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ABSTRACT

This report studies the effects of exposure to simulated critical teaching problems on attitudes and student teaching behavior of prospective elementary teachers. The experimental group participated in simulated training over an 11-week period with feedback from the instructor as a part of their regular teacher training program. The control group followed the regular teacher training program without the use of simulation. The evaluative data were derived from the pre- and posttreatment use of seven instruments. The data were appropriately analyzed according to the specific nature of the data yielded by these instruments. As a result of the statistical analysis of the data, no significant differences were found. It was concluded that student teachers that had the simulated training experiences did not perform any better, nor exhibit more positive attitudes, than did those student teachers not receiving the simulation training. A 14-item bibliography and appendixes are included. (Author/MJM)

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ABSTRACT

The purpose of this study was to answer the question: Does exposure to simulated critical teaching problems have any observable effect on attitudes and student teaching behavior of prospective elementary teachers.

The experimental group participated in simulated training through the use of the *Teaching Problems Laboratory* by Cruickshank, Broadbent and Budd published by Science Research Associates, Inc., over an eleven week period with feedback from the instructor as a part of their regular teacher training program. The control group followed the regular teacher training program without the use of simulation.

The evaluative data was derived from the pre- and posttreatment use of the (1) Perceived Problems Inventory, (2) Instrument for Analysis of Science Teaching, (3) Kansas State Teachers College Student Teaching Questionnaire, (4) Semantic Differential, (5) Minnesota Teacher Attitude Inventory, (6) Confidence Scale, and (7) Assumed 50% Responsibility Card. The data were appropriately analyzed according to the specific nature of the data yielded by these instruments.

As a result of the statistical analysis of the data acquired by the various instruments, no significant differences were found. It was concluded that student teachers that had the simulated training experiences did not perform any better, nor exhibit more positive attitudes, than did those student teachers not receiving the simulation training.

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THE PROBLEM

Teacher educators are constantly faced with two questions: 1. How can we structure methods classes so that education students see them as relevant and as a result become more involved in the teaching-learning process? 2. How can we give the education students experiences that will enhance their attitudes and classroom behaviors during their student teaching experiences and teaching careers? Answering these two questions is of utmost importance in the planning of teacher preparation programs.

The past decade has seen the development of a great interest in simulation as a means of improving teacher preparation programs. Cruickshank defines simulation "as the creation of realistic games to be played by the participants, in order to provide them with lifelike problem-solving experiences related to their present or future work."[1]

Under a grant from the United States Office of Education, Cruickshank and Broadbent designed and field tested a simulation series now available commercially from Science Research Associates, Inc., under the name *Teaching Problems Laboratory*.[2] The materials were used for a *two week period just prior to student teaching, and the instructor took no active part in the simulation experiences.* The field testing resulted in the conclusion that the materials are "an unqualified success as a teaching device that motivates and involves students." The testing showed simulation as only partially successful in changing the student teaching behavior of the subjects.[3]

In reporting their research, the authors of the materials suggest the possibility that feedback through a more active role of the instructor might be advisable. They also suggest changing the placement of the simulation in the program.[4] Cruickshank, in a recent review of the status of simulation, included the placement of simulation in a training system and the increase of feedback capabilities among the aspects of simulation needing research.[5]

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[1]Donald R. Cruickshank, "Simulation—New Direction for Teacher Education," Phi Delta Kappan, 48, (September, 1966), 23.

[2]Donald R. Cruickshank and Frank W. Broadbent, "An Investigation to Determine Effects of Simulation Training on Student Teaching Behavior," *Educational Technology*, IX (October, 1969), 54.

[3]*Ibid.*

[4]_____ *Simulation in Preparing School Personnel*, (Washington: ERIC Clearing House on Teacher Education, 1970), pp. 33-34.

[5]*Ibid.*, p. 34.

The proven motivational value of the *Teaching Laboratory* and the fact that it is commercially available at a reasonable cost suggest the importance of additional research into its effectiveness in changing student attitudes and student teaching behavior.

The purpose of this study, then, was to further evaluate the Cruickshank, Broadbent, and Bubb materials *using a changed role for the instructor and an extended period of simulation training* to answer the question: Does exposure to simulated critical teaching problems have any observable effect on attitudes and student teaching behavior of prospective elementary teachers.

REVIEW OF RELATED RESEARCH

Cruickshank concluded a paper on the present status of simulation in education with these words:

> A new and exciting training methodology has moved into the educational field. Properly designed, utilized, and evaluated, simulation will add a new dimension to programs intended to prepare educational professionals. Although much time and research will have to be devoted to these tasks, the potential is almost limitless.[6]

Surprisingly little has been done to collect evidence to show that classroom simulation has a positive effect on teaching behavior. Most of the research to date on classroom simulation has investigated the fidelity of simulation, prompting, and other instructional variables.[7]

Beldin, Utsey, and Wallen used filmed simulations as a part of a course in elementary reading methods to help train preservice teachers in the use of the informal reading inventory. The 200 preservice teachers involved in the study were able to identify the reading levels of pupils in the simulated test film with 92 percent accuracy.[8]

Kasdon and Kelly used the Beldin, Utsey, and Wallen process with 96 inservice teachers. Their study indicated that simulation is effective as an inservice technique for experienced teachers in terms of involvement, adequacy, and transfer to the classroom situation. However, their findings had to be modified in terms of the time of the school year when the program took place.[9]

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[6]Paul A. Twelker, *Interaction Analysis and Classroom Simulation as Adjunct to Instruction in Teacher Education*, (Monmouth: Teaching Research Division, Oregon State System of Higher Education, 1968), p. 5.

[7]H. O. Beldin, Jordon Utsey, and Carl Wallen, "Diagnostic Techniques in Teaching Reading, Part I," *The Informal Reading Inventory; Determining Reading Levels, Second Edition,* (Monmouth: Teacher Research Division, Oregon State System of Higher Education, 1965), pp. 1-34, cited by Lawrence M. Kasdon and Dean Kelly in "Simulation: In-Service Education for Teachers of Reading," *The Journal of Experimental Education,* XXXVIII (Fall, 1969), p. 80.

[8]Lawrence M. Kasdon and Dean Kelly, "Simulation: In-Service Education for Teachers of Reading," *The Journal of Experimental Education,* XXXVIII (Fall, 1969), p. 85.

[9]Charles W. Vleek, "Assessing the Effect and Transfer Value of a Classroom Simulator Technique," *Dissertation Abstracts,* (Ann Arbor, Michigan: University Microfilms, Inc., February, 1966), p. 4486.

In 1965, Vlcek did a study to assess the effect and transfer value of a classroom simulator technique. The simulator used sound, motion, and color on a projection screen to present classroom problems and feedback sequences to the preservice teachers. Problems and feedback sequences were presented repeatedly until the trainee elicited a desirable response from the simulated class. Vlcek's conclusions were that effective responses to classroom problems can be developed through simulation prior to the student teaching assignment and that principles used in solving classroom problems can be developed through classroom simulation experience and that these principles do transfer to the student teaching experiences. He further concluded that the confidence of the teacher-trainee is increased through classroom simulator experience.[10]

Kersh found that simulation training had no measurable effect on actual student teaching one year after students had simulation experiences. His findings did indicate that some students who underwent simulation training were considered to be ready to assume full responsibility for a class up to three weeks earlier than students who had no simulation training.[11]

Cruickshank and Broadbent executed an extensive study designed to examine the methodology of simulation and to determine whether or not exposure to simulated teaching problems and subsequent decision making would have any observable effect on a trainee's student teaching behavior. During the course of the study they identified 31 critical teaching problems and placed them into simulated settings. These materials were then field tested using the following consequences:

> If student teachers are given pre-student teaching opportunities to encounter, analyze and attempt to solve critical teaching problems:
>
> (C_1) then, such problems will be less numerous;
> (C_2) then, general student teaching performance will be improved;
> (C_3) then, they will develop more positive feelings toward concepts related to such problems;
> (C_4) then, they will be more confident;
> (C_5) then, they will be able to assume full-time responsibility for student teaching sooner.[12]

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[10]Bert Y. Kersh, Classroom Simulation: *A New Dimension in Teacher Education*, (Monmouth, Oregon: State System of Higher Education, Teacher Research Division, 1965), Title VII, NDEA, Project 886, pp. 78-84.

[11]Donald R. Cruickshank and Frank W. Broadbent, "An Investigation to Determine Effects on Simulation Training on Student Teaching Behavior," *Educational Technology*, IX (October, 1969), p. 51.

[12]*Ibid.*, p. 54.

In summarizing this study, the authors had this to say:

> . . . Of the five consequences tested, only the first – (C_1), that such problems will be less numerous – received any statistically significant results. Student teaching performance measures favored the Ss but, since they did not reach significance, consequence (C_2) was rejected. A similar finding was made for consequence (C_3) and (C_4), that Ss will develop more positive feelings toward concepts related to such problems and that they will be more confident. In general, the Ss had slightly more positive attitudes and were more confident but neither difference was statistically significant. Consequence (C_5) stating that Ss will be able to assume full-time responsibility for student teaching sooner also failed to receive any statistical support.[13]

The final conclusion drawn was:

> . . . It can be said that the simulation training when tested under the most stringent conditions was an unqualified success as a teaching device that motivates and involves students; and that, although simulation was only partially successful in changing the student teachers' behavior, it was at least as effective as an equal amount of student teaching. Changes in the materials, placement in the program and in the role of the instructor promise to increase the overall effectiveness of this set of simulation materials in future trials.[14]

In a study utilizing the simulation materials designed by Cruickshank and Broadbent, Gaffga concluded that simulation does produce a change in the critical behavior of student teachers and that student teachers' behavior can be observed effectively in a simulated classroom setting.[15]

A more recent study was made by Beals. As a result of his work, the following conclusions seem warranted:

1. Laboratory experiences which employ simulation techniques appear to be as effective in preparing students for student teaching as are laboratory experiences which provide for participation in an actual classroom.

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[13] *Ibid.*

[14] Robert Martin Gaffga, "Simulation: A Method for Observing Student Teaching Behavior," *Dissertation Abstracts*, (Ann Arbor, Michigan: University Microfilms, Inc., April, 1968), p. 3928A.

[15] Paul E. Beals, *Classroom Simulation as a Substitute for Live–Pre-Student Teaching Laboratory Experiences*, (Washington: ERIC Clearing House on Teacher Education, 1970), p. 8.

2. It appears that students can learn to use certain principles of classroom management and communication in meeting specific classroom situations through participation in simulated classroom experiences.

3. Different types of pre-student teaching laboratory experiences do not appear to affect the attitude of students toward teaching.[16]

[16]Donald R. Cruickshank and Frank W. Broadbent, *The Simulation and Analysis of Problems of Beginning Teachers.* University of Tennessee and State University College at Brookport, New York; U.S. Office of Education Cooperative Research Project 5-0798, 1968.

OBJECTIVES AND PROCEDURES

Hypotheses

In evaluating the Cruickshank, Broadbent, and Bubb materials *under a changed role for the instructor and an extended period of simulation training,* the following hypotheses were tested:

Hypothesis 1: Student teachers having had simulated experiences in which they encounter, analyze and attempt to solve critical teaching problems will experience fewer such problems than will student teachers not having had simulated experiences in solving such problems.

Hypothesis 2: The general student teaching performance of the student teachers having had simulated experiences will receive higher ratings on general teaching performance than will the student teachers not having had simulated experiences.

Hypothesis 3: Student teachers having had simulated experiences will report more positive feelings toward students and toward concepts related to the simulated problems than will the student teachers not having had simulated experiences.

Hypothesis 4: Student teachers having had simulated experiences will report higher levels of confidence than will those student teachers not having had simulated experiences.

Hypothesis 5: Student teachers having had simulated experiences will be able to assume 50% responsibility for student teaching sooner than will those students not experiencing simulation training.

These hypotheses are essentially the same as those tested by Cruickshank and Broadbent in their original research.[17] Hypothesis 5 was changed to read 50% responsibility for student teaching to make provision for those students who are never allowed to have charge of the classroom for the entire school day.

Population and Sample

Both experimental and control groups were selected from those elementary education students enrolling in Education 311A: Basic Methods for Elementary Teachers, during the spring semester of 1971. This course is a part of a 15 semester hour block in the Kansas State Teachers College Elementary Education Program which is team taught by six instructors. All students are instructed in elementary methods in science, math,

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[17]Donald R. Cruickshank, Frank W. Broadbent, Roy L. Bubb, *Simulation Director's Guide* (Chicago: Science Research Associates, Inc., 1967), pp. 21-23.

language arts, social studies, and reading by the member of the team having expertise in each area. All students also participate in a segment of the program called "Home-Base." Those topics not falling within specific course confines are covered during this time period.

The experimental group of 25 was randomly selected from the total group of 69 students enrolling. This group was assigned to the "Home-Base" section taught by the researcher. The controls were randomly selected from two other "Home-Base" sections taught by fully qualified members of the teaching team. The controls did not function as a group. They were considered a group only for purposes of data treatment. All of the subjects had their student teaching experience during the fall semester of 1971.

Treatment

The *Teaching Problems Laboratory*[18] was used with the experimental group over an eleven week period as a part of the "Home-Base" segment of the elementary education program. The topics covered in the *Laboratory* include evaluation of teaching and learning, grouping for instruction, homework, student behavior, teacher problems, teaching language arts, teaching mathematics, teaching reading, individualized instruction, motivation, relations with parents, sociometry, teaching science, teaching social studies, and unit teaching.[19] Ten of the problems are presented by film. The rest are presented by written materials such as notes from parents, notes from other teachers, memoranda from the principal, or through role-playing. The students are provided with background on the school and community through filmstrips, recordings, a faculty handbook, and a curriculum guide. The students are also provided with a set of cumulative records for a fifth-grade class.

The simulation problems were used by grouping them into topics rather than in the consecutive order suggested in the *Director's Guide.*[20] For each major topic, the instructor presented theory in the area and encouraged group discussions of readings and understandings developed in other classes. Following the theory presentation, each problem relating to the topic was worked through individually, then in small groups, and finally in total group discussion. During the total group discussion, the researcher played an active role, giving feedback to the students, suggesting procedures and pointing out the relationship between the problem and theory. This role was one of approver and sounding block rather than judge of the group resolutions of the problems. Approximately 30 hours were spent in using the simulation materials.

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[18]Donald R. Cruickshank and Frank W. Broadbent, "An Investigation to Determine Effects of Simulation Training on Student Teaching Behavior," *Educational Technology*, IX (October, 1969).

[19]Cruickshank and Broadbent, *op. cit.*, pp. 155-163.

[20]Donald R. Cruickshank, Frank W. Broadbent, Roy L. Bubb, *Simulation Director's Guide* (Chicago: Science Research Associates, Inc., 1967), pp. 21-23.

The control group spent the same amount of time in basic elementary methods and in "Home-Base" and covered essentially the same topics. The members of this group did not use the *Teaching Problems Laboratory*.

TEST OF HYPOTHESIS 1

Student teachers having had simulated experiences in which they encounter, analyze and attempt to solve critical teaching problems will experience fewer such problems than will student teachers not having had simulated experiences in solving such problems was the statement of the first hypothesis. To investigate this hypothesis the *Perceived Problems Inventory* (Appendix A) was used. This instrument, designed by Cruickshank and Broadbent for their study, lists 117 persistent problems of teachers with a four-point scale placed opposite each item. If respondents felt the item was a serious problem they were asked to check column one and if they believed the item was a moderate or a minor problem they were asked to check columns two or three respectively. Column four indicated that the respondent did not think the item was a problem.

In order to ascertain the average problems perceived by the S's and C's, the Perceived Problems Inventory (PPI) four scales were collapsed into a problem-no problem type responses. The PPI was administered to both groups in the beginning of the second semester of 1971 (pretest) and again at the close of their student teaching experience (October, 1971).

In the January pretest situation, the control group reported an average of 91.85 of the 117 items that were in some way a problem while the experimental group identified an average of 88.42 items as problems. In both groups, after their fall student teaching experiences, the average number of problems identified was lower in value than were identified at the outset of this experiment. The control group identified an average of 77.68 problems out of the 117 items and the experimental group identified an average of 68.38 problems. It would appear evident that some items for the two groups were no longer considered problems, per se, after student teaching.

Table 1, below, identifies the average number of problems for the control and experimental groups before and after their student teaching.

Table 1

Average Number of Problems Self-Reported on Perceived Problems Inventory by S's and C's on Pre- and Posttest Dates

Group	Pre (January 1971)	Post (October 1972)
Control	91.85	77.68
Experimental	88.42	68.38

In addition to the average number of problems identified by both groups, the Chi-square test was run on each of the 117 items between the two groups to investigate the manner in which they responded. The Chi-square values obtained for each item have been tabled on the following page, along with the particular groups investigated.

Control Group Pre- Posttest (PPI)

As a result of the significant differences obtained, as shown by the Chi-square values of Table 2, further investigation was deemed necessary with respect to the specified items on the *Perceived Problems Inventory*. Table 3 identifies the problems that were significantly different by the control group between the pre- and posttest and the number of respondents who saw the item as a problem, along with the percent values obtained.

It can be observed that of the problems where significant differences on Chi-square were found, that all items listed indicated that the respondents, in general, felt the item was less of a problem after their actual student teaching experience.

However, "helping a student with a destructive home situation (74)," indicates that all of the student teachers in the control group saw this as a problem before and after their student teaching (100% in both pre- and posttest). The significant difference would be in the degree to which they perceived this problem. Ten of the respondents thought this item would be a serious ongoing problem at the outset, but only one respondent saw it as a serious ongoing problem after student teaching. More respondents rated this item as a moderate problem after student teaching, yet, *all* respondents believed this was a major problem.

Experimental Group Pre- Posttest (PPI)

Of the 117 Perceived Problems, the experimental group showed a significant difference between the pre- and posttest on the Chi-square statistic for twenty-one of the problems. Of the control group, table 3, only thirteen problems resulted in significant differences.

Table 4 has been used to illustrate the twenty-one problems identified by the experimental group on their pre- and posttest measures. It can be observed, however, with all twenty-one problems that there were fewer respondents that identified these problems after their student teaching experience.

Experimental Control Groups Pretest (PPI)

As previously indicated in Table 2, seven problems of the total 117 perceived problems showed a significant difference between the experimental and control groups at the beginning of this experiment.

Table 2

Chi-Square Values on 117 Perceived Problems Inventory Items for Control (C) and Experimental (E) Groups

Reported Problems	Control Pre-Post-test	Experimental Pre-test	Control $\overline{c}$ Experimental Pretest	Control $\overline{c}$ Experimental Posttest
1. Having children follow routines for entering and leaving the classroom when coming from home or leaving for home.	4.898	6.826+	1.860	0.343
2. Lacking enthusiasm for a subject.	5.688	0.141	3.077	3.652
3. Needing help in selecting instructional materials.	12.814*	6.803	4.050	0.894
4. Working out a daily schedule.	3.085	2.881	4.933	0.304
5. Discussing with parents their children's achievement.	4.716	5.304	1.004	0.258
6. Explaining my grading system to children.	3.481	5.484	1.182	9.381*
7. Having students see relationship between undesirable behavior and the consequences.	2.147	1.239	3.614	0.984
8. Not really liking kids.	2.516	1.833	2.451	1.336
9. Managing the distribution and collection of materials, paper, milk, etc.	1.819	0.915	2.345	2.851
10. Involving many of the children in group discussions.	9.769+	8.352+	1.227	6.345+
11. Finding films and filmstrips related to the area being studied.	2.351	2.451	0.627	3.772

12.	Getting students to do homework.	7.446	6.601	0.593	1.193
13.	Criticized by parents.	4.933	9.509+	0.936	3.148
14.	Collecting anecdotal background information about students.	5.840	8.750+	2.833	10.888+
15.	Maintaining order during field trips.	3.455	5.352	1.915	1.132
16.	Unhappy teaching in lower socio-economic district.	1.572	3.208	0.543	1.612
17.	Keeping pupil attendance records accurately.	1.856	0.230	1.629	4.795
18.	Not knowing what to do with students who finish early.	2.083	0.268	4.907	0.565
19.	Finding out about radio and TV programs related to daily classwork of my children.	1.232	0.732	0.384	1.703
20.	Planning and executing useful field trips.	4.017	1.226	3.621	0.229
21.	Bothered by parents telephoning.	2.663	3.833	1.882	0.254
22.	Not knowing how to evaluate my objectives.	6.243	4.492	4.900	2.831
23.	Students not respecting me.	1.321	3.810	2.928	0.755
24.	Disturbed by school regulations.	4.833	2.143	4.400	1.422
25.	Ordering, securing, and accounting for supplies and equipment.	1.351	1.710	8.439+	6.403+
26.	Too much stress on grades for motivation.	8.697+	2.641	3.170	0.495
27.	Integrating A-V materials into the lessons.	8.425+	5.435	2.440	4.884
28.	Working out details of assembly programs.	6.048	7.689+	2.810	3.333

29.	Talking with parents I wish to contact.	2.988	2.956	0.540	4.364
30.	Judging children's progress in terms of my aims and purposes.	1.505	1.892	0.927	0.421
31.	Having children maintain quiet while working independently.	1.097	4.096	2.722	0.369
32.	Feelings of insecurity.	0.313	16.470*	5.692	4.375
33.	Managing the transition from one activity or subject to another.	3.119	6.733+	1.597	0.470
34.	Relating the subject meaningfully to children.	3.491	5.698	0.369	3.465
35.	Finding appropriate reading materials for readers one or more years below grade level.	2.102	1.070	0.493	2.144
36.	Finding out what content I am supposed to cover in my grade.	6.530	0.368	3.523	3.137
37.	Establishing a rapport with parents so that they will provide information candidly and without embarrassment.	5.343	5.980	3.168	4.690
38.	Feeling uncomfortable about giving failing grades.	3.423	2.068	0.546	0.586
39.	Finding ways to integrate isolated, disliked children into group activities.	0.461	4.620	1.316	0.580
40.	My feelings being hurt by criticism.	1.880	2.323	1.490	5.827
41.	Organizing an orderly procedure for children to hang up their wraps.	2.518	0.230	2.550	2.746
42.	Not knowing how to deal with reading problems.	7.631	5.711	11.770*	0.494

43.	Being unable to complete a lesson.	5.187	7.850+	2.543	3.393
44.	Helping parents understand the reporting system of my school.	2.425	0.737	0.398	0.973
45.	Involving pupils in self-evaluation.	4.277	5.754	4.936	1.877
46.	Knowing how to hold student conferences.	3.628	8.271+	10.790+	4.849
47.	Unhappy about teaching at this present grade level.	0.435	5.771	2.026	5.276
48.	Unhappy with routine classroom bookkeeping.	2.257	2.839	1.724	1.743
49.	Being afraid to teach controversial subjects.	1.036	8.324+	3.573	2.169
50.	Having work for some children while I am working with other groups or individuals.	5.112	3.250	0.952	0.859
51.	Difficulty in identifying those who need remedial help.	7.430	4.790	0.744	3.190
52.	Feeling unpopular as a teacher.	1.659	13.043*	2.126	7.972+
53.	Not wanting a certain student in my class.	2.035	5.170	2.910	5.011
54.	Formulating questions that provoke discussion.	9.782*	6.438	4.654	1.930
55.	Needing to know how to organize a unit of work.	9.094+	6.360	1.941	1.267
56.	Identifying children in need of psychological testing or counseling.	10.531+	6.575	2.102	1.530
57.	Having difficulty with grouping.	3.639	6.107	2.918	1.642
58.	Having activities ready for children's rest-time periods.	0.928	3.242	0.666	1.284

59.	Bothered by frustration in my personal life.	9.175+	4.129	1.992	1.688
60.	Not really knowing how to teach.	4.602	9.704+	3.411	2.248
61.	Unhappy about teaching slow learners.	2.008	7.143	5.283	0.237
62.	Difficulties with organizing supplies and materials.	3.417	0.855	4.403	1.689
63.	Introducing a new topic and obtaining high interest.	1.325	3.398	0.058	1.516
64.	Obtaining the materials for making my own teaching materials, e.g., construction paper.	2.768	4.951	0.311	0.229
65.	Having difficulty preparing lesson plans.	6.622	8.107+	8.360+	3.130
66.	Conducting an interview with a parent.	2.762	6.325	1.376	0.495
67.	Having trouble interpreting children's capabilities to parents.	5.725	5.183	0.931	0.496
68.	Handling cliques in the classroom.	3.286	11.867*	3.754	0.757
69.	Not being accepted by my colleagues.	4.536	5.328	3.951	2.813
70.	Handling children in passing in hall from room to room.	7.520	0.937	3.888	0.493
71.	Differentiating instruction among the slow, average and gifted children in class.	5.920	7.388	1.598	0.568
72.	Constructing bulletin boards.	2.108	2.085	0.134	1.812
73.	Finding out what the objectives of education are for my grade.	3.903	3.066	0.530	2.603
74.	Helping a student with a destructive home situation.	7.660+	3.029	8.196+	2.355

75.	Being able to prepare classroom tests that are valid.	11.205+	2.964	6.553	4.989
76.	Handling children's aggressive behavior toward one another.	6.714	4.821	2.833	5.379
77.	Feelings of inferiority.	5.030	6.487	2.290	3.478
78.	Organizing procedures for moving as a class from place to place.	2.994	0.172	2.120	0.484
79.	Students not willing to work.	8.343+	7.968+	0.772	0.984
80.	Finding materials with which to prepare simple science demonstrations.	4.780	2.333	3.220	0.029
81.	Lacking understanding of my subject(s).	0.924	5.957	0.270	1.311
82.	Explaining my techniques of teaching to parents.	5.884	6.226	0.903	1.246
83.	Interpreting the results of standardized tests.	1.890	1.396	1.222	1.362
84.	Handling children who waste school materials.	0.752	3.776	0.184	1.898
85.	Being impatient with my students.	2.671	7.350	1.636	0.350
86.	Teaching in an area for which I am unprepared.	6.333	7.469	2.464	4.284
87.	Unable to operate A-V equipment.	6.155	14.657*	7.566	6.824
88.	Parents complaining about homework assignments.	2.741	17.484*	14.933*	3.929
89.	Getting parents to take an interest in their children's behavior.	1.900	5.614	3.156	5.924
90.	Telling parents that their children have problems.	4.408	3.980	3.350	2.247
91.	Handling the constantly disrupting child.	4.293	3.380	6.641	0.676

92.	Being able to tolerate student errors.	1.689	0.650	1.252	2.395
93.	Having difficulty with written communication.	4.751	1.428	9.410+	1.561
94.	Finding out about community resources that I can use in my teaching.	2.035	1.113	0.970	0.176
95.	Finding out what content children in my class covered last year.	1.532	5.877	2.801	0.944
96.	Being troubled by parental complaints.	1.705	7.894+	6.300	2.671
97.	Using test results and anecdotal information in working with individual children.	5.956	2.501	3.660	0.209
98.	Needing more understanding of student behavior.	2.707	10.916+	4.998	3.465
99.	Being unable to adjust to certain ethnic groups.	8.220+	3.884	3.974	1.383
100.	Using the committee method with childen.	0.326	2.702	2.347	0.472
101.	Not understanding the value of a planbook.	2.010	7.364	2.699	2.663
102.	Enlisting parent aid for activities such as trips, making costumes for a play, or class mother.	4.468	8.322+	5.003	3.579
103.	Being required to grade on a curve.	2.471	1.165	2.582	2.711
104.	Working with overly dependent children.	5.615	0.870	2.807	0.689
105.	Bothered by feelings of loneliness.	3.567	6.054	1.968	1.312
106.	Having difficulty with oral communication.	8.292+	6.368	5.582	0.304

107.	Planning segments of work for a week or longer.	7.555	5.121	1.509	1.991
108.	Having a distaste for grading papers.	6.650	5.037	1.220	2.327
109.	Being afraid of some of my students.	2.711	3.687	0.672	0.633
110.	Bright students make me feel uncomfortable.	3.021	2.965	0.282	1.003
111.	Unable to maintain pupil interest.	6.654	5.491	5.313	1.084
112.	Lacking know-how for pupil-teacher planning.	5.641	5.477	1.457	3.063
113.	Having trouble controlling class.	3.708	1.739	1.806	1.727
114.	Inability to keep up professionally in my field.	0.756	4.540	0.891	2.156
115.	Not being prepared to teach under newer instructional organization (e.g., team teaching).	2.968	0.694	6.415	4.000
116.	Having difficulty organizing my work.	2.581	1.670	3.253	1.807
117.	Feeling nervous when supervised.	7.560	13.527	2.524	2.691

+significant at the .05 level
*significant at the .01 level

Table 3

Item-by-Item Analysis Showing the Number and Percent of Responses on Problems Where Significant Differences Existed According to Chi-Square (Table 2) for the Control Group Pre- and Posttest

Perceived Problem	Pretest Indicated a Problem	%	Posttest Indicated a Problem	%
3. Needing help in selecting instructional material.	27	100	17	77
10. Involving many of the children in group discussions.	25	93	13	59
26. Too much stress on grades for motivation.	23	85	17	77
27. Integrating A-V materials into the lessons.	19	70	10	45
54. Formulating questions that provoke discussions.	25	93	12	55
55. Needing to know how to organize a unit of work.	26	96	14	64
56. Identifying children in need of psychological	24	89	18	82
59. Bothered by frustration in my personal life.	19	70	14	64
74. Helping a student with a destructive home situation.	27	100	22	100
75. Being able to prepare classroom tests that are valid.	27	100	16	73
79. Students not willing to work.	26	96	20	91
99. Being unable to adjust to certain ethnic groups.	20	74	11	50
106. Having difficulty with oral communication.	23	85	10	45

Table 4

Item-by-Item Analysis Showing the Number and Percent of Responses on Problems Where Significant Differences Existed According to Chi-Square (Table 2) for the Experimental Group Pre- and Posttest

Perceived Problem	Pretest Indicated a Problem	%	Posttest Indicated a Problem	%
1. Having children follow routines for entering and leaving the classroom when coming home or leaving for home.	16	67	10	48
10. Involving many of the children in group discussions.	21	88	16	76
13. Criticized by parents.	23	96	16	76
14. Collecting anecdotal background information about students.	22	92	14	67
28. Working out details of assembly programs.	20	83	14	67
32. Feelings of insecurity.	22	92	12	57
33. Managing the transition from one activity or subject to another.	20	83	10	48
43. Being unable to complete a lesson.	19	79	8	38
46. Knowing how to hold student conferences.	19	79	14	67
49. Being afraid to teach controversial subjects.	18	75	12	60
52. Feeling unpopular as a teacher.	19	79	7	35
60. Not really knowing how to teach.	18	75	8	38
65. Having difficulty preparing lesson plans.	17	71	9	43

68.	Handling cliques in the classroom.	23	96	12	60
79.	Students not willing to work.	23	96	19	90
87.	Unable to operate A-V equipment.	21	88	9	43
88.	Parents complaining about homework assignments.	24	100	10	48
96.	Being troubled by parental complaints.	21	88	15	71
98.	Needing more understanding of student behavior.	22	92	12	60
102.	Enlisting parent aid for activities such as trips, making costumes for a play, or class mother.	16	67	9	43
117.	Feeling nervous when supervised.	23	96	13	62

Table 5 has been developed to give the total number and percent of responses to the particular problem for both of the groups. It can be noted that out of seven problems identified, at the outset the number of responses for the control group were higher except for item 88, "parents complaining about homework assignments."

Table 5

Item-by-Item Analysis Showing the Number and Percent of Responses on Problems Where Significant Differences Existed According to Chi-Square (Table 2) Between the Control and Experimental Groups on the Pretest

Perceived Problem	Control Indicated a Problem	%	Experimental Indicated a Problem	%
25. Ordering, securing, and accounting for supplies and equipment.	23	85	16	67
42. Not knowing how to deal with reading problems.	26	96	24	100
46. Knowing how to hold student conferences.	26	96	19	79
65. Having difficulty preparing lesson plans.	25	93	17	71
74. Helping a student with a destructive home situation.	27	100	22	92
88. Parents complaining about homework assignments.	23	85	24	100
93. Having difficulty with written communication.	21	78	16	67

Experimental Control Groups Posttest (PPI)

After completing their student teaching experience in October, 1971, it can be observed in the following table (Table 6) that of the 117 perceived problems only five problems were significantly different on the Chi-square test.

Table 6

Item-by-Item Analysis Showing the Number and Percent of Responses on Problems Where Significant Differences Existed According to Chi-Square (Table 2) Between the Control and Experimental Groups on the Posttest

Perceived Problem	Control Indicated a Problem	%	Experimental Indicated a Problem	%
6. Explaining my grading system to children.	13	59	9	43
10. Involving many of the children in group discussions.	13	59	16	79
14. Collecting anecdotal background information about students.	18	82	14	67
25. Ordering, securing, and accounting for supplies and equipment.	18	82	12	57
52. Feeling unpopular as a teacher.	16	73	7	35

TEST OF HYPOTHESIS 2

This hypothesis stated that the general student teaching performance of the student teachers having had simulated experiences would receive higher ratings on general teaching performance than those student teachers not having had simulated experiences. To test this hypothesis the Instrument for Analysis of Science Teaching (Appendix B) was used. This instrument, designed at the University of Texas, was administered during the student teaching experience to describe student teaching performance.

The audio-tapes were evaluated by an observer trained at the University of Texas resulting in close adherance to the ground rules for using this instrument. The instrument, originally designed for measuring science teaching behaviors, has proven acceptable for rating and measuring teacher performance in all curricula areas.

Three patterns of interaction were selected for this study as indices of teaching behavior. These were selected as appropriate to, and compatible with the philosophies of recently developed child-centered approaches to elementary education.

A description of each of the 3 interaction patterns considered as comprising teaching behavior is stated below. Following the description of each behavior, the IAST v. 2 category or ratio of categories used to measure the frequency of occurrence of that behavior is described.[21]

1. Does the teacher stimulate increased student participation or maintain dominant control of the lesson? Although there are undoubtedly instructional tasks which require a high degree of direction from the teacher, the overall intent of most recently developed curricula is to actively involve the student in manipulation of objects, events, and data.

From the IAST v. 2 data the I/D ratio can be determined. The I/D ratio divides the total number of tallies for teachers' indirect statements by the total number of tallies for direct statements. Using the IAST v. 2 categories, the I/D ratio is:

$$\frac{\text{Indirect}}{\text{Direct}} \quad \frac{1 + 2 + 3R + 3S + 3Q + 4C + 4O}{5P + 5M + 6L + 6R + 7}$$ [22]

For this study, then, the I/D ratio found for the control group was 0.9492 while for the experimental group the I/D ratio found was 1.2254.

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[21] Roger S. Irwin, "A Comparative Study of The Effect of Certain Factors on the Teaching Behavior of Preservice Elementary Teachers of Science," (unpublished doctor's dissertation, The University of Texas, Austin, 1970), pp. 50-55.

[22] *Ibid.*,

2. To what extent does the teacher motivate students through use of encouragement and praise of students' ideas compared to dominance of students through extensive instruction, reprimands, and assertion of authority? If increased student participation, as mentioned in No. 1, is a common goal of contemporary elementary instruction, then the teacher's use of more indirect behaviors such as empathy and praise for students may reflect the tendency to actively involve children in instruction.

This component of teaching behavior was measured by calculating the I/D ratio. It is a measure of the emphasis given to motivation and control during a lesson.

$$\frac{\text{Indirect}}{\text{Direct}} \qquad \frac{1 + 2 + 3R + 3Q + 3S}{5P + 5M + 7}$$ [23]

The I/D ratio found for the control group was 0.7003 and a 0.9211 was found for the experimental group.

3. To what extent does the teacher dominate the verbal behavior of the lesson? Although it is expected that the need to provide instructions, questions, and new information will require a considerable amount of teacher talk, little or no provision for student questions and statements may result in the teacher finding out very little about the competence of his students. It is therefore suggested that a comparison of the amount of teacher talk and student talk may provide useful data on science teaching behavior.

This behavior pattern is described and measured by expressing two ratios: (a) total teacher talk to total student talk,

$$\frac{\text{Total Teacher Talk}}{\text{Total Student Talk}} \qquad \frac{1 + 2 + 3R + 3Q + 3S + 4C + 4O +}{9C + 9O + 9R + 10SC + 10SO +}$$

$$\frac{5P + 5M + 6L + 6P + 6R + 7}{10PC + 10PO}$$

and (b) extended teacher talk to extended student talk. Extended talk involves the continuous use of one behavior for a period of time that is longer than three seconds.

$$\frac{\text{Extended Teacher Talk}}{\text{Extended Student Talk}} \qquad \frac{(1\text{-}1) + (2\text{-}2) + (3R\text{-}3R) + (3Q\text{-}3Q) +}{(9C\text{-}9C) + (9O\text{-}9O) + (9R\text{-}9R) +}$$

$$\frac{(3S\text{-}3S) + (4C\text{-}4C) + (4O\text{-}4O) + (5P\text{-}5P) + (5M\text{-}5M) + (6L\text{-}6L) +}{(10SC\text{-}10SC) + (10SO\text{-}10SO) + (10PC\text{-}10PC) +}$$

$$\frac{(6P\text{-}6P) + (6R\text{-}6R) + (7\text{-}7)}{(10PO\text{-}10PO)}$$ [24]

[23] *Ibid.*

[24] *Ibid.*

The experimental group obtained ratio of 1.6830 was slightly lower than the obtained ratio of the control group which was 1.7239.

In the further analysis of the Instrument for Science Teaching, the percent of time spent in doing each activity was calculated on the basis of the number of observations made as compared to the grand total of observed behaviors for both groups. Of the thirty-two identified behavioral characteristics, seventeen characteristics describe teacher behaviors, while fourteen of the characteristics describe student behaviors. The last item, (14) is defined as nonfunctional behavior which is a behavior described as being without direction or purpose.

Table 7 has been used to briefly indicate the percentage of time the two groups were described as engaged in the particular behavior out of the grand total of the observations made.

Table 7

Percent of Time as Determined by the Instrument for the Analysis of Science Teaching

Description of Behavior		Control	Experimental
TEACHER BEHAVIORS			
1	Teacher accepts feeling	0.202	0.189
2	Teacher praises	0.151	0.241
3R	Teacher restates or restructures student statement	4.760	5.081
3Q	Teacher questions student statement for clarification	0.020	0.042
3S	Teacher gives non-evaluative confirmation	3.893	4.052
4C	Teacher asks closed question	14.613	16.871
4O	Teacher asks open question	0.464	0.346
5P	Teacher gives procedural directions	6.787	4.871
5M	Teacher gives managerial directions	0.494	0.850
6L	Teacher initiates new information	17.265	15.255

6P	Teacher initiates background or review information	0.000	0.010
6R	Teacher initiates information by reading aloud	0.827	0.640
7	Teacher rejects or criticizes student's ideas or behavior	0.020	0.262
8D	Teacher demonstrates silently	0.262	0.000
8C	Teacher-controlled silence	1.624	1.050
8L	Teacher silence while looking at notes	0.000	0.000
8E	Teacher silence while handling equipment	0.484	0.168
STUDENT BEHAVIORS			
9C	Student closed statement	15.954	19.559
9O	Student open statement	4.871	4.714
9R	Student reads aloud	7.140	3.759
10SC	Student asks substantive closed question	0.676	0.777
10PC	Student asks procedural closed question	0.071	0.136
10PO	Student asks procedural open question	0.000	0.000
11P	Student affective response, positive	0.262	0.829
11N	Student affective response, negative	0.000	0.031
12O	Student overt silent activity	9.802	11.097
12C	Student covert silent activity	2.592	3.811
12G	Group overt activity	0.000	0.031
12X	"Greek chorus"	3.167	3.160

13	Division of student-to-student interaction	3.015	1.858
14	Nonfunctional behavior	0.585	0.304

An observation of the preceding table would indicate that a lower percent for item one, teacher accepts feeling, for the experimental group was a more desirable behavior. However, the percent of time engaged in each of the activities was not too different between the experimental and control groups.

TEST OF HYPOTHESIS 3

Hypothesis three stated that student teachers who had simulated experiences will report more positive feelings toward students and toward concepts related to the simulated problems than will the student teachers not having had simulated experiences. In testing the null form of this hypothesis, two separate instruments were utilized in this study, the semantic differential, as well as the *Minnesota Teacher Attitude Inventory*. Both instruments, along with the analysis of their respective data, have been discussed.

The Semantic Differential (Appendix C)

At the outset, eleven concepts were used to ascertain if student teachers having had simulated experiences (experimental group) would show a significant difference in having more positive feelings toward students and those concepts related to the simulated problems, than the control group. The eleven concepts selected were:

1. myself as a teacher
2. Pat Taylor
3. classroom bookkeeping
4. supervising teacher
5. methods of teaching
6. supervisor's visit
7. relationship with parents
8. discipline problems
9. student teaching
10. pupils
11. my first year of teaching

After these eleven concepts had been developed for the instrument, concept two (above), Pat Taylor, was considered irrelevant to this study and was deleted from the instrument, leaving ten concepts that were utilized.

With respect to the bipolar adjectives selected, three pairs made up the potency factor, i.e., formal-informal, strong-weak, and heavy-light. For determining the activity dimension, the bipolar adjectives were active-passive, poised-excitable and simple-complex. Out of the total sixteen adjective pairs used, the remaining ten completed the third dimension, the evaluative factor. The ten bipolar adjectives used for this evaluative factor were: skillful-inept, good-bad, chaotic-ordered, attractive-unattractive, confident-uncertain, dirty-clean, happy-sad, understanding-impatient, interesting-dull, and clean-vague. In order to avoid tendencies of acquiescence and to counteract response bias tendencies, a reversal of bipolar adjectives was made. In addition to reversing these bipolar adjectives, the adjective pairs were randomly selected accordingly for each concept, therefore, a different order of bipolar adjectives appears for each concept, yet all sixteen adjective pairs were used for each separate concept.

Since the semantic differential instrument was developed on a nine point scale for each pair of bipolar adjectives, a value of one was assigned to the highest positive adjective, whereas a score of nine was assigned on the opposite, or negative end of the continuum. A score of five indicated the respondents neutral position with respect to the adjective pairs for any particular concept.

To test hypothesis three, using the semantic differential, a "pretest" was given to both the control and experimental groups in January, 1971 and the "posttest" was administered to both groups in October, 1972, after completing their student teacher experiences.

Table 8 summarizes the results of testing with the semantic differential for the evaluative dimension. It will be noted from an inspection of means that the experimental and control group values, after student teaching, were decreased (indicating stronger positive feelings and/or attitudes) toward the following concepts:

1. myself as a teacher
3. supervising teacher
4. methods of teaching
5. supervisor's visit
8. student teaching
9. pupils
10. my first year of teaching

From a general overview of these concepts, it would appear that students in both groups felt better toward the above mentioned concepts after their student teaching experience.

However, as might be noted from inspection of these means, that the control group had a more positive attitude toward the concepts classroom bookkeeping (2) and relationship with parents (6) than did the experimental group.

For the concept, discipline problems (7), both the experimental and control group means were slightly higher on the posttest indicating that both groups may be more apprehensive, or less favorably concerned, over discipline problems.

In addition, differences in mean values, or range, for each of these two groups were as follows:

(1) Control group:
   A. Pretest:
      3.35 - 2.12 = 1.23
   B. Posttest:
      3.37 - 2.00 = 1.37

Table 8

Semantic Differential Means (x) and Standard Deviations (s) on the Evaluative Factor for Ten Bipolar Adjectives

Concept	January (Pre) Experimental $\bar{x}$	s	Control $\bar{x}$	s	October (Post) Experimental $\bar{x}$	s	Control $\bar{x}$	s
Myself as a teacher	2.29	1.06	2.98	1.33	2.03	1.19	2.16	0.96
Classroom bookkeeping	2.46	1.53	3.35	1.92	2.90	1.63	2.86	1.75
Supervising teacher	2.28	1.53	2.12	1.13	1.87	1.19	2.00	1.43
Methods of teaching	2.15	1.10	2.28	1.06	2.12	1.18	2.04	1.10
Supervisor's visit	2.51	1.56	3.30	1.85	2.43	1.55	2.23	1.50
Relationship with parents	2.20	1.27	2.29	1.47	2.31	1.32	2.09	1.21
Discipline problems	3.23	1.84	3.33	1.74	3.38	1.63	3.37	1.97
Student teaching	2.26	1.22	2.57	1.35	1.97	1.36	2.10	1.43
Pupils	2.72	1.49	2.85	1.39	2.70	1.42	2.82	1.51
My first year of teaching	2.51	1.43	2.68	1.44	2.16	1.13	2.27	1.34

Table 9

Post Experimental and Control Mean Values and Rank Values on the Evaluative Dimension

Concept	E mean	Rank	C mean	Rank
Myself as a teacher	2.03	4	2.16	9.5
Classroom bookkeeping	2.90	18	2.86	17
Supervising teacher	1.87	1	2.00	3
Methods of teaching	2.12	8	2.04	5
Supervisor's visit	2.43	14	2.23	11
Relationship with parents	2.31	13	2.09	6
Discipline problems	3.38	20	3.37	19
Student teaching	1.97	2	2.10	7
Pupils	2.70	15	2.82	16
My first year of teaching	2.16	9.5	2.27	12
	$R_1 = 104.5$		$R_2 = 105.5$	

(2) Experimental group:
   A. Pretest:
      3.23 - 2.20 = 1.03
   B. Posttest:
      3.38 - 1.87 = 1.51

Both groups increased in their perceptions of the ten concepts indicating a greater variation after their student teaching experiences.

To test the hypothesis to find if students ranked these ten concepts in a similar manner the Mann-Whitney U's were calculated for the posttest means only. The following table lists the mean values obtained for both groups, along with their assigned rank values.

The Mann-Whitney formula is:[25]

$$U = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1$$

or, equivalently,

$$U = n_1 n_2 + \frac{n_2 (n_2 + 1)}{2} - R_2$$

where,

R_1 = sum of the ranks assigned to group whose sample size is n_1 (10)
R_2 = sum of the ranks assigned to group whose sample size is n_2 (10)

$$U = (10)(10) + \frac{(10)(10 + 1)}{2} - 104.5$$

$$= 50.5$$

$$U^1 = n_1 n_2 - U$$

$$= 49.5$$

Since the smaller value of U is needed to test for a significant difference, a U-value of 49.5 was referred to the critical region. A U-value of nineteen or less would be necessary to reject the null hypothesis at the .02 level of significance for a two tailed test. The obtained value of U (49.5) would warrant acceptance of the null hypothesis in this case. It is tenable that their is not a significant difference in the ranking of these ten concepts by the experimental and control groups.

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[25]Sidney Siegel. *Nonparametric Statistics for the Behavioral Sciences.* (New York: McGraw-Hill Book Company, 1956), pp. 116-127.

The Wilcoxon Matched-Pairs Signed-Ranks test[26] gives more weight to a pair which shows a large difference between concepts than to a pair which shows a small difference. Letting d represent the difference between means for each concept, Table 10, following, was constructed.

A T-value less than or equal to 8 ($T \leq 8$) would be needed to reject H_0 at the .05 level of significance. It would be concluded, then, that no significant differences existed between the experimental and control group means on the evaluative dimension of the semantic differential with respect to the ten selected concepts.

The means and standard deviations calculated for the potency dimension have been tabled in Table 11, page 37.

Differences in mean values, or range, for each of the groups were as follows:

(1) Control group:
   A. Pretest:
      4.68 - 3.37 = 1.31
   B. Posttest:
      4.55 - 3.42 = 1.13

(2) Experimental group:
   A. Pretest:
      4.26 - 3.35 = 0.91
   B. Posttest:
      5.74 - 3.45 = 2.29

The differences in these four range values illustrate that the experimental group saw a much greater variation in their attitudes toward the ten selected concepts with respect to the "strength," or potency, factor. This experimental group saw the ten concepts as more neutral, or less positive, after their student teaching experiences that did the control group.

Upon inspection of the means for the potency factor it will be noted that the control group means decreased in value (indicating a tendency to mark the bipolar adjectives toward the "stronger," or positive, end of the scales) for the following concepts:

1. myself as a teacher
2. classroom bookkeeping
3. supervising teacher
4. methods of teaching (very slight decrease)
5. supervisor's visit

The experimental group means, however, on these same five concepts, increased in value indicating a more neutral position after their student teaching.

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[26] *Ibid.* pp. 75-83.

Table 10

Post Experimental and Control Mean Values and their Differences on the Evaluative Factor

Concept	E mean	C mean	d	Rank of d	Rank with less frequent sign
Myself as a teacher	2.03	2.16	-0.13	-7	
Classroom bookkeeping	2.90	2.86	0.04	2	2
Supervising teacher	1.87	2.00	-0.13	-7	
Methods of teaching	2.12	2.04	0.08	3	3
Supervisor's visit	2.43	2.23	0.20	9	9
Relationship with parents	2.31	2.09	0.22	10	10
Discipline problems	3.38	3.37	0.01	1	1
Student teaching	1.97	2.10	-0.13	-7	
Pupils	2.70	2.82	-0.12	-5	
My first year of teaching	2.16	2.27	-0.11	-4	

T = 25

Table 11

Semantic Differential Means (x) and Standard Deviations (s) on the Potency Factor for Three Bipolar Adjectives

Concept	January (Pre) Experimental $\bar{x}$	s	Control $\bar{x}$	s	October (Post) Experimental $\bar{x}$	s	Control $\bar{x}$	s
Myself as a teacher	3.40	1.30	3.64	1.78	4.85	1.39	3.42	1.66
Classroom bookkeeping	4.09	1.82	4.68	2.45	5.74	2.07	4.55	2.24
Supervising teacher	3.81	1.71	4.05	2.13	4.87	2.13	3.93	2.04
Methods of teaching	3.39	1.31	3.48	1.59	5.10	1.72	3.46	1.70
Supervisor's visit	4.11	1.87	4.52	2.00	5.19	1.91	3.85	2.27
Relationship with parents	3.35	1.66	3.37	2.03	5.25	2.05	3.98	2.42
Discipline problems	4.26	1.66	3.77	1.79	4.91	1.88	4.12	2.25
Student teaching	4.16	1.47	3.69	1.59	5.50	1.95	4.30	2.39
Pupils	3.66	1.46	3.38	1.62	4.94	1.95	3.84	2.30
My first year of teaching	4.19	1.78	4.02	1.84	3.45	1.59	4.36	2.09

The four concepts, relationships with parents (6), discipline problems (7), student teaching (8), and pupils (9), were more toward the neutral point after student teaching for both the experimental and control groups.

The experimental group mean, after student teaching, decreased in value implying that this group felt more positive on the potency factor toward "my first year of teaching" (10), than did the control group. The control group, while close to the neutral point changed closer to the neutral point after student teaching.

Again, to test the hypothesis to ascertain if the students ranked these ten concepts in a similar manner, with respect to the potency factor, the following table was utilized.

To determine the value of U for the Mann-Whitney formula, the following procedure has been illustrated:

$$U = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1$$

$$= (10)(10) + \frac{10 (10 + 1)}{2} - 146$$

$$= 9$$

For determining U^1 the following method was used:

$$U^1 = n_1 n_2 - U$$

$$= 100 - 9$$

$$= 91$$

Therefore, the smaller value of U and U^1 (U = 9) was used to test the null hypothesis, or to find if a significant difference did exist in the ranking of these means between the experimental and control groups.

The obtained value of nine did fall in the critical region, therefore, it would seem plausible that there was a significant difference in the manner in which the two groups tended to evaluate these concepts after their student teaching experience. From inspection of the table it can readily be observed that the experimental group, in general, held all concepts closer to the neutral position than did the control group on the potency factor.

To investigate the differences between the means for the ten selected concepts, the Wilcoxon Matched-Pairs Signed-Ranks test was computed. Table 12, page 39, shows the mean values for both groups, for the ten concepts, along with their differences (d) and the assigned ranks.

Table 12

Post Experimental and Control Mean Values and Rank Values on the Potency Dimension

Concept	E mean	Rank	C mean	Rank
Myself as a teacher	4.85	12	3.42	1
Classroom bookkeeping	5.74	20	4.55	11
Supervising teacher	4.87	13	3.93	6
Methods of teaching	5.10	16	3.46	3
Supervisor's visit	5.19	17	3.85	12
Relationship with parents	5.25	18	3.98	7
Discipline problems	4.91	14	4.12	8
Student teaching	5.50	19	4.30	9
Pupils	4.94	15	3.84	4
My first year of teaching	3.45	2	4.36	10
		$R_1 = 146$		$R_2 = 71$

Table 13

Post Experimental and Control Mean Values and their Differences on the Potency Factor

Concept	E mean	C mean	d	Rank of d	Rank with less frequent sign
Myself as a teacher	4.85	3.42	1.43	9	
Classroom bookkeeping	5.74	4.55	1.19	5	
Supervising teacher	4.87	3.93	0.94	3	
Methods of teaching	5.10	3.46	1.64	10	
Supervisor's visit	5.19	3.85	1.34	8	
Relationship with parents	5.25	3.98	1.27	7	
Discipline problems	4.91	4.12	0.79	1	
Student teaching	5.50	4.30	1.20	6	
Pupils	4.94	3.84	1.10	4	
My first year of teaching	3.45	4.36	-0.91	-2	2

T = 2

Since a T-value of less than or equal to three ($T \leq 3$) was needed to reject the null hypothesis, H_0 would be rejected for the potency factor, at the .01 level of significance. It would be concluded that the experimental group was affected with respect to the potency factor of these ten concepts.

For the activity factor of the semantic differential, Table 14, page 42, has been summarized. Upon inspection of these mean values it can be observed that the experimental and control group means, after student teaching, were decreased (indicating stronger positive feeling and/or attitudes relative to the activity dimension on the following concepts:

1. myself as a teacher
3. supervising teacher
5. supervisor's visit
8. student teaching
10. my first year of teaching

Discipline problems (7) and pupils (9) were two concepts where both groups were less positive after their student teaching experiences.

For the concepts, classroom bookkeeping (2) and relationship with parents (6) the control group held more positive evaluations after their student teaching, whereas the experimental group were less positive after their student teaching.

With respect to the fourth concept, methods of teaching (4), their was a large increase toward the postitive end of the continuum (3.19 to 2.66) for the experimental group. The control group on this concept remained about the same (3.25 to 3.30), or showed a slight decrease in their evaluation of the concept.

The differences in mean values, or range, for each of these two groups were as follows:

(1) Control group:
   A. Pretest:
      3.97 - 3.25 = 0.72
   B. Posttest:
      4.47 - 2.78 = 1.69

(2) Experimental group:
   A. Pretest:
      3.92 - 2.81 = 1.11
   B. Posttest:
      4.20 - 2.66 = 1.54

It can be generally observed that after their student teaching experience both groups tended to show greater variation in their evaluation of the ten concepts. In fact, the

Table 14

Semantic Differential Means ($\bar{x}$) and Standard Deviations (s) on the Activity Factor for Three Bipolar Adjectives

Concept	January (Pre) Experimental $\bar{x}$	s	Control $\bar{x}$	s	October (Post) Experimental $\bar{x}$	s	Control $\bar{x}$	s
Myself as a teacher	3.45	1.62	3.88	1.89	3.03	1.75	3.06	1.47
Classroom bookkeeping	2.81	1.48	3.73	2.20	3.31	1.72	3.51	2.11
Supervising teacher	3.74	2.36	3.29	1.84	2.90	1.92	2.78	1.97
Methods of teaching	3.19	1.62	3.25	1.97	2.66	1.48	3.30	2.01
Supervisor's visit	3.36	1.99	3.94	2.15	2.74	1.76	2.97	2.07
Relationship with parents	3.17	1.77	3.52	2.25	3.31	1.71	3.11	1.97
Discipline problems	3.48	2.00	3.49	1.83	3.54	2.03	3.71	2.37
Student teaching	3.56	2.17	3.54	1.90	3.28	2.14	3.27	2.13
Pupils	3.88	1.95	3.97	2.03	4.20	2.02	4.47	2.13
My first year of teaching	3.92	1.92	3.90	1.93	3.20	1.57	3.65	1.91

overall range for both groups (highest mean value and lowest mean value differences) was quite similar, showing increased variation with respect to the posttest.

In order that the hypothesis could be tested to find if students ranked these ten concepts in a similar manner, the Mann-Whitney test was utilized for the posttest means only. The following table lists these mean values obtained for both groups, along with their assigned rank values:

Using the Mann-Whitney formula below:

$$U = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1$$

$$= (10)(10) + \frac{(10)(10 + 1)}{2} - 95$$

$$= 60$$

The value of U was determined in the following manner:

$$U = n_1 n_2 - U$$

$$= 100 - 60$$

$$= 40$$

The lower value of U ($U = 40$) was the test statistic used to test H_0. A U-value of twenty-three or less would be needed to reject the null hypothesis at the .05 level of significance, for a two-tailed test, it would be expected that there was no significant difference between the two groups on their ranking of the ten concepts relative to the activity dimension.

The Wilcoxon Matched-Pairs Signed-Ranks test was calculated for the activity factor. In order to investigate the differences between the means for these ten concepts, the following table was developed:

A T-value of less than or equal to 8 ($T \leq 8$) would be needed to reject the null hypothesis at the .05 level of significance. Since the obtained value of $T = 9.5$ was greater than eight, it would be concluded that there was no significant difference between the two groups mean differences for the activity factor. Therefore, the simulation group did not react significantly different to the control group for these ten concepts after their student teaching had been completed.

Table 15

Post Experimental and Control Mean Values and Rank Values on the Activity Dimension

Concept	E mean	Rank	C mean	Rank
Myself as a teacher	3.03	6	3.06	7
Classroom bookkeeping	3.31	13.5	3.51	15
Supervising teacher	2.90	4	2.78	3
Methods of teaching	2.66	1	3.30	12
Supervisor's visit	2.74	2	2.97	5
Relationship with parents	3.31	13.5	3.11	8
Discipline problems	3.54	16	3.71	18
Student teaching	3.28	11	3.27	10
Pupils	4.20	19	4.47	20
My first year of teaching	3.20	9	3.65	17
	R_1 = 95		R_2 - 115	

Table 16

Post Experimental and Control Mean Values and their Differences on the Activity Factor

Concept	E mean	C mean	d	Rank of d	Rank with less frequent sign
Myself as a teacher	3.03	3.06	-0.03	-2	
Classroom bookkeeping	3.31	3.51	-0.20	-5.5	
Supervising teacher	2.90	2.78	0.12	3	3
Methods of teaching	2.66	3.30	-0.64	-10	
Supervisor's visit	2.74	2.97	-0.23	-7	
Relationship with parents	3.31	3.11	0.20	5.5	5.5
Discipline problems	3.54	3.71	-0.17	-4	
Student teaching	3.28	3.27	0.01	1	1
Pupils	4.20	4.47	-0.27	-8	
My first year of teaching	3.20	3.65	-0.35	-9	

T = 9.5

The Minnesota Teacher Attitude Inventory (MTAI)

The Minnesota Teacher Attitude Inventory, a 150 item standardized inventory, published by the Psychological Corporation, was also used to test hypothesis three, as the inventory measures changes in attitudes toward youth. In the MTAI there are no "right" or "wrong" answers. Score values are obtained on the basis of agreement or disagreement toward specific attitude statements. Although a misnomer in scoring and in order to avoid confusion, "right" and "wrong" values are calculated. The actual attitude score is found by subtracting the "wrongs" score from the "rights" score.

To test if a significant difference did exist, i.e., student teachers who had simulated experiences reported more positive feelings toward students and toward concepts related to the simulated problems than student teachers not having had simulated experience, the t-test was used.

Control Group Pre- Posttests

Since the sample size was reduced in the control group (pretest $n_1 = 27$; posttest $n_2 = 22$), the t-test for correlated data could not be used. In order to determine whether the pooled variance or separate variance formula t-test was to be used, a check for the homogeneity of variance was made using Bartlett's as indicated:

$$F = \frac{s^2_g}{s^2_l}$$

where

s^2_g = greater variance, and,

s^2_l = lesser variance

Since the greater variance was for the pretest ($s^2_g = 678.247$) and the lesser variance was 408.835 ($s^2_g = 408.835$) on the posttest, an F-ratio of 1.65 was obtained. Since the F = 1.65 did not fall in the critical region, it would be concluded that the two samples were drawn from the same populations. With unequal sample sizes, the two variances were considered homogeneous and the pooled variance t-test formula was used. The degrees of freedom used for this test was found by $n_1 + n_2 - 2$, or 27 + 22 - 2 = 47.

The pooled variance formula is:

$$t = \frac{x_1 - x_2}{\left(\frac{\Sigma x^2_1 + \Sigma x^2_2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}$$

where

X_1 = mean of the first group (pretest control)
X_2 = mean of the second group (posttest control)

Σx_1 = sum of squares for the first group
Σx_2 = sum of squares for the second group

n_1 = sample size of first group
n_2 = sample size of second group

by substitution,

$$t = \frac{45.778 - 54.273}{\sqrt{\left(\frac{25.12 + 18.58}{27 + 22 - 2}\right)\left(\frac{1}{27} + \frac{1}{22}\right)}}$$

$t = -1.228$

The following table summarizes the t-test value found for the control group.

Table 17

t-Table for the Control Group Pre- and Posttest Means on the MTAI

Group	Number	Standard Deviation	Mean Values	t
Pre	27	26.043	45.778	-1.228
Post	22	20.220	54.273	

A t-value of -1.288 indicated that the mean for the second group was higher, but, in essence, there was no significant differece in positive feelings and attitudes after their student teaching for the control group.

Experimental Group Pre- Posttests

As the sample size was reduced in the experimental group, the t-test for correlated data was not warranted. Again, the homogeneity of variance was calculated in order to determine which t-test formula should be used.

Using Bartlett's test, it was found that the greater variance (s^2 = 628.310) was in the pre-test, while the lesser variance (s^2 = 542.044) was found for the posttest. An F-ratio of 1.15 did not fall in the critical region, therefore, the pooled variance t-test formula, previously discussed, was used with 46 degrees of freedom (26 + 22 - 2 = 46).

A summary for the t-test for the experimental pre- posttests is as follows:

Table 18

t-Table for the Experimental Group Pre- and Posttest Means on the MTAI

Group	Number	Standard Deviation	Mean Values	t
Pre	26	25.066	52.192	-1.082
Post	22	23.282	59.955	

The t-ratio of -1.082 indicates that the experimental students did have more positive feelings toward students and toward concepts related to the simulated problems, but not significantly greater after their student teaching.

Experimental and Control Posttest

To test the null hypothesis that no significant differences existed between the experimental and control after their student teaching, the pooled variance t-test formula was justified according to Bartlett's test for homogeneity of variance. For this test, 42 degrees of freedom were used ($df = n_1 + n_2 - 2$, or 22 + 22 - 2 = 42).

Table 19 summarizes the t-test for the experimental and control groups after student teaching.

Table 19

t-Table for the Experimental and Control Group Posttest Means on the MTAI

Group	Number	Standard Deviation	Mean Values	t
Control	22	20.220	54.273	-0.845
Experimental	22	23.282	59.955	

While the mean value for the experimental group was higher, the t-test revealed there was no significant difference between the experimental and control groups after their student teaching. It would be concluded, then, that the simulation experiences had no significantly greater affect on student teachers with respect to having more positive feelings toward students and toward concepts related to the simulated problems than those student teachers not having had simulated experiences according to the MTAI.

TEST OF HYPOTHESIS 4

As stated before, hypothesis four was structured to investigate if student teachers that had simulated experiences would report higher levels of confidence than those student teachers that did not have simulated experiences. The *Confidence Scale*, (Appendix D), developed by Cruickshank and Broadbent, was the instrument used to collect the necessary data.

However, as stated in the original proposal, the Lindquist Type VI Analysis of Variance was not used as the statistical test because of the limited capacity of the KSTC computer. The t-test, along with the analysis of variance test, was processed by the KSTC Computer Services for each of the thirty-two statements.

For scoring on the *Confidence Scale* a value of one was given when respondents indicated they felt very confident about the statement while confident, uncertain, and very uncertain were assigned scores of two, three, and four, respectively.

To test this hypothesis, comparisons were made between the experimental and control groups for both the pretest and posttest scores. In addition, pre- and posttest scores were made for the experimental and control groups separately.

In the following table, the thirty-two statements on the *Confidence Scale* have been listed, along with the mean values found for the experimental and control groups pretest scores, as well as both t- and F- values.

Upon inspection it can be observed that statements twelve and fifteen showed a significant difference in the mean values of the experimental group when compared to the mean of the control group at the .01 level of significance. It would be concluded that the control group (lower mean value indicating more confidence) felt more confident in helping children with reading problems (12) and more confident toward integrating the isolated, disliked child into classroom activities (15).

Two other characteristics, items twenty-eight and thirty-two, showed a significant difference in favor of the control group (lower mean value indicating greater confidence) at the .05 level of significance. The control, at the outset, felt more confident about relating subjects meaningfully to children (28) and more confident that they would be able to get students to do homework (32).

Table 21, page was developed to show the mean values, t- and F-values for both the control and experimental groups after completing their student teaching experiences (posttest).

It can be readily observed that there was no significant differences between the experimental and control groups in their degree of confidence after completing their student teaching. This would warrant that the null hypothesis be accepted, concluding that simulation training did not affect student teachers in their confidence level.

Table 20

Pretest t- and F-values Computed Between the Experimental and Control Group Means for the Confidence Scale

Confidence Scale Statement ("I am confident that I . . . ")	E mean	C mean	t-value	F-ratio
1. ... can reach parents I wish to contact.	2.083	2.148	-0.389	0.152
2. ... can introduce a new topic and obtain high interest.	2.292	2.074	1.517	2.302
3. ... can help students with destructive home situations.	2.625	2.519	0.589	0.347
4. ... can handle children's aggressive behavior toward one another.	2.375	2.259	0.633	0.401
5. ... can be enthusiastic about each subject that I will teach.	2.000	2.037	-0.178	0.032
6. ... will not feel uncomfortable about giving failing grades.	2.833	2.815	0.118	0.014
7. ... can help students see the relationships between undesirable behavior and its consequences.	2.042	1.889	1.229	1.510
8. ... can cope with students who are not willing to work.	2.458	2.556	-0.635	0.402
9. ... can interpret children's capabilities to parents.	2.208	2.259	-0.327	0.107
10. ... know how to discuss a child's achievement with his parent(s).	2.167	2.074	0.557	0.311
11. ... can differentiate instruction among the slow, average, and gifted children in class.	2.458	2.296	0.913	0.835
12. ... can help children with reading problems.	2.667	2.185	3.281*	10.766*

13.	... can be happy with routine classroom bookkeeping.	2.083	2.037	0.267	0.071
14.	... can involve pupils in self-evaluation.	2.250	2.259	-0.055	0.003
15.	... can integrate the isolated, disliked child into classroom activities.	2.583	2.037	2.855*	8.151*
16.	... can have a good attitude toward grading papers.	1.917	1.593	1.888	3.563
17.	... can evaluate my objectives.	1.917	2.222	-1.877	3.523
18.	... have the skills necessary to have children maintain quiet while working independently.	2.208	1.926	1.509	2.277
19.	... can have work for some while I work with other groups or individuals.	2.042	1.815	1.568	2.458
20.	... will be at ease when supervised	3.083	2.963	0.732	0.537
21.	... will be patient with my students.	2.000	1.741	1.477	2.181
22.	... know how to judge children's progress in terms of my aims and purposes	2.375	2.259	0.666	0.443
23.	... can cope with the constantly disrupting child.	2.625	2.593	0.172	0.030
24.	... know what to do with students who finish early.	2.167	1.926	1.542	2.376
25.	... can involve many children in group discussions.	2.208	2.074	0.901	0.813
26.	... can find reading materials for readers one or two years below grade level.	2.125	2.111	0.095	0.009
27.	... can prepare classroom tests that are valid.	2.292	2.333	-0.252	0.064
28.	... can relate subjects meaningfully to children.	2.333	2.037	2.304+	5.309+

29.	... can relate to parents that their children have problems.	2.500	2.482	0.086	0.008
30.	... can select instructional materials.	2.208	2.037	1.293	1.673
31.	... can interest parents in their children's behavior.	2.667	2.333	1.801	3.243
32.	... can get students to do homework.	2.583	2.259	2.241+	5.022+

*significant at .01 level
+significant at .05 level

Table 21

Posttest t- and F-values Computed Between the Experimental and Control Groups Means for the Confidence Scale

Confidence Scale Statement ("I am confident that I . . .")	E mean	C mean	t-value	F-ratio
1. ... can reach parents I wish to contact.	3.100	2.941	0.957	0.917
2. ... can introduce a new topic and obtain high interest.	3.000	3.235	-1.438	2.067
3. ... can help students with destructive home situations.	2.810	2.471	1.840	3.386
4. ... can handle children's aggressive behavior toward one another.	3.000	3.000	0.000	0.000
5. ... can be enthusiastic about each subject that I will teach.	3.048	3.059	-0.066	0.004
6. ... will not feel uncomfortable about giving failing grades.	1.952	2.059	-0.567	0.322
7. ... can help students see the relationships between undesirable behavior and its consequences.	3.095	3.000	0.627	0.393
8. ... can cope with students who are not willing to work.	2.762	2.824	-0.323	0.105
9. ... can interpret children's capabilities to parents.	2.952	2.882	0.336	0.113
10. ... know how to discuss a child's achievement with his parent(s).	3.048	3.000	0.213	0.045
11. ... can differentiate instruction among the slow, average, and gifted children in class.	3.191	3.000	0.963	0.927
12. ... can help children with reading problems.	2.905	2.882	0.121	0.015

13.	... can be happy with routine classroom bookkeeping.	3.143	3.235	-0.384	0.147
14.	... can involve pupils in self-evaluation.	3.095	2.941	0.957	0.917
15.	... can integrate the isolated, disliked child into classroom activities.	2.762	2.765	-0.013	0.000
16.	... can have a good attitude toward grading papers.	3.143	3.353	-1.195	1.428
17.	... can evaluate my objectives.	3.048	2.882	1.399	1.959
18.	... have the skills necessary to have children maintain quiet while working independently.	2.905	3.000	-0.510	0.260
19.	... can have work for some while I work with other groups or individuals.	3.238	3.353	-0.617	0.382
20.	... will be at ease when supervised.	2.952	3.000	-0.201	0.041
21.	... will be patient with my students.	3.143	3.177	-0.233	0.054
22.	... know how to judge children's progress in terms of my aims and purposes.	3.000	2.941	0.301	0.090
23.	... can cope with the constantly disrupting child.	2.810	2.588	1.114	1.240
24.	... know what to do with students who finish early.	3.095	3.000	0.415	0.172
25.	... can involve many children in group discussions.	3.095	3.118	0.133	0.018
26.	... can find reading materials for readers one or two years below grade level.	3.095	3.177	-0.396	0.156
27.	... can prepare classroom tests that are valid.	2.810	2.765	0.193	0.037
28.	... can relate subjects meaningfully to children.	3.191	3.118	0.507	0.256

29. ... can relate to parents that their children have problems.	2.762	2.765	-0.012	0.000
30. ... can select instructional materials.	3.143	3.177	-0.186	0.035
31. ... can interest parents in their children's behavior.	2.810	2.706	0.581	0.337
32. ... can get students to do homework.	2.667	2.706	-0.252	0.063

*significant at .01 level
+significant at .05 level

In addition to comparisons made on the pre- and posttest scores between the experimental and control groups, comparisons were also made between the pre- and posttests for the experimental group and the control group separately. The mean values, along with the t- and F-values are shown in Table 22 (pre- posttest for control group) and Table 23 (pre- and posttest for experimental group).

Table 24 has been developed to show the comparisons between the two groups with respect to the significant differences indicated by the two previous tables. Column I indicates the characteristics, while Column II (C = control; E = experimental) indicates the group that was significantly less confident after student teaching and Column III indicates the group that was more confident about the characteristic after student teaching. The level of significance is indicated in Column IV. In Columns II and III, an E or C will mean there was a significant difference between the pre- and posttest means at the level of significance indicated in Column IV.

It might be readily observed that both groups felt less confident on nearly every characteristic after their actual student teaching. There was no significant difference between the pre- and posttest means for both the control and experimental groups on items 3, 8, 20, 23, 29, and 21. The control group showed a significant difference on item 12 and 32, while the experimental group showed no significant difference between their pretest and posttest means on these two items.

One characteristic, "...not feel uncomfortable about giving failing grades," out of the thirty-two indicated that both the experimental and control groups felt more confident after their student teaching.

Table 22

Control Group t- and F-values Computed for Pre- and Posttest Means on the Confidence Scale

Confidence Scale Statement ("I am confident that I . . .")	Pretest mean	Posttest mean	t-value	F-ratio
1. ... can reach parents I wish to contact.	2.148	2.941	5.161*	26.625*
2. ... can introduce a new topic and obtain high interest.	2.074	3.235	8.143*	66.289*
3. ... can help students with destructive home situations.	2.519	2.471	-0.278	0.078
4. ... can handle children's aggressive behavior toward one another.	2.259	3.000	4.270*	18.235*
5. ... can be enthusiastic about each subject that I will teach.	2.037	3.059	4.375*	19.138*
6. ... will not feel uncomfortable about giving failing grades.	2.815	2.059	-4.768*	22.730*
7. ... can help students see the relationships between undesirable behavior and its consequences.	1.889	3.000	7.900*	62.397*
8. ... can cope with students who are not willing to work.	2.556	2.824	1.547	2.395
9. ... can interpret children's capabilities to parents.	2.259	2.882	4.360*	19.006*
10. ... know how to discuss a child's achievement with his parent(s).	2.074	3.000	5.630*	31.692*
11. ... can differentiate instruction among the slow, average, and gifted children in class.	2.296	3.000	3.508*	12.306*
12. ... can help children with reading problems.	2.185	2.882	4.241*	17.986*

13.	... can be happy with routine classroom bookkeeping.	2.037	3.235	5.606*	31.421*
14.	... can involve pupils in self-evaluation.	2.259	2.941	4.099*	16.803*
15.	... can integrate the isolated, disliked child into classroom activities.	2.037	2.765	3.588*	12.873*
16.	... can have a good attitude toward grading papers.	1.593	3.353	9.098*	82.782*
17.	... can evaluate my objectives.	2.222	2.882	3.638*	13.230*
18.	... have the skills necessary to have children maintain quiet while working independently.	1.926	3.000	5.046*	24.459*
19.	... can have work for some while I work with other groups or individuals.	1.815	3.353	3.618*	74.270*
20.	... will be at ease when supervised.	2.963	3.000	0.188	0.035
21.	... will be patient with my students.	1.741	3.177	7.596*	57.681*
22.	... know how to judge children's progress in terms of my aims and purposes.	2.259	2.941	3.798*	14.424*
23.	... can cope with the constantly disrupting child.	2.593	2.588	-0.021	0.001
24.	... know what to do with students who finish early.	1.926	3.000	5.321*	28.317*
25.	... can involve many children in group discussions.	2.074	3.118	7.043*	49.610*
26.	... can find reading materials for readers one or two years below grade level.	2.111	3.177	5.387*	29.020*
27.	... can prepare classroom tests that are valid.	2.333	2.765	2.186+	4.779+
28.	... can relate subjects meaningfully to children.	2.037	3.118	7.656*	58.621*

29.	... can relate to parents that their children have problems.	2.482	2.765	1.215	1.477
30.	... can select instructional materials.	2.037	3.177	7.766*	60.301*
31.	... can interest parents in their children's behavior.	2.333	2.706	1.979	3.916
32.	... can get students to do homework.	2.259	2.706	2.856*	8.157*

*significant at .01 level
+significant at .05 level

Table 23

Experimental Group t- and F-values Computed for Pre- and Posttest Means on the Confidence Scale

Confidence Scale Statement ("I am confident that I . . .")	Pretest mean	Posttest mean	t-value	F-ratio
1. ... can reach parents I wish to contact.	2.083	3.095	5.615*	31.524*
2. ... can introduce a new topic and obtain high interest.	2.292	3.000	4.138*	18.645*
3. ... can help students with destructive home situations.	2.625	2.810	0.932	0.869
4. ... can handle children's aggressive behavior toward one another.	2.375	3.000	3.716*	13.806*
5. ... can be entnusiastic about each subject that I will teach.	2.000	3.048	6.388*	40.810*
6. ... will not feel uncomfortable about giving failing grades.	2.833	1.952	-4.790*	22.953*
7. ... can help students see the relationships between undesirable behavior and its consequences.	2.042	3.095	7.808*	60.972*
8. ... can cope with students who are not willing to work.	2.458	2.762	1.796	3.224
9. ... can interpret children's capabilities to parents.	2.208	2.952	3.571*	12.750*
10. ... know how to discuss a child's achievement with his parent(s).	2.167	3.048	4.095*	16.770*
11. ... can differentiate instruction among the slow, average, and gifted children in class.	2.458	3.191	4.122*	16.988*
12. ... can help children with reading problems.	2.667	2.905	1.441	2.078

13.	... can be happy with routine classroom bookkeeping.	2.083	3.143	5.420*	29.376*
14.	... can involve pupils in self-evaluation.	2.250	3.095	4.903*	24.043*
15.	... can integrate the isolated, disliked child into classroom activities.	2.583	2.762	0.884	0.782
16.	... can have a good attitude toward grading papers.	1.917	3.143	7.640*	58.370*
17.	... can evaluate my objectives.	1.917	3.048	9.527*	90.782*
18.	... have the skills necessary to have children maintain quiet while working independently.	2.208	2.905	4.119*	16.965*
19.	... can have work for some while I work with other groups or individuals.	2.042	3.238	8.001*	64.026*
20.	... will be at ease when supervised.	3.083	3.952	-0.663	0.440
21.	... will be patient with my students.	2.000	3.143	7.714*	59.414*
22.	... know how to judge children's progress in terms of my aims and purposes.	2.375	3.000	3.267*	10.673*
23.	... can cope with the constantly disrupting child.	2.625	2.810	0.986	0.972
24.	... know what to do with students who finish early.	2.167	3.095	5.236*	27.420*
25.	... can involve many children in group discussions.	2.208	3.095	5.246*	27.514*
26.	... can find reading materials for readers one or two years below grade level.	2.125	3.095	6.591*	43.442*
27.	... can prepare classroom tests that are valid.	2.292	2.810	2.664+	7.097+
28.	... can relate subjects meaningfully to children.	2.333	3.191	6.425*	41.288*

29.	... can relate to parents that their children have problems.	2.500	2.762	1.178	1.388
30.	... can select instructional materials.	2.208	3.143	5.794*	33.567*
31.	... can interest parents in their children's behavior.	2.667	2.810	0.770	0.593
32.	... can get students to do homework.	2.583	2.667	0.565	0.319

*significant at .01 level
+significant at .05 level

Table 24

A Summary of the Confidence Scale Mean Values (Pre- Post) for Both Groups After Student Teaching Experience

I Characteristic ("I am confident that I . . .")	II Less confident	III More confident	IV Level of significance
1. ... can reach parents I wish to contact.	C,E		.01
2. ... can introduce a new topic and obtain high interest.	C,E		.01
3. ... can help students with destructive home situations.			NS
4. ... can handle children's aggressive behavior toward one another.	C,E		.01
5. ... can be enthusiastic about each subject that I will teach.	C,E		.01
6. ... will not feel uncomfortable about giving failing grades.		C,E	.01
7. ... can help students see the relationships between undesirable behavior and its consequences.	C,E		.01
8. ... can cope with students who are not willing to work.			NS
9. ... can interpret children's capabilities to parents.	C,E		.01
10. ... know how to discuss a child's achievement with his parents(s).	C,E		.01
11. ... can differentiate instruction among the slow, average, and gifted children in class.	C,E		.01
12. ... can help children with reading problems.	C		.01

13.	... can be happy with routine classroom bookkeeping.	C,E	.01
14.	... can involve pupils in self-evaluation.	C,E	.01
15.	... can integrate the isolated, disliked child into classroom activities.	C	.01
16.	... can have a good attitude toward grading papers.	C,E	.01
17.	... can evaluate my objectives.	C,E	.01
18.	... have the skills necessary to have children maintain quiet while working independently.	C,E	.01
19.	... can have work for some while I work with other groups or individuals.	C,E	.01
20.	... will be at ease when supervised.		NS
21.	... will be patient with my students.	C,E	.01
22.	... know how to judge children's progress in terms of my aims and purposes.	C,E	.01
23.	... can cope with the constantly disrupting child.		NS
24.	... know what to do with students who finish early.	C,E	.01
25.	... can involve many children in group discussions.	C,E	.01
26.	... can find reading materials for readers one or two years below grade level.	C,E	.01
27.	... can prepare classroom tests that are valid.	C,E	.05
28.	... can relate subject meaningfully to children.	C,E	.01

29.	... can relate to parents that their children have problems.		NS
30.	... can select instructional materials.	C,E	.01
31.	... interest parents in their children's behavior.		NS
32.	... can get students to do homework.	C	.01

NS not significant between the pre- and posttest means

TEST OF HYPOTHESIS 5

Assumed 50% Responsibility Card (Appendix E)

For hypothesis five, the Assumed 50% Responsibility Card was used. As stated in the proposal, student teachers having had simulated experiences will be able to assume 50% responsibility for student teaching sooner than will those students not experiencing simulation training. The t-test was used to test for a significant difference between the means for Ss and Cs with respect to the total number of days reported by the supervising teacher.

The following table summarizes the t-test value found for the experimental and control groups.

Table 25

t-Table for the Experimental and Control Group Means on the Assumed 50% Responsibility Card

Group	Number	Standard Deviation	Mean Values	t
Experimental	21	5.534	15.524	0.706
Control	23	6.356	16.826	

Student Teaching Questionnaire (Appendix F)

In addition to the Assumed 50% Responsibility Card, the KSTC Education Department asks the cooperating teacher to complete a simple *Student Teaching Questionnaire.* A t-test was calculated to test if a significant difference existed between the mean values for the experimental and control groups on the following three questions of this instrument.

Question 1. Compare this student teacher with all other students with whom you have associated. How would you rank this student teacher as regards the student's self-esteem or self-confidence?

Least Self-confident 1 2 3 4 5 6 7 Most Self-confident

The following t-table summarizes the findings as related to Question 1.

Table 26

t-Table for the Experimental and Control Group Means on Question No. 1. of the KSTC Student Teaching Questionnaire

Group	Number	Standard Deviation	Mean Values	t
Experimental	21	1.350	5.714	0.421
Control	23	1.034	5.870	

Since the t-value of 0.421 does not fall in the critical region the null hypothesis would be accepted. The cooperating teachers did not see the simulation training group as more confident than the student teachers that did not receive the simulation training.

Question 2. How successful was the student teacher in establishing an appropriately warm, working relationship with the children?

Totally unable to relate to children 1 2 3 4 5 6 7 Good relationship with children

Again, the t-test was calculated to test if there was a significant difference between the experimental and control group means as evaluated by the cooperating teachers. A summary of the t-test has been tabled below:

Table 27

t-Table for the Experimental and Control Group Means on Question No. 2 of the KSTC Student Teaching Questionnaire

Group	Number	Standard Deviation	Mean Values	t
Experimental	21	1.109	6.095	0.808
Control	23	0.914	6.348	

A t-value of 0.808 would indicate that the cooperating teachers did not significantly rate the experimental and control group student teachers differently with respect to Question 2 on the KSTC Student Teaching Questionnaire. Therefore, the null hypothesis was accepted.

Question 3. Subjectively speaking, would you want this person to become your child's teacher?

Absolutely not 1 2 3 4 5 6 7 Very much

Calculation of the t-test was made to test if a significant difference existed between the experimental and control group means as rated by the cooperating teachers. The t-test summary is as follows:

Table 28

t-Table for the Experimental and Control Group Means on Question No. 3 of the KSTC Student Teaching Questionnaire

Group	Number	Standard Deviation	Mean Values	t
Experimental	21	1.540	5.762	-0.045
Control	23	1.700	5.739	

Since a t-value of -0.045 did not fall in the critical region the null hypothesis was accepted. It would be concluded then that the cooperating teachers tended to rate both the experimental student teachers (simulation training) and the control student teachers (no simulation training) the same with respect to Question 3 on the KSTC Student Teaching Questionnaire.

CONCLUSIONS

As previously stated, the purpose of this study was to further evaluate the Cruickshank, Broadbent, and Bubb materials *using a changed role for the instructor and an extended period of simulation training* to answer the question: Does exposure to simulated critical teaching problems have any observable effect on attitudes and student teaching behavior of prospective elementary teachers.

The conclusions have been discussed for each of the five original hypotheses in the following section.

Hypothesis 1

Student teachers having had simulated experiences in which they encounter, analyze and attempt to solve critical teaching problems will experience fewer such problems than will student teachers not having had simulated experiences in solving such problems.

The *Perceived Problems Inventory (Appendix A),* as developed by Cruickshank and Broadbent, was used to test this hypothesis.

Both the control and experimental groups perceived fewer of the 117 identified problems to be problems after their student teaching experiences, yet, there was no significant difference in the average number of problems reported between these two groups (Table 1).

There was a significant difference between the experimental and control groups on seven items of the 117 perceived problems on the pretest measures according to Chi-square. Those seven items have been identified below:

25. Ordering, securing, and accounting for supplies and equipment.

42. Not knowing how to deal with reading problems.

46. Knowing how to hold student conferences.

65. Having difficulty preparing lesson plans.

74. Helping a student with a destructive home situation.

88. Parents complaining about homework assignments.

93. Having difficulty with written communication.

After the student teaching experience in the fall of 1971, it was found that out of the 117 perceived problems there was a significant difference between the experimental and control groups on only five items. The five items where significant differences were found according to the Chi-square test were:

6. Explaining my grading system to children.

10. Involving many of the children in group discussions.

14. Collecting anecdotal background information about students.

25. Ordering, securing, and accounting for supplies and equipment.

52. Feeling unpopular as a teacher.

Of interest was the one item (25) which still showed a significant difference between the two groups on the pre- and posttest.

In conclusion, acceptance of the null hypothesis would seem most tenable and it would be concluded that there was, in essence, no real significant difference between the experimental and control groups according to the *Perceived Problems Inventory.*

Hypothesis 2

The general student teaching performance of the student teachers having had simulated experiences will receive higher ratings on general teaching performance than will the student teachers not having had simulated experiences.

To test this hypothesis, the *Instrument for Analysis of Science Teaching (Appendix B)*, designed by the University of Texas, was utlized. In analyzing this intrument it was found that no significant differences did exist between the experimental and control groups with respect to the obtained I/D ratio values and percent of time spent on the various behaviors.

From the analysis of this data it would be concluded that no significant differences existed and the students having had the simulated training background did not perform differently from the student teachers wo did not receive the simulated training.

Hypothesis 3

Student teachers having had simulated experiences will report more positive feelings toward students and toward concepts related to the simulated problems than will the student teachers not having had simulated experiences.

Two instruments, the *Semantic Differential (Appendix C)* and the *Minnesota Teacher Attitude Inventory* were used to test this null hypothesis.

With respect to the semantic differential, it was found that while no significant differences existed between the experimental and control groups, there was a general

increase in more favorable attitudes toward the eleven selected concepts after their student teaching was completed.

To analyze the data for the *Minnesota Teacher Attitude Inventory*, the t-test was used to test for a significant difference between the mean values obtained on the pre-posttest scores for both the experimental and control groups.

In each of the tests calculated, it was found that no t-value fell within the critical region. Therefore, it would be most tenable to conclude that there was no significant differences between the simulated trained student teachers and the student teachers that did not receive the simulation training as measured by this instrument (MTAI).

Hypothesis 4

Student teachers having had simulated experiences will report higher levels of confidence than will those student teachers not having had simulated experiences was the instrument used to test this null hypothesis.

From the analysis of the data, using both the t-test and F-ratio, it was found that no significant differences existed between the control and experimental groups. The null hypothesis was accepted, concluding that the simulation experience had no significant effect on student teachers with respect to their levels of confidence.

Hypothesis 5

Student teachers having simulated epxeriences will be able to assume 50% responsibility for student teaching sooner than will those student not experiencing simulation training.

As a result of the t-test, it was found that no significant differences existed between the experimental (simulation training) and the control (non-simulation training) groups with respect to the time the student teachers accepted 50% responsibility of the classroom.

In addition, using the *KSTC Student Teaching Questionnaire*, it was also found that the cooperating teachers did not differ significantly between the experimental and control groups. Therefore, it was concluded that the simulation training experience did not have any effect on the student teacher as compared to the control group.

Summary

In summary and conclusion, it would be most tenable to conclude that exposure to simulated critical problems had any observable effect in attitudes and student teaching

behavior of prospective elementary teachers. It was also concluded that extending the period of simulation training and changing the role of the instructor did not produce significant differences in the effectiveness of the simulation materials.

BIBLIOGRAPHY

BIBLIOGRAPHY

Beals, Paul E. *Classroom Simulation as a Substitute for Live-Prestudent Teaching Laboratory Experiences.* Washington: ERIC Clearing House on Teacher Education, 1970.

Beldin, H. O., Jordon Utsey, and Carl Wallen. "Diagnostic Techniques in Teaching Reading, Part I," *The Informal Reading Inventory: Determining Reading Levels, Second Edition.* Monmouth: Teacher Research Division, Oregon State System of Higher Education, 1965. Cited by Lawrence M. Kasdon and Dean Kelly in "Simulation: In-Service Education for Teachers of Reading," *The Journal of Experimental Education,* XXXVIII, Fall, 1969.

Cruickshank, Donald R. "Simulation – New Direction for Teacher Education," *Phi Delta Kappan,* 48, September, 1966.

Cruickshank, Donald R. and Frank W. Broadbent. "An Investigation to Determine Effects of Simulation Training on Student Teaching Behavior," *Educational Technology,* IX, October, 1969.

Cruickshank, Donald R. and Frank W. Broadbent. *Simulation in Preparing School Personnel.* Washington: ERIC Clearing House on Teacher Education, 1970.

Cruickshank, Donald R. and Frank W. Broadbent. *The Simulation and Analysis of Problems of Beginning Teachers.* Brookport, New York: The State University College at Brookport and the University of Tennessee, U.S. Office of Education Cooperative Research Project 5-0798, 1968.

Cruickshank, Donald R., Frank W. Broadbent, and Roy L. Bubb. *Simulation Director's Guide.* Chicago: Science Research Associates, Inc., 1967.

Gaffga, Robert Martin. "Simulation: A Method for Observing Student Teaching Behavior," *Dissertation Abstracts.* Ann Arbor, Michigan: University Microfilms, Inc., April, 1968.

Heath, Ray G. *"A Semantic Differential Analysis of Teacher Characteristics as Perceived by High School Students in Iowa."* Unpublished Doctor's dissertation, The University of Iowa, 1968.

Irwin, Roger S. "A Comparative Study of the Effect of Certain Factors on the Teaching Behavior of Preservice Elementary Teachers of Science." Unpublished Doctor's dissertation, The University of Texas at Austin, 1970.

Kasdon, Lawrence M. and Dean Kelly. "Simulation: In-Service Education for Teachers of Reading." *The Journal of Experimental Education,* XXXVIII, Fall, 1969.

Kersh, Bert Y. *Classroom Simulation: A New Dimension in Teacher Education.* Monmouth, Oregon: State System of Higher Education, Teacher Research Division, Title VII, NDEA, Project 886, 1965.

Siegel, Sidney. *Nonparametric Statistics for the Behavioral Sciences.* New York: McGraw-Hill Book Company, 1956.

Twelker, Paul A. *Interaction Analysis and Classroom Simulation as Adjunct to Instruction in Teacher Education.* Monmouth, Oregon: State System of Higher Education, Teaching Research Division, 1968.

Vlcek, Charles W. "Assessing the Effect and Transfer Value of a Classroom Simulator Technique." *Dissertation Abstracts.* Ann Arbor, Michigan: University Microfilms, Inc., February, 1966.

APPENDIX A

Perceived Problems Inventory

Appendix A

Perceived Problems Inventory

Name: Date: Section:

The following problems have been reported by first year teachers. Some of them may be problems that you feel you might have also. Please read each item carefully.

If you think this will be a serious ongoing problem: Place an X under 1.

If you think this will be a moderate problem: Place an X under 2.

If you think this will be a minor problem: Place an X under 3.

If you think this will be no problem at all: Place an X under 4.

	a serious problem	a moderate problem	a minor problem	no problem
Example	1	2	3	4
Feeling insecure in teaching spelling.	____	X	____	____

List of Reported Problems

1.	Having children follow routines for entering and leaving the classroom when coming from home or leaving for home.	____	____	____	____
2.	Lacking enthusiasm for a subject.	____	____	____	____
3.	Needing help in selecting instructional materials.	____	____	____	____
4.	Working out a daily schedule.	____	____	____	____
5.	Discussing with parents their children's achievement.	____	____	____	____
6.	Explaining my grading system to children.	____	____	____	____

	a serious problem 1	a moderate problem 2	a minor problem 3	no problem 4
7. Having students see relationship between undesirable behavior and the consequences.				
8. Not really liking kids.				
9. Managing the distribution and collection of materials, paper, milk, etc.				
10. Involving many of the children in group discussions.				
11. Finding films and filmstrips related to the area being studied.				
12. Getting students to do homework.				
13. Criticized by parents.				
14. Collecting anecdotal background information about students.				
15. Maintaining order during field trips.				
16. Unhappy teaching in lower socio-economic district.				
17. Keeping pupil attendance records accurately.				
18. Not knowing what to do with students who finish early.				
19. Finding out about radio and T.V. programs related to daily classwork of my children.				
20. Planning and executing useful field trips.				
21. Bothered by parents telephoning.				
22. Not knowing how to evaluate my objectives.				
23. Students not respecting me.				
24. Disturbed by school regulations.				

	a serious problem	a moderate problem	a minor problem	no problem
	1	2	3	4
25. Ordering, securing, and accounting for supplies and equipment.	____	____	____	____
26. Too much stress on grades for motivation.	____	____	____	____
27. Integrating A-V materials into the lessons.	____	____	____	____
28. Working out details of assembly programs.	____	____	____	____
29. Talking with parents I wish to contact.	____	____	____	____
30. Judging children's progress in terms of my aims and purposes.	____	____	____	____
31. Having children maintain quiet while working independently.	____	____	____	____
32. Feelings of insecurity.	____	____	____	____
33. Managing the transition from one activity or subject to another.	____	____	____	____
34. Relating the subject meaningfully to children.	____	____	____	____
35. Finding appropriate reading materials for readers one or more years below grade level.	____	____	____	____
36. Finding out what content I am supposed to cover in my grade.	____	____	____	____
37. Establishing a rapport with parents so that they will provide information candidly and without embarrassment.	____	____	____	____
38. Feeling uncomfortable about giving failing grades.	____	____	____	____
39. Finding ways to integrate isolated, disliked children into group activities.	____	____	____	____
40. My feelings being hurt by criticism.	____	____	____	____
41. Organizing an orderly procedure for children to hang up their wraps.	____	____	____	____

	a serious problem	a moderate problem	a minor problem	no problem
	1	2	3	4
42. Not knowing how to deal with reading problems.	____	____	____	____
43. Being unable to complete a lesson.	____	____	____	____
44. Helping parents understand the reporting system of my school.	____	____	____	____
45. Involving pupils in self-evaluation.	____	____	____	____
46. Knowing how to hold student conferences.	____	____	____	____
47. Unhappy about teaching at this present grade level.	____	____	____	____
48. Unhappy with routine classroom bookkeeping.	____	____	____	____
49. Being afraid to teach controversial subjects.	____	____	____	____
50. Having work for some children while I am working with other groups or individuals.	____	____	____	____
51. Difficulty in identifying those who need remedial help.	____	____	____	____
52. Feeling unpopular as a teacher.	____	____	____	____
53. Not wanting a certain student in my class.	____	____	____	____
54. Formulating questions that provoke discussion.	____	____	____	____
55. Needing to know how to organize a unit of work.	____	____	____	____
56. Identifying children in need of psychological testing or counseling.	____	____	____	____
57. Having difficulty with grouping.	____	____	____	____
58. Having activities ready for children's rest-time periods.	____	____	____	____

	a serious problem	a moderate problem	a minor problem	no problem
	1	2	3	4
59. Bothered by frustration in my personal life.	____	____	____	____
60. Not really knowing how to teach.	____	____	____	____
61. Unhappy about teaching slow learners.	____	____	____	____
62. Difficulties with organizing supplies and materials.	____	____	____	____
63. Introducing a new topic and obtaining high interest.	____	____	____	____
64. Obtaining the materials for making my own teaching materials, e.g., contruction paper.	____	____	____	____
65. Having difficulty preparing lesson plans.	____	____	____	____
66. Conducting an interview with a parent.	____	____	____	____
67. Having trouble interpreting children's capabilities to parents.	____	____	____	____
68. Handling cliques in the classroom.	____	____	____	____
69. Not being accepted by my colleagues.	____	____	____	____
70. Handling children in passing in hall from room to room.	____	____	____	____
71. Differentiating instruction among the slow, average and gifted children in class.	____	____	____	____
72. Constructing bulletin boards.	____	____	____	____
73. Finding out what the objectives of education are for my grade.	____	____	____	____
74. Helping a student with a destructive home situation.	____	____	____	____
75. Being able to prepare classroom tests that are valid.	____	____	____	____
76. Handling children's aggressive behavior toward one another.	____	____	____	____

	a serious problem	a moderate problem	a minor problem	no problem
	1	2	3	4
77. Feelings of inferiority.	____	____	____	____
78. Organizing procedures for moving as a class from place to place.	____	____	____	____
79. Students not willing to work.	____	____	____	____
80. Finding materials with which to prepare simple science demonstrations.	____	____	____	____
81. Lacking understanding of my subject(s).	____	____	____	____
82. Explaining my techniques of teaching to parents.	____	____	____	____
83. Interpreting the results of standardized tests.	____	____	____	____
84. Handling children who waste school materials.	____	____	____	____
85. Being impatient with my students.	____	____	____	____
86. Teaching in an area for which I am unprepared.	____	____	____	____
87. Unable to operate A-V equipment.	____	____	____	____
88. Parents complaining about homework assignments.	____	____	____	____
89. Getting parents to take an interest in their children's behavior.	____	____	____	____
90. Telling parents that their children have problems.	____	____	____	____
91. Handling the constantly disrupting child.	____	____	____	____
92. Being able to tolerate student errors.	____	____	____	____
93. Having difficulty with written communication.	____	____	____	____

		a serious problem	a moderate problem	a minor problem	no problem
		1	2	3	4
94.	Finding out about community resources that I can use in my teaching.	____	____	____	____
95.	Finding out what content children in my class covered last year.	____	____	____	____
96.	Being troubled by parental complaints.	____	____	____	____
97.	Using test results and anecdotal information in working with individual children.	____	____	____	____
98.	Needing more understanding of student behavior.	____	____	____	____
99.	Being unable to adjust to certain ethnic groups.	____	____	____	____
100.	Using the committee method with children.	____	____	____	____
101.	Not understanding the value of a planbook.	____	____	____	____
102.	Enlisting parent aid for activities such as trips, making costumes for a play, or class mother.	____	____	____	____
103.	Being required to grade on a curve.	____	____	____	____
104.	Working with overly dependent children.	____	____	____	____
105.	Bothered by feelings of loneliness.	____	____	____	____
106.	Having difficulty with oral communication.	____	____	____	____
107.	Planning segments of work for a week or longer.	____	____	____	____
108.	Having a distaste for grading papers.	____	____	____	____
109.	Being afraid of some of my students.	____	____	____	____
110.	Bright students make me feel uncomfortable.	____	____	____	____

		a serious problem	a moderate problem	a minor problem	no problem
		1	2	3	4
111.	Unable to maintain pupil interest.	____	____	____	____
112.	Lacking know-how for pupil-teacher planning.	____	____	____	____
113.	Having trouble controlling class.	____	____	____	____
114.	Inability to keep up professionally in my field.	____	____	____	____
115.	Not being prepared to teach under newer instructional organization (e.g., team teaching).	____	____	____	____
116.	Having difficulty organizing my work.	____	____	____	____
117.	Feeling nervous when supervised.	____	____	____	____

C

APPENDIX B

Instrument for the Analysis of Science Teaching (IAST), Version Two

Appendix B

INSTRUMENT FOR THE ANALYSIS OF SCIENCE TEACHING (IAST), VERSION TWO

Description of the Categories

TEACHER BEHAVIORS

1 Teacher accepts feelings: Teacher recognizes and identifies with feeling of students, is empathetic, non-evaluative, encourages student or jokes to relieve tension.

2 Teacher praises: Teacher makes a positive value judgment.

3R Teacher restates or restructures student statement: A verbal or written restatement, including summary on the board.

3Q Teacher questions student statement for clarification: Teacher asks student to restructure his statement.

3S Teacher gives non-evaluative confirmation: Teacher makes short response in acceptance of student's ideas with no value judgment, no expansion or clarification. Examples: "yes," "no," "O.K."

4C Teacher asks closed question: Teacher asks a narrow, specific, channeled question requiring a specific student response. Simple or complex skills are applied to a convergent, memorative or cognitive situation.

4O Teacher asks open question: Teacher asks broad, "think" question, providing space for student to be original in his response.

TEACHER BEHAVIORS

5P Teacher gives procedural directions: Teacher tells student(s) how to do substantive behaviors. This requires an immediate response.

5M Teacher gives managerial directions: Teacher gives directions not dealing directly with lesson content. Examples: "Open the door," "Go to the board," "Take your seats."

6L Teacher initiates new information (substantive): Teacher lectures, provides facts, performs calculations, etc. Writing new information on the board is included.

6P Teacher initiates background or review information: Teacher gives information from previous lesson or experience. Information covered earlier is restated.

6R Teacher initiates information by reading aloud: Teacher reads aloud from textbook or other source.

TEACHER BEHAVIORS

7 Teacher rejects or criticizes students's ideas or behavior: Teacher uses self-justification and disciplinary statements that may be critical in a defensive manner, negative value responses to a student's idea, or establishment of authority.

8D Teacher demonstrates silently: Teacher conducts a demonstration before the class without speaking.

8C Teacher-controlled silence: Teacher maintains silence after asking a question and before recognizing a student to answer. This behavior is sometimes slightly disciplinary, as in waiting for the attention of all the students.

8L Teacher silence while looking at notes: Teacher pauses to look at notes or lesson plan.

8E Teacher silence while handling equipment: Teacher prepares, distributes or collects equipment, papers, etc., without speaking.

STUDENT BEHAVIORS

9C Student closed statement: Student makes statement that is cognitive, memorative, or convergent in thought.

9O Student open statement: Student makes statement that is divergent or evaluative in thought.

9R Student reads aloud: Student reads aloud from textbook or other source.

10SC Student asks substantive closed question: A precise, explicit question is asked about the subject under discussion. Example: "How many ships did Columbus have?"

10PC Student asks procedural closed question: A question about procedure is asked which requires an explicit answer. Example: "Should we use plain notebook paper?"

10PO Student asks procedural open question: Students show enthusiasm or pleasant surprise. Example: "Yippee!"

11N Student affective response, negative: Students show disdain or unpleasant surprise. Example: "Ugh! Not that again!"

12O Student over silent activity: Students are invovled in lab activities or manipulating materials. They may be raising their hands.

12C Student cover silent activity: Internalized behavior such as silent reading or thinking prior to verbal response. This behavior must be purposeful.

STUDENT BEHAVIORS

12G Group overt activity: Behavior of 120 type when students are working together in groups.

12X "Greek chorus": A simultaneous verbal response by several students.

13 Division of student-to-student interaction: This category is a mark having no time dimension. It is used when students are interacting with one another to indicate when one student stops and another responds.

---

14 Nonfunctional behavior: This behavior does not contribute to the goals of the lesson and is usually disruptive. Examples: horseplay, loud talking.

APPENDIX C

Semantic Differential

Appendix C

SEMANTIC DIFFERENTIALS
(Adjective Scales)

The purpose of this test is to measure the meaning of certain concepts by having the concepts judged against a series of descriptive scales. The results of this test are to be used in a study of the nature of "meaning" and will NOT affect your grade.

Name: _____
(Last) (First)

Sex: _____ (Male) _____ (Female)

At what school level are you preparing to teach? (check only one):

_____ Kindergarten

_____ Primary (1st through 3rd)

_____ Elementary (4th through 6th)

_____ Junior High (7th through 9th)

_____ Senior High School (10th through 12th)

DIRECTIONS FOR MAKING SCALES

On each page of the booklet you will find a different concept to be judged and beneath the concept a set of 16 rating scales. You are to rate the concept of each scale in order. Make your judgments on the basis of what these concepts mean to you. There are no right or wrong answers; all that is requested is your rating on each scale.

IMPORTANT

1. Place your check marks in the middle of the spaces, not on the boundaries.
   Not this ___x___ But this: ___ _x_
2. Never put more than one check mark on a single scale.
3. Be sure to check every scale for every concept.

Here is how you are to use the scales:

If you feel that the concept at the top of each page is very closely related to one end of a scale, you should place your check mark as follows:

fair X : : : : : : : unfair

(or)

fair : : : : : : : X unfair

If you feel that the concept is quite closely related to one or the other end of a scale (but not extremely), you should place your check mark as follows:

strong : X : : : : : : weak

(or)

strong : : : : : : X : weak

If the concept seems slightly related to one side as opposed to the other side, then place your check mark as follows:

active : : X : : : : : passive

(or)

active : : : : : X : : passive

If the concept seems only somewhat related to one side as opposed to the other side (but is not really neutral), then place your check mark as follows:

bright : : : X : : : : dull

(or)

bright : : : : X : : : dull

If you consider the concept to be neutral on the scale, or if the scale is completely irrelevant to the concept being judged, then place your check mark as follows:

safe : : : : X : : : dangerous

MYSELF AS A TEACHER

attractive___:___:___:___:___:___:___:___:___unattractive

chaotic___:___:___:___:___:___:___:___:___ordered

heavy___:___:___:___:___:___:___:___:___light

interesting___:___:___:___:___:___:___:___:___dull

formal___:___:___:___:___:___:___:___:___informal

simple___:___:___:___:___:___:___:___:___complex

poised___:___:___:___:___:___:___:___:___excitable

happy___:___:___:___:___:___:___:___:___sad

understanding___:___:___:___:___:___:___:___:___impatient

clear___:___:___:___:___:___:___:___:___vague

good___:___:___:___:___:___:___:___:___bad

confident___:___:___:___:___:___:___:___:___uncertain

active___:___:___:___:___:___:___:___:___passive

dirty___:___:___:___:___:___:___:___:___clean

skillful___:___:___:___:___:___:___:___:___inept

strong___:___:___:___:___:___:___:___:___weak

PAT TAYLOR

attractive___:___:___:___:___:___:___:___:___unattractive

understanding___:___:___:___:___:___:___:___:___impatient

good___:___:___:___:___:___:___:___:___bad

simple___:___:___:___:___:___:___:___:___complex

active___:___:___:___:___:___:___:___:___passive

formal___:___:___:___:___:___:___:___:___informal

confident___:___:___:___:___:___:___:___:___uncertain

chaotic___:___:___:___:___:___:___:___:___ordered

skillful___:___:___:___:___:___:___:___:___inept

happy___:___:___:___:___:___:___:___:___sad

strong___:___:___:___:___:___:___:___:___weak

interesting___:___:___:___:___:___:___:___:___dull

dirty___:___:___:___:___:___:___:___:___clean

poised___:___:___:___:___:___:___:___:___excitable

heavy___:___:___:___:___:___:___:___:___light

clear___:___:___:___:___:___:___:___:___vague

CLASSROOM BOOKKEEPING

strong___:___:___:___:___:___:___:___:___weak

good___:___:___:___:___:___:___:___:___bad

poised___:___:___:___:___:___:___:___:___excitable

active___:___:___:___:___:___:___:___:___passive

skillful___:___:___:___:___:___:___:___:___inept

formal___:___:___:___:___:___:___:___:___informal

attractive___:___:___:___:___:___:___:___:___unattractive

interesting___:___:___:___:___:___:___:___:___dull

chaotic___:___:___:___:___:___:___:___:___ordered

heavy___:___:___:___:___:___:___:___:___light

happy___:___:___:___:___:___:___:___:___sad

simple___:___:___:___:___:___:___:___:___complex

confident___:___:___:___:___:___:___:___:___uncertain

clear___:___:___:___:___:___:___:___:___vague

understanding___:___:___:___:___:___:___:___:___impatient

dirty___:___:___:___:___:___:___:___:___clean

SUPERVISING TEACHER

heavy___:___:___:___:___:___:___:___:___light

attractive___:___:___:___:___:___:___:___:___unattractive

clear___:___:___:___:___:___:___:___:___vague

formal___:___:___:___:___:___:___:___:___informal

interesting___:___:___:___:___:___:___:___:___dull

chaotic___:___:___:___:___:___:___:___:___ordered

understanding___:___:___:___:___:___:___:___:___impatient

good___:___:___:___:___:___:___:___:___bad

happy___:___:___:___:___:___:___:___:___sad

skillful___:___:___:___:___:___:___:___:___inept

dirty___:___:___:___:___:___:___:___:___clean

poised___:___:___:___:___:___:___:___:___excitable

confident___:___:___:___:___:___:___:___:___uncertain

active___:___:___:___:___:___:___:___:___passive

simple___:___:___:___:___:___:___:___:___complex

strong___:___:___:___:___:___:___:___:___weak

METHODS OF TEACHING

active___:___:___:___:___:___:___:___:___passive

poised___:___:___:___:___:___:___:___:___excitable

skillful___:___:___:___:___:___:___:___:___inept

good___:___:___:___:___:___:___:___:___bad

chaotic___:___:___:___:___:___:___:___:___ordered

formal___:___:___:___:___:___:___:___:___informal

attractive___:___:___:___:___:___:___:___:___unattractive

strong___:___:___:___:___:___:___:___:___weak

confident___:___:___:___:___:___:___:___:___uncertain

dirty___:___:___:___:___:___:___:___:___clean

happy___:___:___:___:___:___:___:___:___sad

understanding___:___:___:___:___:___:___:___:___impatient

interesting___:___:___:___:___:___:___:___:___dull

clear___:___:___:___:___:___:___:___:___vague

simple___:___:___:___:___:___:___:___:___complex

heavy___:___:___:___:___:___:___:___:___light

SUPERVISOR'S VISIT

clear___:___:___:___:___:___:___:___:___vague

confident___:___:___:___:___:___:___:___:___uncertain

understanding___:___:___:___:___:___:___:___:___impatient

simple___:___:___:___:___:___:___:___:___complex

dirty___:___:___:___:___:___:___:___:___clean

heavy___:___:___:___:___:___:___:___:___light

interesting___:___:___:___:___:___:___:___:___dull

happy___:___:___:___:___:___:___:___:___sad

formal___:___:___:___:___:___:___:___:___informal

attractive___:___:___:___:___:___:___:___:___unattractive

skillful___:___:___:___:___:___:___:___:___inept

chaotic___:___:___:___:___:___:___:___:___ordered

poised___:___:___:___:___:___:___:___:___excitable

strong___:___:___:___:___:___:___:___:___weak

good___:___:___:___:___:___:___:___:___bad

active___:___:___:___:___:___:___:___:___passive

RELATIONSHIP WITH PARENTS

poised___:___:___:___:___:___:___:___:___excitable

confident___:___:___:___:___:___:___:___:___uncertain

attractive___:___:___:___:___:___:___:___:___unattractive

simple___:___:___:___:___:___:___:___:___complex

good___:___:___:___:___:___:___:___:___bad

strong___:___:___:___:___:___:___:___:___weak

formal___:___:___:___:___:___:___:___:___informal

clear___:___:___:___:___:___:___:___:___vague

skillful___:___:___:___:___:___:___:___:___inept

interesting___:___:___:___:___:___:___:___:___dull

understanding___:___:___:___:___:___:___:___:___impatient

dirty___:___:___:___:___:___:___:___:___clean

heavy___:___:___:___:___:___:___:___:___light

happy___:___:___:___:___:___:___:___:___sad

active___:___:___:___:___:___:___:___:___passive

chaotic___:___:___:___:___:___:___:___:___ordered

DISCIPLINE PROBLEMS

understanding___:___:___:___:___:___:___:___:___impatient

skillful___:___:___:___:___:___:___:___:___inept

chaotic___:___:___:___:___:___:___:___:___ordered

dirty___:___:___:___:___:___:___:___:___clean

poised___:___:___:___:___:___:___:___:___excitable

confident___:___:___:___:___:___:___:___:___uncertain

interesting___:___:___:___:___:___:___:___:___dull

heavy___:___:___:___:___:___:___:___:___light

formal___:___:___:___:___:___:___:___:___informal

good___:___:___:___:___:___:___:___:___bad

active___:___:___:___:___:___:___:___:___passive

strong___:___:___:___:___:___:___:___:___weak

simple___:___:___:___:___:___:___:___:___complex

clear___:___:___:___:___:___:___:___:___vague

happy___:___:___:___:___:___:___:___:___sad

attractive___:___:___:___:___:___:___:___:___unattractive

STUDENT TEACHING

interesting___:___:___:___:___:___:___:___:___dull

strong___:___:___:___:___:___:___:___:___weak

skillful___:___:___:___:___:___:___:___:___inept

formal___:___:___:___:___:___:___:___:___informal

simple___:___:___:___:___:___:___:___:___complex

happy___:___:___:___:___:___:___:___:___sad

clear___:___:___:___:___:___:___:___:___vague

good___:___:___:___:___:___:___:___:___bad

active___:___:___:___:___:___:___:___:___passive

attractive___:___:___:___:___:___:___:___:___unattractive

heavy___:___:___:___:___:___:___:___:___light

chaotic___:___:___:___:___:___:___:___:___ordered

poised___:___:___:___:___:___:___:___:___excitable

dirty___:___:___:___:___:___:___:___:___clean

confident___:___:___:___:___:___:___:___:___uncertain

understanding___:___:___:___:___:___:___:___:___impatient

PUPILS

strong___:___:___:___:___:___:___:___:___weak

active___:___:___:___:___:___:___:___:___passive

clear___:___:___:___:___:___:___:___:___vague

happy___:___:___:___:___:___:___:___:___sad

simple___:___:___:___:___:___:___:___:___complex

heavy___:___:___:___:___:___:___:___:___light

skillful___:___:___:___:___:___:___:___:___inept

good___:___:___:___:___:___:___:___:___bad

poised___:___:___:___:___:___:___:___:___excitable

chaotic___:___:___:___:___:___:___:___:___ordered

attractive___:___:___:___:___:___:___:___:___unattractive

dirty___:___:___:___:___:___:___:___:___clean

confident___:___:___:___:___:___:___:___:___uncertain

understanding___:___:___:___:___:___:___:___:___impatient

interesting___:___:___:___:___:___:___:___:___dull

formal___:___:___:___:___:___:___:___:___informal

MY FIRST YEAR OF TEACHING

heavy___:___:___:___:___:___:___:___:___light

clear___:___:___:___:___:___:___:___:___vague

happy___:___:___:___:___:___:___:___:___sad

confident___:___:___:___:___:___:___:___:___uncertain

simple___:___:___:___:___:___:___:___:___complex

understanding___:___:___:___:___:___:___:___:___impatient

dirty___:___:___:___:___:___:___:___:___clean

strong___:___:___:___:___:___:___:___:___weak

chaotic___:___:___:___:___:___:___:___:___ordered

active___:___:___:___:___:___:___:___:___passive

attractive___:___:___:___:___:___:___:___:___unattractive

poised___:___:___:___:___:___:___:___:___excitable

interesting___:___:___:___:___:___:___:___:___dull

skillful___:___:___:___:___:___:___:___:___inept

formal___:___:___:___:___:___:___:___:___informal

good___:___:___:___:___:___:___:___:___bad

APPENDIX D

Confidence Scale

Appendix D

Name: _____

Date: _____

CONFIDENCE SCALE

DIRECTIONS: The following items concern your feelings of confidence on your abilities as a classroom teacher. Please place an X before the word or words that best describes how you feel about each statement. Be sure to check all thirty-two statements:

1. I am confident that I can reach parents I wish to contact.
   - _____ Very Confident
   - _____ Confident
   - _____ Uncertain
   - _____ Very Uncertain
2. I am confident that I can introduce a new topic and obtain high interest.
   - _____ Very Confident
   - _____ Confident
   - _____ Uncertain
   - _____ Very Uncertain
3. I am confident that I can help students with destructive home situations.
   - _____ Very Confident
   - _____ Confident
   - _____ Uncertain
   - _____ Very Uncertain
4. I am confident that I can handle children's aggressive behavior toward one another.
   - _____ Very Confident
   - _____ Confident
   - _____ Uncertain
   - _____ Very Uncertain

5. I am confident that I can be enthusiastic about each subject that I will teach.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

6. I am confident that I will not feel uncomfortable about giving failing grades.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

7. I am confident that I can help students see the relationships between undesirable behavior and its consequences.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

8. I am confident I can cope with students who are not willing to work.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

9. I am confident that I can interpret children's capabilities to parents.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

10. I am confident that I know how to discuss a child's achievement with his parent(s).

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

11. I am confident that I can differentiate instruction among the slow, average, and gifted children in class.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

12. I am confident that I can help children with reading problems.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

13. I am confident that I can be happy with routine classroom bookkeeping.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

14. I am confident that I can involve pupils in self-evaluation.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

15. I am confident that I can integrate the isolated, disliked child into classroom activities.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

16. I am confident that I can have a good attitude toward grading papers.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

17. I am confident that I can evaluate my objectives.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

18. I am confident that I have the skills necessary to have children maintain quiet while working independently.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

19. I am confident that I can have work for some while I work with other groups or individuals.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

20. I am confident that I will be at ease when supervised.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

21. I am confident that I will be patient with my students.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

22. I am confident that I know how to judge children's progress in terms of my aims and purposes.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

23. I am confident that I can cope with the constantly disrupting child.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

24. I am confident that I know what to do with students who finish early.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

25. I am confident that I can involve many children in group discussions.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

26. I am confident that I can find reading materials for readers one or two years below grade level.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

27. I am confident that I can prepare classroom tests that are valid.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

28. I am confident that I can relate subjects meaningfully to children.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

29. I am confident that I can relate to parents that their children have problems.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

30. I am confident that I can select instructional materials.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

31. I am confident that I can interest parents in their children's behavior.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

32. I am confident that I can get students to do homework.

_____ Very Confident

_____ Confident

_____ Uncertain

_____ Very Uncertain

APPENDIX E

Assumed 50% Responsibility Card

APPENDIX E

Assumed 50% Responsibility Card

My student teacher _____

assumed 50% responsibility for the class (as a student teacher) on

_____
(Date)

_____
Signed

APPENDIX F

KSTC Student Teaching Questionnaire

APPENDIX F

KANSAS STATE TEACHERS COLLEGE

STUDENT TEACHING QUESTIONNAIRE

TO: The Cooperating Teacher

RE: _____

In the interests of better teacher education, please respond to the following queries concerning the above-indicated student teacher. Please be very discriminating in your responses. Favorable responses are not much value in themselves as we are comparing two different teacher education curricula. Negative responses are just as valuable and useful as are favorable ones. Please be very frank.

Responses are confidential and for research use exclusively: they will not be made known to the student teacher nor will they be used in professional references in any manner.

(Circle the number on the continuum which best describes this student teacher's performance. Seven is highest, one is lowest, with two through six graduations in between.)

(1) Compare this student teacher with all other student teachers with whom you have associated. How would you rank this student teacher as regards the student's self-esteem or self-confidence?

Least Self-confident	1	2	3	4	5	6	7	Most Self-confident

(2) How successful was the student teacher in establishing an appropriately warm, working relationship with the children?

Totally unable to relate to children	1	2	3	4	5	6	7	Good relationship with children

(3) Subjectively speaking, would you want this person to become your child's teacher?

Absolutely not	1	2	3	4	5	6	7	Very much

Signed: _____