78

$X^2 = 3.46$

*Chi square was not significant at the 0.05 level.

in the various courses of study in both the population of Arts
students and in the sample. Table 2 shows the observed and
expected numbers for the four categories used to calculate chi
square. As can be seen, the value obtained was not large enough
to reject the null hypothesis that the number of students
enrolled in the various courses of study as indicated by the
sample group was in proportion to the number similarly enrolled
in the population. Hence, it can be tentatively assumed that the
respondents were a representative sample of fourth year Arts
students in terms of their course of study. However, since no
effort was made to assess the effect of the non-response bias,
it cannot be concluded that this sample was entirely satisfactory.

Further, in view of the fact that the incident data did
not meet the criterion of adequacy laid down by Flanagan, and
that it is not likely that the "specific conditions" alluded to
by him were operating for each behavioral evaluation by each
respondent, the results obtained should be viewed with such
limitations in mind.

It was felt that the resultant distortions in data
effected by the above noted uncontrolled variables could be
tolerated by the frame of reference of this enquiry, namely,
that of the student observers--the audience, present at each
lecture performance. Lecturer actions judged as either effect-
ive or ineffective reflected acceptance or rejection by this

audience. These actions included not only teaching methods, but personal-social attributes, and were listed in Tables 11 and 12 below as the critical requirements of effective and ineffective university lecturing, at the fourth year Arts level.

Classification of behaviors. In order to facilitate an understanding of the main trends in the data, the results summarized in the Tables below were presented in reverse order from that which was followed in setting them up. Thus, the sequence is from the more general to the more specific detail. Tables 3 and 4 show a delineation of each major area into its component

---

TABLES 3 and 4

---

sub-areas. The total number of effective and ineffective behaviors are reported for each of the sub-areas of each major area. These Tables include both the behavioral and result classification schemes. Table 3 includes the two major areas of the former, and Table 4 includes the four major areas of the latter scheme, as was outlined above.

Looking first at Table 3 (behavior classification scheme), the 7 sub-areas of major area A., Teaching Methods, subsumed behaviors that were grouped using the discussion of Justman and Mais (1956, p. 173) as an appropriate organizational framework. They argue that:

TOTAL EFFECTIVE AND INEFFECTIVE BEHAVIORS FALLING WITHIN
EACH SUB-AREA (BEHAVIOR CLASSIFICATION SCHEME)

MAJOR AREA: A. TEACHING METHODS

% EFFECT-IVE BEHAVIORS	NUMBER OF EFFECT-IVE BEHAVIORS		SUB-AREA	NUMBER OF INEF-FECTIVE BEHAVIORS	% INEFFECT-IVE BEHAVIORS	TOTAL %
20.9	158	A.	Lecture Method	171	22.7	43.5
7.7	58	B.	Discussion Method	60	7.9	15.6
9.1	69	C.	Selection and Emphasis of Subject Material	47	6.2	15.3
5.4	41	D.	Special Methods	31	4.1	9.5
6.1	46	E.	Audio-Visual Methods	20	2.6	8.7
2.4	18	F.	Discipline and Control	11	1.4	3.8
2.1	16	G.	Appraisal Methods	11	1.4	3.6

Area Total	53.7	406			351	46.3	100.0

MAJOR AREA: B. PERSONALITY TRAITS

29.4	47	A.	Temperamental, Dynamic and Motivational Traits	66	41.3	70.6
16.8	27	B.	Abilities or Cognitive Traits	20	12.5	29.4

Area Total	46.2	74			86	53.8	100.0

Final Total Behaviors 480   437

T A B L E   4

TOTAL EFFECTIVE AND INEFFECTIVE BEHAVIORS FALLING WITHIN EACH SUB-AREA (RESULT CLASSIFICATION SCHEME)

MAJOR AREA: A.   EMOTIONAL REACTIVITY

% EFFECT-IVE BEHAVIORS	NUMBER OF EFFECT-IVE BEHAVIORS		SUB-AREA	NUMBER OF IN-EFFECTIVE BEHAVIORS	% INEFFECT-IVE BEHAVIORS	TOTAL %
36.0	93	A.	Motivational State	50	19.4	55.5
15.9	41	B.	General Affective Reactions	74	28.7	44.5

Area Total	51.9	134			124	48.1	100.0

MAJOR AREA: B.   MASTERY OF SUBJECT MATERIAL

53.2	75	A.	Learning, Correlating, Clarifying, Reviewing Material	46	32.6	85.8
13.5	19	B.	Orientation	1	0.7	14.2

Area Total	66.7	94			47	33.3	100.0

MAJOR AREA: C.   TEACHING METHODS

24.1	27	A.	Presentation of Material	46	41.0	64.9
17.0	19	B.	Student Participation	20	17.9	35.1

Area Total	41.1	46			66	58.9	100.0

TABLE 4 (CONT'D)

MAJOR AREA: D. PERSONALITY TRAITS

% EFFECT-IVE BEHAVIORS	NUMBER OF EFFECT-IVE BEHAVIORS	SUB-AREA	NUMBER OF IN-EFFECTIVE BEHAVIORS	% INEFFECT-IVE BEHAVIORS	TOTAL %
20.8	15	A. Temperatmental, Dynamic and Motivational Traits	24	33.4	54.2
19.4	14	B. Abilities or Cognitive Traits	19	26.4	35.8
Area Total 40.2	29		43	59.8	100.0

Final Total Behaviors 303   280

Essentially every teacher creates his own teaching method. In terms of his personality and experience, the purposes and subject matter of instruction, and the students he teaches, each follows the procedures he judges suitable, choosing and adapting available techniques or devising, when necessary, new ones.

They distinguish between method and technique as follows:

... A technique is the procedure or device through which a teacher seeks to accomplish wholly or in part a specific instructional purpose. There are many techniques--in lecture, discussion, questioning, experimental demonstration, laboratory work, audio-visual presentation.... Every teacher necessarily employs a number of techniques, serially or in combination, their choice and manner of use depending upon his general method of instruction. The latter is a composite style or quality of teaching, a characteristic mode of instructional behavior reflecting one's own values and educational philosophy. One's teaching method influences not only the choice of techniques and the manner of their use but also goals of instruction, selection and emphasis of subject matter, and relationship with students.

In their view the variety of possible teaching methods is unlimited, there being as many variations as there are teachers.

Thus, the 7 sub-areas and the kinds of behaviors subsumed under each were as follows:

A. The Lecture Method. All behaviors referring to methods of interpreting, analyzing, explaining, defining, reviewing and summarizing, were included in this sub-area.

B. The Discussion Method. All behaviors referring to the lecturer's reactions to and interests shown in student's questions and participation generally; and techniques used to promote student-lecturer 'feed-back'.

C. The Selection and Emphasis of Subject Material.
All behaviors referring to the selection of and emphasis
placed on the actual lecture content.

D. Special Methods. All behaviors referring to teaching
methods dissimilar to those of any other sub-area.

E. Audio-Visual Methods. All behaviors referring to the
use of supplementary teaching devices in the form of
audio-visual aids.

F. Maintaining Discipline and Control. All behaviors
referring to the handling of stress situations, and
preserving order under adverse classroom conditions.

G. Student Appraisal Methods. All behaviors which
dealt with the methodological approach to student
assessment, in terms of both assignments and term
examinations.

The lecturer behaviors subsumed under the two sub-areas of

major area B., Personality Traits, were grouped using Cattel's

(1950, p. 35) framework. He describes a formal basis for

classifying traits into the three 'modalities' of Ability,

Temperament and Dynamic traits. The Dynamic traits or interests

include basic drives, on the one hand, and acquired interests,

such as attitudes, sentiments, complexes, superego and ego

formations, on the other. They are characterized by behavior

arising from a stimulus situation or incentive and directed

to some goal, at which the action ceases. Performance varies,

then, as incentive varies. The Abilities by contrast, are

shown by how well the person makes his way to the accepted goals.

Performance varies in response to changes in complexity. The

third modality, Temperament traits, by exclusion, are those

traits which are unaffected by incentive or complexity, such
as, high strungedness, speed, energy, and emotional reactivity.

The two additional major areas listed in Table 4, namely,
major area A., Emotional Reactivity, and B., Mastery of Subject
Material, grew out of the result analysis as was mentioned above.
Major Area A. included all behaviors which resulted in references
made to the generation of various affective responses, including
motivational states such as interest arousal, and attention,
or such feelings as respect, admiration, and other personal
regards for the lecturer. It subsumed behaviors grouped into
two sub-areas as follows:

A. Motivational State. All behaviors which resulted
in generating interest, attention, enthusiasm, and
student arousal in general.

B. General Affective Reactions. All behaviors which
resulted in generating feelings such as admiration,
respect, warmth, fear, and personal regards for the
lecturer.

Major Area B. included all behaviors which resulted in references
made to the learning, correlating, clarifying, and reviewing of
subject material or orienting the student. It subsumed behaviors
grouped into two sub-areas as follows:

A. Learning, Correlating, Clarifying, Reviewing Material.
All behaviors which resulted in references to the learning,
correlating, clarifying, reviewing of subject material.

B. Orientation. All behaviors which resulted in references
made to the acquisition of perspective in terms of both
a particular course and its planned scope, and appreciating
the value of the course.

Since the total number of effective and ineffective behaviors described was nearly equal (see Table 3), it appears that student observers were capable of reporting both good or effective, and poor, or ineffective examples of lecture technique. Further, only 43.5% of the behaviors grouped as 'Teaching Methods' were judged to be descriptions of lecture technique. Hence, a wide variety of lecturer actions were considered to be examples of good or poor teaching practices. They included the personal-social attributes listed as 'Personality Traits.' However, these actions made up a relatively small proportion of the total (17.5%), and would suggest that while personal-social attributes contribute significantly to the impact of the presentation of a lecture, their significance may be out-weighed by, but not isolated from, 'Teaching Methods.'

Data derived solely from the result analysis shows that the largest number (44.2%) of lecturer actions generated an 'affective' response in the audience. Of these, 55.5% resulted in changes in the motivational state of the observer. These results suggest that students are keenly sensitive to behaviors which arouse or stultify their interest. Moreover, it would seem that it is not rational to assume that all students are fully motivated and remain so during the lecture hour. Efforts to generate enthusiasm, and arouse interest were received gratefully and considered to be good lecture technique. Results listed in Table 4 suggest further that students are concerned about and can clearly express what assists or detracts from the learning of subject material.

Lecturer acts resulting in statements about lecturer personality traits were again the least frequently reported (12.5%).

Tables 5, 6, and 7 provide a quantitative summary of the data of the three classifications applied to the data of this study. Each sub-area listed includes a number of classes which,

---

TABLES 5, 6, 7

---

in turn, are generalized descriptions of the behaviors grouped in their sub-classes. The latter contain only "first order" acts, or "elemental behaviors," which are listed in Appendices B, C, and D respectively for each of the three classification schemes.

The total number of classes, sub-classes and behaviors is indicated in the above three Tables. Thus, the final totals as derived from the behavioral analysis, the first classification scheme, were 917 behaviors (480 deemed effective, 437 deemed ineffective) extracted from 595 incidents, placed in 194 sub-classes, 55 classes, 9 sub-areas and 2 major areas.

Totals derived from the second classification scheme, the result analysis, were 583 behaviors (303 judged effective, 280 judged ineffective) extracted from 595 incidents, placed in 115 sub-classes, 43 classes, 8 sub-areas and 4 major areas.

TABLE 5

TOTAL NUMBER OF CLASSES, SUB-CLASSES AND
BEHAVIORS BY MAJOR AND SUB-AREAS (BEHAVIOR
CLASSIFICATION SCHEME)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA	CLASSES	SUB-CLASSES	TOTAL BEHAVIORS
A. Lecture Method	20	67	329
B. Discussion Method	4	20	118
C. Selection and Emphasis of Subject Material	7	27	116
D. Special Methods	8	19	72
E. Audio-Visual Methods	4	15	66
F. Discipline & Control	1	7	29
G. Appraisal Methods	2	8	27
AREA TOTALS	46	163	757

MAJOR AREA: B.   PERSONALITY TRAITS

A. Temperamental, Dynamic and Motivational Traits	6	23	113
B. Abilities or Cognitive Traits	3	8	47
AREA TOTALS	9	31	160
FINAL TOTALS	55	194	917

TABLE 6

TOTAL NUMBER OF CLASSES, SUB-CLASSES AND BEHAV-
IORS BY MAJOR AND SUB-AREAS (RESULT CLASSIFICATION
SCHEME)

MAJOR AREA: A. EMOTIONAL REACTIVITY			
SUB-AREA	CLASSES	SUB-CLASSES	TOTAL BEHAVIORS
A. Motivational State	3	24	143
B. General Affective Reactions	11	21	115
AREA TOTALS	14	45	258

MAJOR AREA: B. MASTERY OF SUBJECT MATERIAL			
A. Learning, Correlating, Clarifying, Reviewing Material	3	20	121
B. Orientation	3	5	20
AREA TOTALS	6	25	141

MAJOR AREA: C. TEACHING METHODS			
A. Presentation of Material	11	24	73
B. Student Participation	3	9	39
AREA TOTALS	14	33	112

TABLE 6 (CONT'D)

MAJOR AREA: D.   PERSONALITY TRAITS

SUB-AREA	CLASSES	SUB-CLASSES	TOTAL BEHAVIORS
A. Temperamental, Dynamic and Motivational Traits	6	8	39
B. Abilities or Cognitive Traits	3	4	33
AREA TOTALS	9	12	72
FINAL TOTALS	43	115	583

TABLE 7

TOTAL NUMBER OF CLASSES, SUB-CLASSES AND
BEHAVIORS BY MAJOR AND SUB-AREAS (OPINION
CLASSIFICATION SCHEME)

| | MAJOR AREA: A. TEACHING METHODS | |
SUB-AREA	CLASSES	TOTAL OPINIONS
A. Lecture Method	8	32
B. Discussion Method	2	12
C. Special Methods	4	14
D. Selection and Emphasis of Subject Material	3	6
E. Appraisal Methods	3	6
F. Discipline and Control	1	3
AREA TOTALS	21	73
MAJOR AREA: B. PERSONALITY TRAITS		
A. Temperamental, Dynamic and Motivational Traits	2	18
B. Abilities or Cognitive Traits	3	15
AREA TOTALS	5	33
FINAL TOTALS	26	106

106 opinions were derived from an analysis of 'general opinions', the third and final classification scheme applied. These opinions were placed in 26 classes, 8 sub-areas and 2 major areas. Since respondents were specifically asked to state general opinions not related to specific incidents, it was not possible to group their responses into definitive sub-classes. The 'class' groupings, then, represents a generalized descriptive statement of the largely miscellaneous references, the elemental components of which are listed in Appendix D. Indications were that this data represents the students concepts of idealized lecturers or teaching methods, and took the form of 'directives' to or about the lecturer or lecture setting.

Tables 8 and 9 list the individual classes, in decreasing order of the frequency of reported behaviors for which they provide a generalized descriptive statement.

TABLES 8 and 9

The 'loading' column, found in Table 8, was obtained from the differences in the number of effective and ineffective behaviors found for each class. Thus, a class having a loading score of -11 signifies that there were 11 more ineffective than effective behaviors reported for this class. While a 'difference score' can be obtained for each class listed in Table 9 (result analysis), because the behaviors reported were such that it was impossible to formulate an identical generalized statement to adequately summarize both the effective and ineffective behaviors, the

TABLE 8

TOTAL CRITICAL BEHAVIORS AND 'LOADING' SCORE
FOR EACH CLASS (BEHAVIOR CLASSIFICATION SCHEME)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: A.   THE LECTURE METHOD (PRESENTATION, DELIVERY)

CLASS	LOADING	TOTAL BEHAVIORS
1. quality of voice	-11	45
2. use of language	-24	26
3. speed of presentation	- 4	22
4. orderliness and organization of presentation	- 1	21
5. use of notes	- 6	20
6. summarizing and review	9	17
7. use of unusual techniques	12	16
8. use of outlines	12	14
9. use of outside references and authorities	10	14
10. reading, dictating lecture	- 9	13
11. use of classroom demonstration	7	11
12. level of lecture in relation to student	-10	10
13. discrete references to detailed vs. general approach	- 2	8
14. utilization of available time	- 7	9
15. use of repetition	0	8
16. clarity of presentation	2	8
17. integrating course material	8	8
18. use of emphasis	2	8
19. stayed on topic	- 2	6
20. discrete references to lecture technique (presentation, delivery)	1	45

SUB-AREA TOTAL	-13	329

SUB-AREA: B.   THE DISCUSSION METHOD

I.   REACTIONS TO AUDIENCE PARTICIPATION

1. willingness; readiness to answer or acknowledge questions or suggestions	- 2	24
2. discrete reations to student contributions	-33	51

TABLE 8 (CONT'D)

MAJOR AREA: A.   TEACHING METHODS (CONT'D)

SUB-AREA: B. THE DISCUSSION METHOD		
CLASS	LOADING	TOTAL BEHAVIORS

II.   CONTROL OF OPPORTUNITIES FOR STUDENT PARTICIPATION

1. promotion of discussion and questions (from class)	28	32
2. lecturer initiated questions (directed to class)	5	11

SUB-AREA TOTAL	- 2	118

SUB-AREA: C.   THE SELECTION AND EMPHASIS OF SUBJECT MATERIAL

1. relevancy of content	-18	22
2. use of illustrations and examples	9	21
3. use of anecdotes - use of personal experiences	8	20
4. use of wit and humour	6	12
5. lecturer biases	5	9
6. use of side issues growing out of course	7	7
7. discrete references to selection and emphasis	5	25

SUB-AREA TOTAL	22	116

SUB-AREA: D.   SPECIAL METHODS

1. availability for extra consultation	8	12
2. taunting, bullying, ridiculing, humiliating students	-11	11
3. personal interest in students	1	9
4. use of sarcasm	- 4	6
5. regard for student ability	- 3	5
6. rearrangement of class members	4	4
7. stimulates thinking	1	3
8. discrete reference to special methods	14	22

SUB-AREA TOTAL	10	72

TABLE 8 (CONT'D)

MAJOR AREA:　A.　TEACHING METHODS (CONT'D)

SUB-AREA:　E.　AUDIO-VISUAL METHODS

CLASS	LOADING	TOTAL BEHAVIORS
1. use of the blackboard	2	34
2. use of slides	7	13
3. use of maps and charts	1	3
4. discrete references to use of audio-visual techniques	16	16
SUB-AREA TOTAL	26	66

SUB-AREA:　F.　MAINTAINING DISCIPLINE AND CONTROL

CLASS	LOADING	TOTAL BEHAVIORS
1. discrete references to maintaining discipline and control	7	29
SUB-AREA TOTAL	7	29

SUB-AREA:　G.　STUDENT APPRAISAL METHODS (LECTURE ASSIGNMENTS, EXAMS, QUIZES)

CLASS	LOADING	TOTAL BEHAVIORS
1. discrete references to examinations	5	15
2. discrete references to term assignments	0	12
SUB-AREA TOTAL	5	27
AREA TOTAL	55	757

TABLE 8 (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC AND
MOTIVATIONAL TRAITS

CLASS		LOADING	TOTAL BEHAVIORS
1.	interest and enthusiasm for subject	0	26
2.	position in front of the class	-13	17
3.	punctuality (arriving at, leaving class)	- 7	13
4.	habits and mannerisms	- 8	10
5.	conceding personal limitations	1	11
6.	discrete references to temperamental, dynamic and motivational traits	8	36
SUB-AREA TOTAL		-19	113

SUB-AREA: B. ABILITIES OR COGNITIVE TRAITS

1.	ability to answer questions; specific abilities	- 1	19
2.	knowledge of subject material	4	14
3.	preparedness	4	14
SUB-AREA TOTAL		7	47
AREA TOTAL		-12	160
FINAL TOTAL		43	917

TABLE 9

TOTAL EFFECTIVE AND INEFFECTIVE CRITICAL BEHAVIORS
FOR EACH CLASS (RESULT CLASSIFICATION SCHEME)

MAJOR AREA: A. EMOTIONAL REACTIVITY

SUB-AREA: A. MOTIVATIONAL STATE

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	aroused interest, enthusiasm, attention; relieved boredom	74	1.	generated feelings of boredom; was dull, monotonous, tedious; students lost interest	50
2.	stimulates, motivates; provokes further reading and thinking; fosters a desire to work harder	19			

SUB-AREA TOTAL   93   50

SUB-AREA: B. GENERAL AFFECTIVE REACTIONS

1.	generated feelings of respect, admiration; generally made a favourable impression	11	1.	generated feelings of resentment, irritation, dissatisfaction, disappointment, annoyance, antagonism, distaste; minimized "feed-back", insulting	31
2.	generation of class-room 'atmosphere'	9	2.	generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection, fearfulness; generally lowered morale	27

TABLE 9 (CONT'D)

MAJOR AREA: A. EMOTIONAL REACTIVITY (CONT'D)

SUB-AREA: B. GENERAL AFFECTIVE REACTIONS (CONT'D)

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
3.	generated feelings of confidence, apprecia-tion, affection	8	3.	loss of faith or confidence in and respect for lecturer	11
4.	generated sense of achievement; generated feelings of personal value to student	5	4.	was a disrupting in-fluence; disconcerting	5
5.	generated feelings of pleasure; appealing	4			
6.	helpful, beneficial	3			
7.	generated feelings of immediacy with lecturer	2			

SUB-AREA TOTAL	41		74
AREA TOTAL	134		124

TABLE 9 (CONT'D)

MAJOR AREA:	B.	MASTERY OF SUBJECT MATERIAL

SUB-AREA: A. LEARNING, CORRELATING, CLARIFYING, REVIEWING MATERIAL

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	facilitated learning and correlating material; clarified; familiarized student with material	73	1.	detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to student's confusion	46
2.	facilitated reviewing material	2	2.	—	—
SUB-AREA TOTAL		75			46

SUB-AREA: B. ORIENTATION

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	facilitated gaining perspective, seeing material from different points of view	11	1.	students unsure of what to be covered	1
SUB-AREA TOTALS		19			1
AREA TOTAL		94			47

TABLE 9 (CONT'D)

MAJOR AREA: C. TEACHING METHODS

SUB-AREA: A. PRESENTATION OF MATERIAL

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	maintained good classroom control	12	1.	distracting	11
2.	did not waste class time (saved time)	6	2.	difficult to follow	9
3.	well organized, orderly presentation	5	3.	wasted class time	9
4.	conversational style	2	4.	difficult to get good, well organized notes	6
5.	easily heard	2	5.	material missed or lost	7
			6.	class hurried	4

SUB-AREA TOTAL		27			46

SUB-AREA: B. STUDENT PARTICIPATION

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	encourages student participation	19	1.	discourages student queries	11
			2.	discourages class discussion or inter- action	9

SUB-AREA TOTAL		19			20

AREA TOTAL		46			66

TABLE 9 (CONT'D)

MAJOR AREA: D. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC AND MOTIVATIONAL
TRAITS

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	took a personal interest in students; considerate	8	1.	seemed insensitive to class's reaction	3
2.	seemed sincere	2	2.	seemed lazy, disinterested, blase	3
3.	miscellaneous (tactful, sensitive, flexible, trustworthy)	5	3.	miscellaneous (unbalanced, embittered, over-confident, afraid	18
SUB-AREA TOTAL		15			24

SUB-AREA: B. ABILITIES OR COGNITIVE TRAITS

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	seemed alert, aware of problems and controversial subjects; evidence of good knowledge of material; interested in work	14	1.	poorly prepared, poor planning	11
			2.	generated the impression of incompetence	8
SUB-AREA TOTAL		14			19
AREA TOTAL		29			43
FINAL TOTAL		303			280

classes are listed separately as effective or ineffective. The results listed in these tables will be discussed in conjunction with Table 11 and 12 which follow below.

Table 10 lists the opinions, found on the Supplementary Information page. The 'miscellaneous references' as discussed above, are included in Appendix D. Assuming that this data

---

TABLE 10

---

represents students concepts of his 'idealized' lecturer, a summary of Table 10 suggests the following: The lecturer should be an individual who "shows interest and enthusiasm", "has an ability to present his material", and should "direct the lecture to the ability level of his class."

Derivation of Critical Requirements. Tables 11 and 12 comprise a list of the 'critical requirements' of university teaching as derived from this enquiry. They are listed in order of decreasing frequency for both the behavioral and result

---

TABLES 11 and 12

---

classification schemes. Those requirements falling towards the end of either requirement list must be viewed as more tenuous than those occurring at the beginning since the latter are based upon a larger number of lecturer behaviors. Immediately follow- ing each critical requirement is the number and letter of its

TABLE 10

GENERAL OPINIONS, BY FREQUENCY, UNDER EACH
SUB-AREA

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	TOTAL
1. should direct lecture at "ability level" of class	5
2. should make use of outlines	3
3. should present material in as most interesting a manner as possible	3
4. should distribute mimeographed material	2
5. should be well organized	2

SUB-AREA TOTAL	15

SUB-AREA: B. THE DISCUSSION METHOD

1. should promote leading questions, or make time for discussion	4

SUB-AREA TOTAL	4

SUB-AREA: C. SPECIAL METHODS

1. lecturers should be in small classes	4

SUB-AREA TOTAL	4
AREA TOTAL	23

TABLE 10 (CONT'D)

MAJOR AREA: B.   PERSONALITY TRAITS

SUB-AREA: A.   TEMPERAMENTAL, DYNAMIC AND
MOTIVATIONAL TRAITS

CLASS	TOTAL
1. should show interest and enthusiasm	7
SUB-AREA TOTAL	7

SUB-AREA: B.   ABILITIES OR COGNITIVE TRAITS

1. should have knowledge of how, or ability to present material	6
2. should be prepared	5
3. should have knowledge of subject material	4
SUB-AREA TOTAL	15
AREA TOTAL	22
FINAL TOTAL	45

TABLE 11

CRITICAL REQUIREMENTS, BY FREQUENCY, UNDER
EACH SUB-AREA. (BEHAVIOR CLASSIFICATION SCHEME)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. read or followed text, books 10(a)	2	11
2. dictated, read notes for whole hour 5(a)		12
3. excessive speed, lack of pause 3(a)		12
4. monotonous voice 1(a)		12
5. changes from topic to topic, follows no pattern, disorganized 4(a)		11
6. spoke clearly, distinctly 1(b)	11	
7. gave references of available material pertinent to lecture material 9(a)	9	1
8. material presented in logical, systematic order 4(b)	10	
9. gave summary of previous lecture 6(a)	7	1
10. soft, low, inaudible voice 1(c)	8	
11. clear 16(a)	5	
12. emphasized important points 18(a)	5	
13. outlines topics of whole course 8(a)	5	
14. paused, paced lecture, allowed time for note-taking 3(b)	5	
15. summarized or reviewed at end of section, year, or end of hour 6(b)	5	
16. brings guest lecturer 7(a)	4	
17. brings outside, source material into class 9(b)	3	1
18. extended lecture or course 14(a)		4
19. gives topics of next lecture 8(b)	4	
20. goes off on tangent, circumscribes point 19(a)		4
21. relates more complicated material to simpler material or to material familiar to student 17(a)	4	
22. repeats difficult or important material 15(a)	4	
23. repeats material already covered 15(b)		4
24. spoke indistinctly, mumbled 1(d)		4

TABLE 11 (CONT'D)

MAJOR AREA: A.   TEACHING METHODS (CONT'D)

SUB-AREA: A.   THE LECTURE METHOD (CONT'D)

	CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
25.	spoke loudly 1(e)	4	
26.	use of er, ah 2(a)		4
27.	failed to emphasize material or to distinguish one topic from another 18(b)		3
28.	incoherent, unclear 16(b)		3
29.	indicated material to be covered 8(c)	3	
30.	lecture directed above level of most students 12(a)		3
31.	lecture directed to bottom level, or below intellectual capacity of most students 12(b)		3
32.	made use of demonstrations (equipment) 11(a)	3	
33.	terms too complex 2(b)		3
34.	used no notes 5(b)	2	1
35.	asked students to take no notes 7(b)	1	1
36.	conducted tours 7(c)	2	
37.	constant rephrasing 2(c)		2
38.	halting, uncertain; stutters 1(f)		2
39.	leaves student with something to think about 7(d)	2	
40.	moved class to office or seminar room 7(e)	2	
41.	presented at moderate speed 3(c)	2	
42.	seldom summarized; did not review 6(c)		2
43.	spoke in conversational voice 1(g)	2	
44.	stuck to point 19(b)	2	

SUB-AREA: B.   THE DISCUSSION METHOD

1.	promoted, created, made use of discussion or class participation II 1(a)	14	
2.	reacted with ridicule, sarcasm, belittlement I 2(a)		14
3.	ignored, discouraged, restricted questions I 1(a)		11
4.	encourages and provokes questions from the class II 1(b)	9	

TABLE 11 (CONT'D)

MAJOR AREA: A. TEACHING METHODS (CONT'D)

SUB-AREA: B. THE DISCUSSION METHOD (CONT'D)

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
5. welcomes suggestions, seems ready to acknowledge student's questions I 1(b)	8	
6. display of hostility, anger, annoyance I 2(b)		7
7. squelching students I 2(c)		3
8. asked whole class questions II 2(a)	1	1
9. encourages debates at important points in lecture II 1(c)	2	
10. failed to promote discussion or questions II 1(d)		2
11. interruption of student contributions I 2(d)		2

SUB-AREA: C. THE SELECTION AND EMPHASIS
OF SUBJECT MATERIAL

1. irrelevant, unrelated, outdated, unimportant material 1(a)		16
2. used concrete examples 2(a)	10	
3. made general use of anecdotes or personal experiences 3(a)	7	
4. used personal experiences related to lecture material 3(b)	6	
5. indicated biases 5(a)	5	
6. made use of examples and illustrations 2(b)	5	
7. relevant, interesting issues 6(a)	3	
8. used anecdotes repeatedly 3(c)		3
9. used humour to establish point 4(a)	3	
10. used jokes, element of humour 4(b)	3	
11. avoided irrelevant material 1(b)	2	
12. emphasized simple material 7(a)		2
13. made no use of examples and illustrations 2(c)		2
14. presentation unbiased 5(b)	2	
15. textbook material used, given no further treatment 7(b)		2

TABLE 11 (CONT'D)

MAJOR AREA: A.   TEACHING METHODS
(CONT'D)

SUB-AREA: D.   SPECIAL METHODS

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. stays after hours to discuss points, gives extra sessions 1(a)	6	
2. made general use of sarcasm 4(a)		5
3. insinuates students stupid or treats students as if stupid 5(a)		4
4. made a general practice of taunting, bullying, ridiculing, humiliating students 2(a)		4
5. requests private interview, gives private advice outside the classroom 1(b)	4	
6. indulged in personalities (showed discrimination) 3(a)		3
7. leaves class with stimulating thought 7(a)	2	
8. rearranged class into small groups 6(a)	2	
9. refused additional help, seldom stays after hours 1(c)		2
10. seemed genuinely interested in students 3(b)	2	

SUB-AREA: E.   AUDIO-VISUAL TECHNIQUES

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. wrote indistinctly on blackboard (poor quality, scribbled) 1(a)		7
2. made use of motion pictures 4(a)	6	
3. wrote summary of topics for lecture, charted out where going in lecture 1(b)	6	
4. augments discussion, illustrates points with slides 2(a)	5	
5. made use of pictoral material 4(b)	5	
6. made use of recordings 4(c)	5	
7. made use of slides 2(b)	5	
8. wrote new or unusual terms on the blackboard 1(c)	3	
9. drew diagrams on the blackboard 1(d)	2	
10. spent long time writing on blackboard 1(e)		2
11. used large maps 3(a)	2	
12. wrote in a random fashion on the blackboard 1(f)		2

66

TABLE 11 (CONT'D)

MAJOR AREA: A.   TEACHING METHODS
(CONT'D)

SUB-AREA: G.   STUDENT APPRAISAL METHODS
(LECTURE ASSIGNMENTS, EXAMS, QUIZES)

CRITICAL REQUIREMENTS   EFFECTIVE   INEFFECTIVE

---

1. special preparation of students for
    exams 1(a)   1   2
2. gave list of work ahead of time 2(a)   2

TABLE 11 (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC AND MOTIVA-
TIONAL TRAITS

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. interested and enthusiastic 1(a)	13	
2. seemed disinterested, bored; lacks spontaneity 1(b)		13
3. pacing; moving about 2(a)	2	7
4. admitted uncertain of a point, or lack of preparation 5(a)	5	3
5. arrives late to lecture 3(a)		8
6. does not face the class 2(b)		8
7. forceful, authoritarian, dominant 6(a)	4	1
8. friendly, charming, pleasant 6(b)	4	
9. dogmatic 6(c)		3
10. explains or apologizes for lateness 3(b)	3	
11. laughing, chuckling at subject material 4(a)		3
12. leaves class immediately at bell 3(c)		2
13. plagiarizes students critiques 5(b)		2
14. self-conscious, nervous 6(d)		2
15. smoking 4(b)	1	1

SUB-AREA: B. ABILITIES OR COGNITIVE TRAITS

	EFFECTIVE	INEFFECTIVE
1. familiar with subject material 2(a)	9	
2. well prepared (apparatus; to deliver lecture) 3(a)	9	
3. unable to answer questions; unsatisfactory answers 1(a)		5
4. unfamiliar with subject material; lack of information 2(b)		5
5. unprepared, poorly prepared 3(b)		5
6. answers questions without losing the thread of the lecture 1(b)	2	

TABLE 12

CRITICAL REQUIREMENTS, BY FREQUENCY, UNDER
EACH SUB-AREA (RESULT CLASSIFICATION SCHEME)

MAJOR AREA: A.   EMOTIONAL REACTIVITY

SUB-AREA: A.   MOTIVATIONAL STATE

	CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1.	used audio-visual techniques, class demonstrations 1(a)	15	
2.	made use of and/or provoked student contributions 1(b)	10	
3.	referred to, or made use of 'outside' issues or material 1(c)	7	7
4.	spoke in a monotone 1(a)		7
5.	used anecdotes, wit, humour 1(d)	7	
6.	read material directly from notes or text 1(b)		6
7.	appeared interested in the subject 1(e)	5	
8.	showed lack of interest or effort 1(c)		5
9.	arrived late consistently 1(d)		3
10.	closed lecture with thought-provoking ideas; indicated interesting outside reading 2(a)	3	
11.	over-emphasized the obvious 1(e)		3
12.	voice inaudible, unclear, low 1(f)		3
13.	answered student sarcastically 1(g)		2
14.	conducted tours, on or off campus 1(f)	2	
15.	disorderly presentation 1(h)		2
16.	good knowledge of material 1(g)	2	
17.	irrelevant digressions 1(i)		2
18.	related personal experiences 1(j)	2	
19.	sensed class's attitude 1(h)	2	
20.	shows interest in student queries 2(b)	2	
21.	spoke in a clear voice 1(i)	2	

SUB-AREA: B.   GENERAL AFFECTIVE REACTIONS

1.	sarcastic, ridiculed students; hyper-critical 2(a)		7
2.	conceded or admitted an error, or uncertain of point 1(a)	3	
3.	made an extra effort (conducted extra classes, conducted tours, gave the call numbers of books) 3(a)	3	

TABLE 12 (CONT'D)

MAJOR AREA: A. EMOTIONAL REACTIVITY (CONT'D)		
SUB-AREA: B. GENERAL AFFECTIVE REACTIONS (CONT'D)		
CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
4. made use of or stimulates student contributions 2(a)	3	
5. was dogmatic 1(a)		3
6. indulged in personalities 2(b)		2
7. made derrogatory remarks about students intelligence 4(a)		2
8. poorly prepared, 2(c)		2
9. squelched students ideas or discussion 1(b)		2
10. used student contributions 4(a)	2	

TABLE 12 (CONT'D)

MAJOR AREA: B.   MASTERY OF SUBJECT MATERIAL

SUB-AREA: A.   LEARNING, CORRELATING, CLARIFYING,
REVIEWING MATERIAL

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. used audio-visual techniques class demonstrations 1(a)	20	
2. made use of and/or provoked student participation 1(b)	8	
3. explanations concise, and detailed 1(c)	6	
4. provided error-ridden material (blackboard, prepared sheets) 1(a)		5
5. paused to repeat important points; paced lecture 1(d)	4	
6. related difficult material to more simple; drew analogies 1(e)	4	
7. rephrased in different ways until point established 1(f)	4	
8. used humour 1(g)	4	
9. constantly rephrasing; stammering 1(b)		3
10. manifested anger; bullied; insinuated students stupid 1(c)		3
11. blatantly suggested he was bored and/or unprepared 1(d)		2
12. began with broad overview before specific investigation 1(h)	2	
13. gave personal attention to wrong answers on written material 1(i)	2	
14. included extraneous material 1(e)		2
15. related own experiences 1(j)	2	
16. used specialized or advanced terms or techniques 1(f)		2
17. wordy 1(g)		2

SUB-AREA: B.   ORIENTATION

1. distributed lists and/or provided topics for entire course; outlines the entire course at beginning of term 2(a)	8	
2. demonstrated his biases, points out other points of view 1(a)	2	
3. invited guest lecturer 1(b)	2	

TABLE 12 (CONT'D)

MAJOR AREA: C.   TEACHING METHODS

SUB-AREA: A.   PRESENTATION OF MATERIAL

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. moved about while lecturing 1(a)		4
2. lectured too fast, refused to stop 5(a)		3
3. spoke monotonously 2(a)		3
4. admitted lack of knowledge or preparation 2(a)	2	
5. arbitrarily demanded students answer, even if obviously not prepared 3(a)		2
6. gave topics to be discussed ahead of time 2(b)	2	
7. handled attention-getting student with firmness 1(a)	2	
8. jumped ahead or back from topic to topic 2(b)		2
9. politely, but firmly refused charity collections during lecture 1(b)	2	
10. presented a brief summary of last lecture 3(b)	2	
11. read sheets of notes or definitions 3(b)		2
12. refused to admit or threw out late-comers 1(c)	2	
13. used slides or practical demonstrations 2(c)	2	
14. wrote major topics to be covered on the blackboard 3(a)	2	

SUB-AREA: B.   STUDENT PARTICIPATION

	EFFECTIVE	INEFFECTIVE
1. asked leading questions or made provocative comments 1(a)	5	
2. immediate, serious interest in students suggestions or questions 1(b)	4	
3. ridiculed questions or answers 1(a)		4
4. appointed group to lead discussion; organized seminars 1(c)	3	
5. dictated from detailed notes 2(a)		2
6. sarcastic, discourteous 2(b)		2

TABLE 12 (CONT'D)

MAJOR AREA: D.   PERSONALITY TRAITS

SUB-AREA: A.   TEMPERAMENTAL, DYNAMIC AND
MOTIVATIONAL TRAITS

CRITICAL REQUIREMENTS	EFFECTIVE	INEFFECTIVE
1. gave personal assistance 1(a)	2	
2. requested student visit him in office 1(b)	2	

respective class and sub-class for ease of cross-checking with the Appendices.

The following summarizes and paraphrases the trends made apparent from the list of critical requirements listed in Table 11:

Reading texts, or notes; dictating, lecturing excessively fast with no pause; lecturing in a monotonous voice; and changing from topic to topic were judged as ineffective procedures.

Speaking clearly and distinctly; presenting material logically, in a systematic order; and providing references of available material pertinent to the lecture were all considered effective techniques.

Promoting and making use of discussions or other kinds of student participation was considered an effective technique, as was provoking questions or suggestions from the class. Students appeared highly sensitive to the lecturer's reactions to their efforts to participate. Ridicule, sarcasm, belittlement were all considered ineffective lecture techniques.

Students seemed to desire lecturers to not only avoid the use of irrelevant, unrelated subject material, but also to use personal anecdotes and experiences which were related to the lecture material. Further, the use of concrete examples was deemed an effective technique.

All manner of audio-visual techniques were considered highly effective. Poor writing on the blackboard was not looked upon with favour.

An enthusiastic, seemingly interested, spontaneous, knowledgeable lecturer was considered to be an effective lecturer.

On the basis of the results of this enquiry, students do not seem to consider lecturer actions associated with the handling of examinations and assignments as important components of university teaching practice.

The above list of critical requirements as derived from the behavioral analysis uncovered a wide variety of student conceptions of the lecturer's role. For example, critical requirement BB3, (i.e., critical requirement #3, listed under Major Area B., sub-area B), "unable to answer questions; unsatisfactory answers", suggests omniscience is expected of the lecturer. Critical requirement AC 1, "irrelevant, unrelated, outdate, unimportant material" judged as being used for lecture content suggests that students conceptions of what should be selected and stressed as lecture content were at odds with those of the lecturer.

While these are admittedly only isolated examples, the existence of such misconceptions in graduating students, represents a serious condemnation of university lecturing practices.

The list of recommendations were developed from groupings of the critical requirements listed in Table 12 (results analysis). Each recommendation, listed below, is followed by identifying letters and figures referring to the list of critical requirements as derived from the behavioral analysis (Table 11). This permitted an assessment of the recommendations 'relative criticalness' as discussed above. Under each recommendation are listed the results associated with it, derived as was indicated in the illustration above (page 30). Each result is prefixed by identifying letters and figures of the critical requirement from which it was derived. Lastly, each result is

followed by the letter "E" or "I" indicating whether it was considered effective or ineffective, and the number of behaviors reported which contributed to the particular result.

The list of recommendations are arranged in order of decreasing frequency of the total number of critical behaviors from which they were evolved. They are followed by a brief comment.

Practical Recommendations.

1. Used audio-visual techniques, class demonstrations (A,E)

    a) B.A. 1 facilitated learning and correlating material; clarified; familiarized student with material (E-20)
    b) A.A. 1 aroused interest, enthusiasm, attention; relieved boredom (E-15)
    c) C.A. 13 did not waste class time (saved time) (E-2)

The uses made of audio-visual methods as a teaching method were described as being relatively effective (Table 8, p. 52). However, since nearly as many ineffective as effective actions were described for class 1. "use of the blackboard", and since the first 'critical requirement' listed in Table 11, p. 65, for this sub-area is "wrote indistinctly on the blackboard (poor quality, scribbled)", then indications are that blackboard work was not judged as being generally satisfactory. A list of effective and ineffective uses of the blackboard can be found in Appendix B, p. 125.

The value of audio-visual techniques seemed to lie both in their aiding in comprehension of the subject material, and in arousing interest and enthusiasm. Of course, the onus is on the lecturer to decide when the educational value of these devices has been sacrificed for the purely entertainment value. While the relief of "boredom" can likely be achieved by the use of audio-visual techniques, this cannot be considered the exclusive end for which they are chosen as a teaching method.

2. Made use of, provoked, showed interest in student contributions (A, B, #1, 9)

    a) A.A. 2 aroused interest, enthusiasm, attention; relieved boredom (E-10)
    b) B.A. 2 facilitated learning and correlating material; clarified; familiarized student with material (E-8)

c) A.B. 4 generation of classroom "atmosphere" (E-3)
d) A.B. 10 generated sense of achievement; generated feelings of personal worth to student (E-2)

These kinds of lecturer behaviors are subsumed exclusively under sub-area B. The Discussion Method. Not only were these behaviors considered highly effective (Table 8, p. 51, II, 1) but also were judged to generate interest and enthusiasm, and aid in mastery of subject material. Further, there is a suggestion that an attitude of interest in student contributions assists in the generation of a desirable 'atmosphere' in the classroom, and assists in building 'self-confidence' in the student audience. Ways of promoting discussion and questions from the class are listed in Appendix B, p. 113, B, II, 1.

3. Answered student sarcastically; hypercritical; derrogatory comments; ridiculed questions or answers; sarcastic and discourteous; bullied; insinuated students stupid (A,B, #2; A,D, #3,4)

    a) A.B. 1 generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection, fearfulness; generally lowered morale (I-7)
    b) C.B. 3 discourages student queries (I-4)
    c) B.A. 10 detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to students confusion (I-3)

These kinds of lecturer actions are reported both as Reactions to Audience Participation (A,B, I) and as behaviors included in the sub-area Special Methods (d). Indications are that lecturer reactions to students efforts to participate in the lecture were judged as mainly ineffective (Table 8, p.50, B, I, 2). The explanation for the voluntary use of behaviors described in this recommendation, and which are described in more detail in Appendix B, pp. 109-112, is beyond the scope of this enquiry. However, that these actions were judged as ineffective and, on the basis of these results, seriously detracted from optimum learning conditions by generating stress reactions, a critical appraisal by lecturers of their reactions to their audience is strongly suggested.

4. Used anecdotes, wit, humour; related own experiences (A,C, #3, 4, 8, 9, 10)

    a) A.A. 5 aroused interest, enthusiasm, attention; relieved boredom (E-7)
    b) B.A. 8 facilitated learning and correlating material; clarified; familiarized student with material (E-4)
    c) B.A. 15 facilitated learning and correlating material; clarified; familiarized student with material (E-2)

The selection for inclusion in a lecture of personal experiences and humour was considered to be, in the main, an effective technique. Some isolated exceptions are listed in Appendix B, p. 116, under classes 3 and 4 of sub-area C. Although interest arousal was the main reported result of the use of this technique, in addition it may have assisted students to grasp subject material.

5. Asked leading questions; made provocative comments; manifests serious interest in students suggestions or questions (A, B, #4, 5)

       a)   C.B. 1 encourages student participation (E-5)
       b)   C.B. 2 encourages student participation (E-4)
       c)   C.B. 4 encourages student participation (E-3)

The kinds of behaviors included in this recommendation are similar to those listed in recommendation #2 above. As above, they were exclusively subsumed under sub-area B. The Discussion Method. They too were judged to be highly effective, but were considered to result exclusively in "encouraging student participation."

6. Distributed lists of or otherwise provided topics to be covered (A,A, #13, 19, 29: A,E, #3: A,G. #2)

       a)   B.B. 1 facilitated pre-reading, or planning time to be spent on the course (E-8)
       b)   C.A. 6 did not waste class time (saved time) (E-2)
       c)   C.A. 14 well organized, orderly presentation (E-2)

As is indicated, these actions are listed under various sub-areas. Those included in sub-area A, are subsumed under Class 8. "use of outlines." This technique was considered effective (Table 8, p. 50, A.A. 8) Appendix B, p. 100, A. 8, indicates the kinds of topics provided. These results would suggest that benefit is derived from these outlines in terms of assisting students to plan their time more efficiently.

7. Spoke in a monotone; indistinctly; improperly (A,A, #4, 10, 24, 38)

       a)   A.A. 4 generated feelings of boredom; was dull, monotonous, tedious; students lost interest (I-7)
       b)   C.A. 3 difficult to follow (I-3)

Actions related to voice quality were the most frequently reported lecturer behaviors (other than those listed as "discrete references"). Moreover, results listed in Table 8, p. 50, A.A. 1 suggest that the quality of the lecturer's voice was reported more often as being ineffective. The specific 'qualities' included in this class are listed in Appendix B, p. 97, under A.A. 1. Indications are that a clear, distinct, loud speaking voice has a decidedly favourable impact on the student audience.

8. Read material directly from notes or text (A.A. #1, 2:
A.C. #15)

> a) A.A. 6 generated feelings of boredom; was dull,
> monotonous tedious; students lost interest (I-6)
> b) C.A. 11 wasted class time (I-2)
> c) C.B. 15 discouraged class discussion or inter-
> action (I-2)

Table 11, p. 62, lists the behaviors included in this
recommendation as first and second on the list of 'critical
requirements'. As can be seen they were considered largely
ineffective techniques, and lead to feelings of monotony and
disinterest. As is indicated in Classes 5 and 10 of sub-area
A, Table 8, p. 50, reading from either notes or text was con-
sidered, in the main, ineffective. Appendix B, p. 104, Class
5 lists other ineffective "use of notes."

9. Related difficult material to more simple; drew analogies;
rephrased in different ways until point established (A,A. #21)

> a) B.A. 6 facilitated learning and correlating material;
> clarified; familiarized student with material (E-4)
> b) B.A. 7 facilitated learning and correlating material;
> clarified; familiarized student with material (E-4)

The behaviors alluded to in this recommendation were
included, in part, in requirement #21 of sub-area A., as indi-
cated. These actions were included in Class 17, "integrating
course material", as listed in Table 8, p. 50, of sub-area A.
All such behaviors reported were considered effective, and are
listed in detail in Appendix B, p. 104, under Class 17.

10. Gave personal attention; personal assistance (A.D. #5, 10)

> a) B.A. 13 facilitated learning and correlating material;
> clarified; familiarized student with material (E-2)
> b) D.A. 1 took a personal interest in students;
> considerate (E-2)
> c) D.A. 2 took a personal interest in students;
> considerate (E-2)

These actions were included under sub-area D. Special
Methods, and were subsumed under classes 1 and 3. Staying
behind after class or asking for a private interview were con-
sidered effective techniques, but "indulging in personalities
(showing discrimination)" was deemed ineffective (see Appendix
B, p. 120, Classes 1 and 3.) Although few results were reported,
as is shown, this kind of personal interest seemed to generate
a favourable impression of the lecturer as a person.

11. Conceded or admitted an error; admitted lack of knowledge or preparation (B.A. #4)

    a) A.B. 2 generated feelings of respect, admiration; generally made a favourable impression (E-3)
    b) C.A. 4 did not waste class time (saved time) (E-2)

The admission of fallibility was not entirely considered an effective technique (Table 11, p. 67, B.A. #4). However, on the basis of those reports including a result, the lecturer was generally respected for so doing, and if nothing else, class time was saved, as reported above.

12. Made an extra effort (conducted extra classes, tours, gave call number of books) (A.D. #1)

    a) A.B. 3 generated feelings of confidence, appreciation, affection, absence of fear (E-3)
    b) A.A. 14 aroused interest, enthusiasm, attention; relieved boredom (E-2)

Behaviors indicating "extra effort" were also subsumed under sub-area D, Special Methods as were the behaviors included in recommendation #10 above. However, the actions included in this recommendation (#12) are reported as generating favourable affective reactions in the respondents, rather than evaluations of the lecturer's personality, as was the case in #10.

13. Disorderly presentation (A.A. #5)

    a) C.A. 8 difficult to follow (I-2)
    b) A.A. 15 generated feelings of boredom; was dull, monotonous, tedious, students lost interest (I-2)

The only critical requirement listedwhich included this kind of behavior was requirement #5, listed under sub-area A (Table 11, p. 62). As can be seen, this method of presentation was considered ineffective. "Orderliness and Organization of presentation" is listed as sharing with "use of notes" the fourth position in the list of critical behaviors (Table 8, p. 50. As is indicated in this Table, the number of ineffective and effective behaviors reported are essentially the same. So few results were reported that no conclusions can be drawn in this regard.

14. Included irrelevant digressions; extraneous material (A.C. #1)

    a) B.A. 14 Detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to students confusion (I-2)

b) A.A. 17 generated feelings of boredom; was dull, monotonous, tedious; students lost interest (I-2)

The use of irrelevant, outdated material was considered, as would be expected, ineffective (Table 8, p. 51, C 1). Examples of subject material considered to be relevant and irrelevant are listed in Appendix B, pp. 115 and 117 under classes 1 and 6. That content relevancy is an important consideration to the student audience was suggested by the fact that the largest number of behaviors were grouped under this category for the sub-area C (Table 8, p. 51, Class 1). Further, by far the largest number of behaviors reported were judged as ineffective. Chances are that if the reasons for introducing or selecting course content were indicated by the lecturer, some of the confusion, as suggested by the above results, could be ameliorated.

15. Poorly prepared, admitted was bored and/or unprepared (B.B. #5)

a) B.A. 11 detracted from learning; made learning difficult; generally unsatisfactory; made no contributions; added to students confusion (I-2)
b) A.B. 8 generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection, fearfulness; generally lowered morale (I-2)

While some of the behaviors included in this recommendation overlap those of recommendation #11 above, the latter described temperamental, dynamic or motivational traits, while the behaviors of this recommendation are descriptive of ability traits. An unprepared or poorly prepared lecturer was not considered effective.

The above list of recommendations was an attempt, then, to uncover broad trends in the results of closely similar lecturer behaviors which, when viewed individually led to a wide range of results. A detailed account of the dissimilarity of both the results and behaviors is reported in Appendices B and C. These findings likely reflect the fact that the dissimilitude of interpretation attached to instructor behavior is a product of not only the personality attributes of the instructor and that of the members of his audience, but also that the particular aims of the instructor and those of the students are not mutually

understood.

The value and uniqueness of the above list of recommendations lies in the fact that they are not mere listings of critical behaviors, or groups of behaviors, but are based on groupings of closely similar critical requirements, and indicate the specific reactions generated by these requirements. Further, it was possible to relate the behavioral component of the recommendation to the behavioral analysis data, and thereby gain an index of its 'relative criticalness.'

Although the recommendations are subject to the limitations imposed by the data, it is hoped that they may serve not as absolute prescriptions for teaching, but as a basis for hypotheses formulation in a more ideal context.

CHAPTER V.

SUMMARY OF CONCLUSIONS AND IMPLICATIONS

1. Student observers proved capable of reporting lecturer actions as representing examples of both good, or effective, and poor, or ineffective lecture practices. That lecture procedure was judged to include areas other than strictly "lecture techniques" is noteworthy. What a lecturer has relegated to the preconscious, or rationally deems incidental to lecturing is noticed and seems to considerably influence the 'learning climate' of the lecture setting.

2. Behaviors associated with 'Teaching Methods' were the most frequently reported. These are, in the main, strictly technical skills and can be taught and learned. The onus is on the individual lecturer to ensure their mastery. Regardless of the criteria one uses to define lecturer effectiveness, certainly, and obviously, those interfering with learning would be universally rejected. This would imply the rejection of certain lecturer personality attributes and teaching methods as revealed by this study. Hence, future research is indicated to uncover both the personality traits and teaching techniques that are detrimental to effective university lecturing.

3. Lecturers cannot take for granted 'wired-in' motivation. Students are keenly aware of actions which generate or detract

from interest-arousal. Further, students have clear notions of behaviors which assist in or detract from learning the subject material.

4. Supplementary information given as opinions derived from general experience did not augment the incident data. It was hypothesized that this data represented the student's idealized lecturer or lecture setting. The use, by the observers, of the Supplementary Information page of the copy form for the recording of critical incidents, pointed out the need for more rigid and clear instructions for placement of the incidents.

Moreover, it was felt that many of the recorded critical incidents were 'contaminated' by evaluative references, and varying degrees of abstraction. Although efforts to scale behavioral reports on the basis of 'degrees of opinionation' proved abortive, if such an operation had been possible, it was felt that classification would have been made more precise, hence more reliable.

5. Suggestions of serious misconceptions on the part of students both as to the lecturer's role and aims in the classroom, and what should be selected and stressed as lecture content by him, strongly indicated a need for a critical appraisal of both lecturers and students concepts of the nature and aims of the profession of university teaching.

6. While a wide variety of reactions were generally associated with reports of specific lecturer actions, some general trends

in audience reaction were forthcoming from an analysis of the
recommendations which grew out of this study. The following
summarizes and paraphrases the recommendations:

a) The use of audio-visual techniques; showing
   an interest in and provoking student contri-
   butions; using wit, humour, and anecdotes;
   making an "extra effort"; were all judged to
   be effective in generating student interest and
   attention.

b) Answering or reacting to student's answers or
   contributions sarcastically; ridiculing; being
   hypercritical and generally derrogatory, not only
   generated feelings of anxiety and precipitated
   distress reactions in the student audience, but
   detracted from the 'learning environment' by
   minimizing student-lecturer 'feed-back', and
   caused feelings of confusion, making "learning
   more difficult".

c) Speaking in a monotone, or indistinctly; reading
   material from notes or texts; presenting the
   material in a disorganized manner; all led to
   feelings of tedium, boredom, and disinterest.

d) The use of audio-visual techniques; using and
   showing an interest in student contributions;
   making use of wit, humour and anecdotes; relat-
   ing difficult material to the more familiar, and
   using analogies; all facilitated student mastery
   of the subject material.

It is interesting to note that behaviors which led to
interest arousal were generally also judged to aid in "learning
the material". Moreover, indications were that a sarcastic,
derrogatory reaction, to students efforts to contribute to the
lecture actually detracted from or hindered the learning process.
In this regard Hook (1946, p. 172) asserts that "whatever teach-
ing is, it should not be an obstruction to learning."

It was hoped that the practical recommendations which grew out of this enquiry might serve as a basis for hypothesis formulation for future research.

7. The critical requirements derived from this data could serve as "component dimensions" in the determination of criteria behaviors of effective university lecturing. They could act as a basis from which to define criteria objectively, and assist in developing vehicles for obtaining criterion measures of lecturer competence.

Moreover, the exhaustive list of "first-order behavior dimensions" and elemental behaviors listed in the Appendices in the form of 'miscellaneous references', could provide the basis for a glossary of terms describing lecturer actions for a classroom observation record form. The latter could assist in the description of the behavioral components of teacher effect- iveness at the university level.

CHAPTER VII

SUMMARY OF STUDY

It was the purpose of this enquiry to report on an adaptation of the Critical Incident Technique to university teaching with specific reference to its usefulness for:

1. Determining the "critical requirements" of university teaching as evolved from the descriptions of lecturer behavior by university students;

2. Studying the relationship between information on teaching obtained by "critical incidents", and supplementary information given as 'opinions' derived from general experience;

3. Educing a set of practical recommendations that may be of value to lecturers in the improvement of their university teaching practices.

There was found to be a paucity of research related to the methodological approach to teacher appraisal at the university level. For the purposes of this study, the more frequently employed procedure of asking educators, specially trained observers, or others to name desirable teaching traits was rejected. Rather, it was decided to employ the student audience as the source of criterion data for this study. The procedure chosen was the Critical Incident Technique, since it represents an effort to objectify descriptions of behavior, and thereby provide an operational frame of reference for behavioral

appraisal. It was emphasized that no attempt was to be made to identify for administrative action good and poor instructors on the basis of student judgments alone. Precautions were taken to avoid any direct references being made that would actually identify university instructors.

Specially prepared record forms were provided for 239 fourth year Arts students who had agreed to participate in the study. Useful data were contained in 80 of the 97 forms which were returned. The data were recorded in the form of "critical incidents," and supplementary information in the form of 'opinions.'

Three classifications were applied to these data. The first was based exclusively on descriptions of lecturer behaviors, that is, a behavioral analysis; the second on the reported result of the lecturer's actions; the third on an analysis of opinions as derived from general experiences. These data were all systematized according to a progression of more inclusive categories.

From the first two classifications, two lists of "critical requirements" were evolved. It was observed that a wide dissimilarity of results ensued from closely similar critical requirements. Hence, practical recommendations were developed from this data with a view to uncovering broad trends in the results of closely similar lecturer behaviors. The recommendations were summarized as follows:

a) The use of audio-visual techniques; showing an interest in and provoking student contributions; using wit, humour, and anecdotes; making an "extra effort"; were all judged to be effective in generating student interest and attention.

b) Answering or reacting to student's answers or contributions sarcastically; ridiculing; being hyper-critical and generally derrogatory, not only generated feelings of anxiety and precipitated distress reactions in the student audience, but detracted from the 'learning environment' by minimizing student-lecturer 'feed-back', and caused feelings of confusion, making "learning more difficult."

c) Speaking in a monotone, or indistinctly; reading material from notes or texts; presenting the material in a disorganized manner; all led to feelings of tedium, boredom, and disinterest.

d) The use of audio-visual techniques; using and showing an interest in student contributions; making use of wit, humour and anecdotes; relating difficult material to the more familiar, and using analogies; all facilitated student mastery of the subject material.

The classification of the supplementary information provided by the opinion data did not augment the incident data. It was hypothesized that they may have represented students' 'idealized' notions of university lecturing.

Implications and conclusions gained from this enquiry were:

1. Students proved capable of reporting both good and poor instances of lecture practice. Moreover, they seemed especially aware of actions which generated or detracted from interest arousal, or assisted in or detracted from learning the subject material.

2. While actions describing 'Teaching Methods' were the most frequently reported, lecture procedure was judged to include areas other than strictly 'lecture technique'. On the basis of these findings, it was suggested that future research might uncover both personality traits and teaching techniques that were indicated by this enquiry as being detrimental to effective university teaching.

3. A need was shown for devising a means of minimizing the 'opinionation' of critical incidents. One approach was suggested.

4. Findings which alluded to the existence of serious misconceptions concerning the role and aims of lecturers in the classroom, pointed to the need for a critical assessment of both students' and lecturers' concepts of university teaching.

5. The critical requirements derived from this data could act as the basis from which to define criteria behaviors of effective university lecturing. Specifically, the list of "first-order behavior dimensions" gleaned from the critical incident data, and listed in the Appendices in the form of particular motor or verbal responses, could provide the basis for a glossary of terms in the development of vehicles for obtaining criterion measures of lecturer competence.

6. It was hoped that future research might make use of the recommendations which grew out of this study for hypothesis formulation.

REFERENCES

REFERENCES

American Institute for Research: A report of three years of experience. Pittsburgh: Amer. Inst. for Res., Sept. 1950, 3-5.

Anikeeff, A.M. Factors affecting student evaluation of college faculty members. J. appl. Psychol. 1953, 37, 458-459.

Barr, A.S. The measurement and prediction of teaching efficiency, a summary of investigations. J. Exp. Educ., 1948, 16, 203-283.

Beecher, D.E. The evaluation of teaching, backgrounds and concepts. Syracuse: Syracuse University Press, 1949.

Bendig, A.W. A preliminary study of the effect of academic level, sex, and course variables on student ratings of psychology instructors. J. Psychol., 1952, 54, 21-26.

Bendig, A.W. An inverted factor analysis study of student-rated introductory psychology instructors. J. Exp. Educ., 1953, 21, 333-336.

Buxton, C.E. College teaching: a psychologist's view. New York: Harcourt, Brace & Co., 1956.

Cattel, R.B. Personality: a systematic theoretical and factual study. New York: McGraw Hill, 1950.

DeVries, A.G. A study of training needs in the selling of real estate through the use of the critical incident technique. Unpublished Masters Thesis, Univ. of British Columbia, 1957.

Drucher, A.J., and Remmers, H.H. Do alumni and students differ in their attitudes towards instructors? J. Ed. Psychol., 1951, 42, 129-143

Flanagan, J.C. The critical requirements approach to educational objectives. School and Society, 1950, 71, 321-324.

Flanagan, J.C. The critical incident technique in the study of individuals in Modern Educational Problems: Report of the Seventeenth Educational Conference, New York City, Oct. 30-31, 1952, published by American Council on Education, pp. 61-70 (a).

Flanagan, J.C. The critical incident technique. Psych. Bull., 1954, 51, 327-358 (b).

REFERENCES (CONT'D)

Flanagan, J.C. The evaluation of methods in applied psychology
    and the problem of criteria. Occupational Psychology, 1956,
    30, 1-9(c).

Gordon, T. The airline pilot's job. J. appl. Psychol., 1949,
    33, 122-131.

Guthrie, E.R. The state university: its function and its future.
    Univ. of Washington, 1959.

Hook, S. Education for modern man. New York: Dial Press,
    1946.

Justman, J. and Mais, W.A. College teaching: its practice
    and its potential. New York: Harper & Bros., 1956.

McKeachie, W. Teaching tips: a guide book for the beginning
    college teacher. Ann Arbor, Mich.: George Wahr Publishing
    Co., 1956.

McKeachie, W.J. and Solomon, D. Student ratings of instructors:
    a validity study. J. of Ed. Res., 1958, 51, 379-382.

Moser, C.A. Survey methods in social investigation. London:
    William Heinemann Ltd., 1958.

Remmers, H.H. and Elliot, D.N. The indiana college and uni-
    versity staff-evaluation program. School and Society,
    1949, 70, 168-171.

Riley, J.W., et al. The student looks at his teacher. an
    enquiry into the implications of student ratings at the
    college level. New Brunswick, New Jersey: Rutgers V.
    Press, 1950.

Ryans, D.G. and Wandt, E. A factor analysis of observed teacher
    behaviors in the secondary school: a study of criterion
    data. Ed. and Psychol. Meas., 1952, 12, 574-586.

Ryans, D.G. Characteristics of teachers: their description,
    comparison, and appraisal. Menasha, Wisconsin: George
    Banata Co., 1960.

Smit, Jo Anne, A study of the critical requirements for
    instructors of general psychology courses. Unpublished
    PhD Thesis, Univ. of Pittsburgh, 1951.

REFERENCES (CONT'D)

Smit, Jo Anne A study of the critical requirements for
    instructors of general psychology courses. Univ. of Pitts.
    Bull., 1952, 48, 279-284.

Stoyva, J.M.   Critical Requirements of Trolley-Bus Operator's
    job. Unpublished Masters Thesis, Univ. of British Columbia,
    1956.

Travers, R. Appraisal of the teaching of the college faculty.
    J. Higher Ed., 1950, 21, 41-42.

Wagner, R.F. Critical requirements for dentists. J. appl.
    Psychol., 1950, 34, 190-192.

APPENDICES

APPENDIX A

INSTRUCTIONS

      You are being asked to take part in a study designed to arrive at criteria by which the quality of university lecturers may be improved. Specifically, you are being asked to provide us with a written description of the important or critical incidents of behavior which you personally would identify with good and poor lecturing. We, then, are asking you to describe actual experiences, whether your own, or someone else's, which to you illustrate good and poor lecture technique.

      An example, say pertaining to bus driving, may illustrate the point more clearly. An incident associated with good bus driving might be that the operator left his bus to guide a blind man across a busy street, or that he knew the name of the street you were looking for. These examples represent actual incidents of behavior which are associated with good bus driving.

      On the other hand, such incidents as the bus driver trying to beat the red light, or having undue difficulty in replacing a trolley pole, or braking suddenly at each stop, describe poor bus driving.

      Please notice that in these examples, incidents appear that relate to specific behavior. You are to think about any actual incidents of behavior on the part of your lecturer that applies to the effective or non effective delivery of a lecture. Please keep in mind that your evaluation of the goodness or poorness of the lecture is not to be in terms of whether you personally are impressed by the subject material being delivered, but solely in terms of lecture procedure as manifested by your lecturer.

      Some things to be kept in mind when describing incidents are:-

1. Since this study has a constructive purpose it is requested that the name of the instructor involved not be given.
2. Describe the circumstances that led up to the incident, and refer to the person involved anonymously as "the lecturer".
3. Describe exactly what the lecturer did.
4. Do you consider his action justified? Why?
5. Did the incident lead to a successful or an unsuccessful result?
6. What was the result?

APPENDIX A (CONT'D)

Some final points:-

1. All information is confidential.
2. In <u>no way</u> will your name be mentioned or associated with any of the information you supply.
3. Do not discuss any questions or information you give with others, since they might be interviewed later and any knowledge of what is being asked before the interview will effect the study adversely.
4. <u>Please</u> write legibly.
5. If you have <u>any</u> questions please feel free to ask them. If you wish to <u>get</u> in touch with me please leave a message at Alma 3180-R.
6. It might be a help in remembering incidents if you start to think about the most recent good or poor lectures you have attended.
7. Please indicate whether the incident occurred in a laboratory or a lecture.

APPENDIX B

CRITICAL BEHAVIORS, BY FREQUENCY, UNDER EACH
CLASS (BEHAVIOR CLASSIFICATION)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
1. Quality of Voice		
a) monotonous voice		12
b) spoke clearly, distinctly	11	
c) soft, low, inaudible voice		8
d) spoke indistinctly, mumbled		4
e) spoke loudly	4	
f) halting, uncertain; stutters		2
g) spoke in conversational voice	2	
h) miscellaneous references to voice quality		
- emphasis on every word		1
- decreases in volume progressively		1
CLASS TOTAL	17	28
2. Use of language		
a) use of er, ah		4
b) terms too complex		3
c) constant rephrasing		2
d) miscellaneous references to use of stereotyped phrases		
- frequent use of phrase, "I think"		1
- overworks particular phrases		1
- overworked work "important"		1
- continual repetitive use of pet word		1
- uses such phrases as; "a simple derivative; a naive interpretation"		1
- repetitive use of phrase "don't philosophize"		1
- frequent use of repetitive phrases		1
e) miscellaneous references to diction		
- used bad grammar		1
- couldn't speak English properly		1
- doesn't finish sentences		1
- poor command of English		1

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
f) miscellaneous references to pronunciation		
- poor attempt pronouncing word		1
- spoke in foreign accent		1
- read text with mediocre accent		1
g) miscellaneous references to quality and choice of words		
- spontaneous phrasing	1	
- pauses to pick out specific words		1
- used different language than the textbook		1
CLASS TOTAL	1	25
3. Speed of presentation		
a) excessive speed, lack of pause		12
b) paused, paced lecture, allowed time for note-taking	5	
c) presented at moderate speed	2	
d) miscellaneous references to speed of presentation		
- purposely raced through section that the text covered well	1	
- went rapidly from beginning of hour	1	
- covered material rapidly		1
CLASS TOTAL	9	13
4. Orderliness and organization of presentation		
a) changes from topic to topic, follows no pattern, disorganized		11

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
4. Orderliness and organization of presentation (cont'd)		
b) material presented in logical, systematic order	10	
CLASS TOTAL	10	11
5. Use of notes		
a) dictated, read notes for whole hour		12
b) used no notes	2	
c) miscellaneous references to use of notes		
- returned to office to retrieve notes	1	
- dropped notes on floor, class waited until all picked up	1	
- sought for exact quote in notes, failed to find it	1	
- forced to return to notes after ad lib	1	
- consulted notes when realized proof incorrect	1	
- dictated notes if seemed necessary		1
CLASS TOTAL	7	13
6. Summarizing and review		
a) gave summary of previous lecture	7	1
b) summarized or reviewed at end of section, year or end of hour	5	
c) seldom summarized; didn't review		2

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
6. Summarizing and review (cont'd)		
d) miscellaneous references to summarizing and reviewing		
- provided an organized summary	1	
- persisted in summarizing, rather than dealing with specific problem		1
CLASS TOTAL	13	4
7. Use of unusual techniques		
a) brings guest lecturer	4	
b) asked students to take no notes	1	1
c) conducted tours	2	
d) leaves student with something to think about	2	
e) moved class to office or seminar room	2	
f) miscellaneous references to unusual techniques		
- used class member as principal piece of apparatus in demonstration	1	
- used football players names to stand for points on a triangle when discussing trigonometric functions	1	
- used "shocking", extraordinary phrases	1	
- conducts class as study group		1
CLASS TOTAL	14	2
8. Use of outlines		
a) outlines topics of whole course	5	
b) gives topics of next lecture	4	
c) indicated material to be covered	3	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
8. Use of outlines (cont'd)		
d) miscellaneous references to use of outlines		
- followed given outline	1	
- failed to follow outline		1
CLASS TOTAL	13	1
9. Use of outside references and authorities		
a) gave references of available material pertinent to lecture material	9	1
b) brings outside, source material into class	3	1
CLASS TOTAL	12	2
10. Reading, dictating lecture		
a) read or followed text, books	2	11
CLASS TOTAL	2	11
11. Use of classroom demonstration		
a) made use of demonstrations (equipment)	3	
b) miscellaneous references to use of specific kinds of demonstrations		
- practical demonstration of equipment	1	
- performed experiments in class	1	
- demonstrated lab. technique	1	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
11. Use of classroom demonstration (cont'd)		
b) miscellaneous references to use of specific kinds of demonstrations		
- used actual equipment to demonstrate print making	1	
- used chemicals to augment verbal description	1	
- used mercury hammer to illustrate effects of low temperature	1	
- demonstration poor		1
- experiments in class failed		1
CLASS TOTAL	9	2
12. Level of lecture in relation to student ability		
a) lecture directed above level of most students		3
b) lecture directed to bottom level, or below intellectual capacity of most students		3
c) miscellaneous references to level of lecture in relation to student's ability		
- takes for granted student remembers work of previous years		1
- treated students as beginners		1
- assumes class knows as much as he does		1
- assumes terms understood		1
CLASS TOTAL	0	10

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: A.   THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
13. Discrete references to detailed vs. general approach		
a) miscellaneous references to point by point presentation		
- gave detailed description of facts and apparatus	1	
- presentation point by point		1
- each point enlarged upon		1
- too much detail stressed		1
- undue emphasis or analysis on one aspect of material		1
b) miscellaneous references to general approach		
- habitually examined general problems	1	
- broad coverage before detailed analysis	1	
- spoke in generalizations		1
CLASS TOTAL	3	5

CLASS	EFFECTIVE	INEFFECTIVE
14. Utilization of available time		
a) extended lecture or course		4
b) miscellaneous references to starting time of lecture		
- begins immediately after bell	1	
- begins before class silent		1
- waits 1-1$\frac{1}{2}$ minutes after bell		1
c) miscellaneous references to utilization of available time		
- gave no reason for finishing lecture early		1
- tries to cover too large a field in time available		1
CLASS TOTAL	1	8

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS .

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
15. Use of repetition		
a) repeats difficult or important material	4	
b) repeats material already covered		4
CLASS TOTAL	4	4
16. Clarity of presentation		
a) clear	5	
b) incoherent, unclear		3
CLASS TOTAL	5	3
17. Integrating course material		
a) relates more complicated material to simpler material or to material familiar to student	4	
b) miscellaneous references to efforts to integrate course material		
- one statement related to rest of course	1	
- links various phases of course into a discussion of the basic problem	1	
- gave all events leading up to topic	1	
- unemotional appraisal of situation using previous material	1	
CLASS TOTAL	8	0

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
18. Use of emphasis		
a) emphasized important points	5	
b) failed to emphasize material or to distinguish one topic from another		3

CLASS TOTAL	5	3

CLASS	EFFECTIVE	INEFFECTIVE
19. Stayed on topic		
a) goes off on tangent, circumscribes point		4
b) stuck to point	2	

CLASS TOTAL	2	4

CLASS	EFFECTIVE	INEFFECTIVE
20. Discrete references to lecture technique (presentation and delivery)		
a) miscellaneous references to presentation and delivery		
- used new facts and new approach when answering the query of student who had missed the point	1	
- present with zest	1	
- keeps lectures fresh and alive	1	
- informal delivery	1	
- present logical, sound arguments	1	
- read passage with sincerity and emotion	1	
- course arranged such that student aware of material to be covered each day, but not aware who would be called on to answer	1	
- praised work before critically evaluating it	1	
- built up curiosity, and anticipation by able description of an event, then showed the movie	1	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
20. Discrete references to lecture technique (presentation and delivery) (cont'd.)		
a) miscellaneous references to presentation and delivery (cont'd)		
- avoided changing mind about statements and demonstrations	1	
- revised old material whenever encountered, left nothing for granted	1	
- allow student to fill in by study	1	
- presented in friendly manner	1	
- presents material in straightforward fashion	1	
- precise	1	
- the seemingly rote "pouring out of material" day after monotonous day		1
- lecturer is like a tape recorder; turned on at beginning, turned off at end		1
- presented material dryly		1
- exceedingly wordy		1
- overly ramified his point since most information in text		1
- gave detailed information at rapid pace for 50 minutes		1
- skimmed important material after being stuck in earlier part of lecture		1
- unfamiliar words not explained or spelled		1
- cancelled 4 lectures in a row with no notification of any kind to student		1
- filled with soliloquies		1
- covered only the highlights of course		1
- too intense delivery		1

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: A.   THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
20. Discrete references to lecture technique (presentation and delivery) (cont'd)		
b) miscellaneous references to distribution of mimeographed subject material		
- distributed list of lecture topics	1	
- distributed poems he wished read	1	
- distributed complicated subject material	1	
- distributed study outline	1	
- distributed a list of definitions, read for whole hour		1
- distributed two sets of material, the first set incorrect		1
c) miscellaneous references to specific lecturer errors		
- started proof, began afain, made another error		1
- discovered mistake after long detailed presentation of problem		1
- frequent erasures of error ridden diagram		1
- erased work when stuck on proof		1
- corrected self regarding matter discussed in previous lectures		1
d) miscellaneous references to attempts at relating course material		
- attempts to integrate material with other relevant courses	1	
- tied in course material with political occurrences	1	
- analyzed PTA meeting which fitted well into the course material under discussion	1	
- explained what subject taught meant to our society, what it will mean to the student, why he chose the field	1	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD

CLASS	EFFECTIVE	INEFFECTIVE
20. discrete references to lecture technique (presentation and delivery) (cont'd)		
e) miscellaneous references to specific forms of carelessness		
- left out simpler steps in derivation		1
- of a complicated formula		
- began new material before completing last days' work		1
- explained points in perfunctory manner		1
CLASS TOTAL	23	22
SUB-AREA TOTAL	158	173

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: B.   THE DISCUSSION METHOD

I.   REACTIONS TO AUDIENCE PARTICIPATION

CLASS	EFFECTIVE	INEFFECTIVE
1. willingness; readiness to answer or acknowledge questions or suggestions		
a) ignored, discouraged, restricted questions		11
b) welcomes suggestions, seems ready to acknowledge student's questions	8	
c) miscellaneous references to willingness; readiness to answer or acknowledge questions or suggestions		
- sketches answer on blackboard in response to student's query	1	
- reached into his pocket and thrust change found therein into amazed student's hand for asking particularly intelligent question	1	
- in response to question and his inability to answer same, began reasoning and thinking such that students could follow	1	
- asked for question, got one, unable to solve		1
- response to question was "Uh" and a smile		1
CLASS TOTAL	11	13
2. discrete reactions to student contributions		
a) reacted with ridicule, sarcasm, belittlement		14
b) display of hostility, anger, annoyance		7
c) squelching students		3
d) interruption of student contributions		2
e) miscellaneous reactions to student contributions		
- politely apologized for asking student to comment on a book after student replied he hadn't read same	1	

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: B.   THE DISCUSSION METHOD

I.   REACTIONS TO AUDIENCE PARTICIPATION (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
2. discrete reactions to student contributions (cont'd)		
e) miscellaneous reactions to student contributions (cont'd)		
- admitted some students arguments were valid objections to own theory	1	
- flatly contradicted student's objection to his point, and pointed out student had better think along his lines if he wanted to pass		1
- assuming superior when questioned on debatable point		1
- jokingly handles student's question, offers no explanation		1
- laconically replies to query, "well"		1
- discourteous of student's opinion when specifically asked for		1
- treated questions in a condescending manner		1
- asked students if they couldn't take a joke in response to their not sharing his amusement		1
- suggested that since no apparent concern was shown over the death of one of the members, it showed a lack of sensibility and solidarity		1
- told student who complained he wasn't speaking loud enough to move closer		1
- after asking students if following, and receiving no response, replies, "Oh well, not important anyway".		1
- lecturer said, "Oh well, it isn't very important anyway" when student failed to give meaningful comments about a poem just rendered by lecturer		1
- tended to disagree with student's questions which disagreed with approved interpretation of work under discussion		1

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: B.   THE DISCUSSION METHOD

I.   REACTIONS TO AUDIENCE PARTICIPATION (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
2. discrete reactions to student contributions (cont'd)		
f) miscellaneous reactions to poor questions from students		
- criticizes students questions lacking forethought	1	
- responded with no derision to what was considered to be a pointless student question	1	
- patient to a fault with students questions and locates kernel of knowledge among the most innane questions	1	
- pointed out inconsistencies in or subtly rephrased an irrelevant or obscure question	1	
- cleverly incorporates stupid student's question into his answer such that errors in question eliminated	1	
- indulged student's irrelevant questions		1
- spoke to students about wasting time when asking pointless question		1
- criticized students ideas and grammar when he attempted to justify his statement		1
g) miscellaneous references to asking for justification of statements from students		
- insinuated students believed one authority to be infallible since he quoted one authority against the other		1
- asked students to substantiate his point, then acted as moderator while students had vigorous discussion	1	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: B. THE DISCUSSION METHOD

I. REACTIONS TO AUDIENCE PARTICIPATION (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
2. discrete reactions to student contri-butions (cont'd)		
g) miscellaneous references to asking for justification of statements from students (cont'd)		
- asked where students got information regarding influence of environment on development of prostitute	1	
CLASS TOTAL	9	42

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: B. THE DISCUSSION METHOD

II. CONTROL OF OPPORTUNITIES FOR STUDENT PARTICIPATION

CLASS	EFFECTIVE	INEFFECTIVE
1. promotion of discussion and questions (from class)		
a) promoted, created, made use of discussion or class participation	14	
b) encourages and provokes questions from the class	9	
c) encourages debates at important points in lecture	2	
d) failed to promote discussion or questions		2
e) miscellaneous references to lecturer promoting questions and discussion		
- calls for impromptu discussion after each new topic	1	
- asked for student opinions on controversial material	1	
- invites discussion by asking for general definitions of abstract ideas	1	
- handles material as if it were important enough to sustain controversy	1	
- detailed discussion of points raised, following a general survey	1	
CLASS TOTAL	30	2
2. Lecturer initiated questions (directed to class)		
a) asked whole class questions	1	1
b) miscellaneous references to specific recipients of lecturer's questions		
- called on student by name	1	
- frequent and unexpected questioning of student by name	1	
- directs questions to student with special knowledge	1	

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: B.   THE DISCUSSION METHOD

II.   CONTROL OF OPPORTUNITIES FOR STUDENT
PARTICIPATION (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
2. Lecturer initiated questions (directed to class) (cont'd)		
b) miscellaneous references to specific recipients of lecturer's questions (cont'd)		
- called out seat number and demanded answer		1
- called repeatedly on students who never had their assignments finished		1
c) miscellaneous references to kinds of questions directed to students		
- asked questions leading to discussion	1	
- direct questions	1	
- leading questions	1	
- rhetorical questions	1	
CLASS TOTAL	8	3
SUB-AREA: TOTAL	58	60

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: C. THE SELECTION AND EMPHASIS
OF SUBJECT MATERIAL

CLASS	EFFECTIVE	INEFFECTIVE
1. Relevancy of content		
a) irrelevant, unrelated, outdated, unimportant material		16
b) avoided irrelevant material	2	
c) miscellaneous references to content relevance		
- paraded own views		1
- inappropriate stories about mental illness		1
- overemphasized sex		1
- too much time on background material		1
CLASS TOTAL	2	20
2. Use of illustrations and examples		
a) used concrete examples	10	
b) made use of examples and illustrations	5	
c) made no use of examples and illustrations		2
d) miscellaneous references to use of illustrations and examples		
- used poor examples		1
- used examples from text unknown to students		1
- exaggerated examples		1
- too much time spent illustrating		1
CLASS TOTAL	15	6
3. Use of anecdotes--use of personal experiences		
a) made general use of anecdotes or personal experiences	7	
b) used personal experiences related to lecture material	6	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: C. THE SELECTION AND EMPHASIS
OF SUBJECT MATERIAL (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
3. Use of anecdotes--use of personal experiences (cont'd)		
c) used anecdotes repeatedly		3
d) miscellaneous references to use of anecdotes and personal experiences		
- relates amusing incidents	1	
- stories seemed to have no ending		1
- experiences were unrelated to topic		1
- discussed own college years in detail		1
CLASS TOTAL	14	6
4. Use of wit and humour		
a) used humour to establish point	3	
b) used jokes, element of humour	3	
c) pokes fun at material	1	1
d) miscellaneous references as to use of wit and humour		
- no sense of humour		1
- used "unhumourous" joke to establish point		1
- used ironic humour	1	
- used college level humour	1	
CLASS TOTAL	9	3
5. Lecturer biases		
a) indicated biases	5	
b) presentation unbiased	2	

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: C. THE SELECTION AND EMPHASIS
              OF SUBJECT MATERIAL (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
5. Lecturer biases (cont'd)		
c) miscellaneous references to lecturer bias		
- allowed bias to influence allotment of class time		1
- taught debatable subject in one-sided manner		1
CLASS TOTAL	7	2
6. Use of side issues growing out of course		
a) relevant, interesting issues	3	
b) miscellaneous references to side issues		
- compared conditions in other parts of world with those in Canada	1	
- concerned about institutional life in our society	1	
- discussed current political situation	1	
- discussed Suez Crises	1	
CLASS TOTAL	7	0
7. Discrete references to selection and emphasis of subject material		
a) emphasized simple material		2
b) textbook material used, given no further treatment		2
c) miscellaneous references to attempts to deal with material in a frank, honest manner		
- explained difficulties encountered by experimenter in discovering drug	1	

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: C.   THE SELECTION AND EMPHASIS
OF SUBJECT MATERIAL (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
7. Discrete references to selection and emphasis of subject material (cont'd)		
c) miscellaneous references to attempts to deal with material in a frank, honest manner (cont'd)		
- reviewed problems in professional work stemming from the course material	1	
- admitted force of student's objection, rephrased	1	
- made point of mentioning point admitted didn't know last day	1	
- asked student to accept his concept since it was the most useful for class's purpose	1	
- made use of classroom situation to demonstrate tact to students	1	
- did not pad material	1	
- discussed difficulties teaching course	1	
d) miscellaneous references to selection and emphasis of subject material		
- detailed explanation of point in grammar	1	
- proves one over infinity doesn't equal two by using it to prove that one equals two	1	
- filled out poor speech with solid information	1	
- changed symbols in course of single proof		1
e) miscellaneous references to use of "favourite material" as content		
- read material prepared when he was a student		1
- disproportionate time on favourite material		1
- gave details of own research		1
- harps on own speciality		1

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: C. THE SELECTION AND EMPHASIS
OF SUBJECT MATERIAL (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
7. Discrete references to selection and emphasis of subject material		
f) miscellaneous references to use of factual material		
- used facts to show derivation of theory	1	
- showed where opinions made poor use of the facts	1	
- supported statements by insufficient facts	1	
g) miscellaneous references to use of textbook		
- criticized text, yet held class responsible		1
- selected the best textbook	1	
CLASS TOTAL	15	10
SUB-AREA TOTAL	69	47

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: D. SPECIAL METHODS

CLASS	EFFECTIVE	INEFFECTIVE
1. Availability for extra consultation		
a) stays after hours to discuss points, gives extra sessions	6	
b) requests private interview, gives private advice outside classroom	4	
c) refused additional help, seldom stays after hours		2
CLASS TOTAL	10	2
2. Taunting, bullying, ridiculing, humiliating students		
a) made a general practice of taunting, bullying, ridiculing, humiliating students		4
b) miscellaneous references to use of taunting, bullying, ridiculing, humiliating students		
- takes shyest student to front of room and tortures them like kid with bug on end of pin		1
- used name of student to make remarks about his poor showing, student wasn't present		1
- referred to students by name in order to embarrass them		1
- singling out one student for unfair criticism in front of whole class		1
- called student to front of class and demanded reason for lateness		1
- spoke harshly to assistant in that he was unable to comment on exam papers just referred to		1
- presumed to amuse class by making fun of class member		1
CLASS TOTAL	0	11

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: D. SPECIAL METHODS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
3. Personal interest in students		
a) indulged in personalities (showed discrimination)		3
b) seemed genuinely interested in students	2	
c) miscellaneous references to lecturer's personal interest in students		
- gave encouragement	1	
- made effort to know each student separately	1	
- called student by name	1	
- lack of interest for student's contribution with student felt was of general interest		1
CLASS TOTAL	**5**	**4**
4. Use of sarcasm		
a) made general use of sarcasm		5
b) miscellaneous references to use of sarcasm		
- no sarcasm or irony	1	
CLASS TOTAL	**1**	**5**
5. Regard for student ability		
a) insinuates students stupid or treats students as if stupid		4

APPENDIX B (CONT'D)

MAJOR AREA: A.- TEACHING METHODS

SUB-AREA: D.   SPECIAL METHODS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
5. Regard for student ability		
b) miscellaneous references to regard for student's ability		
- regards students as mature, intelligent individuals, not Dick and Jane	1	
CLASS TOTAL	1	4
6. Rearrangement of class members		
a) rearranged class into small groups	2	
b) miscellaneous references to class rearrangements		
- arranged students in circle and present paper which was discussed by the group	1	
- assigned seminars on certain days in place of usual essay	1	
CLASS TOTAL	4	0
7. Stimulates thinking		
a) leaves class with stimulating thought	2	
b) miscellaneous references to stimulating thought		
- doesn't encourage class to think		1
CLASS TOTAL	2	1

APPENDIX B (CONT'D)

MAJOR AREA: TEACHING METHODS

SUB-AREA: D. SPECIAL METHODS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE

8. Discrete references to special methods

   a) miscellaneous references to use of
      special methods

- asked each student to use the word
"classic" in sentence, discussiom
followed and meaning was further
narrowed such that her use of word
clarified   1
- appointment of another class member
to read a report to be delivered by
class member, and to criticize it
when delivered   1
- organized debating team to deal with
topic during one lecture period   1
- student asked to prepare and present
formal argument - refuted by
lecturer   1
- appoints group to conduct part of
class   1
- student board work   1
- lecturer asked each student to
write one answer on the board which
were gone through in turn   1
- lecturer hunted up slide student
using, discovered artifact therein,
adjusted mark   1
- lecturer had student present papers
and debate them   1
- each class member assigned topic to
discuss on character in play, or
structure, etc.   1
- lecturer asked class for constructive
criticisms of course and its content
and accepted suggestions   1
- greets class with smile and "good
morning", and ends by thanking them
for their attentions   1
- introduced controversial points   1
- lecturer required students to read
aloud   1

APPENDIX B (CONT'D)

MAJOR AREA: TEACHING METHODS

SUB-AREA: D. SPECIAL METHODS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
8. Discrete reference to special methods (cont'd)		
b) miscellaneous references to use of practice exercise and problem solving		
- aids in organizing thinking; shows interest in students who put greater effort into course	1	
- lecturer asked student to do problems in class on their own	1	
- assigned large amount of research work to the students, class time used to have students report findings		1
- difficult points in computation left to student as an exercise		1
- lecturer asked students to look up and finish theorem had been discussing in a general way in class		1
c) miscellaneous references to extra-curricular methods for promoting social relationships with students		
- lecturer arranged a party and purely recreational field trip	1	
- formed a club	1	
- students invited for dinner	1	
CLASS TOTAL	18	4
SUB-AREA TOTAL	41	31

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: ·E.   AUDIO-VISUAL TECHNIQUES

CLASS	EFFECTIVE	INEFFECTIVE
1. Use of the blackboard		
a) wrote indistinctly on blackboard (poor quality, scribbled)		7
b) wrote summary of topics for lecture, charted out where going in lecture	6	
c) wrote new or unusual terms on blackboard	3	
d) drew diagrams on blackboard	2	
e) spent long time writing on blackboard		2
f) wrote in a random fashion on blackboard		2
g) miscellaneous references to use of blackboard		
- asked student to put previously prepared problem on the board	1	
- presentation of greater portion of lecture on the blackboard	1	
- augmented board work with sufficient additional written material to make material comprehensible	1	
- used blackboard for putting down equations, augmenting verbal description	1	
- used blackboard to stress points	1	
- used blackboard to define terms and derive formula	1	
- drew purposefully incorrect diagram on board, asked students to correct	1	
- accompanies blackboard work with verbal description		1
- wrote plan of lab on board and added to it during the lecture		1
- didn't write on blackboard		1
- erased equations before students can copy		1
- doesn't make use of board to explain difficult material		1
CLASS TOTAL	18	16

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: E. AUDIO-VISUAL TECHNIQUES
(CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
2. Use of slides		
a) augments discussion, illustrates points with slides	5	
b) made use of slides	5	
c) miscellaneous use of slides		
- photographed textbook and showed on slides		1
- filled in great many lectures with slides		1
- all lecture time taken up with		1
CLASS TOTAL	10	3
3. Use of maps and charts		
a) used large maps	2	
b) miscellaneous references to use of maps and charts		
- used chart which couldn't be seen from the third row		1
CLASS TOTAL	2	1
4. Discrete references to use of audio-visual techniques		
a) made use of motion pictures	6	
b) made use of pictoral material	5	
c) made use of recordings	5	
CLASS TOTAL	16	0
SUB-AREA TOTAL	46	20

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: F.   MAINTAINING DISCIPLINE AND
CONTROL

CLASS	EFFECTIVE	INEFFECTIVE
1. Discrete references to maintaining discipline and control		
a) miscellaneous references to the handling of student induced distractions		
- asked student not to smoke in a quiet voice	1	
- asked student to leave in polite, firm fashion	1	
- handled attention getting remarks with patience but firmness	1	
- asked garrolous student if he would like to complete the lecture	1	
- removed fainted student from exam quickly	1	
- never allow pseudo-intellectuals to dominate	1	
- allows student to harangue on topic unrelated		1
b) miscellaneous references to the handling of late arrivals		
- insists on punctuality in attendance, handing in work, etc.	1	
- refused to admit late student	1	
- threw student out for coming late	1	
- frequent ordering out of late students		1
- upbraids class of 200 for lateness of 5%		1
c) miscellaneous references to the maintaining of discipline and control		
- discourages extracurricular activity	1	
- demonstrated no discipline		1
- arranged in alphabetical order		1
- unjust levying of demerits for untidy lab tables		1
- demanded students wait after bell		1

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: F. MAINTAINING DISCIPLINE
AND CONTROL (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
1. Discrete references to maintaining discipline and control (cont'd)		
d) miscellaneous references to controlling noise		
- walked out after reprimanding student for noise and getting no result	1	
- turned off "hood" in chemistry	1	
- stated anyone wishing to talk would be asked to leave		1
e) miscellaneous references to standards of work expected		
- used threats at beginning of term concerning quality of work expected	1	
- demands specific standard	1	
- informed class they had to work harder, set up own school performance as standard		1
- condemned class for sloppy work		1
f) miscellaneous references to attendance		
- stated didn't care if came or not, wouldn't take attendance		1
- takes attendance	1	
- announced the ratio of attendance to non-attendance would determine the number of passes and failures	1	
g) miscellaneous references to charity collections		
- rejected right to interfere in classroom to make collection since did not have authority from administration	1	
- refused to allow student campaigners for charity	1	
SUB-AREA TOTAL	18	11

APPENDIX B (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: G. STUDENT APPRAISAL METHODS
(LECTURE ASSIGNMENTS, EXAMS,
QUIZES)

CLASS	EFFECTIVE	INEFFECTIVE
1. Examinations		
a) special preparation of student for exams	1	2
b) miscellaneous references to kind of quizes and tests		
- individual exams to point out areas of difficulty in each student	1	
- gave test at end of each month	1	
- intermittent review questions	1	
- general quiz on topics to be discussed	1	
c) miscellaneous references to handling exam results		
- rank ordered results	1	
- posted results within week	1	
- read out results by name		1
d) miscellaneous references to lecturer expectations on exams		
- required understanding rather than memory	1	
- asked questions on which the least amount of time had been spent		1
- expects verbatim notes back on exams		1
e) miscellaneous references to marking		
- explained each error to individual students	1	
- marked with personal comment	1	
CLASS TOTAL	10	5
2. Assignments		
a) gave list of work ahead of time	2	
b) miscellaneous references to the handling of essays		
- asks for small essays rather than term essays	1	

APPENDIX B (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: G.   STUDENT APPRAISAL METHODS
(LECTURE ASSIGNMENTS,
EXAMS, QUIZES)

CLASS	EFFECTIVE	INEFFECTIVE
2. Assignments (cont'd)		
b) miscellaneous references to the handling of essays (cont'd)		
- approves student essay topic before written	1	
- essays handed in in class time, then went on with regular work		1
- emphasis on layout rather than content		1
- gave poor mark for essay that disagreed with lecturer's interpretation, but agreed with the author		1
- announced ad hoc the value of an essay		1
- rewrote essay to conform to own wording		1
c) miscellaneous references to term assignments		
- assigned areas related to work under discussion	1	
- demands cover alloted reading	1	
- demanded long grammar exercises		1
CLASS TOTAL	6	6
SUB-AREA TOTAL	16	11
AREA TOTAL	406	351

APPENDIX B (CONT'D)

MAJOR AREA: B.   PERSONALITY TRAITS

SUB-AREA: A.   TEMPERAMENTAL, DYNAMIC, AND
MOTIVATIONAL TRAITS

CLASS	EFFECTIVE	INEFFECTIVE
1. Interest and enthusiasm for subject		
a) interested and enthusiastic	13	
b) seemed disinterested, bored; lacks spontaneity		13
CLASS TOTAL	13	13
2. Position in front of the class		
a) pacing; moving about	2	7
b) does not face class		8
		%
CLASS TOTAL	2	15
3. Punctuality (arriving at, leaving class)		
a) arrives late to lecture		8
b) explains or apologizes for lateness	3	
c) leaves class immediately at bell		2
CLASS TOTAL	3	10
4. Habits and mannerisms		
a) laughing, chuckling at subject material		3
b) smoking	1	1
c) miscellaneous references to lecturer's mannerisms		
- annoying habits (pacing, flicking notes, clearing throat)		1

APPENDIX B (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC, AND
                MOTIVATIONAL TRAITS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
4. Habits and mannerisms (cont'd)		
c) miscellaneous references to lecturer's mannerisms (cont'd)		
- stretched and yawns		1
- obnoxious remarks		1
- read paper before class		1
- pulled at hair on leg		1
CLASS TOTAL	1	9
5. Conceding personal limitations		
a) admitted uncertain of a point, or lack of preparation	5	3
b) plagiarizes student's critiques		2
c) pointed out difficulties experiencing with difficult portion of the work	1	
CLASS TOTAL	6	5
6. Discrete references to temperamental, dynamic and motivational traits		
a) forceful, authoritarian, dominant	4	1
b) friendly, charming, pleasant	4	
c) dogmatic		3
d) self-conscious, nervous		2
e) miscellaneous references to temperamental, dynamic and motivational traits		
- coloured and laughed at ambiguous statement	1	
- patient	1	
- devoted to research	1	
- sincerity of tone	1	

APPENDIX B (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC, AND
MOTIVATIONAL TRAITS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
6. Discrete references to temperamental, dynamic and motivational traits (cont'd)		
e) miscellaneous references to temperamental, dynamic and motivational traits (cont'd)		
- lack of personal egotism	1	
- no imagination		1
- stern, sulky, stiff demeanor		1
f) miscellaneous references to lecturer's concern for student's feelings		
- followed student's suggestion concerning how to present material	1	
- asked if speaking loud enough	1	
- knows how student feels about course	1	
- sensed class attitude, stopped and explained	1	
- keeps student's needs in other course in mind	1	
g) miscellaneous references to the personal expression of lecturer's opinions		
- expressed opinion only after class opinion tapped by vote	1	
- committed himself to specific opinion	1	
- used strong opinions		1
- told class his opinion was the only one that counted		1
h) miscellaneous references to lecturer's appearance		
- neat	1	
- female lecturer wearing excessive make-up, loud clothing		1
i) miscellaneous references to lecturer's attitude towards inadequate facilities		
- condemns library system here		1
- tells students to "make out with what they have"		1

APPENDIX B (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC AND
                MOTIVATIONAL TRAITS (CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
6. Discrete references to temperamental, dynamic and motivational traits (cont'd)		
j) miscellaneous references to lecturer's prejudices		
- lack of prejudices	1	
- allowed free indulgence of his prejudices		1
CLASS TOTAL	22	14
SUB-AREA TOTAL	47	66

APPENDIX B (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: B. ABILITIES OR COGNITIVE TRAITS

CLASS	EFFECTIVE	INEFFECTIVE
1. Ability to answer questions		
a) unable to answer questions; unsatisfactory answers		5
b) answers questions without losing the thread of the lecture	2	
c) miscellaneous references to manner of answering questions		
- with alacrity	1	
- briefly	1	
- in generalities	1	
- discriminating reply	1	
- longwinded		1
- many false starts		1
- fails to understand student's point of view		1
- confused when questioned		1
d) miscellaneous references to specific abilities		
- lecturer liked public speaker	1	
- was able to command student attention	1	
- had ability to make student like him as a person	1	
- inability to put over joke		1
CLASS TOTAL	9	10
2. Knowledge of subject material		
a) familiar with subject material	9	
b) unfamiliar with subject material; lack of information		5
CLASS TOTAL	9	5

APPENDIX B (CONT'D)

MAJOR AREA: B. PERSONALITY TRAITS

SUB-AREA: B. ABILITIES OR COGNITIVE TRAITS
(CONT'D)

CLASS	EFFECTIVE	INEFFECTIVE
3. Preparedness		
a) well prepared (apparatus; to deliver lecture)	9	
b) unprepared, poorly prepared		5
CLASS TOTAL	9	5
SUB-AREA TOTAL	27	20
AREA TOTAL	74	86
FINAL TOTAL	480	437

CRITICAL BEHAVIORS BY FREQUENCY UNDER EACH CLASS (RESULT
CLASSIFICATION

MAJOR AREA: A.   EMOTIONAL REACTIVITY

SUB-AREA: A.   MOTIVATIONAL STATE

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1. Aroused interest, enthusiasm, attention; relieved boredom			1. Generated feelings of boredom; was dull, monotonous, tedious; students lost interest		

1. Aroused interest, enthusiasm, atten-
    tion; relieved boredom

   a) used audio-visual techniques,
      class demonstrations   15

   b) made use of and/or provoked
      student contributions   10

   c) referred to, or made use of
      'outside issues or material   7

   d) used anecdotes, wit, humour   7

   e) appeared interested in the subject 5

   f) conducted tours, on or off campus 2

   g) good knowledge of material   2

   h) sensed class's attitude   2

   i) spoke in a clear voice   2

   j) related personal experiences   2

   k) miscellaneous
      - moved class to office
      - set time aside every two weeks to
        discuss previous two weeks material
      - gave word of advice outside class
      - assigned areas to student which
        were related to topic under
        discussion
      - digressed on points of general
        interest

1. Generated feelings of boredom;
    was dull, monotonous, tedious;
    students lost interest

   a) spoke in a monotone   7

   b) read material directly from
      notes or text   6

   c) showed a lack of interest or
      effort   5

   d) arrived late consistently   3

   e) over-emphasized the obvious 3

   f) voice inaudible, unclear, low 2

   g) answered student sarcastically 2

   h) disorderly presentation   2

   i) irrelevant digressions   2

   j) miscellaneous
      - overworked word "important"
      - indulged student's irrelevant
        questions
      - repeats most of previous lecture
        as background for lecture
      - presents material point by point
      - uses phrases such as; "a simple
        derivative; a naive interpre-
        tation"
      - used bad grammar

CRITICAL BEHAVIORS BY FREQUENCY UNDER EACH CLASS (RESULT CLASSIFICATION)

MAJOR AREA: A.   EMOTIONAL REACTIVITY

SUB-AREA: A.   MOTIVATIONAL STATE (CONT'D)

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

1. Aroused interest, enthusiasm, attention; relieved boredom (cont'd)

  k) miscellaneous (cont'd)
- lectured very rapidly from beginning of hour
- avoided irrelevant material
- proved one over infinity doesn't equal zero by using it to prove that one equals two
- read passage with sincerity and emotion
- lecture notes regularly supplemented with good illustrations
- spontaneously and interestingly phrased
- set procedure for dealing with controversial material - gives facts, case for each side, question period, opinions discussed
- keeps lecture fresh and alive
- ability to answer all questions without deviating from lecture content
- asked general questions (small class)
- asked rhetorical questions (large class)

1. Generated feelings of boredom; was dull, monotonous, tedious; students lost interest (cont'd)

  j) miscellaneous (cont'd)
- lack of effort to make a dull course more interesting
- repeatedly derided students
- lacks spontaneity and drive
- spent forty minutes espounding on areas unrelated to demonstration set-up
- did not look at the class
- dropped notes on floor; class waited until all picked up
- told students that they shouldn't have to be catered to with prettied-up material, and recited dogmatic material from the text
- paced back and forth
- no sense of humour
- photographed the text book and showed on slides
- annoying habits (pacing, flicking pages of notes, continually clearing throat)
- wrote pouring out of material day after monotonous day

CRITICAL BEHAVIORS BY FREQUENCY UNDER EACH CLASS (RESULT CLASSIFICATION)

MAJOR AREA: A.   EMOTIONAL REACTIVITY

SUB-AREA: A.   MOTIVATIONAL STATE (CONT'D)

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1. Aroused interest, enthusiasm, attention; relieved boredom (cont'd) k) miscellaneous (cont'd) - friendly attitude - relates material to previous learned material - forceful, personality, and degree of preparation - an individualist		—		—	—
CLASS TOTAL		**74**			**50**
2. Stimulates, motivates; provokes further reading and thinking; fosters a desire to work harder		—		—	—
a) closed lecture with thought-provoking ideas; indicated interesting outside reading		3			
b) shows interest in student queries		2			

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

2. Stimulates, motivates; provokes
    further reading and thinking;
    fosters a desire to work harder
    (cont'd)

   c) miscellaneous
      - genuine personal interest in
        students
      - gave problem demonstrating
        theory just discussed
      - attempts to link the various
        phases of the course into a
        discussion of the basic
        problem
      - made an effort to draw the
        class into discussion
      - committed himself to a
        specific opinion
      - answered in generalities,
        allowing the student to fill
        in the details
      - referred to the fact that he
        was lecturing 'off the cuff',
        and suggested that this was
        how well they should know the
        subject
      - made use of student board work
      - course was arranged such that
        the student was aware of
        material to be covered each day,
        but not aware who would be called
        upon to answer
      - purposely raced through a section
        of material the textbook covered
        particularly well

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
2. Stimulates, motivates; provokes further reading and thinking; fosters a desire to work harder c) miscellaneous (cont'd) - arranged a party and purely recreational field trip - rank ordered exam results - went out of his way to inform the class that he would be late - used strong talk and threats at the beginning of the term concerning the quality of work expected		—		—	—

CLASS TOTAL		19			—
SUB-AREA TOTAL		93			50

MAJOR AREA: A. EMOTIONAL REACTIVITY

SUB-AREA: B. GENERAL AFFECTIVE REACTIONS

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	Generated feelings of respect, admiration; generally made a favourable impression		1.	Generated feelings of resentment, irritation, dissatisfaction, disappointment, annoyance, antagonism, distaste; minimized "feed-back", insulting.	
a)	conceded or admitted an error, or uncertain of point	3			
b)	miscellaneous		a)	was dogmatic	3
	- manifested personal brilliance		b)	squelched students' ideas or discussion	2
	- friendly		c)	miscellaneous	
	- presented logical, sound argument			- continual repetitive use of pet word	
	- ability to answer queries without losing the thread of the lecture			- pronounced strictness	
	- apologized politely for asking a student to comment on material for which he was unprepared			- curt mannerisms	
				- obnoxious remarks	
	- patient with student questions			- lecturing below the intellectual level of students	
	- dominant, direct			- takes attendance, insists on no gum-chewing, talking	
	- insists on punctuality in attendance, assignments.			- spends more time illustrating than stating points	
				- referred to psychotics as "crazy"	
				- insinuated student believed one authority against the other	
				- arrived two to five minutes late each day	
				- arranged students in alphabetical order	
				- told student who complained that he wasn't speaking loud enough to move closer	

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
—	—	—	1. Generated feelings of resentment, irritation, dissatisfaction, disappointment, annoyance, antagonism, distaste; minimized "feed-back", insulting (cont'd) c) miscellaneous (cont'd) - announced that the ratio of attendance to non-attendance would determine the number of passes and failures - looks through notes for exact quote, unable to find it - repeatedly mentioned tripe, films seen - allowed students to harangue on unrelated topics - disagreed with students' questions which disagreed with approved interpretation of the work under discussion - ridiculed student who responded to his request for translation of expression - asked class if they couldn't take a joke in response to their not sharing his amusement - spent all his time condemning the library system here, and lauded his own university's system - asked class what he was going to discuss, since he had failed to bring any material		

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
			1.	Generated feelings of resentment, irritation, dissatisfaction, disappointment, annoyance, antagonism, distaste; minimized "feed-back", insulting (cont'd)	
—	—	—	c)	miscellaneous (cont'd) - said that he failed to do his homework - extended the lecture ten minutes in order to complete a proof - told stories that seemed to have no ending - emphasis on nearly every word - assigned a large amount of research work to the students, and used class time to report the findings	

CLASS TOTAL		11			31

2. Generation of classroom 'atmosphere'			2.	Generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection fearfulness; generally lowered morale	
a) made use of or stimulates student contributions		3			
b) miscellaneous - strides up and down between the aisles - undiscriminating, friendly, sincere attitude			a) sarcastic, ridiculed students; hypercritical b) indulged in personalities c) poorly prepared		7 2 2

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

2. Generation of classroom 'atmosphere' (cont'd)
 b) miscellaneous (cont'd)
  - greets the class with a smile and "good morning", ends by thanking them for their attention
  - smoked during the lecture
  - explained what the subject meant to society, what it will mean to the student, why he chose the field as a profession
  - introduced controversial points

2. Generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection fearfulness; generally lowered morale (cont'd)
 d) miscellaneous
  - refused to answer questions by looking away or beginning to lecture again
  - overworks particular phrases
  - used different language than text
  - begins loudly, then decreases until barely audible
  - lectures above the level of most of the students
  - circumscribes the point
  - demanded long grammar exercises
  - called student to the front of the class and demanded a reason for lateness
  - defends the author's point of view whether sensible or not-- puts down the student's criticism --later makes the same criticism
  - elements of chauvanism
  - after a lengthy discourse on irrelevant issues, the class was forced to work overtime
  - discusses trivia
  - discussed own college years in some detail
  - arrives late

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
			2.	Generated feelings of tension, distress, anxiety, frustration, embarrassment, rejection fearfulness; generally lowered morale (cont'd)	
—	—	—	d)	miscellaneous (cont'd) - first out of the class at the end of the period - repetitively interrupted student delivery of assignment	
CLASS TOTAL		**9**			**27**
3. Generated feelings of confidence, appreciation, affection, absence of fear a) made an extra effort (conducted extra classes, conducted tours, gave the call numbers of books) b) miscellaneous - mentioned next day's topic at end of lecture - did not deride student for what seemed to be a pointless question - used his own family situation to illustrate a lecture point		3	3. Loss of faith or confidence in and respect for lecturer a) miscellaneous - frequent use of the phrase, "I think" - sarcastic - spoke harshly to his assistant when the latter was unable to comment on exam papers - laughs at his own joke - inability to put over joke - used tawdry humour to poke fun at important principle	

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

3.	Generated feelings of confidence, appreciation, affection, absence of fear (cont'd)
	
	  b) miscellaneous (cont'd)
	    - aware of intellectual level of class
	    - reviewed last day's lecture before going on
			3.	Loss of faith or confidence in and respect for lecturer (cont'd)
				
				  a) miscellaneous (cont'd)
				    - stressed too much detail
				    - literally read his notes page by page
				    - passes off questions with, "I'm just coming to that"
				    - returned to his office in order to retrieve a page of his notes
				    - unable to answer a straight forward question	

CLASS TOTAL		**8**			**11**

4.	Generated a sense of achievement; generated feelings of personal value to student
	
	  a) used student contributions
	  b) miscellaneous
	    - distributed sample exam questions several weeks before the end of the term, allowed a discussion of them
	    - approves essay topic before written
		2	4.	Was a disrupting influence; disconcerting
				
				  a) made derrogatory remarks about student's intelligence
				  b) miscellaneous
				    - essays handed out in class time, some discussion of them, then went on with regular work
				    - returned to his notes after walking away from in order to ad lib
				    - burst into uncontrollable laughter at Dryden's wit
					2

CLASS TOTAL		**4**			**5**

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
5. Generated feelings of pleasure; appealing					
a) miscellaneous - used college level humour - used a prudish sense of humour, relevant to lecture material - wove elements of personal experience into lecture content - used a class member as principal piece of apparatus in a demonstration	—		—		—
CLASS TOTAL		4			—
6. Helpful, beneficial					
a) miscellaneous - inter-dispersed the material with anecdotes - broke up the class into groups, each group prepared a discussion for presentation - summarized at the beginning of the hour the material proposed to cover	—		—		—
CLASS TOTAL		3			—

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
7. Generated feelings of immediacy with lecture					
a) miscellaneous		—		—	—
- read excerpts from periodicals					
- takes time to answer questions					
CLASS TOTAL		2			—
SUB-AREA TOTAL		41			74
AREA TOTAL		134			124

MAJOR AREA: B. MASTERY OF SUBJECT MATERIAL

SUB-AREA: A. LEARNING, CORRELATING, CLARIFYING,
REVIEWING MATERIAL

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	Facilitated learning and correlating material; clarified; familiarized student with material		1.	Detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to student's confusion	
a)	used audio-visual techniques	20			
b)	encouraged student participation	8	a)	provided error-ridden material (blackboard, prepared sheets)	5
c)	explanations concise, and detailed	6			
d)	paused to repeat important points; paced lecture	4	b)	constantly rephrasing; stammering	3
e)	related difficult material to more simple; drew analogies	4	c)	manifested anger; bullied; insinuated students stupid	3
f)	rephrased in different ways until point established	4	d)	blatantly suggested he was bored and/or unprepared	2
g)	used humour	4	e)	included extraneous material	2
h)	began with broad overview before specific investigation	2	f)	used specialized or advance terms or techniques	2
i)	gave personal attention to wrong answers on written material	2	g)	wordy	2
j)	related own experiences	2	h)	miscellaneous	
k)	miscellaneous			- lectured so quickly no time to get anything down	
	- gave brief summary of previous lecture at beginning of each lecture			- bitter sarcasm	
	- asked student to accept his point of view since lecturer believed most useful for the purposes of the class			- continually interrupted student while talking	
	- gave references			- insufficiently informed; couldn't give help	
	- gave practice exercises			- arrogant manner on being interrupted by question	
	- well organized			- answered query unsatisfactorily; didn't substantiate his view in response to student challenge	
	- thoroughly prepared				
	- ability to command students' attention				

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

1. Facilitated learning and correlating material; clarified; familiarized student with material (cont'd)

   k) miscellaneous (cont'd)
- public speaking ability
- arranged field trips and experiments
- mentioned interesting sidelights without detracting from the subject
- tied in course material with actual happenings in the Provincial Government
- built up curiosity, and anticipation by able description of an event
- gave tests at end of each month
- small essays rather than term essay
- formed a club
- enthusiastic
- demands cover alloted reading

1. Detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to student's confusion (cont'd)

   h) miscellaneous (cont'd)
- criticized text mercilessly, yet held class responsible for it; own point of view often conflicted therewith
- gave no chance to ask questions; none of material in text
- goes off on tangent from original topic
- began to speak before class was silent
- wrote plan of lab. on board and added to it during the lecture
- failed to distinguish when one topic finished and new one begun
- read text with mediocre accent and delivery
- response to question was, "Uh" and a smile
- summarized work, rather than dealing with specific problems
- spoke in generalizations (example)
- gave detailed information at rapid pace for 50 minutes
- difficult points in computation left to students as an exercise
- refused additional help for students making unsatisfactory progress according to their own standards

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
			1.	Detracted from learning; made learning difficult; generally unsatisfactory; made no contribution; added to student's confusion (cont'd)	
—	—	—	h)	miscellaneous (cont'd) - filled in many lectures with slides - gave poor mark for work that disagrees with lecturers interpretation - read notes and wrote on blackboard with back to class - gave details of own research - talks and writes too quickly - takes for granted student remembers all work of previous years - used advanced techniques to facilitate solution of problem - emphasis on layout rather than on content of term essays	
CLASS TOTAL		73			46
2. Facilitated reviewing material					
a) miscellaneous - gave brief summary of term work at completion of section - follows prescribed text	—	—		—	—
CLASS TOTAL		2			—
SUB-AREA TOTAL		75			46

MAJOR AREA: B. MASTERY OF SUBJECT MATERIAL

SUB-AREA: B. ORIENTATION

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

1. Facilitated gaining perspective, seeing material from different points of view

   a) demonstrated his biases, points out other points of view   2

   b) invited guest lecturer   2

   c) miscellaneous
- reviewed problems dealing with professional work stemming from the course
- attempts to integrate material with other relevant courses
- habitual reference to material of previous lecture before beginning
- directs questions to students with special knowledge (knows interest of each student)
- discourages extracurricular activity
- places outline of lecture on the board
- pokes fun at "frightening material"

1. Students unsure of what to be covered

   a) Miscellaneous
- does not follow given outline

CLASS TOTAL   11   1

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
2. Facilitated pre-reading, or planning time to be spent on the course					
a) distributed lists of provided topics for entire course; outlines the entire course at beginning of term	8	—		—	—
CLASS TOTAL	8				—
SUB-AREA TOTAL	19				1
AREA TOTAL	94				47

MAJOR AREA: C.   TEACHING METHODS

SUB-AREA: A.   PRESENTATION OF MATERIAL

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1. Maintained good classroom control			1. Distracting		
			a) moved about while lecturing		4
a) handled attention-getting student with firmness		2	b) miscellaneous		
b) politely, but firmly refused charity collections during lecture		2	- inappropriate mannerisms		
c) refused to admit or threw out late-comers		2	- female wearing excessive make-up, loud clothing		
d) miscellaneous			- habit of saying "uh" every phrase or so		
- asked student to stop smoking quietly - didn't interrupt the lecture			- presumed to amuse class by making fun of class member		
- turned off "hood" in chemistry			- self-conscious and nervous		
- removed a fainting student from the examination			- presented material dryly		
- apologized for lateness			- presented material straight from book		
- asked student to leave the room firmly but politely					
- walked out after getting no results from reprimanding students because of noise					

CLASS TOTAL		12			11

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
2.	Did not waste class time (saved time)		2.	Difficult to follow	
	a) admitted lack of knowledge or preparation	2		a) spoke monotonously	3
	b) gave topics to be discussed ahead of time	2		b) jumped ahead or back from topic	2
	c) used slides or practical demonstrations	2		c) miscellaneous - speaks monotonously - too speedy - quoted extensively from source literature - talks while working at the blackboard	
CLASS TOTAL		6			9
3.	Well organized, orderly presentation; continuity of material		3.	Wasted class time	
	a) wrote major topics to be covered on blackboard	2		a) arbitrarily demanded students answer, even if obviously not prepared	2
	b) presented a brief summary of last lecture	2		b) read sheets of notes or definitions	2
	c) worked out problems before lecture	1		c) miscellaneous - incapable of answering question without long deliberation - changed symbols in the course of a single proof - said, "make out with what you've got" - never used a note during the course of a lecture - asked the whole class questions, not individuals	
CLASS TOTAL		5			9

156

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

4. Conversational style
 	
  a) miscellaneous
    - familiar with material
    - natural interest in subject
			4. Difficult to get good, well organized notes
			
			  a) miscellaneous
			    - repeated topic already covered
			    - too much chaff
			    - conducts the class as a study group
			    - reads notes
			    - lectured too quickly or tried to cover too much
			    - topics discussed in random fashion		

CLASS TOTAL		2			6

5. Easily heard
 	
  a) miscellaneous
    - voice loud and clear
    - spoke clearly and concisely
			5. Material missed or lost
			
			  a) lectured too fast, refused to stop 3
			  b) miscellaneous
			    - refused to put new terms on the board when asked
			    - begins immediately after the bell
			    - without attempting to get class's attention
			    - arrives late, prolongs lecture past buzzer		

CLASS TOTAL		2			7

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
.				6. Class hurried	
				a) miscellaneous	
				- spends disproportionate time on favourite subject	
—	—	—		- tried in vain to prove an argument	
				- left out the simpler steps in derivation of a complicated formula	
				- used all hour writing formula on board	
CLASS TOTAL					4
SUB-AREA TOTAL	27				45

MAJOR AREA: C.   TEACHING METHODS

SUB-AREA: B.   STUDENT PARTICIPATION

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

1. Encourages student participation

  a) asked leading questions or made
     provocative comments   **5**
  b) immediate, serious interest in
     student suggestions or questions   **4**
  c) appointed group to lead discussion;
     organized seminars   **3**
  d) miscellaneous
    - defined and gave a few examples
      of what beliefs are, drawing a few
      examples from his own experiences
    - mimeographed a list of poems he
      wished read by a certain date
    - appointed another class member
      to read and criticize a report
      prepared by another student
    - moved to seminar room expressed
      his desire to have students smoke
      if they wished
    - criticized student's questions
      lacking forethought
    - asked for general definitions of
      abstract ideas
    - encouraged students to ask questions

1. Discouraged student queries

  a) ridiculed questions or answers   **4**
  b) miscellaneous
    - spoke to student about wasting
      class time when asking point-
      less question
    - used student as a pivot point
      as he walked back and forth
    - ignores student with hand up
    - laconically replies to question
    - answers questions longwindedly
    - leaves class immediately at bell
    - treated questions in a con-
      descending manner

CLASS TOTAL   19   11

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
			2.	Discouraged class discussion or interaction	
			a)	dictated from detailed notes	2
			b)	sarcastic, discourteous	2
			c)	miscellaneous	
—	—	—		- stated anyone wishing to talk would be asked to leave the room	
				- didn't welcome questions or interruptions	
				- jokingly handled student question, offered no explanation	
				- free indulgence of admitted prejudices	
				- ignored questions that did not immediately fall within the scope of his attention	
CLASS TOTAL	—				9
SUB-AREA TOTAL	19				20
AREA TOTAL	46				66

MAJOR AREA: D. PERSONALITY TRAITS

SUB-AREA: A. TEMPERAMENTAL, DYNAMIC AND MOTIVA-
TIONAL TRAITS

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1.	took a personal interest in students; considerate		1.	Seemed insensitive to class's reaction	
a)	gave personal assistance	2	a)	miscellaneous	
b)	requested student visit him in office	2		- consistent illustration of points from his own associations and experience	
c)	miscellaneous - gave twelve extra classes - invited the student for dinner - called on students by name to ask questions - gave encouragement			- followed the text too closely - wrote illegibly on the blackboard, and erased	

CLASS TOTAL	8		3

CLASS		TOTAL	CLASS		TOTAL
2.	Seemed sincere		2.	Seemed lazy, disinterested, blase	
a)	miscellaneous - explained his lateness - pointed out that he was willing to consider any questions after the hour		a)	miscellaneous - material taken from the text and given no further treatment - stated that he didn't care if the students came or not--he wouldn't take any attendance - required student to read aloud	

CLASS TOTAL	2		3

CLASS	EFFECTIVE	TOTAL.	CLASS	INEFFECTIVE	TOTAL

3. Miscellaneous (tractful, sensitive, flexible, trustworthy)

   a) miscellaneous
- acted as a moderator while students had a vigorous discussion
- appeared embarrassed and laughed when class laughed at what was a recognizably ambiguous statement
- asked student to see him privately when interrupted by an irrelevant question
- lack of prejudice
- praised work first before critically evaluating it

3. Miscellaneous (unbalanced, embittered, over-confident, afraid)

   a) miscellaneous
- treatment of students as complete ignorants
- referred to mentally ill as "those crazy people"
- spices lecture with inappropriate stories about mental illness
- read the morning paper before class
- told the class that his opinion was the only one that counted in his class
- continually harping on outdated material and defeated proposals
- ignored students' raised hands
- looked at the student insinuating that he was stupid
- takes the shyest student to the front of the class and tortures him like a kid with a bug on the end of a pin
- dictates the lecture so that students can copy every word
- re-wrote student essays to conform to his own wording
- smoked in a room wherein restrictions were posted
- unable to give a satisfactory explanation to the class's challenge of the validity of statistics
- gave a hurried and garbled account
- ignored student who had prepared ahead

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
—	—	—	3.	Miscellaneous (unbalanced, embittered, over-confident, afraid) (cont'd) a) miscellaneous (cont'd) - informed the class that they had to work harder and set up his own performance in school as a standard - is like a tape recorder, turned on at the beginning, turned off at the end - stated it was unnecessary to copy lecture material into notes	
CLASS TOTAL	5				18
SUB-AREA TOTAL	15				24

MAJOR AREA: D. PERSONALITY TRAITS

SUB-AREA: B. ABILITY TRAITS

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL

1. Seemed alert, aware of problems and controversial subjects; evidence of good knowledge of material; interested in work

  a) miscellaneous
- explained difficulties experimenter had when discussing a drug
- presented material with zest
- discussed current political happenings
- asked for questions from the class
- indicated different approaches, and clearly showed where his own biases are
- showed where opinions made poor use of the facts
- filled out a poor speech with solid information
- admitted the validity of some student's arguments
- used facts to show how the theory had been derived
- handled the material as if it were important enough to sustain contoversy and discussion
- clear, unhurried presentation
- used no notes
- widely read

1. Poorly prepared, poor planning

  a) miscellaneous
- regular failures of classroom experiments
- ran out of time for the discussion of tables that one-quarter of time had been spent putting on board
- spends undue length of time at the beginning of the year, necessitating two extra sessions at the end of the year
- in using a film projector film torn, lamp burnt out, no operator or substitute machine
- read foreign language novel with no additional comment
- rambled and repeated himself
- discovered a mistake after lengthy, detailed presentation
- asked for a question, got one, unable to solve
- gave no reasons for finishing a lecture fifteen minutes early
- made many false starts and many long periods of silence when answering
- tries to fill in the lecture with irrelevant material

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
1. Seemed alert, aware of problems and controversial subjects; evidence of good knowledge of material; interested in work (cont'd)		—		—	—
a) miscellaneous (cont'd) - makes a point of mentioning the point that he didn't know last day					

CLASS TOTAL		14			11

			2. Generated the impression of incompetence		
			a) filled in gaps in lecture with "uhs"		2
			b) miscellaneous - couldn't answer question from the text - apologized for not having bibliography prepared - made a poor attempt at pronouncing the word 'enantiotropic' - repetitive use of the phrase, "don't philosophize"		

CLASS	EFFECTIVE	TOTAL	CLASS	INEFFECTIVE	TOTAL
				2. Generated the impression of incompetence (cont'd)	
—	—	—	b)	miscellaneous (cont'd) - said "Oh, well, it isn't very important anyway", when student failed to give meaningful comments about a poem - demonstrated no discipline	

CLASS TOTAL	—				8
SUB-AREA TOTAL	14				19
AREA TOTAL	29				43

APPENDIX D

GENERAL OPINIONS, BY FREQUENCY, UNDER EACH CLASS

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: A. THE LECTURE METHOD (CONDUCT, PRESENTATION AND DELIVERY)

CLASS		TOTAL
1.	should direct lecture at "ability level" of class	5
2.	should make use of outlines	3
3.	should present material in as most interesting manner as possible	3
4.	should distribute mimeographed material	2
5.	should be well organized	2
6.	miscellaneous items related to voice quality	
	- pitch and intensity should be varied	
	- should be taught elocution	
	- should be a public speaker	
	- delivery should be in simple, conversational voice	
7.	miscellaneous references related to speed of presentation	
	- should not speak too fast	
	- should give student time to get all points down	
8.	miscellaneous references to the lecture method	
	- oratorical powers may be of advantage in quality of teaching	
	- should orient course to education per se rather than examinations and credit	
	- history can be taught in story form	
	- lecture should consist of an informal speech rather than reading of notes	
	- illustrations are useful in moderation	
	- lecturers from England tend to condense the steps in their proofs	
	- should repeat particularly important points	
	- textbook should not be followed as if gospel	
	- lecturer should direct student to other references if text insufficient	
	- lecturer should leave questions in student's mind as well as providing pat answers	
	- lecture courses generally an unsatisfactory method of teaching	

SUB-AREA TOTAL   32

APPENDIX D (CONT'D)

MAJOR AREA: A.   TEACHING METHODS

SUB-AREA: B.   THE DISCUSSION METHOD

CLASS   TOTAL

1. should promote leading questions, or make time
    for discussion   4
2. miscellaneous references to the expression of
    student preferences for discussion
    - discussion groups excellent
    - class discussion and student thoughts should
      enter lectures
    - remember classes in which discussions held
    - should be more interaction between lecturer and
      student
    - prefer discussion to lectures
    - lecture should consist of discussion at which
      lecturer is leader or moderator
    - lectures should consist of a guiding and discussion
      period
    - discussions should occur in small groups where
      can be held profitably

SUB-AREA TOTAL   12

SUB-AREA: C.   SPECIAL METHODS

1. lectures should be in small classes   4
2. miscellaneous references related to treatment
    of students
    - lecturer should use common courtesy and under-
      standing
    - shouldn't treat students as if high school students,
      i.e., try to get all students through their courses
3. miscellaneous references related to use of field
    trips
    - should go on field trips to related concerns off
      campus
    - should arrange field trips
4. miscellaneous references to special methods
    - psychology courses could have been more interesting
      with the introduction of visual aids

APPENDIX D (CONT'D)

MAJOR AREA: A. TEACHING METHODS

SUB-AREA: C. SPECIAL METHODS (CONT'D)

CLASS   TOTAL

4. miscellaneous references to special methods (cont'd)
    - guest lecturers add to a lecture if they talk
      on subjects appropriate to the subject
    - should use tape recorder if only going to
      lecture
    - lectures should be in the form of seminars
    - should arrange appointments to see students if
      requested, and keep same
    - professor of literature should be able to act

SUB-AREA TOTAL   14

SUB-AREA: D. SELECTION AND EMPHASIS
OF SUBJECT MATERIAL

1. miscellaneous items related to biased content
    - should try as far as possible in beginning years
      not to colour material
    - should notify students if value judgments being
      made
    - objectivity often nonsense
2. miscellaneous items related to use of humour
    - no continual tone of humour unless lecturer can
      avoid detracting from lecture material
    - should have a dry sense of humour, but not let
      it interfere with the progress of the lecture
3. miscellaneous references to the selection and
    emphasis of subject material
    - should inform students, especially in the social
      sciences what is yet to be learned

SUB-AREA TOTAL   6

APPENDIX D (CONT'D)

MAJOR AREA: A. ` TEACHING METHODS

SUB-AREA: E. ,APPRAISAL METHODS

<u>CLASS</u>   <u>TOTAL</u>

1. miscellaneous references related to essays
   - emphasis in Arts courses should be on term
     essays
   - essays should not be handed back without written
     comment
2. miscellaneous references related to use of formal
   examinations
   - should provide prepared exam questions
   - should find out how students are reacting
     to lecturers by some means other than exams
     and make adjustments accordingly
3. miscellaneous references related to term assignments
   - assignments should be of such a nature that
     original thought and logic is required
   - assignments should reduce the number of topics
     such that independent investigation and thinking ,
     could be realized

_____

SUB-AREA TOTAL   6

_____

SUB-AREA: F. DISCIPLINE AND CONTROL

1. miscellaneous references to discipline and control
   - lecturer should not concern themselves with
     absences and homework
   - class administration should be de-emphasized
   - pronounced strictness has no place in university
     setting

_____

SUB-AREA TOTAL   3

_____

AREA TOTAL   73

_____

APPENDIX D (CONT'D)

MAJOR AREA: B.   PERSONALITY TRAITS

SUB-AREA: A.   TEMPERAMENTAL, DYNAMIC AND MOTIVA-
                 TIONAL TRAITS

CLASS   TOTAL

1. should show interest and enthusiasm   7
2. miscellaneous references to temperamental,
    dynamic and motivational traits
    - should try to stimulate the group and put
      enthusiasm into his words
    - lecturers personality should suit the students;
      student benefits most if such is the case
    - lecturers are interesting, well informed people
      with an ability to teach, but not lacking in
      human frailties
    - students often choose courses according to the
      testimonials of ability and technique of the
      lecturers
    - quality of lecturers should be stressed by the
      university
    - should be an individualist
    - most of the conflicts between student and
      lecturer are because of personality clashes
    - good lecturers make the course, not the subject
      material
    - lecturer should enjoy teaching
    - should admit ignorance of subject and not attempt
      to cover up with sarcasm
    - should demonstrate initiative

SUB-AREA TOTAL   18

SUB-AREA: B.   ABILITIES OR COGNITIVE TRAITS

1. should have knowledge of how, or ability to present
    material   6
2. should be prepared   5
3. should have knowledge of subject material   4

SUB-AREA TOTAL   15

AREA TOTAL   33

FINAL TOTAL   106