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This investigation was conducted to determine the construct validity of the Teaching Situation Reaction Test (TSRT), which is used to assess preservice education students' reactions to teaching situations. (The testee responds by ranking four answers or options provided for each question regarding the situation.) Specifically, the study investigated relationships between the TSRT (including separate correlations for subscales and option rankings) and six personality traits (objectivity, sociability, control, confidence, reflectiveness, and empathy) identified with the TSRT and measured by six selected tests. Each student in the sample completed all six tests and the TSRT. Factor analysis and correlation of data revealed that the TSRT is related to objectivity, control, confidence, and empathy; that some TSRT factors (subscales) are related to all the traits except confidence; that there is a consistent relationship between option rankings of TSRT items and control; and that females have more relationship with empathy and less with control (the reverse is true for males). Implications of the study include the possibility of developing personality profiles of reactions to situations posed in the TSRT and of using the TSRT to assess preservice courses and to determine areas of teacher performance which could be developed in preservice courses. Further research is needed to improve the TSRT as a research tool for preservice education. (LP)

Final Report

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A STUDY OF THE CONSTRUCT VALIDITY OF THE TEACHING SITUATION REACTION TEST

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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TABLE OF CONTENTS

LIST OF TABLES

TABLES

TABLES
(Continued)

ILLUSTRATION

Figure Page

SUMMARY

This study was designed to investigate the construct validity of the Teaching Situation Reaction Test as an instrument for the assessment of pre-service education student's reactions to teaching situations.

As a result of examining the T.S.R.T. and consulting with the authors, certain factors were proposed as being built into the T.S.R.T. These factors were objectivity, sociability, control, confidence, reflectiveness, and empathy. Operational measures of these factors were selected which had proven to be valid and reliable as research instruments.

Then, the following questions were posed:

1. Is there a relationship between the T.S.R.T. and the factors measured by the other scales used in this study?

2. Is there a relationship among factors in the T.S.R.T. and the factors measured by the other scales used in this study?

3. Is there a relationship between the option rankings of the T.S.R.T. items and the factors measured by the other scales used in this study?

The sample for this study consisted of an incidental non-probability sample of 238 pre-service education students at The Ohio State University, comprised of 138 females and 100 males. The data were properly arranged and punched on IBM cards which were submitted to an IBM computer using a 100 x 100 factor analysis program with rotation and product moment correlation. The data were analyzed for the total sample and separately for the males and females.

The findings show that:

1. As an instrument, the T.S.R.T. appears to be related to the factors of objectivity, control, confidence and empathy.

2. There appears to be a relationship among some factors in the T.S.R.T. and the factors of control, empathy, sociability, objectivity, and reflectiveness. There also appears to be some concurrent relationships between

control and empathy.

3. It appears that there is a consistent relationship between the option rankings of the items of the T.S.R.T. and control. The second highest relationship is found with empathy. There are also some scattered relationships with reflectiveness, sociability, objectivity, and confidence.

4. There appears to be a difference in the relationships that were found for the female and male sample. The females tend to have more relationships with empathy and less with control while the males have more relationships with control and less with empathy.

The findings of this study have added descriptive data about the construct of the T.S.R.T. It seems plausible that if you know the personality traits or models of personality that relate to performance on the T.S.R.T., it would be possible to develop personality profiles of reactions to situations which are posed in the T.S.R.T. It appears that one such profile emerges from the findings of this study.

This profile consists of a relationship between increased skill in reacting to classroom situations and higher scores on empathy and lower scores on control. A second dimension of this profile consists of an inverse relationship between skill in reacting to classroom situations and scores on control.

If it is possible to develop profiles of reactions to the T.S.R.T., it could be used in pre-service education courses in at least two ways,

The T.S.R.T. could be used to determine areas of teacher performance that could be more fully developed through pre-service education and therefore provide the rationale for a more individualized program.

Since there is some evidence that the T.S.R.T. relates to in-service teacher performance, it seems plausible that the instrument could be used in a pre and post design in a pre-service education course to assess the performance of that course in terms of growth made by a prospective teacher.

CHAPTER I

INTRODUCTION

One of the continuing problems facing those who are involved in teacher education is the assessment of the pre-service education courses which comprise the teacher education program. The major purpose of the typical pre-service education program is to prepare students to perform with reasonable success in an anticipated teaching situation. Courses intended to improve the quality of a person's performance in a complex situation like teaching are notoriously difficult to conceptualize, implement, and evaluate. Pre-service teacher education courses have been widely criticized for their lack of content, irrelevance, and especially because of a widespread belief that they do not make a difference in the prospective teacher's ultimate classroom performance.

Spurred on by these criticisms, educators of pre-service teachers have introduced new content which is believed to be much more relevant to the preparation of competent teachers. Interaction analysis, micro-teaching situations, simulated materials, and basically new approaches to the whole professional sequence have been inaugurated. But, there is still the basic problem of whether these innovations make a difference in the prospective teacher's ultimate performance. How does one determine whether a general methods course, for example, at the pre-service level has improved the quality of a persons potential classroom performance? How does one determine what is an appropriate general methods course experience for different students? How does one determine whether students are performing so far below the expected level that they might better be counseled with before proceeding further in teacher preparation? These kinds of evaluative questions about pre-service programs remain unanswered.

The Teaching Situation Reaction Test (referred to as the T.S.R.T.) was designed to get research answers to such questions as these with respect to pre-service course experiences in professional education. The instrument is intended to measure reactions to teaching situations which are intentionally subject matter neutral. The reactions are concerned with such common aspects of teaching as planning, classroom management, and teacher-pupil relationships.

The T.S.R.T. has demonstrated predictive validity at significant levels (.05) in five out of six studies of pre-service teachers and two out of two studies of in-service teachers. The test-retest reliability in two studies remained consistent at .84. Two studies of fake-resistance yielded data to support the belief that students cannot fake their responses and improve their scores.

Sample size for these studies has ranged from N = 21 to N = 106. Studies of the construct validity have demonstrated small positive relationships between factors measured by the Rokeach Dogmatism Scale, the Barrett-Lennard Relationship Inventory, the Minnesota Teacher Attitude Inventory, and the California Test of Mental Maturity on samples ranging from N = 51 to N = 186. Twelve other studies involving the T.S.R.T. give indication that the instrument is actively being used in research in teacher education. (6)

The T.S.R.T. gives clear evidence of promise as a research tool in the study of pre-service teacher education. What is not clear is the nature of the factors of teacher performance that the test measures. The test was originally conceived as a paper-and-pencil test of performance. The lack of clarity stems from the fact that the theory of teacher performance underlying the test was loosely conceived and simply interwoven into the situations and possible responses. Now with the test performing as well as it does it is necessary, if the test is to fulfill its research promise, to determine the factors of teacher performance that the T.S.R.T. is measuring.

This study arises out of the pressing need to know more about the factors which might be found in the T.S.R.T.

STATEMENT OF THE PROBLEM AND OBJECTIVES

The purpose of this study is to determine if certain factors might be measured by the T.S.R.T. and on the basis of this data, make recommendations relative to ways in which the T.S.R.T. might be revised. It is, therefore, a study of the construct validity of the T.S.R.T. as an instrument for the assessment of pre-service education students reactions to teaching situations. In this framework the following objectives seem appropriate:

1. To identify factors which might be found in the T.S.R.T.

2. To identify factors which might be found in the options of each item of the T.S.R.T.

3. To make recommendations relative to ways in which the T.S.R.T. might be revised, based upon the findings of this study.

QUESTIONS

Before proposing specific questions that the study would attempt to answer, the items of the T.S.R.T. were carefully examined to determine factors that might be involved in the

instrument. Consultation with the authors helped to clarify the original beliefs underlying the instrument. On this basis, certain factors were proposed as being built into the T.S.R.T. These factors were: objectivity, sociability, control, confidence, reflectiveness, and empathy.

Then the following questions were posed:

1. Is there a relationship between the T.S.R.T. and the factors of:

   1.1 objectivity?
   1.2 sociability?
   1.3 control?
   1.4 confidence?
   1.5 reflectiveness?
   1.6 empathy?

2. Is there a relationship among factors in the T.S.R.T. and the factors of:

   2.1 objectivity?
   2.2 sociability?
   2.3 control?
   2.4 confidence.
   2.5 reflectiveness
   2.6 empathy?

3. Is there a relationship between the item rankings of the T.S.R.T. options and the factors of:

   3.1 objectivity?
   3.2 sociability?
   3.3 control?
   3.4 confidence?
   3.5 reflectiveness?
   3.6 empathy?

INSTRUMENTATION

The quality of the results of this study depends substantially upon the ability of the scales employed to measure the factors which might be involved in the T.S.R.T. The scales, therefore, should give promise of identifying factors thought to be built into the T.S.R.T. and have demonstrated validity and reliability in previous research. In addition, it seemed important not to replicate inconclusive prior studies by using scales which have been used in prior T.S.R.T. construct studies. The scales chosen were selected in the following manner.

1. After certain factors were proposed as being built into the T.S.R.T., a careful analysis of Buros (3) and other sources (1,5) was made to determine scales which measured factors proposed as being a part of the T.S.R.T. This analysis identified those measures of these factors which had proven to be valid and reliable as research instruments.

2. Scales which had previously been used in inconclusive construct studies of the instrument were deleted.

Based upon the above rationale, the following scales were selected for inclusion in this study:

1. The objectivity scale of the Guilford Zimmerman Temperament Survey.
2. The sociability scale of the Guilford Zimmerman Temperament Survey.
3. The California F-Scale
4. The confidence scale of the Sixteen Personality Factor Questionnaire.
5. The reflective scale of the Thurstone Temperament Schedule.
6. The intraception (empathy) scale of the Edwards Personal Preference Schedule.

DEFINITION OF TERMS

For the purpose of this study, the following definitions will be used:

1. Sociability is characteristic of a person who likes social activity and contacts, formal and informal. The operational measure of this construct will be the sociability scale of the Guilford Zimmerman Temperament Survey.

2. Objectivity is characteristic of a person who takes an objective, realistic view of things, is alert to his environment, and can forget himself. The operational measure of this construct will be the objectivity scale of the Guilford Zimmerman Temperament Survey.

3. Control indicates an authoritarian or anti-democratic stance which is characterized by a closed outlook and subservience to leaders and authority. The operational measure of this construct will be the California F-Scale.

4. Confidence refers to an individual who is resolute and accustomed to going his own way, but is not necessarily dominant in his relation to other people. The operational measure of this construct will be the confidence scale of the Sixteen Personality Factor Questionnaire.

5. Reflectiveness is characterized by meditation and reflective thinking. The operational measure of this construct will be the reflectiveness scale of the Thurstone Temperament Schedule.

6. Empathy refers to a persons ability to put one's self in another's place. The operational measure of this construct will be the intraception scale of the Edwards Personal Preference Schedule.

DESIGN OF THE STUDY

The T.S.R.T. and the other six scales used in this study were administered to an incidental non-probability sample of 238 pre-service education students at The Ohio State University. These students were enrolled in Education 535 (Theory and Practice in Secondary Education) during the Winter Quarter, 1967.

The data compiled on this sample consisted of (1) scores on the T.S.R.T., (2) scores on factor created sub scales of the T.S.R.T., (3) the individual ranking of the options of each item of the T.S.R.T., and (4) scores on the following scales:

1. The objectivity scale of the Guilford Zimmerman Temperament Survey.
2. The sociability scale of the Guilford Zimmerman Temperament Survey.
3. The California F-Scale.
4. The confidence scale of the Sixteen Personality Factor Questionnaire.
5. The reflective scale of the Thurstone Temperament Schedule.
6. The intraception (empathy) scale of the Edwards Personal Preference Schedule.

The data were properly arranged and punched on IBM cards and these cards were then submitted to an IMB 7094 computer using a 100 x 100 factor analysis program with varimax rotation and product-moment intercorrelation matrix programed by Bradford. (2)

The data were analyzed to determine if relationships existed between:

1. The T.S.R.T. and the factors measured by the other six scales.
2. Factors in the T.S.R.T. and the factors measured by the other six scales.
3. The option rankings of the T.S.R.T. items and the factors measured by the other six scales.

Since there is some evidence that sex differences play a role in performance on the T.S.R.T. (7), this study interpreted the data for the total sample and separately for males and females.

ASSUMPTIONS

The following assumptions were inherent in this study:

1. The sociability scale of the Guilford Zimmerman Temperament Survey provided a valid measure of sociability.

2. The objectivity scale of the Guilford Zimmerman Temperament Survey provides a valid measure of objectivity.

3. The California F-Scale provides a valid measure of control.

4. The confidence scale of the Sixteen Personality Factor Questionnaire provides a valid measure of confidence.

5. The reflective scale of the Thurstone Temperament Schedule provides a valid measure of reflectiveness.

6. The intraception scale of the Edwards Personal Preference Schedule provides a valid measure of empathy.

7. The population, consisting of pre-service education students in their first professional course, brings to this research situation a certain point of view which characterizes their orientation to classroom situations.

CHAPTER II

THE PROCEDURE

INTRODUCTION

The major purpose of this study was to investigate the construct validity of the Teaching Situation Reaction Test as an instrument for the assessment of pre-service education students reactions to teaching situations. Specifically, the study attempted to identify factors which might be found in the T.S.R.T. and the options of each item of the T.S.R.T. In this chapter the author will delineate the procedures utilized in this study to collect and analyze data relative to answering the following questions which were posed in Chapter I:

1. Is there a relationship between the T.S.R.T. and the factors measured by the other scales used in this study?
2. Is there a relationship among factors in the T.S.R.T. and the factors measured by the other scales used in this study?
3. Is there a relationship between the option rankings of the T.S.R.T. items and the factors measured by the other scales used in this study?

SAMPLE

The sample for this study consisted of 238 pre-service education students who were enrolled in Education 535, Theory and Practice in Secondary Education, at The Ohio State University during the Winter Quarter, 1967. This group of 138 females and 100 males comprised an incidental nonprobability sample for the purpose of this study.

Since the T.S.R.T. was designed to assess pre-service education students reactions to teaching situations, this sample seemed to be an appropriate one for a study of the construct validity of the instrument.

Education 535 is a required first professional course for all Ohio State University students preparing to teach in secondary schools. The course focuses on four major dimensions which are: (1) the study of verbal interaction; (2) the study of behavioral objectives; (3) observation and participation in the public schools; and (4) simulated teaching experience in the college classroom.

Students in Education 535 during the Winter Quarter, 1967, were informed that their section of the course was participating

in a research study involving the Teaching Situation Reaction Test. The nature of this study was not clearly spelled out to the students but they were informed where they might go to get the results of the various tests they responded to and a description of the research study in which they were participating. Also, students were assured that the scores they received on the various tests would in no way effect the grades they would earn in the course.

TESTING INSTRUMENTS USED

Seven testing instruments were used in this study and each instrument was administered to the total sample. The following paragraphs briefly describe these instruments.

Van Steenberg in his review of the Guilford Zimmerman Temperament Survey reported by Buros (3) describes the Survey as a combination of traits previously defined by Guilford and others via factor analysis. The Survey contains 300 items, thirty items per trait, which the person taking the test responds to with yes, undecided, or no. This study is concerned with the objectivity and sociability scales of this instrument. Various estimates of reliability were made and the coefficients range from .75 to .85. Intercorrelations between traits are small enough to indicate that the Survey measures ten separate dimensions. The validity of the scores is principally based on the factor analytic studies in which the traits were isolated.

Adorno (1) and his colleagues report that the California F-Scale attempts to measure the potentially anti-democratic personality (authoritarianism). The point is made that not all features of this personality pattern are touched upon in this scale, but that the scale embraces a fair sample of the ways in which this pattern characteristically expresses itself. The reliability for this scale is reported as .90 and all of the items on the scale differentiate significantly between the high and low quartiles.

The Sixteen Personality Factor Questionnaire was developed to measure primary personality factors based on general psychological research. This study employed the confidence scale of this instrument. This factor characterizes an individual who is resolute and accustomed to going his won way, but is not necessarily dominant in his relation to other people. Cattell (4) reports a reliability coefficient of .61 for this scale.

The Thurstone Temperament Schedule was designed to emphasize important, stable traits which describe how normal, well adjusted people differ from each other. This study employed the reflective scale of this Schedule. This type of temperament is characterized by meditation and reflective thinking. The test consists of forty statements which are marked yes, no, or cannot decide. Thurstone (12) reports reliability on the reflective scale as .73 for men

and .62 for women. The test-retest reliability coefficient for this scale is .75.

The Edwards Personal Preference Schedule intended to assess the relative strengths of fifteen manifest needs selected by Murray's need system. The Survey consists of 225 paired statements which the testee is to mark according to his feelings. This study is only concerned with the student score on the intraception scale which measures a persons ability to put one's self in anothers' place, i.e., empathy. Edwards (8) reports a split-half reliability for the intraception scale as .79, corrected by the Spearman-Brown formula. The test-retest reliability coefficient for this scale is reported as .86 based on a sample of eighty-nine students at The University of Washington who took the instrument twice within a one-week interval.

The Teaching Situation Reaction Test is the instrument which was under investigation in this study. The T.S.R.T. consists of forty-eight items and is a forced choice instrument in which the testee is asked to respond to a classroom situation by ranking a set of four possible solutions. After careful examination, certain factors were proposed as being built into the instrument. These factors were: objectivity, sociability, control, confidence, reflectiveness, and empathy. The study was concerned with an investigation of the relationship of these factors to the T.S.R.T. A copy of the T.S.R.T. may be found in the Appendix.

COLLECTION OF DATA

The Teaching Situation Reaction Test and the other six scales used in this study were administered to the sample of pre-service education students at The Ohio State University who were enrolled in Education 535 during the Winter Quarter, 1967. These scales were administered to eleven sections of this class which were taught by six different instructors. In all cases, the directions for each instrument were read aloud by the instructor and every effort was made to clarify directions.

Students responding to the instruments were asked to print their names on the answer sheets for each instrument, as indicated in the directions. A total of 238 students responded to each instrument and identified themselves by name. Some sixty other students were eliminated from the study because they did not complete all instruments or failed to identify themselves by name.

STATISTICAL PROCEDURES

To answer the questions which were posed in this study, it was necessary to subject the data to: (1) a factor analysis among scores on the T.S.R.T. and the scores on the other scales used in this study; (2) a factor analysis of the T.S.R.T. to determine sub scales and then a product-moment correlation between these sub scales and scores on the other scales used in this study; and (3) a product-moment correlation between the ranking of the options of each item of the T.S.R.T. and the scores on the other scales used in this study.

To answer question one, the data were subjected to a factor analysis in which the factor space consisted of scores on the T.S.R.T. and scores on the other scales used in this study. The scores on these variables were intercorrelated and the correlation matrix was factored by the principal axes method. The major feature of the principal axes method is the fact that it extracts a maximum amount of variance as each factor is calculated. In this manner, the correlation matrix is expressed in the smallest number of factors. This particular solution was programed so as to allow the extraction of all positive roots and those factors which accounted for the total estimated communality were rotated to orthogonal simple structure by means of the Varimax method advocated by Kaiser. (11).

1. The largest variable loadings on all of the rotated factors were selected. This procedure allowed each variable to contribute its loading of greatest magnitude to the imterpretation of the factors.

2. All loadings of .25 and larger were also considered. This practice insured that all fairly large loadings would also be included in the interpretation.

To answer question two, it was necessary to take two steps. The first step involved a factor analysis of the T.S.R.T. to determine sub-scales of the instrument. These sub-scales consisted of the largest item loadings on all the factor created sub-scales and these items were then scored to get a sub-scale score. The factor space for this analysis consisted of scores on the forty-eight items of the T.S.R.T. The computational procedure for this analysis was the same as the factor analysis procedure used in question one.

The second step necessary to answer question two sonsisted of computing a product moment correlation between the various sub-scale scores of the T.S.R.T. and the scores on the other scales used in this study. This computation was carried out by the IBM 7094 computer using the following formula:

$$r = \frac{NEXY - (EX)\ (EY)}{\sqrt{\left[NEX^2 - (EX)^2\right]\ \left[NEY^2 - (EY)^2\right]}}$$

In order to test the significance of the computed correlations, the following formula suggested by Guilford (9) was used:

$$r_o = \frac{1}{N-1}$$

The final step is:

$$\frac{r}{r_o}$$

To answer question three, a product moment correlation was computed between the rankings of the 192 options of the T.S.R.T. and the other six scales. The T.S.R.T. consists of forty-eight items and is a forced choice instrument in which the testee is asked to respond to a classroom situation by ranking a set of four possible solutions. The way in which the sample ranked the options was correlated with the other six scales used in this study. This analysis provided 1,152 correlations.

CHAPTER III

Results and Findings

INTRODUCTION

The purpose of this chapter is to present the findings of this study as they relate to questions posed in Chapter I. The format for this chapter will include: (1) a statement of the question; (2) a description of the procedure used to answer the question; and (3) a discussion of the findings.

QUESTION ONE

Is there a relationship between the T.S.R.T. and the factors of:

1.1 objectivity?
1.2 sociability?
1.3 control?
1.4 confidence?
1.5 reflectiveness?
1.6 empathy?

As indicated earlier, question one was answered by submitting the data to a factor analysis in which the factor space consisted of scores on the T.S.R.T. and scores on the operational measures of objectivity, sociability, control, confidence, reflectiveness, and empathy.

The rotated factor loadings which were utilized to interpret the factors in regard to the question posed were determined by selecting the largest variable loading on all the factors and also considering all factor loadings of .25 and above.

Findings reported in Table 1 show that when the total sample is considered, this factor space consisted of two rotated factors which account for the total estimated communality.

TABLE 1

ROTATED FACTORS AND LOADINGS FOR
SEVEN VARIABLES - TOTAL SAMPLE

Variables	Rotated Factors and Loadings	
	1	2
T.S.R.T.	.437	.024
Objectivity	.333	.459
Sociability	-.046	.581
Control	-.508	.066
Confidence	-.180	-.047
Reflectiveness	.061	-.296
Empahty	.330	-.047

In Table 1, rotated factor 1 shows that there is a relationship among five of the seven variables. The loadings of these five variables are .437 for the T.S.R.T., .333 for objectivity, -.508 for control, -.180 for confidence, and .330 for empathy. Rotated factor 2 shows that there is a relationship among three of the seven variables. The loadings for these three variables are .459 for objectivity, .581 for sociability, and -.296 for reflectiveness.

The interpretation of the data presented in Table 1 indicates that there is a relationship between the T.S.R.T. and the factors of objectivity, control, confidence, and empathy. For factor 1, the loadings show that scores on the T.S.R.T. are positively related to scores on the measures of objectivity and empathy. It also shows that scores on the T.S.R.T. are negatively related to scores on the measures of control and confidence, i.e., higher scores on the T.S.R.T. are related to lower scores on control and confidence and higher scores on control and confidence are related to lower scores on the T.S.R.T.

Table 2 shows the intercorrelation matrix which was used in the above factor analysis procedure.

TABLE 2

INTERCORRELATIONS BETWEEN THE T.S.R.T. AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T. - TOTAL SAMPLE

Variables	T.S.R.T.	Control	Reflectiveness	Sociability	Objectivity	Empathy	Confidence
T.S.R.T.	.000						
Control	-.282[b]	.000					
Reflectiveness	-.013	-.091	.000				
Sociability	.013	.106	-.222[b]	.000			
Objectivity	.130[a]	-.212[b]	-.094	.354	.000		
Empathy	.175[b]	-.187[b]	-.064	-.151[a]	.066	.000	
Confidence	-.105	.033	-.128[a]	-.020	-.142[2]	-.010	.000

a = Statistically significant at the .05 level of confidence with 236 d.f.

b = Statistically significant at the .01 level of confidence with 236 d.f.

Table 3 shows that when the female sample is considered, the factor space also consisted of two rotated factors which account for the total estimated communality.

TABLE 3

ROTATED FACTORS AND LOADINGS FOR SEVEN VARIETIES - FEMALE SAMPLE

Variables	Rotated Factors and Loadings	
	1	2
T.S.R.T.	-.003	.275
Objectivity	.536	.301
Sociability	.586	-.116
Control	.031	-.368
Confidence	-.197	-.201
Reflectiveness	-.313	.062
Empathy	-.003	.446

In Table 3, rotated factor two shows that there is a relationship among five of the seven variables. The loadings of these five variables are .275 for the T.S.R.T.,.301 for objectivity, -.368 for control, -.201 for confidence, and .446 for empathy. Rotated factor one shows a relationship among three of the seven variables. The loadings of these three variables are .536 for objectivity, .586 for sociability, and -.313 for reflectiveness.

The findings suggest that there is a relationship between the T.S.R.T. and the factors of objectivity, control, confidence, and empathy. The nature of the factor (factor two) which shows this relationship is the same as factor one in Table 1 which also showed a relationship between the T.S.R.T. and the same four variables. The loadings on both factors show that the T.S.R.T. scores are positively related to scores on measures of empathy and objectivity, and negatively related to scores on measures of control and confidence.

Data presented in Table 4 indicates the nature of the intercorrelations which were used in the above factor analysis procedure.

Table 5 shows that when the male sample is considered, this factor space also consists of two rotated factors which account for the total estimated communality.

In Table 5, rotated factor 1 shows a relationship among four of the seven variables. The loadings of these four factors are

TABLE 4

INTERCORRELATIONS BETWEEN THE T.S.R.T. AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T. - FEMALE SAMPLE

Variables	T.S.R.T.	Control	Reflectiveness	Sociability	Objectivity	Empathy	Confidence
T.S.R.T.	.000						
Control	-.114	.000					
Reflectiveness	-.069	-.163[a]	.000				
Sociability	-.034	.003	-.238[b]	.000			
Objecitivty	.035	-.156[a]	-.121	.376[b]	.000		
Empathy	.178[b]	-.159[a]	-.131[a]	-.162[a]	.172[b]	.000	
Confidence	-.045	.019	-.105	-.089	-.254[b]	-.050	.000

a = Statistically significant at the .05 level of confidence with 136 d.f.

b = Statistically significant at the .01 level of confidence with 136 d.f.

-.563 for the T.S.R.T., -.394 for objectivity, .690 for control, and .152 for confidence. Rotated factor 2 also shows a relationship among four of the seven variables. The loadings of these four factors are .434 for objectivity, .584 for sociability, -.279 for reflectiveness, and -.240 for empathy.

TABLE 5

ROTATED FACTORS AND LOADINGS FOR SEVEN VARIABLES - MALE SAMPLE

Variables	Rotated Factors and Loadings	
	1	2
T.S.R.T.	-.563	-.019
Objectivity	-.394	.434
Sociability	.031	.584
Control	.690	.135
Confidence	.152	.117
Reflectiveness	-.109	-.279
Empathy	-.123	-.240

Factor one in Table 5 indicates that there is a relationship between the T.S.R.T. and objectivity. The nature of this relationship suggests that lower scores on the T.S.R.T. are related to lower scores on the operational measure of objectivity. Also, there is a relationship between the T.S.R.T. and the factors of control and confidence. The nature of this relationship is such that higher scores on the T.S.R.T. are related to lower scores on the measures of control and confidence and higher scores on the measures of control and confidence are related to lower scores on the T.S.R.T.

The intercorrelations which were utilized in the above factor analysis procedure are presented in Table 6.

In summary of question one, it appears that when one considers the question in terms of the total sample, female sample, and male sample, there is a relationship between the T.S.R.T. and the factors of objectivity, control, and confidence. In addition, the total sample and the female sample also show a relationship between the T.S.R.T. and the factor of empathy.

QUESTION TWO

Is there a relationship among factors in the T.S.R.T. and the factors of:

2.1 objectivity?

TABLE 6

INTERCORRELATIONS BETWEEN THE T.S.R.T. AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T. - MALE SAMPLE

Variables	T.S.R.T.	Control	Reflectiveness	Sociability	Objectivity	Empathy	Confidence
T.S.R.T.	.000						
Control	-.398[b]	.000					
Reflectiveness	.109	-.036	.000				
Sociability	.025	.204[b]	.193[b]	.000			
Objectivity	.219[b]	-.263[b]	-.058	.331[b]	.000		
Empathy	.151[a]	-.210[b]	.054	-.149[a]	-.067	.000	
Confidence	-.171[b]	.041	-.173	.170	-.011	.055	.000

a = Statistically significant at the .05 level of confidence with 98 d.f.

b = Statistically significant at the .01 level of confidence with 98 d.f.

2.2 sociability?
2.3 control?
2.4 confidence?
2.5 reflectiveness?
2.6 empathy?

The solution to this question involved a two step process. First, the T.S.R.T. was factor analyzed to determine sub-scales of the instrument. The factors which were identified by the process of factor analysis were considered to be sub-scales. The items comprising these sub-scales were identified on the basis of the largest item loading on all of the factor created sub-scales and these items were then scored to get a sub-scale score. The second step consisted of computing a product moment correlation between the sub-scales and the scores on the other scales used in this study.

Table 7 shows that when the total sample of 238 pre-service education students is considered, the T.S.R.T. is comprised of twelve sub-scales.

TABLE 7

SUB-SCALES OF THE T.S.R.T. FOR
THE TOTAL SAMPLE

Sub-Scale	Items Comprising the Sub-Scale
1	5-7-12-14-40-45
2	6-29-31-39
3	8-16-22-30-48
4	2-36-41-44-46-47
5	9-10-20-32
6	21-23
7	4-11-37
8	3-13-18-27-35-43
9	1-24-25-26
10	19-28
11	15-34
12	17-33-38-42

Data presented in Table 8 shows that when the total sample is considered, eight of the seventy-two correlation coefficients between the sub-scales of the T.S.R.T. and factors proposed as being built into the T.S.R.T. are statistically significant at or beyong the .05 level of confidence. Chance alone would allow 3.6 to be significant at this level. Of these eight statistically significant

TABLE 8

CORRELATION COEFFICIENTS OF T.S.R.T. SUB-SCALES AND FACTORS

PROPOSED AS BEING BUILT INTO THE T.S.R.T - TOTAL SAMPLE

Factors	Sub-Scales of the T.S.R.T.											
	1	2	3	4	5	6	7	8	9	10	11	12
Objectivity	.057	.068	.066	.063	.024	.064	.027	.007	.102	-.023	.070	.030
Sociability	.008	-.010	.121	-.014	-.024	.120	.102	-.030	.061	-.054	-.115	-.059
Control	-.137[a]	-.196[b]	-.073	-.186[b]	-.101	-.045	.031	-.190[b]	-.193[b]	-.081	-.060	-.045
Confidence	.011	-.082	-.053	.043	-.081	-.108	-.081	-.037	-.120	.057	-.005	-.018
Reflectiveness	.046	.017	-.080	.053	.012	-.004	-.107	-.050	.180	-.077	.063	-.112
Empathy	.175[b]	.082	.056	.142[a]	-.046	.120	.044	.171[b]	.029	.007	-.051	.008

a = Statistically significant at the .05 level of confidence with 236 d.f.

b = Statistically significant at the .01 level of confidence with 236 d.f.

correlations, control was found to correlate negatively to five of twelve sub-scales of the T.S.R.T.

The five control correlations found to be significant are -.137 with sub-scale one comprised of T.S.R.T. items 5, 7, 12, 14, 40, and 45, -.196 with sub-scale two comprised of T.S.R.T. items 6, 29, 31, and 39, -.186 with sub-scale four comprised of T.S.R.T. items 2, 36, 41, 44, 46, and 47, -.190 with sub-scale eight comprised of T.S.R.T. items 3, 13, 18, 27, 35, and 43, and -.193 with sub-scale nine comprised of T.S.R.T. items 1, 24, 25, and 26. These significant negative correlations indicate that higher scores on these sub-scales of the T.S.R.T. are related to lower scores on control and higher scores on control are related to lower scores on these sub-scales of the T.S.R.T. The three positive empathy correlations found to be significant are .175 with sub-scale four comprised of T.S.R.T. items 2, 36, 41, 44, 46, and 47, and .171 with sub-scale eight comprised of T.S.R.T. items 3, 13, 18, 27, 35 and 43. It is apparent that control and empathy are concurrently related to T.S.R.T. sub-scales one, four and eight, while control alone is related to T.S.R.T. sub-scales two and nine.

Table 9 indicates that when the female sample of 138 preservice education students is considered, the T.S.R.T. is comprised of fifteen sub-scales.

TABLE 9

SUB-SCALES OF THE T.S.R.T. FOR
THE FEMALE SAMPLE

Sub-Scale	Items Comprising the Sub-Scale
1	14-19-21-23-40
2	10-11-48
3	7-34-39
4	3-18-27-35
5	22-43
6	2-38
7	15-16-33
8	5-6-9-12-31-32
9	17-30-37
10	8-24-28
11	4-42-46
12	1-44
13	20-25-41-45
14	13-26
15	29-47

Table 10 gives correlation coefficients, for the female sample, of T.S.R.T. sub-scales and factors proposed as being built into the T.S.R.T. When this data is considered, five of the ninety product moment correlations computed are statistically significant at or beyond the .05 level of confidence. Chance alone would allow four to be significant at this level.

The five statistically significant correlations are -.185, for control and .242 for empathy with sub-scale one comprised of T.S.R.T. items 14, 19, 21, 23, and 40, .170 for sociability with sub-scale two comprised of T.S.R.T. items 10, 11, and 48, .186 for empathy with sub-scale four comprised of T.S.R.T. items 3, 18, 27, and 35, and .180 for empathy with sub-scale thirteen comprised of T.S.R.T. items 20, 25, 41, and 45.

In summary Table 10 reports five statistically significant product moment correlations for the female sample. The data indicates that control and empathy are concurrently related to sub-scale one of the T.S.R.T., sociability is related to sub-scale two of the T.S.R.T., and empathy is related to sub-scales four and thirteen of the T.S.R.T.

Table 11 shows that when the male sample of 100 pre-service education students is considered, the T.S.R.T. is comprised of nineteen sub-scales.

Findings in Table 12 indicate that when the male sample is considered, there are thirteen statistically significant product moment correlation coefficients between T.S.R.T. sub-scales and factors proposed as being built into the T.S.R.T. Chance alone would allow 5.70 to be significant at the .05 level of confidence. The thirteen statistically significant correlations are -.254 for control with sub-scale four comprised of T.S.R.T. items 38 and 41, -.221 for control with sub-scale six comprised of T.S.R.T. items 9, 32, and 36, -.198 for control with sub-scale eight comprised of T.S.R.T. items 4, 12, 14, and 22, -.241 for control with sub-scale nine comprised of T.S.R.T. items 18, 21, 23, 42, and 44, -.226 for control with sub-scale ten comprised of T.S.R.T. items 30 and 35, -.280 for control with sub-scale fourteen comprised of T.S.R.T. items 11, 29, 34, -.336 for control with sub-scale eighteen comprised of T.S.R.T. item 43, -.223 for reflectiveness with sub-scale one comprised of T.S.R.T. items 13 and 33, -.208 for sociability with sub-scale seven comprised of T.S.R.T. items 4, 12, 14, and 22, .203 for objectivity with sub-scale nineteen comprised of T.S.R.T. items 2, 3, and 6, .240 for empathy with sub-scale ten comprised of T.S.R.T. items 30, and 35, and .201 for empathy with sub-scale eleven comprised of T.S.R.T. items 26 and 45.

Table 12 reports thirteen statistically significant correlations among factors in the T.S.R.T. and the factors of control, reflectiveness, sociability, objectivity, and empathy. Seven of

TABLE 10

CORRELATION COEFFICIENTS OF T.S.R.T. SUB-SCALES AND FACTORS

PROPOSED AS BEING BUILT INTO THE T.S.R.T. - FEMALE SAMPLE

Factors	Sub-Scales of the T.S.R.T.							
	1	2	3	4	5	6	7	8
Objectivity	.045	.092	.006	.013	-.062	.006	.009	.145
Sociability	-.098	.170[a]	-.046	-.121	.030	.120	-.062	.043
Control	-.185[a]	-.039	.052	-.020	-.077	.027	.030	-.059
Confidence	.031	.003	-.018	.009	-.152	-.027	-.010	-.086
Reflectiveness	.041	-.123	-.003	-.046	.007	-.149	.035	-.007
Empathy	.242[b]	-.089	.047	.186[a]	.083	.008	-.020	.023

TABLE 10

(Continued)

Objectivity	-.027	.120	-.086	-.063	.014	.032	-.158
Sociability	-.102	.104	-.104	.107	-.133	.038	-.040
Control	-.056	-.021	.033	-.088	-.002	-.068	-.001
Confidence	-.031	-.108	.073	-.090	-.043	.017	.043
Reflectiveness	-.109	-.132	-.072	-.144	.036	-.002	-.040
Empathy	.062	.128	-.024	-.088	.180[a]	.135	.034

a = Statistically significant at the .05 level of confidence with 136 d.f.

b = Statistically significant at the .01 level of confidence with 136 d.f.

TABLE 11

SUB-SCALES OF THE T.S.R.T. FOR

THE MALE SAMPLE

Sub-Scale	Items Comprising the Sub-Scale
1	13-33
2	1-10
3	38-41
4	5-19-25-31-47
5	9-32-36
6	39
7	4-12-14-22
8	16-20-27-48
9	18-21-23-42-44
10	30-35
11	26-45
12	17-28
13	15-37
14	11-29-34
15	8
16	7-40
17	24-26
18	43
19	2-3-6

TABLE 12

CORRELATION COEFFICIENTS OF T.S.R.T. SUB-SCALES AND FACTORS

PROPOSED AS BEING BUILT INTO THE T.S.R.T. - MALE SAMPLE

Factors	Sub-Scales of the T.S.R.T.								
	1	2	3	4	5	6	7	8	9
Objectivity	.008	.121	.196	.116	-.006	.079	.186	.184	.103
Sociability	-.044	-.040	-.208[a]	.022	-.004	.056	.206[a]	.026	.100
Control	-.152	-.159	-.189	-.254[b]	-.183	-.221[a]	-.048	-.198[a]	-.241[a]
Confidence	-.005	-.043	-.043	.179	-.019	-.063	-.005	.062	-.112
Reflectiveness	-.223[a]	.030	.062	.047	.114	-.025	-.158	.131	.157
Empathy	.040	.092	.189	-.014	.047	-.098	.159	.072	-.033

TABLE 12

(Continued)

Factors	Sub-Scales of the T.S.R.T.									
	10	11	12	13	14	15	16	17	18	19
Objectivity	.081	.120	-.014	-.010	.058	-.055	-.147	-.090	.027	.203[b]
Sociability	.081	.028	-.045	-.132	.038	-.068	-.140	.066	.078	-.031
Control	-.226[a]	-.107	.109	.009	-.280[b]	.050	.098	-.113	-.336[b]	-.139
Confidence	.061	-.116	-.038	.125	.093	-.059	-.036	-.012	.013	-.149
Reflectiveness	-.102	.114	.038	.078	-.003	.114	.006	.113	.008	.183
Empathy	.240[a]	.201[a]	-.165	-.181	.005	.114	.120	.090	-.007	.146

a = Statistically significant at the .05 level of confidence with 98 d.f.

b = Statistically significant at the .01 level of confidence with 98 d.f.

these correlations were for control and all of them were negative in nature. Of the other significant correlations, empathy and sociability were related to two sub-scales while reflectiveness and objectivity were each related to one sub-scale.

QUESTION THREE

Is there a relationship between the item ranking of the T.S.R.T. opinions and the factors of:

3.1 objectivity?
3.2 sociability?
3.3 control?
3.4 confidence?
3.5 reflectiveness?
3.6 empathy?

The procedure used to answer question three was the computation of a product moment correlation between the rankings of the 192 options of the T.S.R.T. and the other six scales used in this study.

Because of the large number of product moment correlations computed, 3,456 for the total, female, and male samples, each correlation will not be presented in a table. Instead, tables will be used to present a summary of the correlations which were found to be significant from zero.

Table 13 shows that when the total sample is considered there are eighty-five statistically significant correlations at the .05 level of confidence between the option rankings of the T.S.R.T. and the other scales used in this study. Chance alone would allow 57.60 to be significant at this level. For each of the six factors, chance alone would allow 9.60 of the 192 correlations to be significant at the .05 level of confidence. This indicates that control with twenty-four statistically significant correlations is the only factor which has considerably more correlations than chance alone would allow. These twenty-four correlations are all negative in nature, signifying that high rankings of these twenty-four options of the T.S.R.T. are related to lower control scores and low rankings of these twenty-four options of the T.S.R.T. are related to higher control scores.

TABLE 13

SUMMARY OF SIGNIFICANT CORRELATION COEFFICIENTS BETWEEN T.S.R.T. OPTIONS AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T. - TOTAL SAMPLE

Factors	Number of Significant Correlations
Objectivity	13
Sociability	11
Control	24
Confidence	12
Reflectiveness	11
Empathy	14

When the male sample is considered, as reported in Table 14, there are seventy-four statistically significant correlations. Chance alone would allow 57.60 correlations to be significant at the .05 level of confidence. For each of the six factors, chance alone would allow 9.60 of the 192 correlations to be significant at the .05 level. The only one of the six factors that has considerably more correlations than chance alone would allow is control. Twenty-three negative statistically significant control correlations were found.

TABLE 14

SUMMARY OF SIGNIFICANT CORRELATION COEFFICIENTS BETWEEN T.S.R.T. OPTIONS AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T. - MALE SAMPLE

Factors	Number of Significant Correlations
Objectivity	11
Sociability	7
Control	23
Confidence	7
Reflectiveness	11
Empathy	15

Data reported in Table 15 for the female sample shows that 75 of the 1,152 correlations were found to be statistically significant at or beyond the .05 level of significance. Chance alone would allow 57.60 correlations to be significant at this level of significance. For each of the six factors, chance alone would allow 9.60 of the 192 correlations to be significant at the .05 level. Although none of the correlations found per factor are considerably greater than that expected by chance, sociability and control were found to have the largest number of statistically significant correlations. Again, all the control correlations were negative.

TABLE 15

SUMMARY OF SIGNIFICANT CORRELATION COEFFICIENTS BETWEEN T.S.R.T. OPTIONS AND FACTORS PROPOSED AS BEING BUILT INTO THE T.S.R.T - FEMALE SAMPLE

Factors	Number of Significant Correlations
Objectivity	12
Sociability	16
Control	15
Confidence	9
Reflectiveness	10
Empathy	13

CHAPTER IV

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

SUMMARY

This study was designed to investigate the construct validity of the Teaching Situation Reaction Test as an instrument for the assessment of pre-service education students reactions to teaching situations.

Before proposing questions that the study would attempt to answer, the T.S.R.T. was examined to determine factors that might be involved in the instrument. This examination led to the proposal that certain factors were built into the T.S.R.T. These factors were: objectivity, sociability, control, confidence, reflectiveness, and empathy.

The quality of the results of this study depends substantially upon the ability of the scales employed to measure the factors which might be involved in the T.S.R.T. The scales chosen were selected in the following manner:

1. After certain factors were proposed as being built into the T.S.R.T., a careful analysis was made to determine scales which measured factors proposed as being a part of the T.S.R.T. This analysis identified those measures of these factors which had proven to be valid and reliable as research instruments.

2. Scales which had previously been used in inconclusive construct studies of the instrument were deleted.

Based upon the above rationale, the following scales selected for inclusion in this study:

1. The objectivity scale of the Guilford Zimmerman Temperament Survey.
2. The sociability scale of the Guilford Zimmerman Temperament Survey.
3. The California F-Scale.
4. The confidence scale of the Sixteen Personality Factor Questionnaire.
5. The reflective scale of the Thurstone Temperament Schedule.
6. The intraception (empathy) scale of the Edwards Preference Schedule.

Then, the following questions were posed:

1. Is there a relationship between the T.S.R.T. and the factors of:

1.1 objectivity?
1.2 sociability?
1.3 control?
1.4 confidence?
1.5 reflectiveness?
1.6 empathy?

2. Is there a relationship among factors in the T.S.R.T. and the factors of:
   2.1 objectivity?
   2.2 sociability?
   2.3 control?
   2.4 confidence?
   2.5 reflectiveness?
   2.6 empathy?

3. Is there a relationship between the item rankings of the T.S.R.T. options and the factors of:
   3.1 objectivity?
   3.2 sociability?
   3.3 control?
   3.4 confidence?
   3.5 reflectiveness?
   3.6 empathy?

Since there was some evidence that sex differences played a role in performance on the T.S.R.T., the data was analyzed for the total sample and separately for females and males.

The T.S.R.T. and the other six scales used in this study were administered to an incidental non-probability sample of 138 female and 100 male pre-service education students at The Ohio State University. These students were enrolled in Education 535 (Theory and Practice in Secondary Education) during the Winter Quarter, 1967.

The data compiled on this sample consisted of (1) scores on the T.S.R.T., (2) scores on factor created sub scales of the T.S.R.T., (3) the individual ranking of the options of each item of the T.S.R.T., and (4) scores on the operational measures of objectivity, sociability, control, confidence, reflectineness, and empathy.

The data were properly arranged and punched on IBM cards and these cards were then submitted to an IBM 7094 computer using a 100 x 100 factor analysis program with varimax rotation and product moment intercorrelation matrix.

Question one was answered by submitting the data to a factor

analysis in which the factor space consisted of scores on the T.S.R.T. and scores on the other six scales used in this study. The rotated factor loadings which were utilized to interpret the factors in regard to the question posed were determined by selecting the largest variable loading on all the factors and also considering all factor loadings of .25 and above.

The solution to question two involved a two step process. First, the T.S.R.T. was factor analyzed to determine sub scales of the instrument. The factors which were identified by the process of factor analysis were considered to be sub scales. The items comprising these sub scales were identified on the basis of the largest item loading on all of the sub scales. The second step consisted of computing a product moment correlation between the sub scales and the scores on the other scales used in this study.

The statistical procedure used to answer question three was the computation of a product moment correlation between the rankings of the 192 options of the T.S.R.T. and the other six scales used in this study.

CONCLUSIONS

In view of the findings presented in Chapter four, the following conclusions are drawn:

1. As an instrument, the T.S.R.T. appears to be related to the factors of objectivity, control, confidence, and empathy.
2. There appears to be a relationship among some factors in the T.S.R.T. and the factors of control, empathy, sociability, objectivity, and reflectivness. There also appears to be some concurrent relationships between control and empathy.
3. It appears that there is a consistent relationship between the option rankings of the items of the T.S.R.T. and control. The second highest relationship is found with empathy. There are also some scattered relationships with reflectiveness, sociability, objectivity, and confidence.
4. There appears to be a difference in the relationships that were found for the female and male sample. The females tend to have more relationships with empathy and less with control while the males have more relationships with control and less with empathy.

DISCUSSION OF THE CONCLUSIONS

The findings of this study have added descriptive data about the construct of the Teaching Situation Reaction Test. These data are relative to the way in which the personality traits of

objectivity, sociability, control, confidence, reflectiveness, and empathy relate to a pre-service education students reaction to a teaching situation.

When analyzing the T.S.R.T. it becomes apparent that there are at least two separate dimensions of the instrument. One of these dimensions is the situational dimension. These situational dimensions are described by the authors of the instrument as involving the instructional activities of planning, classroom management, and teacher-pupil relationships. This investigation was not concerned with the situational dimension of the instrument. Instead, it was concerned with personality traits or models of personality as they relate to performance on the T.S.R.T.

Previous construct studies of the T.S.R.T. have demonstrated small positive relationships between factors measured by the Rokeach Dogmatism Scale, the Barrett-Leonard Relationship Inventory, the Minnesota Teacher Attitude Inventory, and the California Test of Mental Maturity. In this study, scores on the T.S.R.T. appear to be consistently related to negative control as measured by the California F-Scale and positively related to empathy as measured by the Intraception Scale of the Edwards Personal Preference Scale.

It seems plausible that if you know the personality traits or models of personality that relate to performance on the T.S.R.T., it would be possible to develop personality profiles of reactions to situations which are posed in the T.S.R.T. It appears that one such profile emerges from the findings of this study.

This profile consists of a relationship between increased skill in reacting to classroom situations, as measured by higher scores on the T.S.R.T., and higher scores on empathy and lower scores on control. A second dimension of this profile consists of an inverse relationship between skill in reacting to classroom situations and scores on control. In this situation, as the skill of reacting to classroom situations decreases, scores on control become higher. This profile can be seen in Figure 1

FIGURE 1. RELATIONSHIP OF A PERSONALITY PROFILE TO SKILL IN REACTING TO CLASSROOM SITUATIONS

	Personality Profile
Increased skill in reacting to classroom situations	Higher empathy scores Lower control scores
Decreased skill in reacting to classroom situations	Higher control scores

IMPLICATIONS OF THE STUDY

This study gives some indication that it might be possible to create personality profiles that relate to skill in reacting to classroom situations, as measured by the T.S.R.T. If this assumption is appropriate, it appears that the T.S.R.T. could be used in pre-servuce education courses in at least two ways.

For example, the T.S.R.T. could be used to determine specific areas of teacher performance that could be more fully developed through a pre-service education program and therefore provide the rationale for a more individualized program.

Also, since there is some e idence that the T.S.R.T. relates to in-service teacher performance (7), it seems plausible that the instrument could be used in a pre and post design in a pre-service education course to assess the performance of that course in terms of growth made by a prospective teacher.

In addition to the above stated implications of research of this nature, it also appears that a result of this type of research could be to revise the T.S.R.T. and possibly improve its performance as a research tool in pre-service education. This was an objective of this study but this did not appear to be possible based upon the findings of this study.

The possibility of revising the T.S.R.T. and the possibility of the other implications which have been briefly described are dependent upon further research and study in this area of investigation.

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APPENDIX

TEACHING SITUATION REACTION TEST

Revised September, 1966

TEACHING SITUATION REACTION TEST

Revised September, 1966

Directions: The case example that follows has been planned to measure your ability to work through some of the problems of handling a classroom group. You will be given certain information about the classroom group and the working situation. You will then be asked to respond to a number of questions. This will be repeated through a series of problem situations. The case study has been designed so that you can respond regardless of your teaching subject field. You do not need technical subject matter knowledge to take this test.

You are asked to indicate your first, second, third, and fourth choice under each question by inserting respectively the numbers 1, 2, 3, 4, in the spaces provided on the answer sheets under (a) (b) (c) and (d). The most desirable choice should be labeled 1, and the least desirable 4. For example if your first choice was response (c), your second choice was response (a), your third choice was response (b), and your fourth choice was response (d), you would record your responses on the answer sheet as follows:

(a)	(b)	(c)	(d)
2	3	1	4

Please do not write on the test booklet.

The Situation:

You have been employed by a school system which is engaged in a series of experimental studies. One of these studies involves an experimental class designed to improve pupils' general adjustment to their environment. A heterogeneous group (physically, mentally, socially) of twenty-five thirteen to fourteen year old youngsters have signed up for this class.

The class is scheduled to meet the last period of the day on Tuesday and Thursday during the last half year. Arrangements have been made so that the class might take trips and students might have an opportunity to meet informally with the teacher after class.

Around the first of November your principal calls you in to tell you that, if you are interested, you have been chosen to teach the experimental class. You were asked because of your background in adolescent psychology and your interest in helping youngsters with minor problems of adjustment typical of the young adolescent.

Your principal has given you pretty much of a "free hand" to develop the content of the course and the adctivties in which the students will be engaged. A good supply of instructional materials, books on the adolescent, and descriptions of similar programs in other schools has been made available to you. There will be no direct supervision of your work, but an evaluation by students and yourself will be requested at the middle and close of the semester. Studies will also be made of the gain in personal adjustment evidenced by your students. You know the names of the students who have signed up for your course. An experienced teacher-counselor has been asked by the principal to help you when and if you ask for help. The teacher-counselor knows well each of the youngsters who have signed up for your class.

The Group:

Some of the youngsters who have signed up for the course know each other very well, having gone through school together. Three do not know anyone else in the group. Others are only casually acquainted. Members of the group have a variety of interests and abilities, and they represent many levels of competence and come from a variety of socio-economic backgrounds. The quality of their personal adjustment varies, but none is seriously maladjusted.

A. You have about eight weeks plus Christmas vacation to plan for your class:

1. When you begin planning the course you would:
   (a) Ask your teacher-counselor what he thinks should be in the course.
   (b) Examine the materials available to you and determine how they might be used by members of the class.
   (c) Read through the copies of publications describing other school programs of a similar nature and draw ideas from them.
   (d) Interview a randomly selected group of the young people signed up for the course and set your own tentative objectives based on these interviews.

2. During early December an important local civic group comes out against teaching sex education in the schools. Your planning had included some sex education. At this point in your planning you would:
   (a) Continue planning as you have been.
   (b) Ask the principal if you should include any sex education in your course.
   (c) Remove the lessons dealing with sex education.
   (d) Find out ways to get the sex education material across without causing an issue.

3. About three weeks before your class is scheduled to meet for the first time, your principal asks you to come in and talk with him about the course. You would hope that your principal would:
   (a) Say that if there was anything that he could do to be of help that you should feel free to call on him.
   (b) Indicate to you what he would hope the course would accomplish during the semester.
   (c) Encourage you to talk about the purposes of your course as you see them after several weeks of planning.
   (d) Make specific suggestions to help you in your planning, and encourage you to drop in for further suggestions if you need help.

4. The weekend before the course is to start it would be natural for you to feel:
   (a) Concern that your planning has been inappropriate.
   (b) Anxious to get started and prove your ability to handle this rather difficult assignment.
   (c) Hopeful that the course will prove of real value to the students.
   (d) Confident knowing you have done the best you could under the circumstances.

B. You will have your first meeting with the group tomorro .

5. It will be important that you have planned for:
   (a) Students to get well acquainted with each other.
   (b) Explaining your grading system.
   (c) Activities to catch student interest.
   (d) Explaining your complete program for the semester.

6. The teacher-counselor drops by your room and asks if he can be of help. You would ask him for:
   (a) His opinion about what you have planned for tomorrow.
   (b) Suggestions to help you make a good impression.
   (c) Suggestions as to what student reaction might be on the first day.
   (d) Nothing until you had an opportunity to meet with the group.

7. The more important personal information to gather at the first meeting would be:
   (a) Interests of the different students
   (b) Parent or guardian, home address and phone number.
   (c) What the students would like to do in the course.
   (d) Why they are taking the course.

8. Of the things you would do the evening before the meeting of the class, the most essential would be to:
   (a) Become familiar with the notes for such presentations as you might make.
   (b) Become familiar with students' names and any information you have about them from their files.
   (c) Become familiar with the sequence and nature of any activities you may have planned.
   (d) Be sure any materials you were to use were available and in good condition.

9. Your greatest concern on this night before the first meeting would be:
   (a) How to appear poised and at ease.
   (b) How to gain control of the group.
   (c) How to handle problem pupils.
   (d) How to get your program moving rapidly and well.

C. On meeting the group the first day a number of students come in from three to five minutes late. Following this, as you get your program underway the students get restless.

10. With the students that come in late you would:
   (a) Simply acknowledge their presence and noticeably mark them present in the record book.
   (b) Inform them politely about the time at which the class starts.
   (c) Ask them politely why they were unable to get to class on time.

(d) Make clear to the class as a whole and the late students in particular the standards you will maintain with regard to tardiness.

11. You would handle the restlessness of the group by:
    (a) Presenting your program more dynamically.
    (b) Asking students why they were restless.
    (c) Speaking to the group firmly about paying attention.
    (d) Picking out one or two of the worst offenders and reprimanding them.

12. You would tell the group your name and:
    (a) The rules of conduct for your class.
    (b) Your expectations for the class.
    (c) Some of your personal adjustment problems at their age.
    (d) Some of your interests and hobbies.

13. You would, by your general behavior and manner, try to present yourself as:
    (a) Firm and serious but fair.
    (b) Efficient, orderly and business-like.
    (c) Friendly, sympathetic and understanding.
    (d) Understanding, friendly and firm.

14. You would prepare for the next meeting by:
    (a) Discussing with pupils what they would like to do and deciding on one or two ideas.
    (b) Telling them what pages to read.
    (c) Giving students a choice of two ideas and determining in which the majority is interested.
    (d) Discussing your plans for the next meeting with them.

D. You have met with your class four times and have made some observations. Two boys seem particularly dirty and you have found they come from a lower class slum area. One girl seems to be withdrawn. The students do not pay attention to her. She is a pleasant looking well dressed girl. There are four or five youngsters, apparently very good friends (both boys and girls) who do most of the talking and take most of the initiative. Students seem to continually interrupt each other and you.

15. In the interests of the two boys from the slum area you would:
    (a) Find an opportunity to discuss the matter of cleanliness with the class.
    (b) Speak to the boys about their need to be clean in a conference with them.
    (c) Inaugurate a cleanliness competition with a prize to that half of the class with the best record, putting one boy in each half.

(d) Speak to the boys about their need to be clean and arrange facilities at school where they could clean up.

16. In the interests of the apparently withdrawn girl you would:
    (a) Talk to her informally over a period of time to see if you could determine her difficulty.
    (b) Call on her regularly for contributions to the discussion.
    (c) Discover a skill she has and have her demonstrate for the class.
    (d) Have a conference with her and tell her to become involved with the class discussion and speak up.

17. To improve the relationship of the group to the apparently withdrawn girl you would:
    (a) Determine who, if anyone, is friendly with her and arrange to have them work together on occasion.
    (b) Take the girl aside and help her see how she can establish better relations with her classmates.
    (c) Arrange to have her work with the group of boys and girls who take most of the initiative.
    (d) Allow her to work out her own problem.

18. With regard to the four or five youngsters who do most of the talking and take the initiative you would tend to believe:
    (a) They are brighter than most of the other students.
    (b) They are the leaders of the class.
    (c) There is considerable variation in student's ability to participate in class.
    (d) They are a little too cocky and think they know more than the others.

19. With regard to the tendency of class members to interrupt while others are talking you would:
    (a) Tell the class politely but firmly that interruptions are impolite and should not continue.
    (b) Discuss the matter with the class, determining why this happens and what should be done about it.
    (c) Organize a system of hand raising and set rules for student participation in discussion.
    (d) Set rules for student participation in discussion and firmly but fairly reprimand each person who breaks the rules.

20. One of the important problems facint you now is to do something which:
    (a) Will insure that no one is rejected or disliked.
    (b) Will result in everybody's being liked.
    (c) Will encourage each person's acceptance of the others.
    (d) Will guarantee that no one's feelings get hurt.

E. At the beginning of the eighth class session (fourth week) Johnny comes into class holding on to his arm and very nearly crying. The tears are welled up in his eyes and he looks away from the others. You notice that Peter, the largest and strongest boy in the class, looks at Johnny occasionally with a sneering smile. You do not feel that you can let this pass, so you arrange to meet with Johnny and Peter separately after class.

21. You would tend to believe:
    (a) That Johnny probably did something for which this was just, but maybe severe, payment.
    (b) That Peter is something of a bully.
    (c) That Johnny was hit on the arm by Peter.
    (d) That Johnny felt badly and Peter was quite aware of it.

22. When you meet with Johnny you would:
    (a) Ask him if Peter hit him and why.
    (b) Engage him in conversation and lead slowly into the difficulty he had that afternoon.
    (c) Tell him you were aware that he had some difficulty and offer your help to him.
    (d) Let him guide the discussion and reveal what he would about the incident.

23. When you meet with Peter you would:
    (a) Tell him that Johnny was upset this afternoon and you had noticed that he (Peter) was looking strange -- proceed from there.
    (b) Make him aware that you know he had trouble with Johnny and proceed from there.
    (c) Make him aware that he is bigger and stronger than the other boys and that he is a bully if he picks on smaller boys.
    (d) Ask him if he and Johnny had had difficulty.

24. When young people get into conflict in school if would be best to:
    (a) Let them resolve it themselves.
    (b) Help them to establish a friendly relationship.
    (c) Find the cause of the trouble and eliminate it.
    (d) Control the school situation so that the conflicts are less likely to arise.

F. In general your program has been moving along satisfactorily After the eighth meeting you have a feeling that the students are beginning to lose interest. A number of students seem to be sitting through class without really getting involved. Others seem to stay interested and active. The teacher-counselor asks to see you informally over coffee.

25. When you meet with the teacher-counselor you would:
    (a) Not talk about your class or its present lack of involvement.
    (b) Discuss your concern with him and listen for suggestions he might have.
    (c) Speak about how satisfactory the early meetings had been.
    (d) Allow the teacher-counselor to orient the discussion.

26. Your planning for the next (ninth) session would include:
    (a) Some new ideas that you had not tried.
    (b) Some clarification of the importance of students doing well in their work.
    (c) A request for ideas from students as to how to make the class more interesting.
    (d) Ways to get more students actively doing something in class.

27. During the ninth session you would:
    (a) Behave much as you had in earlier sessions.
    (b) Put some stress on the importance of <u>everybody</u> paying attention in class.
    (c) By careful observation determine which students seem disinterested.
    (d) Speak pointedly to those who were not paying attention.

28. You would tend to believe the loss of interest due to:
    (a) A rather natural reaction in a elective experimental course.
    (b) Failure of students to realize that they must contribute much to a course of this kind.
    (c) A rather natural group reaction to the experience of working together on personal adjustment problems.
    (d) Your onw failure in developing good human relationships in the class and stimulating the students.

G. Before the mid term (eighteenth) meeting of the class you take time out to think about the experiences you have had. The class has been good some days and poor other days. You have had no word from your principal about how your work has been. The teacher-counselor has seemed satisfied but not very much impressed with what you are doing. You have heard nothing about the young people who are being studied. You are asked to meet with the parents to discuss the experimental class in an informal way.

29. You would be most concerned about:
    (a) The failure of the principal and teacher-counselor to discuss the progress of the students before your meeting with the parents.
    (b) What you should say to the parents.

(c) Your apparent failure to impress your teacher-counselor.
(d) What the studies of the young people are showing.

30. You would resolve to:
(a) Discuss your progress with the teacher-counselor
(b) Ask for an appointment with the principal to find out how he feels about your work.
(c) Plan to work harder with your group.
(d) Not let the present state of affairs worry you.

31. When talking with the parents you would:
(a) Encourage them to ask questions about the program.
(b) Tell them what the program has consisted of so far.
(c) Tell them you don't know how well the program is going.
(d) Impress upon them the importance of student participation in class activities.

32. In this case you would feel that parents:
(a) Ought to be told how their children are doing in this class.
(b) Ought not to become involved in such an experimental program.
(c) Are entitled to an opportunity to question you.
(d) Ought to be referred to those in charge of the experiment.

33. At your next class meeting:
(a) You would tell students what you told their parents.
(b) You would not initiate any discussion about your visit with the parents.
(c) You would discuss briefly the parents' interest in the class.
(d) You would tell the students that you expected more cooperation from them not that their parents are involved.

H. The nineteenth and twentieth class sessions are very unsatisfactory. You leave class at the end of the twentieth session with doubts in your mind as to whether students are gaining in personal and social adjustment. You can see problems with the structure and organization of the class and believe that if these could be corrected or if you had cone some things differently over the past few weeks that you would not have a problem with the class.

34. At this point you would:
(a) Decide to go to class the next day and ask your students how they feel about the progress of the course.
(b) Think through the problem carefully and start planning revisions for the course next year.
(c) Try to help yourself accept the fact that life is often filled with disappointments and redouble your efforts to make your class better in the future by spending more time in preparation and encouraging your students to work harder.

(d) Mention your concern at the next meeting of your class and encourage students to talk with you after class about the progress of the course.

35. You would feel much better regarding the accuracy of your estimate about what is wrong with the class if you:
    (a) Were sure that some of the students were not being difficult on purpose to test your authority as a new teacher.
    (b) Knew more about the expectations of your students and to what extent they felt their expectations were being met.
    (c) Could have a colleague in whom you could confide and in whom you could trust, come in and observe your class and talk with you.
    (d) Were sure you understood your own needs for success and the extent to which these needs influence your feelings.
36. After the twentieth session, it would be natural for you to feel that:
    (a) You would like to relax and think about the situation over the weekend.
    (b) You wished students accepted the fact that things that are taught them in schools are usually good for them even though they may not like what they are learning all of the time.
    (c) Things seldom go well all the time for everybody and that they couldn't be expected to always go well for you.
    (d) It must have been wonderful to teach in the good old days when students were in school because they wanted to learn.
37. In an attempt to analyze the source of the problem you are having with your class you would:
    (a) Have a conference with several of the brighter and more interesting students to see if they could give you any insight into the problem.
    (b) Take part of a class session to share your concerns with the class, get their reactions, and using this information, rething the problem.
    (c) Ask the teacher-counselor to come in and observe the class several times and talk with you about his observations.
    (d) Consult the records of the students to see if you could find any clues there.

I. At your twenty-fourth meeting you wish to make plans for a series of visits to different community health and welfare agencies. You want to be sure that the youngsters learn from the experiences and conduct themselves properly while

traveling to and grom the visiting agencies.

38. In order to assure that all youngsters learned from thier first trip you would:
    (a) Assign particular things for all of them to look for and listen to.
    (b) Ask each to write a brief commentary on the most important things they saw and heard.
    (c) Encourage them to ask questions while they were there.
    (d) Present them with a check sheet of items to be seen and heard and ask them to check off those they saw or heard.

39. In preparation for the first trip you would:
    (a) Tell them as much as you could about the agency to which they were going.
    (b) Tell them you were sure it would be interesting and fun and let them see and hear for themselves.
    (c) Ask them what they thought they could expect and encourage guided discussions about their expectations.
    (d) Tell them about the most interesting things they would see and hear.

40. To insure that the group conducted themselves properly you would:
    (a) Set out rules of conduct for them.
    (b) Ask them to behave as young ladies and gentlemen representing their school.
    (c) Ask them what rules of conduct they would propose and develop a code with the group.
    (d) Assure them that if they did not behave properly they would not go on trips in the future.

41. On the trips you would:
    (a) Divide them into small groups with a leader responsible for each group and arrange their itenerary and meetings after you get to the agency.
    (b) Ask the youngsters to get your permission first and on this basis allow them to pursue their own interests.
    (c) Let the agency people take responsibility for deciding where they could go and when.
    (d) Keep them all together as a manageable group.

J. At the close of the thirtieth class session Bob, one of the most able boys, summarizes a class discussion on boy-girl relationships with, "Well, we've talked around the subject but we never get down to the important questions." The agreement of a number of the class members is evident.

42. You would tend to believe:
    (a) The class members are too young to be dealing with important questions in this area.

(b) You had allowed just a little too much freedom in the discussion of boy-girl relationships.
(c) This simply reflects a natural desire on the part of students to introduce some excitement into the class sessions.
(d) The class could handle important questions in this area with your guidance and support.

43. Before the thirty-first session you would:
(a) Clarify the significance and implications of Bob's statement in your own mind.
(b) Determine what you will and will not allow to be discussed in class in this area.
(c) Consult the principal and get direction from him.
(d) Discuss the situation with the teacher-counselor with a view to getting ideas for handling the next session.

44. During the thirty-first session you would:
(a) Propose a list of carefully selected questions you believe the students have in mind and begin discussions on the most manageable of these.
(b) Repeat Bob's comment and draw from the class a list of what they thought should be discussed.
(c) Suggest that some questions are not appropriate for discussion in school and that some of these fall in the area of boy-girl relationship.
(d) Ask Bob to pick up where he left off and guide him and other class members as they clarify the directions further discussion should take.

K. Your class has at last developed into a fairly cohesive unit. The discussions are more animated and everyone participates to some degree. Disagreements on ideas begin to appear and the students give evidence of intense feelings on a number of issues. George has been particularly outspoken. He has very radical ideas that seem to provoke the other students to disagree but you know that the ideas he expresses have some support from some adolescent psychologists that you consider to be the "lunatic fringe." George seldom gives in on a point.

45. You would believe that these conditions are likely to:
(a) Ultimately strengthen the group.
(b) Do little but make it uncomfortable until George learns his lesson.
(c) Destroy the group unity unless you intervene.
(d) Make it difficult for progress to be made for some students until they learn to accept George.

46. With regard to George you would:
    (a) Refer him to the teacher-counselor.
    (b) Point out to George that he is intolerant of the views of other class members.
    (c) Encourage him to express his ideas in ways that would not irritate other students.
    (d) Politely but firmly keep him from expressing such ideas.

47. With regard to the other students you would:
    (a) Encourage them in their effort to stand up to George.
    (b) Help them to understand what George is doing to them and why.
    (c) Help them to get onto topics and ideas where George could not disagree with them so forcefully.
    (d) Get into the discussion on their side and show George that he is wrong.

48. With regard to your concern for George as a person, you would feel that:
    (a) He is developing undemocratic traits by behaving as he does, and you would hope to help him change.
    (b) He does not understand how to behave in a democratic setting and may need help.
    (c) He probably has never learned certain social skills necessary for democratic behavior and the possibilities of developing such skills should be shown him.
    (d) He will learn sooner or later that in a democracy some ideas are undesirable because they tend to destroy the group.