A CRITICAL ANALYSIS OF PROCEDURES FOR
EVALUATING STUDENT TEACHERS IN SECONDARY
MATHEMATICS

Dissertation
Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By
JOHN JAMES EVANS, A.B., B. S., in Edu., M. A.
The Ohio State University
1953

Approved by:

[Signature]
Adviser
ACKNOWLEDGMENTS

The writer is deeply grateful to Professor Nathan Lazar for his encouragement and friendly counsel, his many constructive suggestions during the time the study was in process, and his careful evaluation of the manuscript. He also wishes to express his appreciation to Professors Earl W. Anderson and C. B. Mendenhall for their helpful suggestions which served to strengthen this study.

The writer is indebted to the many persons, interested in the education of teachers of mathematics in other institutions who completed the questionnaire. He is grateful to Professor L. O. Andrews for inspiration and leadership in the study of problems in the general area of professional laboratory experiences.
### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1  INTRODUCTION AND STATEMENT OF THE PROBLEM.</strong></td>
<td>1</td>
</tr>
<tr>
<td>Historical Introduction.</td>
<td>1</td>
</tr>
<tr>
<td>Importance of the Study.</td>
<td>3</td>
</tr>
<tr>
<td>The Problem.</td>
<td>4</td>
</tr>
<tr>
<td>Method of the Study.</td>
<td>5</td>
</tr>
<tr>
<td>Definition of Terms.</td>
<td>22</td>
</tr>
<tr>
<td>Survey of the Literature.</td>
<td>26</td>
</tr>
<tr>
<td><strong>2  STUDENT TEACHING PROGRAMS IN INSTITUTIONS</strong></td>
<td>36</td>
</tr>
<tr>
<td>TRAINING TEACHERS OF SECONDARY MATHEMATICS</td>
<td></td>
</tr>
<tr>
<td>Data on Respondents to the Questionnaire.</td>
<td>36</td>
</tr>
<tr>
<td>Number of Student Teachers Trained Annually</td>
<td>37</td>
</tr>
<tr>
<td>Laboratory Experience Prior to Student Teaching.</td>
<td>39</td>
</tr>
<tr>
<td>(a) Special Methods Courses in Mathematics.</td>
<td>42</td>
</tr>
<tr>
<td>(b) Curricular Placement of the required Special Methods Course in</td>
<td>44</td>
</tr>
<tr>
<td>Mathematics.</td>
<td></td>
</tr>
<tr>
<td>(c) Professional Laboratory Experiences</td>
<td>45</td>
</tr>
<tr>
<td>in the Special Methods Courses in Mathematics.</td>
<td></td>
</tr>
<tr>
<td>(d) Value of Participation</td>
<td>48</td>
</tr>
<tr>
<td>(e) Professional Laboratory Experiences</td>
<td>49</td>
</tr>
<tr>
<td>as a Part of General Methods Courses in Secondary Education</td>
<td></td>
</tr>
<tr>
<td>(f) Experiences in Secondary School Classes.</td>
<td>51</td>
</tr>
<tr>
<td>(g) Experience in Peer Groups.</td>
<td>51</td>
</tr>
<tr>
<td>The Student Teaching Assignment in Mathematics.</td>
<td>54</td>
</tr>
<tr>
<td>(a) College Year and Term Placement of Student Teaching.</td>
<td>54</td>
</tr>
<tr>
<td>(b) Time Devoted to Student Teaching.</td>
<td>57</td>
</tr>
<tr>
<td>(c) Number of Mathematical Subjects in Which Student Teaching</td>
<td>57</td>
</tr>
<tr>
<td>enrollment is required.</td>
<td></td>
</tr>
<tr>
<td>(d) Type of School in which Student Teachers are Assigned.</td>
<td>57</td>
</tr>
<tr>
<td>(e) Student Teaching Supervision.</td>
<td>61</td>
</tr>
<tr>
<td>(f) Selection and Compensation of Supervising Teachers.</td>
<td>63</td>
</tr>
<tr>
<td>(g) Factors Considered most important in Assigning Student Teachers.</td>
<td>64</td>
</tr>
<tr>
<td>(h) Level of Responsibility in Student Teaching Assignments.</td>
<td>68</td>
</tr>
<tr>
<td>(i) Student-Teacher Activities in Addition to Class Instruction.</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>72</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS (CONTINUED)

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (Continued)</td>
<td></td>
</tr>
<tr>
<td>(j) The College Supervisor.</td>
<td>76</td>
</tr>
<tr>
<td>(k) The extent of the College Supervisor's Observation of the Student Teacher.</td>
<td>79</td>
</tr>
<tr>
<td>(l) Student Teacher's Individual Conference With College Supervisor.</td>
<td>81</td>
</tr>
<tr>
<td>(m) Group Conferences with Student Teachers.</td>
<td>84</td>
</tr>
<tr>
<td>Conclusions.</td>
<td>89</td>
</tr>
<tr>
<td>Duplications.</td>
<td>93</td>
</tr>
<tr>
<td>3</td>
<td>EVALUATION OF THE MATHEMATICS STUDENT TEACHER.</td>
</tr>
<tr>
<td>General Principles for Evaluation</td>
<td>99</td>
</tr>
<tr>
<td>Self-Evaluation.</td>
<td>103</td>
</tr>
<tr>
<td>Instruments of Self-Evaluation</td>
<td>107</td>
</tr>
<tr>
<td>Self-Evaluation Conclusions and Recommendations</td>
<td>133</td>
</tr>
<tr>
<td>Pupil Evaluation</td>
<td>137</td>
</tr>
<tr>
<td>Instruments Used in Pupil Evaluation of the Student Teacher.</td>
<td>141</td>
</tr>
<tr>
<td>Summary of Pupil Evaluation.</td>
<td>151</td>
</tr>
<tr>
<td>Chapter Summary.</td>
<td>154</td>
</tr>
<tr>
<td>4</td>
<td>METHODS OF EVALUATION USED BY SUPERVISORS Of STUDENT TEACHERS IN MATHEMATICS</td>
</tr>
<tr>
<td>The Role of Supervisors in Evaluation.</td>
<td>157</td>
</tr>
<tr>
<td>Evaluation by Supervising Teachers.</td>
<td>160</td>
</tr>
<tr>
<td>Instruments of Evaluation Used by Supervising Teachers.</td>
<td>163</td>
</tr>
<tr>
<td>Conclusions and Recommendations Concerning Evaluation by the Supervising Teacher.</td>
<td>180</td>
</tr>
<tr>
<td>Evaluation by the College Supervisor.</td>
<td>184</td>
</tr>
<tr>
<td>Principal Emphases in the College Supervisor's Evaluation.</td>
<td>188</td>
</tr>
<tr>
<td>Evaluation Instruments Used by College Supervisors.</td>
<td>193</td>
</tr>
<tr>
<td>(a) Evaluating a Single Lesson</td>
<td>194</td>
</tr>
<tr>
<td>(b) Mid-term and Final Evaluation.</td>
<td>200</td>
</tr>
<tr>
<td>Conclusions and Recommendations Concerning Evaluation by the College Supervisor.</td>
<td>205</td>
</tr>
<tr>
<td>Chapter Summary.</td>
<td>213</td>
</tr>
<tr>
<td>5</td>
<td>SUGGESTED TECHNIQUES FOR USE IN THE SUPERVISOR'S EVALUATION OF MATHEMATICS STUDENT TEACHERS.</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS (CONTINUED)

#### CHAPTER 5 (Continued)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Emotional Balance and Maturity</td>
<td>221</td>
</tr>
<tr>
<td>II. Ability to Attract Interest and Get</td>
<td>221</td>
</tr>
<tr>
<td>Along with Children</td>
<td>222</td>
</tr>
<tr>
<td>III. Intellectual and Professional Energy</td>
<td>222</td>
</tr>
<tr>
<td>IV. Skill in Human Relations with Peers and</td>
<td>223</td>
</tr>
<tr>
<td>Adults</td>
<td>224</td>
</tr>
<tr>
<td>V. Breadth of Interests</td>
<td>225</td>
</tr>
<tr>
<td>VI. Conduct of Classroom Routine</td>
<td>227</td>
</tr>
<tr>
<td>VII. Specific Techniques in Teaching</td>
<td>227</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>VIII. Knowledge of Mathematics and Related</td>
<td>230</td>
</tr>
<tr>
<td>Fields</td>
<td></td>
</tr>
</tbody>
</table>

#### Proposed Instrument for Use of Supervisors
- in Evaluating the Teaching of a Single Mathematics Lesson ........................................... 231
  - (a) General Form .......................................................................................... 233
  - (b) Evaluating the Teaching of a Specific Topic ......................................... 239
  - (c) Strengths and Weaknesses of Proposed Instrument .................................... 249
- Proposed Instrument for Use of Supervisors in Mid-term or Final Evaluation of the Student Teacher in Mathematics ......................................................... 251
  - (a) The Evaluation Form ................................................................................. 253
  - (b) Strengths and Weaknesses of the Proposed Evaluation Form .................... 277

#### Summary ........................................... 279

#### SUMMARY OF THE STUDY ................................280

<table>
<thead>
<tr>
<th>The Problem</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>280</td>
</tr>
<tr>
<td>Summary of Conclusions and</td>
<td>280</td>
</tr>
<tr>
<td>Recommendations</td>
<td>281</td>
</tr>
<tr>
<td>(a) Student Teaching Evaluation</td>
<td>282</td>
</tr>
<tr>
<td>(b) Self-Evaluation</td>
<td>283</td>
</tr>
<tr>
<td>(c) Pupil Evaluation</td>
<td>285</td>
</tr>
<tr>
<td>(d) Evaluation by Supervising</td>
<td>286</td>
</tr>
<tr>
<td>Teachers</td>
<td>288</td>
</tr>
<tr>
<td>(e) Evaluation by College</td>
<td>292</td>
</tr>
<tr>
<td>Supervisors</td>
<td></td>
</tr>
</tbody>
</table>
| Proposed Evaluation Instruments for the Use of Supervisors .......................... 292
<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 (Continued)</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations for Further Research.** 294

**BIBLIOGRAPHY.** 300

**APPENDICES.** 312
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. DISTRIBUTION OF RESPONDENTS TO QUESTIONNAIRE ACCORDING TO TYPE OF INSTITUTION AND AREA OF CONCERN</td>
<td>36</td>
</tr>
<tr>
<td>II. NUMBER OF STUDENT TEACHERS ANNUALLY, DISTRIBUTED BY TYPE OF TRAINING INSTITUTION</td>
<td>38</td>
</tr>
<tr>
<td>III. PROFESSIONAL LABORATORY EXPERIENCES REQUIRED OF ALL STUDENTS, NOT INCLUDING THOSE INCORPORATED IN THE SPECIAL METHODS COURSE IN MATHEMATICS</td>
<td>41</td>
</tr>
<tr>
<td>IV. SPECIAL METHODS COURSES IN TEACHING MATHEMATICS REQUIRED IN VARIOUS INSTITUTIONS</td>
<td>43</td>
</tr>
<tr>
<td>V. CURRICULAR PLACEMENT OF REQUIRED METHODS COURSE WITH RESPECT TO STUDENT TEACHING</td>
<td>44</td>
</tr>
<tr>
<td>VI. PROFESSIONAL LABORATORY EXPERIENCES REQUIRED AS A PART OF THE REQUIRED METHODS COURSE</td>
<td>46</td>
</tr>
<tr>
<td>VII. YEAR IN COLLEGE IN WHICH STUDENT TEACHING IS USUALLY PLACED</td>
<td>55</td>
</tr>
<tr>
<td>VIII. DISTRIBUTION OF INSTITUTIONS ACCORDING TO THE COLLEGE TERM IN WHICH STUDENTS ENROLL IN STUDENT TEACHING</td>
<td>56</td>
</tr>
<tr>
<td>IX. NUMBER OF COLLEGE QUARTERS OR SEMESTERS DEVOTED TO STUDENT TEACHING</td>
<td>58</td>
</tr>
<tr>
<td>X. CLASS PERIODS PER DAY DEVOTED TO STUDENT TEACHING</td>
<td>59</td>
</tr>
<tr>
<td>XI. NUMBER OF SUBJECTS, IN THE FIELD OF MATHEMATICS, IN WHICH STUDENT TEACHERS ARE REQUIRED TO HAVE A STUDENT TEACHING EXPERIENCE</td>
<td>60</td>
</tr>
<tr>
<td>XII. TYPE OF SCHOOL IN WHICH STUDENT TEACHERS ARE ASSIGNED</td>
<td>62</td>
</tr>
<tr>
<td>XIII. PERSONS INVOLVED IN STUDENT TEACHING SUPERVISION</td>
<td>64</td>
</tr>
<tr>
<td>XIV. METHODS OF COMPENSATION FOR SUPERVISING TEACHERS IN SECONDARY SCHOOLS</td>
<td>66</td>
</tr>
<tr>
<td>XV. FACTORS CONSIDERED MOST IMPORTANT IN ASSIGNING STUDENT TEACHERS</td>
<td>69</td>
</tr>
<tr>
<td>TABLE</td>
<td>PAGE</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>XVI.</td>
<td>NATURE OF RESPONSIBILITY IN STUDENT TEACHING ASSIGNMENTS</td>
</tr>
<tr>
<td>XVII.</td>
<td>ACTIVITIES ENGAGED IN BY STUDENT TEACHERS OF MATHEMATICS, IN ADDITION TO CLASS INSTRUCTION</td>
</tr>
<tr>
<td>XVIII.</td>
<td>WHO IS THE COLLEGE SUPERVISOR OF MATHEMATICS STUDENT TEACHERS</td>
</tr>
<tr>
<td>XIV.</td>
<td>FREQUENCY OF THE COLLEGE SUPERVISOR'S OBSERVATION</td>
</tr>
<tr>
<td>XX.</td>
<td>TIME SPENT IN INDIVIDUAL CONFERENCES WITH THE STUDENT TEACHER</td>
</tr>
<tr>
<td>XXI.</td>
<td>TYPE OF EVALUATION REPORT PROVIDED THE STUDENT TEACHER BY THE COLLEGE SUPERVISOR</td>
</tr>
<tr>
<td>XXII.</td>
<td>FREQUENCY OF GROUP CONFERENCES FOR MATHEMATICS STUDENT TEACHERS</td>
</tr>
<tr>
<td>XXIII.</td>
<td>GENERAL CONFERENCE FOR ALL STUDENT TEACHERS IN ALL AREAS INCLUDING MATHEMATICS</td>
</tr>
<tr>
<td>XXIV.</td>
<td>ATTENDANCE OF SUPERVISING TEACHERS AT GROUP CONFERENCES</td>
</tr>
<tr>
<td>XXV.</td>
<td>SELF-EVALUATION IN MATHEMATICS STUDENT TEACHING</td>
</tr>
<tr>
<td>XXVI.</td>
<td>USE MADE OF SELF-EVALUATION REPORTS</td>
</tr>
<tr>
<td>XXVII.</td>
<td>NUMBER OF INSTITUTIONS OBTAINING PUPIL EVALUATION</td>
</tr>
<tr>
<td>XXVIII.</td>
<td>TYPES OF PUPIL EVALUATION</td>
</tr>
<tr>
<td>XXIX.</td>
<td>RESPONSIBILITY FOR FINAL GRADE IN STUDENT TEACHING</td>
</tr>
<tr>
<td>XXX.</td>
<td>BASES OF SUPERVISING TEACHER'S FINAL EVALUATION OF THE STUDENT TEACHER</td>
</tr>
<tr>
<td>XXXI.</td>
<td>BASES OF COLLEGE SUPERVISORS FINAL EVALUATION OF THE STUDENT TEACHER</td>
</tr>
<tr>
<td>XXXII.</td>
<td>TYPES OF EVALUATION DEVICES USED BY COLLEGE SUPERVISORS</td>
</tr>
<tr>
<td>TABLE</td>
<td>PAGE</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>XXXIII. EMPHASIS IN COLLEGE SUPERVISOR'S EVALUATION</td>
<td>189</td>
</tr>
<tr>
<td>XXXIV. EMPHASIS ON SPECIFIC TECHNIQUES IN TEACHING MATHEMATICS</td>
<td>192</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Historical Introduction

The concept of direct experience as an element of teacher-training programs was present in the earliest normal schools in the United States. In the first private normal school, which was opened in 1823 in Concord, Vermont, a few children were admitted to provide facilities for "practice teaching." Students practiced what they were taught under the watchful eyes of a supervisor. The first state normal school in the United States opened in 1839 at Lexington, Massachusetts. From its inception it had a so-called "model school" which was supposed to be as nearly like a regular public school as possible. Students observed and taught under supervision in this model school.

In the Middle West the first state normal school was established in the early 1850's at Ypsilanti, Michigan. It had a model school as an integral part of the institution. The first state normal school west of the Mississippi was established at Winona, Minnesota, in 1860, and in 1864 two rooms were equipped to house the "model department." The number of normal schools offering "practice teaching" gradually increased. In the late eighteen hundreds courses in the "Art and Practice of Teaching" appeared. The first professorship in this field was established in 1879 at the University of Michigan.

---

1 P. I. F. Williams. The Actual and Potential Use of Laboratory Schools, Teachers College, Columbia University, Contributions to Education, No. 846, pp. 2-12.
Student teaching has become an established, integral part of teacher-training programs mainly in the last thirty years. At The Ohio State University student teaching was first provided under contract with the schools in the city of Columbus in 1916. By the late 1930's most states required student teaching before issuing teaching certificates.

Not until the last twenty years did the development of other professional laboratory experiences take place. At The Ohio State University the September School Exploratory Experience dates from 1937 and the Community Service Experience from 1942. The growth of a variety of field experiences, in addition to student teaching, has resulted primarily from the recognized values received by students in the student teaching program, and from the wide influence of the educational philosophy of John Dewey with the emphasis upon "learning by doing." The values received by prospective teachers from all of the various professional laboratory experiences, including student teaching, are now commonly accepted. Ways have been sought to evaluate the performance of students in experiences prior to student teaching in an effort to predict their possible success or failure in student teaching. It is extremely difficult to analyze the effectiveness of these procedures in evaluation without a much more adequate evaluation of the student's performance in the student teaching experience.
Importance of the Study

The problem of finding more adequate techniques of evaluating the work of the student teacher in secondary mathematics is attacked in this study. It is particularly appropriate to undertake such a study here at The Ohio State University at this time when the student teaching experience is being extended from the one class period per day assignment to a half day assignment. This extended experience makes a study and redefinition of procedures for evaluating the student teacher's performance highly desirable and, in fact, urgent.

In addition to the current extension of the program in student teaching at The Ohio State University, there are several important reasons why a study, which will be devoted to contributing toward the improvement of student teaching evaluation in the area of mathematics as well as in various other subject areas, is needed at this time: (1) Public school administrators and boards of education place much emphasis upon the quality of performance in student teaching; (2) Increasing attention is being devoted to student teaching, as well as to other professional laboratory experiences in the total teacher-education program; (3) It is imperative that a careful and detailed evaluation of student teaching be made in order to assess the value of the various elements of the teacher-education curriculum, particularly the professional laboratory
experiences prior to student teaching; (4) There are relatively few references available in the literature on teacher ratings which pertain to the student-teacher and the evaluation of his work; (5) Few attempts at evaluation of student teaching have given any attention to the specific techniques needed in different subject areas; (6) Authorities in the field of professional laboratory experiences have recognized a great need for research and experimentation in evaluation of student teaching in all areas.

The Problem

The problem is this: to study the student teaching programs in a number of institutions which train teachers of secondary-school mathematics, with particular emphasis upon ascertaining their methods of evaluating the student teacher's performance; to discuss the factors, in the total student-teaching program, which exert major influence upon the evaluation of the student teacher's work; to make recommendations regarding the various aspects of the student-teaching program which are of major importance to the program of evaluating the student teacher's performance; and to suggest some techniques of evaluation which may contribute toward improving the


evaluation of the work of the student teacher in the field of mathematics.

**Method of Study**

In this study the student-teaching programs of a selected group of institutions were examined with particular emphasis upon techniques of evaluation. Information about the programs of the institutions which were selected, was secured by questionnaire. In order to choose satisfactory institutions for the study, a specific effort was made to assemble a list of the names of persons who not only are located in various institutions, but also are directly associated with student teaching in secondary mathematics. The method of selection of the individuals to whom the questionnaire was sent was as follows:

1. Specialists in mathematics education who had participated in programs dealing with teacher education at meetings of the National Council of Teachers of Mathematics during the last five years.

2. Supervisors of student teachers in mathematics, directors of student teaching, or heads of education departments who were members of the Association for Student Teaching during the year 1951-52, and were located in institutions from which no representative was selected in (1) above.
(3) Deans of Colleges of Education or heads of institutions engaged in teacher education\(^4\) from whom no representative had been selected in (1) and (2), above. This group was limited generally to institutions whose enrollment was approximately 400 students or more. It was not considered profitable to undertake a special program of supervision and evaluation in the smaller institutions which have a very limited number of student teachers in mathematics.

This list included three hundred sixty-six persons located in teacher-training institutions in forty-five states and the District of Columbia. Two hundred fifty-six replies were received, constituting approximately seventy per cent of the total group. The respondents are listed by the states and institutions which they represent.\(^5\)

The questionnaire was originally devised by the writer with the help of the literature available, as well as the assistance of the records and sample evaluations on hand in the files of the Student Field Experience Office at The Ohio State University. A jury of persons trained in the field of mathematics education and a few other people in the area of general teacher education were asked to


\(^5\) Appendix I.
criticise the original draft and make suggestions for revisions. This process was repeated a second time. Some assistance was received from an authority on the preparation of questionnaires. The questionnaire follows, on page 8.

The questionnaire was constructed to secure data, not available in the literature, on student-teaching programs in mathematics. It was organized in twelve major sections. Four of these sections consist of questions designed to be answered with a freely written response, while the other eight consist of questions followed by alternative answers to be checked by the respondent. Section I, Personal Data, consists of data concerning the respondent: the type of institution in which he is employed, the number of mathematics student teachers trained annually, and the subject area or areas in which he works in student teaching evaluation.

Data concerning the experiential background of the student teacher are sought in Section II, Experiences Prior to Student Teaching, and in Section VIII, which deals with planned experiences in the curriculum. These experiences are specifically designed to

6 The jury included: Professors Harold P. Fawcett, Nathan Lazar, Earl W. Anderson, C. B. Mendenhall, John R. Kinser, H. A. Toops, Mr. Sheldon S. Myers and Mr. Oscar Schaaf.

7 While the data was secured during the academic year 1952-53, it is assumed that very little change in conditions has occurred and the text refers to the data in the present tense.
AN INQUIRY CONCERNING EVALUATION OF STUDENT TEACHING IN SECONDARY MATHEMATICS,
Part of a Study Sponsored by the College of Education and Undertaken by John J. Evans, Assistant Co-ordinator of Student Field Experience

Instructions: Please mark with an X the answer or answers which clearly describe your program of student teaching in Mathematics, unless other instructions for marking appear in the particular question under consideration.

Definitions: In order to insure common understanding in this questionnaire, the following basic terms are defined here.

1. Observation — the passive act of watching a teaching-learning situation, with or without recording reactions.

2. Participation — all activities in which a student engages between the levels of observation and full or almost full responsibility in student teaching.

3. Student Teaching — the assumption of full or almost full responsibility for the teaching-learning process in a secondary school classroom by a college student preparing for the teaching profession.

4. Secondary School — grades seven through twelve.

5. Supervising Teacher — a regular secondary school teacher in the public or campus school in whose class or classes the student teacher is given responsibility.

6. College Supervisor — a staff member of the college who regularly visits student teachers in a specific field or in certain subjects and grade levels.
7. **Professional Laboratory Experiences** – all planned experiences in which a student has direct contact with children in school or in community, thus embracing the three phases: observation, participation, and student teaching.

8. **Structured Evaluation Form** – a rating form which consists primarily of items to be checked according to a scale or of questions with alternative answers to be checked, and which includes little or no opportunity for comments by the rater.

9. **Unstructured Evaluation Form** – a rating form which is designed primarily to encourage a free writing response.

10. **Self Evaluation** – the process whereby a student teacher analyzes his own performance in teaching, either informally or with the help of an evaluation form.

11. **Pupil Evaluation** – evaluation of a student teacher by his pupils in the secondary school.
I. Personal Data

1. ____________________________  (name)  ____________________________  (rank)  ____________________________  (department)

2. ____________________________  (college)  ____________________________  (mailing address)

3. The institution with which I am associated is primarily
   (1) ____________________________ a liberal arts college
   (2) ____________________________ a teacher training institution
   (3) ____________________________ Other (Specify)

4. About how many student teachers in mathematics do you have enrolled annually?
   ____________________________  (number)

5. With what subject areas are you concerned in student teaching evaluation?
   (1) ____________________________ all secondary academic areas
   (2) ____________________________ Mathematics
   (3) ____________________________ Mathematics and Science
   (4) ____________________________ Other (Specify)

II. Experiences Prior to Student Teaching

1. How many methods courses in the teaching of mathematics are required? (Methods courses are those entitled Teaching of Mathematics, Teaching of Algebra, Teaching of Geometry, etc.)
   (1) ____________________________ None
   (2) ____________________________ One
   (3) ____________________________ Two
   (4) ____________________________ Other

2. If more than one methods course is required, how are they organized?
   (1) ____________________________ According to subjects (Algebra, Geometry)
   (2) ____________________________ According to Junior and Senior High Levels
   (3) ____________________________ Other (Specify)

3. When do students usually take the required methods course in the teaching of mathematics?
   (1) ____________________________ Prior to student teaching
   (2) ____________________________ After student teaching
   (3) ____________________________ At the same time as student teaching
   (4) ____________________________ Other (Specify)

4. What professional laboratory experiences are required in the special methods course in mathematics? (Indicate approximate number of hours).
   (1) ____________________________ Hours of observation in mathematics classes
   (2) ____________________________ Hours of participation in mathematics classes
### III. Student Teaching Assignment

1. A student teaching experience in mathematics is required in:

   - **(1)___** Only one subject
   - **(2)___** Two subjects
   - **(3)___** Other (Indicate)

2. What is the usual duration of the student teaching experience?

   - **(1)___** One quarter
   - **(2)___** Two quarters
   - **(3)___** Three quarters
   - **(4)___** One semester
   - **(5)___** Two semesters
   - **(6)___** Other (Specify)

3. What is the usual amount of time devoted to student teaching?

   - **(1)___** One class period per day
   - **(2)___** Two class periods per day
   - **(3)___** Half days
   - **(4)___** Full days
   - **(5)___** Other (Indicate)

4. In what year of college do students usually take student teaching?

   - **(1)___** Senior
   - **(2)___** Junior
   - **(3)___** Sophomore
   - **(4)___** Fifth Year
   - **(5)___** Other (Explain)
5. In which quarter or semester of the year indicated above do students usually take student teaching?

(1) ____ First semester (4) ____ Second quarter
(2) ____ Second semester (5) ____ Third quarter
(3) ____ First quarter (6) ____ Any quarter or semester

6. How many hours of credit are usually allowed for student teaching in mathematics? ________

7. In what type of school are your student teachers assigned?

(1) ____ Public schools exclusively
(2) ____ Campus schools exclusively
(3) ____ Primarily in public schools
(4) ____ Primarily in campus schools
(5) ____ Must be done in both types
(6) ____ May be done in both types
(7) ____ Other arrangement (Specify) ___________________

8. Which of the following factors do you consider most in assigning student teachers to a particular school?

(1) ____ Personality of student teacher
(2) ____ Personality of supervising teacher
(3) ____ Student teacher's experience with the socio-economic group predominant in the school
(4) ____ Sex of supervising teacher
(5) ____ Student teacher's potential ability in classroom management
(6) ____ Other (Specify) ___________________

9. Indicate which of the following best describes the usual student teaching assignment at your institution.

(1) ____ Full teaching responsibility throughout the period of assignment
(2) ____ Observation and participation followed by very little full teaching responsibility
(3) ____ A short period of induction through the levels of observation and participation followed by full teaching responsibility
(4) ____ Other (Describe) ___________________

10. In addition to complete teaching responsibility in mathematics classes what other obligations are included in the student teaching assignment? (Check all those usually included.)

(1) ____ Pre-planning a resource unit
(2) ____ Examining a variety of unit plans which have been used
(3) Planning daily classroom experiences cooperatively with pupils
(4) Improving skill in helping pupils bring mathematics to focus in solving problems arising in their environment
(5) Preparing resource materials for class use
(6) Guiding small group projects
(7) Assisting in development of laboratory materials
(8) Organizing, filing, and storing resource materials
(9) Assisting in planning and conducting field trips
(10) Devising and using various means of evaluating the work of the pupils
(11) Observing in other mathematics classes
(12) Observing in classes in other areas
(13) Leadership of clubs
(14) Supervising of study halls
(15) Assisting with administrative routine in central office
(16) Visiting homes of pupils
(17) Getting acquainted with pupil records for counseling purposes
(18) Assisting the school librarian
(19) Assuming faculty duty in lunchroom supervision
(20) Working on faculty committees
(21) Participating in community activities
(22) Other (Indicate)

IV. Supervision of Student Teaching

1. Who supervises student teachers in mathematics?
   (1) Only the supervising teacher in the secondary school
   (2) Both a supervising secondary school teacher and a college faculty member
   (3) Other (Specify)

2. The college supervisor of student teachers in mathematics is:
   (1) Only the supervising teacher in the secondary school
   (2) Both a supervising secondary school teacher and a college faculty member
   (3) Other (Specify)

2. The college supervisor of student teachers in mathematics is:
   (1) A member of the department of mathematics
   (2) A member of the department of education, specializing in mathematics education
3. How often does the college supervisor observe the student teacher?
   (1) __ One period per week  (3) __ Two periods per month
   (2) __ Two periods per week  (4) __ Other (Indicate)____

4. How much time does the college supervisor devote to individual conferences with the student teacher each week?
   (1) __ One-half hour
   (2) __ One hour
   (3) __ Other (Indicate)__________________________

5. Does the college supervisor have a check list or structured form for evaluating the teaching of a mathematics lesson by the student teacher?
   (1) ___ Yes
   (2) ___ No

6. If the college supervisor uses structured evaluation form in evaluating a single lesson, is this same form used by:
   (1) __ The supervising teacher
   (2) __ The student teacher as a self evaluation device

7. If the college supervisor uses an evaluation form, is the student teacher provided with a copy of the form?
   (1) ___ Yes
   (2) ___ No

8. At his individual conference with the student teacher, does the college supervisor present the student with:
   (1) ___ A verbal criticism with suggestions
   (2) ___ A brief written criticism with suggestions, a carbon copy which the student keeps
   (3) ___ Other (Specify) ____________________________

9. How often is a seminar or conference specifically for all mathematics student teachers held?
   (1) ___ None
   (2) ___ Weekly
   (3) ___ Other (Specify)____________________________

10. If a specific seminar for math student teachers is not held, is a regular one held for all student teachers?
    (1) ___ Yes
    (2) ___ No
11. What is the usual basis for discussion in seminars on student teaching in mathematics?
(1) Modern trends in teaching methods presented by the instructor
(2) Matters of importance to beginning teachers as determined by the instructor
(3) Problems of classroom teaching currently faced by student teachers
(4) Some combination of (1), (2), and (3). Explain

12. What materials and written reports are required of student teachers in mathematics?
(1) An initial statement by the student teacher concerning his fears, strengths, weaknesses, etc.
(2) Daily lesson plans
(3) A diary of their experiences
(4) A final self evaluation
(5) Midterm self evaluation
(6) Weekly lesson plan
(7) Unit plan
(8) Other materials

13. Are the supervising teachers in the secondary schools invited to attend student teaching seminars on the campus, in which student teachers and college supervisors discuss problems arising in student teaching?
(1) Never
(2) Sometimes
(3) Once each quarter or semester
(4) Other (Specify)

14. If the secondary school supervising teachers are invited to attend seminars on the campus, do they attend?
(1) Regularly
(2) Often
(3) Occasionally
(4) Seldom
(5) Never

V. Bases of Evaluation

1. Do your student teachers use any type of self evaluation?
(Definition No. 10, pg. 1)
(1) No self evaluation (formal)
(2) Written, completely unstructured self evaluation
(3) A self-evaluation form, mainly structured but with space for additional comments
(4) A completely structured self-evaluation form
(5) Other (Indicate)

2. What use is made of the student teacher's self evaluation?
(1) Used only by the student teacher himself
(2) Must be submitted to the supervising teacher or university supervisor
(3) May be submitted voluntarily to the supervisors
3. Do you have pupil evaluation of the student teacher? (See Definition 11, pg. 1)
   (1) Yes
   (2) No

4. If you have a pupil evaluation, what type is it?
   (1) None used
   (2) Completely structured form
   (3) Structured with space for additional comments
   (4) Completely unstructured
   (5) Other (Specify) __________________________

5. Upon what do supervising teachers in the secondary schools base their quarter or semester evaluation of the student teacher? (Check all alternatives applicable in your program.)
   (1) Standard tests of pupil performance
   (2) Locally developed teacher rating scales
   (3) Observations of, and conferences with, the student teacher
   (4) Self-appraisal by the student teacher, if any
   (5) Pupil evaluations or reactions to the student teacher
   (6) Conferences with the college supervisor
   (7) Other (Indicate) __________________________

6. Upon what do college supervisors base their quarter or semester evaluation of the student teacher? (Check all alternatives applicable in your program.)
   (1) Standard tests of pupil performance
   (2) Pupil evaluations of, or reactions to, the student teacher
   (3) Observation of, and conferences with, the student teacher
   (4) Self evaluation by the student teacher himself, if any
   (5) A series of ratings completed during visits to the student teacher's classroom, using structured rating forms
   (6) Conferences with the supervising teacher in the secondary school
   (7) Other (Explain) __________________________

VI. Evaluation by College Supervisors

1. What type of evaluation device is being used by the college supervisor?
   (1) Completely structured
   (2) Structured with space for additional comments
   (3) Completely unstructured
   (4) None
   (5) Other (Indicate) __________________________
2. The primary purpose of the evaluation forms used by the college supervisor is to:
   (1) Collect data with which to support a final grade
   (2) Collect data for placement purposes
   (3) Help the student teacher become a better teacher
   (4) Help the student teacher make a better impression upon the public school teachers with whom he works
   (5) Other (Indicate) ____________________________

3. The items incorporated in the college supervisor's evaluation form are:
   (1) Factors or traits difficult to define or describe
   (2) Descriptions of observable behavior
   (3) Factors or traits easily understood to have a common meaning for all
   (4) Other (Indicate) ____________________________

4. If descriptions of observable behavior are used, do they appear in:
   (1) An ordered sequence
   (2) An unordered sequence

5. What is the provision for rating the items in the college supervisor's evaluation form? (If such a form is used)
   (1) Ten point scale
   (2) Five point scale
   (3) Four point scale
   (4) Three point scale
   (5) Other (Explain) ____________________________

6. Are the various items in the evaluation form weighted?
   (1) Weighted equally
   (2) Weighted unequally, according to their importance

7. What has been the relative emphasis upon the following aspects of student teaching in the evaluation by college supervisors? (Weight these on a 10 point scale, using 10 to indicate most emphasis.)
   (1) Personal traits or qualities
   (2) Classroom management or control
   (3) Skill in human relations
   (4) Specific teaching techniques in the subject being taught
   (5) Participation in school community activities
   (6) Use of teaching techniques consistent with modern trends in teaching mathematics
   (7) Immediate preparation and planning
   (8) Emotional balance and maturity
8. What emphasis would you place upon the following teaching techniques when evaluating a student teacher in mathematics? (Mark those you emphasize most 10, and those least 1, and use intermediate digits.)

(1) Providing for individual differences
(2) Maintaining a desirable balance between teacher and pupil participation
(3) Effective use of available school and community resources
(4) Use of physical devices and models to increase understanding
(5) Capacity for utilizing current pupil interest in developing learning situations
(6) Emphasis on democratic rather than autocratic procedures
(7) Skill in use of questions
(8) Clarity of explanations
(9) Economy in use of time
(10) Planning and giving assignments
(11) Ability to help students use mathematics to solve problems which arise in their environment in everyday life
(12) Skill in using general applications of mathematics to science and other fields
(13) Ability to use various methods which provide variety during a class period
(14) Ability to motivate pupils through effective orientation to a lesson
(15) Ability to develop and use evaluation techniques which stimulate pupil performance and understanding
(16) Providing opportunity for pupil discovery

VII. Student Teaching Grade

1. Who is responsible for the final grade of the student teacher?

(1) Supervising teacher in the secondary school
(2) College supervisor
(3) College supervisor with advice from supervising teacher
(4) Other (Indicate) ___________________________
2. Is the final grade of the student teacher supported by a permanent file of any of the following materials? (Indicate which ones)

(1) __ Evaluation forms completed by college supervisor on a series of visits
(2) __ Reports of self evaluations
(3) __ Reports of pupil evaluations
(4) __ Reports of evaluations made by the supervising teacher
(5) __ A subjective statement compiled by the college supervisor
(6) __ Other (Indicate) _________________________

3. How is the student teacher's final grade reported to him?

(1) __ By the college supervisor after an individual conference
(2) __ By college supervisor without a conference
(3) __ By regular university channels (Registrar's Report)
(4) __ Other (Indicate) _________________________

4. If a student teacher is doing a very poor job of student teaching in the early part of his assignment, what happens?

(1) __ Is withdrawn and not permitted to re-enroll in student teaching
(2) __ Is withdrawn and reassigned in a subsequent term
(3) __ Other arrangement (Specify)_________________

5. If a student teacher has completed a student teaching assignment in a manner not entirely satisfactory (barely passing), what happens?

(1) __ Receives appropriate passing grade and is not required to do additional student teaching
(2) __ Receives appropriate passing grade but is required to enroll in student teaching again
(3) __ Receives a grade of incomplete and hence must do additional student teaching
(4) __ Other (Indicate) _________________________

VIII. In your teacher education program, what planned opportunities are provided for prospective teacher to develop increasing skill in their relations with other students, with teachers and staff members, and with adults generally? Mention specifically curricular experiences designed to accomplish this end.________________________________________

________________________________________
IX. Selection and Compensation of Supervising Teachers

1. Which of the following factors do you consider primarily in selecting supervising teachers? (Weight most 5, least 1)

(1) ___ Recommendation of school principal
(2) ___ Professional reputation
(3) ___ Familiarity with objectives of teacher training institution
(4) ___ Willingness to assist in teacher education program
(5) ___ Past performance as a supervising teacher
(6) ___ Appropriate schedule
(7) ___ Other (Indicate) ____________________________

2. How are the supervising teachers in the secondary school, or the school systems, compensated for the work of supervising student teachers?

(1) ___ Payment to the supervising teachers, a certain amount for each student teacher
(2) ___ Free tuition to the university for all teachers in the cooperating school
(3) ___ Free tuition only for those teachers who have student teachers
(4) ___ Certain privileges in use of campus facilities
(5) ___ Payment of a lump sum to the school fund for use in providing additional teaching materials to improve instruction
(6) ___ Other arrangement (Indicate)________________

X. All of us who work with mathematics student teachers feel that our program has certain unusual features and strong points. Would you indicate what you consider to be the high points in your program, particularly in the evaluation of student teaching?

___________________________________________________________________________

___________________________________________________________________________

XI. Recognizing that all of us have certain weaknesses in our attempts at evaluating the work of student teachers, would you care to point out some of the weaknesses in your program and any ideas you have about eliminating some of them.

___________________________________________________________________________

___________________________________________________________________________
XII. PLEASE ATTACH COPIES OF EVALUATION FORMS YOU ARE NOW USING, INCLUDING THOSE USED FOR SELF EVALUATION, PUPIL EVALUATION, EVALUATION BY COLLEGE SUPERVISORS, AND EVALUATION BY SUPERVISING TEACHERS. (Please list those you are enclosing.)

____________________________________________________________________

____________________________________________________________________

NOTE: If you wish a copy of the summary of the results of this study when it is completed, please indicate below.

(1) ___ Yes
(2) ___ No
develop the student's skill in human relations. The nature of the student teaching assignment in mathematics, and the supervisory program are considered in Sections II, IV, and IX. The program of evaluation of the student-teacher's work is discussed in Sections V, VI, and VII. In these sections the bases of evaluation, the grading procedure, and the college supervisor's evaluation are investigated in considerable detail. In Sections X and XI the respondent is given an opportunity to evaluate freely the program in his own institution, listing strengths and weaknesses. Each respondent is requested in Section XII to list the types of devices for evaluation now used in his institution which he is including as a supplement to his response. In addition to the data secured by questionnaire, a review of the literature available on the subject has been made. The literature reveals a dearth of references on the rating of student teachers. In the field of the teaching of mathematics, virtually the only major reference available on student teaching is the "Handbook on Student Teaching in Mathematics," by W. D. Reeve and Homer Howard. In the general area of student teaching, many references are available and have been used, as will be indicated.

Definition of Terms

There is considerable variation in the terminology used in the professional literature relating to professional laboratory experiences.
For the purposes of this study the terms most frequently used are here defined.

Professional laboratory experiences include all those contacts with children, adolescents, and adults (through observation, participation, and teaching) which make a direct contribution to an understanding of individuals and their guidance in the teaching-learning process. It is assumed in this definition that teaching refers to the student teaching experience. It is further assumed that the contacts with children, adolescents and adults may be both inside and outside the school.

Student teaching is guided experience in conducting the teaching-learning process with the level of responsibility gradually increasing to full teaching responsibility in one or more classes. This definition is consistent with the one proposed by Flowers: 

"Student teaching is the period of guided teaching when the student takes increasing responsibility for the work with a given group of learners over a period of consecutive weeks." The synonymous term of practice teaching appears in some literature in this field.

Participation may be defined as responsible assistance in guiding the teaching-learning process. In participation, the student is an active assistant to the regular classroom teacher; and his

---


9 Ibid.
activities, in this role, fall between those of the observer and those of the student teacher since the observer carries no teaching responsibility and the student-teacher, with some induction, carries full, or almost full, responsibility.

Observation is the passive act of watching a teaching-learning situation, with or without the student recording his reactions.

Secondary school is defined for the purposes of this study as grades seven through twelve.

A student teacher is a prospective teacher engaged in full teaching responsibility under the supervision of secondary-school and college-staff members. Cadet and intern are terms used as synonyms for student teacher in the literature.

A supervising teacher is a teacher in a public, private, or campus school, in whose class or classes the student teacher is temporarily assigned full teaching responsibility. The supervising teacher assumes a large share of the responsibility for directing the work of the student teacher. The terms sponsor teacher, cooperating teacher, directing teacher, guidance teacher, master teacher, and critic teacher are generally considered to be synonymous with supervising teacher.

The college supervisor of student teaching is a member of the college faculty who not only is assigned supervisory responsibility in one or more subject areas, but also visits and confers with student teachers in the schools to which they are assigned. The college supervisor of student teaching in mathematics may be a
member of the department of mathematics, a member of the department of education specializing in the teaching of mathematics, or perhaps a staff member without special training in the field of mathematics. In rare cases the college supervisor is a member of the specialized area or department of mathematics education.

The director of student teaching is the college administrator charged with administering the student teaching program of his college. Often, in small colleges, the director of student teaching may also assume the duties of the college supervisor. In large universities the director is a member of the college of education administrative staff and is responsible for the co-ordination between the university and the public schools and community agencies where teacher-education students are placed for laboratory experiences.

The campus laboratory school is a school situated on or near the college campus, operated or controlled directly by the college or jointly with a public-school system or other group. The campus laboratory school is usually staffed by the college and, in many cases, the staff holds faculty rank in the college. This school may be an institution completely separated from the regular public schools.

The co-operating school is a public school in which teacher-education activities are frequently, but not always, conducted under a contractual arrangement with the college. These schools are, in most cases, located within a few miles of the college; but in some
cases they may embrace an entire state.

**Pupil evaluation** of a student teacher may be defined as pupil appraisal of a student teacher's work.

**Self-evaluation** is the student teacher's own analysis of his performance as a teacher, with or without the use of a formal evaluation instrument.

A **structured evaluation form** is a rating device which consists of a list of items to be checked according to a scale, or a list of questions with alternative answers to be checked. It seldom includes provision for comments by the rater.

An **unstructured evaluation form** is one designed primarily to encourage a freely-written, essay-type response to certain questions.

A **mid-term evaluation** is a comprehensive evaluation of the student teacher's competence in handling the various activities of a teacher, including classroom instruction. This type of evaluation is made usually two or more times during the student teaching experience. (This type of evaluation is to be distinguished from the evaluation of the student teacher's ability to teach a single lesson.)

**Survey of Literature**

In the literature there are relatively few studies dealing with student teaching evaluation in general, and virtually none dealing with student teaching in mathematics, specifically. In
this latter category the only closely related study discovered is
Rine's \(^{10}\) study. The study attempts to answer the question: "What
criteria should be used in judging the quality of a program for the
preparation and induction of student-teachers of secondary school
mathematics?" The findings relate primarily, therefore, to the
desirable requirements for admission to student teaching and, only
secondarily, to some elements of the student teaching assignment
itself. Concerning evaluation procedures, "highest ratings were
given to (a) informing the student-teacher early of the criteria
used for evaluation; (b) making evaluation a continuous process;
(c) considering the student-teacher as a person, teacher, member of
the profession, and of the community; and (d) judging the growth
of the student-teacher in increasing his ability to evaluate himself."
The criteria were set up on the basis of current literature and the
judgment of twenty-four mathematics specialists, and rated by persons
from sixty-three institutions who applied them to their own institu­
tions. No further reference is made to student teaching evaluation.

Even though it is not reported in the form of a study the work
of Carl G. F. Franzen \(^{11}\) should be mentioned here insofar as it
applies to the teaching of mathematics. Included among his so-called
"Improvement Sheets" are sheets devoted to algebra, plane geometry,

\(^{10}\) Tedvo E. Rine, "Criteria for Self-Evaluation of Programs of
Student Teaching in Secondary School Mathematics." Unpublished doctoral
dissertation, George Peabody College for Teachers, June 1952.

\(^{11}\) Carl G. F. Franzen, Improvement Sheets for the Teaching of
pp. 57-73 inclusive.
and general mathematics.

These Improvement Sheets were designed for use in the supervision of teachers in-service and are not rating sheets. The author states that "the sole purpose of the Improvement Sheets is to reveal to the teacher and to the observer the elements of good teaching for which the teacher is to be commended, and the absence of certain desirable activities which the teacher is encouraged to bring within the periphery of his classroom experiences." These Improvement Sheets illustrate an attempt to involve consideration of the techniques which are peculiar to the different subjects and help the teacher improve; but they are, in fact, completely subject centered and do not give any attention to aspects of evaluation other than teaching techniques of the particular subject. These Improvement Sheets were not designed for use with student-teachers.

Studies in the general field of student teaching evaluation point up a number of weaknesses. None deals with the problem of evaluation except in terms of so-called general traits, characteristics or teaching abilities, and they are, with only one exception, without reference to a particular subject area. These studies will be referred to in chronological order. Smith\textsuperscript{13} surveyed student-teacher rating sheets used by 103 colleges in the North Central Association.

\textsuperscript{12} Fransen, \textit{op. cit.}, p. vii.

More than half of those reporting were dissatisfied with the forms they were using. Among the forms examined by Smith there was no indication of any emphasis on (1) modern trends in teaching, (2) provision for differentiation of techniques for evaluating the different subjects, (3) provision for evaluation of the student-teacher's work in addition to classroom teaching, and (4) the need for self-evaluation. There is no report in Smith's study that any specific effort was made to secure samples of the devices used in evaluating a particular subject area, even if they were available. No mention of pupil evaluation is made in this study.

Kennard\textsuperscript{14} makes reference to studies of Mead\textsuperscript{15} and Smith\textsuperscript{16} in setting up eight criteria for construction and evaluation of student-teacher rating sheets. The significant difference in the findings of Mead and Smith was that Mead (1930) found only 18 per cent of 133 institutions using analytical rating sheets, whereas Smith (1936) found 80 per cent of 103 institutions using them; but at least half of the group was not satisfied. In his criteria, Kennard makes a case for the weighting of items, providing for the skew-weighting of certain threshold characteristics. Emphasis is placed upon having only a few items on the rating sheet, preferably


\textsuperscript{16} Smith, op. cit., p. 180.
less than twenty, and having them suitably explained or defined.
Kennard repeats Smith's conclusion that rating sheets should provide for self-evaluation, for recognition of modern trends in teaching, and for the different techniques used in different subjects.

Woellner reported a study of rating forms used in 102 of 119 colleges and universities. On these rating forms, two hundred fifty-two different traits appear, but only ten of them appeared in as many as fifty of the forms studied. On seventy-two of the forms no directions were included; nor was there any definition of terms included. No evidence was presented to show that any effort was made in any of the forms to differentiate the traits and techniques that may be peculiarly involved in the work at different grade levels and in the different fields. Woellner concluded that "there is real need for further understanding of this professional problem (student teaching evaluation)."

Burns reported having investigated fifty rating forms and classified them as (1) rating scale with items to be checked according to a point system; (2) rating scales allowing a little space for

---

18 Woellner, op. cit., p. 270.
comments in addition to items to be checked; and (3) the more informal rating devices with large headings to guide the free writing of a brief analysis. Of the fifty forms, most were reported to be in the first two categories, and the most popular large areas of concern on these forms were the following: personal attributes, professional attitude, teaching techniques, and classroom management. Burns deplored the over-use of the criterion of objectivity and the distrust of the subjective. While making several excellent suggestions for evaluation, such as the need for (1) considering the student-teacher with reference to the total situation in which he was operating; and (2) more exactly defining or describing terms and concepts used in rating sheets, Burns went all out for the almost completely subjective type of evaluation, the anecdotal record form. There is no doubt that in the process of evaluating student teachers valuable use can be made of anecdotal records, but these forms are of little or no use to the student-teacher as devices for self-evaluation, since they fail to give the student-teacher a clear idea of what bases of evaluation are to be used by his supervisor.

Student teaching evaluation in the field of business education is the subject of an article by Sollars, in which a chart for use in evaluating student teaching in commercial-education courses

was presented. This chart contains two sections: Personality Traits and Teaching Abilities. Although the chart was apparently designed for use in the business area, there is no indication in any of the definitions of the "traits" and "abilities" of anything specifically relating to that field. The form is, so far as can be determined, just as applicable in any other field. Once again there was no real attack on the problem of involving teaching techniques of a particular subject-matter area in the total evaluation scheme.

The work of Fishback in presenting a "rationale for the evaluation of student teaching" is of real importance, although it is not actually a study of rating forms. In fact, he referred his readers to the work of Troyer and Pace for "descriptions of the most promising instruments and plans of securing evidence" on the student-teacher's work. The need for numerous appraisals of a student-teacher's performance is stressed. These appraisals should be frequent and make use of various evaluation techniques. It is quite necessary that any efforts in the area of improved techniques for evaluation be characterized by the full realization that each such technique should be one of several used. Fishback did stress

---


the need for instruments of evaluation. "The assumption that final evaluation of a student teacher's success can be one of post-mortem nature, based on memory or sketchy notes of progress, is not sound." Some of the weaknesses commonly recognized in the studies already cited are also included.

The most recent study, and the last to be cited here, was by Bach. A rating scale was constructed, based upon a study made of one hundred twenty-six rating forms used in other institutions, and upon the writer's past experience. Eighty-three "traits" appearing on the one hundred twenty-six rating scales were collected and organized according to the frequency of their use. This large group of "traits" was condensed and finally, twenty-five items were used. They were divided into three major classifications: Competencies, Behaviour Controls, and Essential Qualities. The resulting rating scale possesses some of the weaknesses which have already been pointed out. The terms used are somewhat too general, and the writer found it necessary to construct a manual with definitions and descriptions. The use of a device which requires an accompanying manual is much too cumbersome for daily use. The scale proposed does not appear to meet some of the criteria set up by the writer for the construction of a valid and useful rating scale, such as "The scale should be constructed co-operatively..."

Fishback, op. cit., p. 498.

Jacob O. Bach, A Scale for Evaluating Student Teaching, 28th Yearbook, Association for Student Teaching, 1949, Chapter IX, pp. 124-132.

Bach, op. cit., p. 131.
by a number of workers who intend to use it; each trait or behaviour to be appraised should be carefully described or defined; and opportunities should be provided for evidence and documentation of each rating made. It is essential that the devices for evaluation be thoroughly understood by the persons using them, but the possibility that the users could co-operatively construct all these instruments seems rather remote. This principle is somewhat idealistic and would leave no room for the type of experimentation in which Bach engaged.

The studies reviewed here have all contributed to the improvement of student teaching evaluation. They have not, however, been concerned, to any extent, with self-evaluation and pupil evaluation. They have been restricted to evaluation by supervisors. None of the studies has attempted to discover specifically, rating forms used in a particular subject area in order to determine whether the criticisms made twenty years ago have brought about any attempts to include the teaching techniques of a particular subject area in the evaluation. There seems to be no doubt that there is a need for studies of student teaching evaluation in particular fields and that these studies should (1) recognize the value of considering the total situation in which the student-teacher is operating; (2) emphasize pupil evaluation and self-evaluation; (3) recognize the value of using several different techniques in evaluating a student-teacher's work; (4) suggest techniques which are brief and can be
easily used; (5) suggest techniques which are not only free of vague, ill-defined, general items, but also make use of descriptions of observable behaviour; and (6) suggest techniques of evaluation designed specifically for a particular subject area.

This study is designed to accomplish these objectives in the area of mathematics. It is assumed that firsthand experience is essential in an effective teacher-education program, and that student teaching is the most comprehensive program involving firsthand experience in our present-day teacher-education curricula.
CHAPTER 2

STUDENT TEACHING PROGRAMS IN INSTITUTIONS TRAINING
MATHEMATICS TEACHERS

Data on Respondents to Questionnaire

In the two hundred fifty-six replies received in this study, the respondents represented liberal arts colleges, state teachers colleges and colleges or schools of education in universities. Some of the group were working in the area of mathematics alone, while others were associated with additional areas as well as mathematics. The distribution of these respondents according to type of institution which they represent, and their area of responsibility in student teaching evaluation is indicated in Table I. The question was this: With what subject areas are you concerned in student teaching evaluation? From this table it

TABLE I

DISTRIBUTION OF RESPONDENTS TO QUESTIONNAIRE ACCORDING TO TYPE OF INSTITUTION AND AREA OF CONCERN

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>State Teachers College</th>
<th>Institution of</th>
<th>Liberal Arts College</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics (Only)</td>
<td>37</td>
<td>29</td>
<td>16</td>
<td>82</td>
</tr>
<tr>
<td>Mathematics and others</td>
<td>57</td>
<td>37</td>
<td>80</td>
<td>174</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>66</td>
<td>96</td>
<td>256</td>
</tr>
<tr>
<td>Per cent</td>
<td>36.7</td>
<td>25.8</td>
<td>37.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1 Questionnaire I-5, p. 10.
can be seen readily that nearly two-thirds of the supervisors responding represented institutions devoted strictly to teacher education, that is, state teachers colleges and schools or colleges of education in universities. About one-third of the respondents were responsible for supervision in the area of mathematics alone, while about two-thirds were responsible for other areas in addition to mathematics. Smith pointed out about fourteen years ago, the failure of most techniques of evaluation to involve a consideration of the "specific teaching techniques in particular subjects." The fact that so many college supervisors of student teaching in mathematics are not devoting their efforts to that field alone, but also to one or several other areas is necessarily in the opinion of the writer, a significant reason for that particular shortcoming in the devices used for evaluation. Supervisors working in several subject areas tend to devise and use evaluation techniques which they can apply to all of the areas in which they have responsibility for evaluation.

Number of Mathematics Student Teachers Annually

In order to determine approximately how many student teachers in mathematics are being supervised and evaluated annually in the institutions responding, the following question, designed to elicit

---

a free response was included: 3 About how many student teachers in mathematics do you have enrolled annually? The response is shown in Table II. It appears that liberal arts colleges train an average of six mathematics people annually for high school teaching, and that there is little significant difference between the numbers trained by universities and state teachers colleges, the average for both being twelve.

**TABLE II**

<table>
<thead>
<tr>
<th>No. of Student Teachers annually</th>
<th>State Teachers Colleges</th>
<th>Universities</th>
<th>Liberal Arts Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5</td>
<td>5</td>
<td>7</td>
<td>47</td>
</tr>
<tr>
<td>5 - 9</td>
<td>19</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>10 - 14</td>
<td>25</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>15 - 19</td>
<td>7</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>20 - 24</td>
<td>7</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>25 - 29</td>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>30 - 35</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Over 35</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>17</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>94</strong></td>
<td><strong>66</strong></td>
<td><strong>96</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

These figures are based upon the enrollment during the academic

3 Questionnaire I-4, p. 10.
year, 1952-53. A period of decline in enrollment occurred that year. This decline may be illustrated by the annual enrollment of student teachers in the field of mathematics at The Ohio State University for each of the academic years during the period 1948-1953. Those enrollments were as follows: 1948-49, 29; 1949-50, 37; 1950-51, 56; 1951-52, 29; and 1952-53, 12. Since college supervisors are not currently faced with a heavy load of student teachers to supervise, it seems that this is an opportune time for experimentation with different types of evaluation and the subsequent development of improved techniques.

**Laboratory Experiences Prior to Student Teaching**

A program of evaluation of student teaching in mathematics, to be effective, must consider just "where the student is" in the total pattern of experience at the time of his entrance into student teaching. The evaluator must understand the pattern of the experiential background of the student teacher.

Earlier studies, such as that reported by Flowers\(^4\) indicate that opportunities for laboratory experiences following student teaching are seldom, if ever, provided in many institutions, and that minor attention has been given to that area of professional laboratory experiences. The principal growth in professional laboratory experiences.

laboratory experiences, in addition to student teaching, has occurred in the area of pre-student-teaching experiences. It is this area of laboratory experiences that must be considered in attempting to set the student-teaching experience in the context of the total laboratory-experience program. The question asked was this: 

What professional laboratory experiences, in addition to those considered a part of the mathematics methods course, are required of all students prior to admission to student teaching in mathematics? (Indicate hours in each category. Include all experiences, mathematical and non-mathematical.) Table III shows the professional laboratory experiences required prior to student teaching, in terms of clock hours. This table does not provide data on any experiences required as a part of the methods course or courses in the teaching of mathematics. Nearly half of those responding indicate that their students are not required to have any observational experience in public schools prior to, or not connected with the methods course in the teaching of mathematics. Approximately 20 per cent of the group does require over twenty hours of such observation in public schools.

The number of institutions reporting no required observation in campus schools, outside of special methods courses, is slightly over seventy-five per cent of the total number reporting. This is a clear indication that the liberal arts institutions do not usually

---

Questionnaire IV-5, p. 11.
## TABLE III

PROFESSIONAL LABORATORY EXPERIENCES REQUIRED OF ALL STUDENTS, NOT INCLUDING THOSE INCORPORATED IN THE SPECIAL METHODS COURSE IN MATHEMATICS IN 256 INSTITUTIONS (94 STATE TEACHERS COLLEGES, 66 UNIVERSITIES, AND 96 LIBERAL ARTS COLLEGES)

<table>
<thead>
<tr>
<th>Type of Experience</th>
<th>Hours</th>
<th>No. in Each Type of Institution</th>
<th>STC</th>
<th>UNIV.</th>
<th>YAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Observation in Public Schools</td>
<td>0</td>
<td>17 19 18 27 41 42 44</td>
<td>123 48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-10</td>
<td>17 18 19 32 33</td>
<td>67 26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>0 0 0 0 0</td>
<td>0 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>11 12 13 18 19</td>
<td>14 17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 30</td>
<td>1 1 1 4 6</td>
<td>8 3 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>11 12 4 6 1 1</td>
<td>16 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation in Campus Schools</td>
<td>0</td>
<td>57 51 77 91 95</td>
<td>197 77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-10</td>
<td>17 16 6 9 0</td>
<td>21 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>7 7 3 5 5 5 5 5</td>
<td>15 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>2 2 1 1 0</td>
<td>3 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 30</td>
<td>3 3 0 3 0</td>
<td>3 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>12 13 5 8</td>
<td>17 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in Public Schools</td>
<td>0</td>
<td>73 78 55 84 71 81</td>
<td>205 80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-10</td>
<td>5 5 6 9 7 7</td>
<td>18 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>0 0 0 0 0</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>1 1 2 3 6 6</td>
<td>9 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 30</td>
<td>1 1 1 1 6 6</td>
<td>8 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>14 15 2 3</td>
<td>16 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in Campus Schools</td>
<td>0</td>
<td>72 77 56 84 95 99</td>
<td>223 87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-10</td>
<td>2 2 0 1 1 1</td>
<td>3 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>6 6 5 8 0 0</td>
<td>11 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 20</td>
<td>3 3 2 3 0</td>
<td>5 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>11 12 3 5</td>
<td>14 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership of Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in informal, out-of-school situations</td>
<td>0</td>
<td>77 82 52 79 89 93</td>
<td>218 85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-10</td>
<td>2 2 1 1 1 1</td>
<td>4 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>1 1 4 6 3 3</td>
<td>8 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 20</td>
<td>1 1 1 6 3 3</td>
<td>8 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>14 14 5 8 0</td>
<td>18 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Day Experience in Public Schools</td>
<td>0</td>
<td>79 57 87 86 90</td>
<td>222 87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-5</td>
<td>1 1 1 1 1 1</td>
<td>6 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6-10</td>
<td>0 0 1 1 1 1</td>
<td>7 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 10</td>
<td>1 1 1 1 1 1</td>
<td>1 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No reply</td>
<td>14 4 6 2 2</td>
<td>20 8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
have campus schools. However, exactly two-thirds of the institutions which more often have laboratory schools, the universities and state teachers colleges, report no observations required in campus schools. It should be emphasized again that these data concern only required experiences before or outside of the teaching methods course.

An analysis of the required participation indicates that eighty per cent report no required participation in public schools and eighty-seven per cent report none in campus schools. The experiences in group leadership and full-day contacts in public schools are not required by approximately 85 per cent of the institutions reporting.

In summary, Table III shows that, whereas slightly over 50 per cent of the institutions insist upon some observation in public-school classes prior to, or outside of the required experiences of the special methods course in mathematics, only 15–20 per cent of the institutions require experience gained through participation or other experiences, such as group-leadership and full-day experiences in public schools, in which students carry a higher level of responsibility than is usual in an assignment in observation.

**Special Methods Courses in Mathematics**

An examination of the special methods courses required in mathematics will help to complete the over-all picture of laboratory
experiences. Table IV shows the number of institutions requiring a special methods course. The data in Table IV is a summary of the response to the question: How many methods courses in the teaching of mathematics are required? (Methods courses are those entitled: Teaching of Mathematics, Teaching of Algebra, Teaching of Geometry, etc.).

TABLE IV

SPECIAL METHODS COURSES IN TEACHING MATHEMATICS REQUIRED IN VARIOUS INSTITUTIONS

<table>
<thead>
<tr>
<th>No. of Special Methods Courses Required</th>
<th>STC</th>
<th>UNIV.</th>
<th>LAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>65</td>
<td>69</td>
<td>48</td>
<td>72</td>
</tr>
<tr>
<td>2 or more</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Only General Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>required</td>
<td>11</td>
<td>12</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>None required</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>No reply</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

The data of Table IV shows that in seventy-five per cent of the institutions reporting, at least one special methods course in mathematics is required of all prospective teachers of mathematics and that an additional nine per cent require a general course which includes some work in the teaching of mathematics.

---

Questionnaire II-1, p. 10.
Curricular Placement of the Required Special Methods Course in Mathematics

Before investigating the extent of the professional laboratory experiences which are incorporated in the special methods courses, and in order to determine whether or not such experiences usually precede the student teaching experience, the following question was asked: When do students usually take the required methods course in the teaching of mathematics? The response to this question, summarized in Table V, indicates that the laboratory experiences incorporated in the special methods course usually precede student teaching.

TABLE V

CURRICULAR PLACEMENT OF REQUIRED METHODS COURSE WITH RESPECT TO STUDENT TEACHING

<table>
<thead>
<tr>
<th>Time Given</th>
<th>STC</th>
<th>UNIV.</th>
<th>LAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Prior to Student Teaching</td>
<td>64</td>
<td>77</td>
<td>27</td>
<td>47</td>
</tr>
<tr>
<td>At same time</td>
<td>8</td>
<td>10</td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>Either prior or at same time</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>After student teaching</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>100</td>
<td>58</td>
<td>100</td>
</tr>
</tbody>
</table>

---

*Questionnaire II-3, p. 10.
Approximately two-thirds of the institutions require the methods course prior to student teaching. The remaining one-third require this course either prior to or concurrently with student teaching. While none reports that the required methods courses are taken following student teaching, there is some indication that this not only may happen, but actually does happen in a few individual cases in certain institutions. It seems certain, therefore, that the experiences incorporated in the special teaching methods course are almost always, if not exclusively, pre-student-teaching experiences.

Professional Laboratory Experiences in the Special Methods Course in Mathematics

An examination of the nature of the various experiences provided as a part of the special methods course, completes the investigation of the laboratory experiences which students usually have prior to student teaching. Table VI is a compilation of the replies to this question: 8 What professional laboratory experiences are required in the special methods course in mathematics? About forty-eight per cent of those institutions requiring a methods course have some observation in mathematics classes as a part of the requirements of the course. About 21 per cent of the group require participation in mathematics classes. Little experience in classes outside

---
8 Questionnaire II-4, p. 10.


<table>
<thead>
<tr>
<th>Type of Experience</th>
<th>Hours</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Observation in Mathematics Classes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>11-20</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Over 20</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>None required</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Participation in Mathematics Classes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11-20</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Over 20</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>None required</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No reply</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Observation Outside Mathematics Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>11-20</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Over 20</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>None required</td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No reply</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Participation Outside Mathematics Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>None required</td>
<td></td>
<td>81</td>
</tr>
</tbody>
</table>
the mathematics area is required. Only 9 per cent of those replying require observation outside the mathematics area, and fewer than 3 per cent require participation in classes outside the mathematics area. This seems to indicate that the pre-student-teaching experiences of prospective mathematics teachers are confined largely to observation with, at most, about twenty per cent of the group having any higher-level experience, such as participation and group leadership. This situation seems to substantiate the conclusion by Flowers and others:9 "There is perhaps no phase of professional laboratory experiences, where practices are more confused and more in need of study and experimentation than that of the experiences that should precede student teaching." Among these practices are those relating to:

(1) selection of experiences most suitable for a given student;
(2) the types of laboratory facilities used; (3) the relationship of experiences to college courses; (4) the roles of college faculty members and laboratory staff members in supervision and evaluation; (5) the levels of responsibility carried by students; and (6) the techniques of evaluation used.

---

9 Flowers, op. cit., p. 139.
Student teachers in mathematics enter upon their student teaching assignments with an insufficient background of experience at the level of participation.

**Value of Participation**

The value of participation over mere observation is emphasized by Flowers.¹⁰

Initial contacts with new areas of learning call for participation in laboratory experiences rather than observation only. While observation and participation can never be wholly separated, emphasis should be on participation when a student is becoming acquainted with an area of study rather than the reverse emphasis on observation which characterizes current practice. Laboratory contacts which are essentially observation have more meaning for the learner after he has direct experience in the area.

In pointing out the value of participation over observation, it should be emphasized that this does not mean participation in isolation, but rather, participation closely integrated with the course requirements of the students. "Laboratory experiences prior to student teaching take on an added meaning when integrated with other parts of the college program."¹¹ Participation in mathematics classes may be properly incorporated in the

---

¹⁰ Flowers, *op. cit.*, p. 140.

¹¹ Ibid, p. 141
special methods course in mathematics, for it is here that the student can profit greatly as he brings to his college class an account of his personal contacts and experiences in school situations. An experimental program, in which the participation experiences of students were used by the instructor in the special methods course in mathematics education as material upon which to build class discussions, was developed at The Ohio State University.\textsuperscript{12}

Professional Laboratory Experiences as a Part of General Methods Courses in Secondary Education

The data in Table III indicate that only 15-20 per cent of the educational institutions responding in this study provide any experience above the level of observation outside of the requirements of the special methods course in the teaching of mathematics. It can be seen in Table VI that only 21 per cent of those requiring a special methods course in the teaching of mathematics actually require experience above the level of observation. The data from the questionnaire do not permit us to conclude that all experience outside of the requirements of the special methods course in the teaching of mathematics is a part of the general methods courses.

It is the writer's opinion that the general methods courses may provide worthwhile opportunities for laboratory experiences. Some experimentation has been conducted in exploring the development of suitable laboratory experiences as a part of these general methods courses. A report of the experimentation undertaken in this area at The Ohio State University is described fully by Bradbury.¹³

The College of Education, The Ohio State University, offers two general secondary-methods courses, described in the college bulletin as follows:¹⁴


A study of the secondary school in the light of its historical department, the procedures for providing for individual differences among pupils, the organization of instructional materials, classroom methods, general methods, and the planning for pupil activities; also a critical evaluation of current principles and procedures."


This course is based upon the principles developed in Education 533 and consists generally of a study of the place of extracurricular activities in the school program, guidance, and school control, measurements, records, and reports; also a study and evaluation of current principles and procedures.

Laboratory experience is emphasized in both of these courses, with the emphasis upon peer group experiences in 533, and upon experience with secondary-school classes in 534.

**Experience in Secondary-School Classes**

In the second of the two courses mentioned above, Education 534, students participate in classes in their major or minor fields, one period per day for a period of two consecutive weeks. This usually means that a prospective student teacher in the area of mathematics will have ten periods of participation in a mathematics class during the college quarter in which he is enrolled in Education 534. Students have been enthusiastic about these experiences and have received much professional stimulation from them. This program affords the student a valuable opportunity for direct classroom contacts, usually in his major field.

**Experience in Peer Groups**

To determine what opportunities are presented in the curricula in various institutions for experience in the area of working with peer or adult groups, the following question,* seeking a freely

* Questionnaire, VIII-p.19.
written response, was asked: "In your teacher education program, what planned opportunities are provided for a prospective teacher to develop increasing skill in his relations with other students, with teachers and staff members, and with adults generally? Mention specifically the curricular experiences designed to accomplish this end."

An analysis of the replies to this question reveals that eighty-two offered no curricular experiences designed specifically for this purpose. This number accounts for about one-third of the entire group. About thirteen per cent of the group indicated that a definite attempt is made, in the professional courses, to contribute toward increasing skill in human relations through stressing committee work and group processes within the course operation, particularly in the general and special methods courses. The remaining fifty-five per cent of the replies indicate that the only contributions in this area of development are those arising through participation in clubs, extra-curricular activities, and the professional laboratory experiences commonly employed, including observation, participation, and student teaching.

Peer group experiences can be planned as a part of the general secondary methods courses. An example of how this can be accomplished is suggested by Bradbury in her discussion of the Education 533 course.

Bradbury, op. cit.
The laboratory concept is stressed in this program which has, since 1946, been under the direction of C. B. Mendenhall. This course is designed to provide a peer-group experience of considerable value for all students. Bradbury points out the following experiences in which students have an opportunity to participate in this course: (1) Exploratory teaching in his peer group; (2) Assisting his instructor and other members of the class in planning the course; (3) Participating in small- and large-group discussions; (4) Participating in evaluating his strengths and weaknesses for the teaching profession; (5) Having reading, writing, and speaking skills evaluated and receiving remedial help when it is needed; and (6) Helping him to realize that he must take some responsibility for his own learning. The course is designed to cause prospective teachers to become sensitive to the value of better personal adjustment and the need for improving his skill in human relations.

The need for planned opportunities to increase the competence of prospective teachers in the area of human relations with their peers and adults exists in nearly eighty-seven per cent of the institutions in this study. Rapid growth in the area of developing skill in human relations must occur at the level of student teaching, for very often, insufficient skill in this area makes it impossible for a student teacher with definite strength in subject-matter preparation and other teaching competencies to succeed.
Student-teaching programs vary greatly among institutions. Different types of arrangement for student teaching influence the scope of any program set up to evaluate the experience. The factors in which there is considerable variance are these: (1) the year in college in which student teaching usually comes; (2) the amount of time devoted to student teaching, including the number of quarters or semesters as well as the number of hours per week; (3) the type of school in which students are placed; (4) the methods employed in the selection and compensation of supervising teachers; (5) the nature and amount of supervision provided by the college; (6) the factors usually considered in assigning student teachers; (7) the nature of the experience itself, including the usual scope of activities of the student teacher and the level of responsibility carried by him; (8) the program of conferences or seminars conducted concurrently with student teaching; (9) the institution's concept of evaluation of the student teacher's performance, and the program of evaluation conducted; and (10) the methods of final evaluation and grading. A consideration of these factors follows.

College Year and Term Placement of Student Teaching

Table VII shows the distribution of the institutions of this study according to the year in college in which most students have
the student-teaching experience. The question asked was:* In what year of college do students usually take student teaching? This table indicates that students in eighty-six per cent of the institutions take student teaching in the senior year and that

TABLE VII
YEAR IN COLLEGE IN WHICH STUDENT TEACHING IS USUALLY PLACED

<table>
<thead>
<tr>
<th>Year</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SFC</td>
</tr>
<tr>
<td>5th</td>
<td>5   5</td>
</tr>
<tr>
<td>4th</td>
<td>71  76</td>
</tr>
<tr>
<td>4th or 3rd</td>
<td>12  13</td>
</tr>
<tr>
<td>No reply</td>
<td>6   6</td>
</tr>
<tr>
<td></td>
<td>94 100</td>
</tr>
</tbody>
</table>

the remaining fourteen per cent are divided, six per cent in the fifth year and five per cent in either the junior or the senior year. In order to point out more specifically the time in the college course at which enrollment in student teaching occurs, the following question was asked:** In which quarter or semester of the year indicated above, do students usually take student teaching? The response to this question is shown in

* Questionnaire III-4, p. 11
** Questionnaire III-5, p. 12.
Institutions

<table>
<thead>
<tr>
<th>Term</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>LAC No.</th>
<th>LAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st semester</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>1st quarter</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Either qtr. or sem.</td>
<td>74</td>
<td>79</td>
<td>50</td>
<td>75</td>
<td>62</td>
<td>65</td>
<td>186</td>
<td>73</td>
</tr>
<tr>
<td>2nd semester</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>12</td>
<td>23</td>
<td>24</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>2nd quarter</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>third quarter</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>256</td>
<td>100</td>
</tr>
</tbody>
</table>

It may be seen readily that at least eighty per cent of those responding point out that student teaching either may, or does, occur in the last quarter or semester of the senior year. This high percentage of institutions showing that student teaching frequently occurs in the senior year and, in fact, in the last term of that year, makes the significance of experiences prior to student teaching stand out. It is certainly necessary for teacher-education institutions to insist upon opportunities to assist their students to function adequately in teaching situations.
before the year of their graduation. There is definite evidence to support the viewpoint that a considerable number of the student-teaching experiences occur in the last quarter or semester of the senior year. Eighty per cent of the institutions indicated that student teaching usually was or could be taken in that last quarter or semester of the senior year. This conclusion varies somewhat with that of Flowers. However, no data on the programs of liberal arts colleges were included in that study. This blocks, clearly, any significant program of "experiences following student teaching" and clearly confirms the statement by Flowers that "attempts to extend such (laboratory experiences upward from the student teaching period have not been numerous."

**Time Devoted to Student Teaching**

To determine the amount of time devoted to student teaching, the following two questions were asked: *(A) What is the usual duration of the student-teaching experience? (B) What is the usual amount of time (per day) devoted to student teaching? The answers to these questions are recorded in Tables IX and X, respectively.

16 Flowers, et. al., op. cit., p. 147 and p. 188.

17 Flowers, op. cit., p. 141.

* Questionnaire III-2, p. 11, and Questionnaire III-3, p. 11.
Table IX shows that eighty-two per cent of the student-teaching assignments are one term in duration whether the term be a quarter, semester, or some fractional part of a semester or quarter. Sixteen per cent of those responding report that their student-teaching assignments extend over a period in excess of one quarter or semester, and one-half of this group are located in institutions devoted solely to teacher preparation, i. e. State Teachers Colleges and Schools of Education in Universities.
### Table X

**CLASS PERIODS PER DAY DEVOTED TO STUDENT TEACHING**

<table>
<thead>
<tr>
<th>No. of Periods</th>
<th>Institutions</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>STC</strong></td>
<td><strong>UNIV.</strong></td>
<td><strong>LAC</strong></td>
<td><strong>ALL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>34</td>
<td>36</td>
<td>20</td>
<td>30</td>
<td>38</td>
<td>39</td>
<td>92</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>12</td>
<td>11</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Half-day</td>
<td>17</td>
<td>18</td>
<td>13</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>51</td>
<td>20</td>
</tr>
<tr>
<td>Full-day</td>
<td>25</td>
<td>27</td>
<td>19</td>
<td>26</td>
<td>19</td>
<td>20</td>
<td>63</td>
<td>25</td>
</tr>
<tr>
<td>No reply</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>256</td>
<td>100</td>
</tr>
</tbody>
</table>

Table X, showing the class periods per day in the average student-teaching assignments, indicates that sixty-one per cent of those responding provide a student-teaching experience which extends over a portion of the school day exceeding one class period in duration. Only thirty-six per cent of the group indicated that the usual assignment was "one period per day," while forty-five per cent of the group had either half- or full-day experience in student teaching.

**Number of Mathematical Subjects in Which Student Teaching Enrollment Is Required**

Teachers of mathematics seldom, if ever, are employed in their first year of teaching in a situation where they are
required to teach only algebra or only geometry. The usual assignment, in small high schools, requires that a teacher be competent in most, if not all, of the subjects in the field of mathematics, and sometimes in other areas in which he has college minors. A rather typical teaching load might include these high-school courses: algebra, plane geometry, general mathematics, general science and physics. In order to determine in how many mathematical subjects student teachers gain experience, the following question was asked: * A student-teaching experience in mathematics is required in: only one subject? two subjects? Other (indicate)? The response to this question is summarized in Table XI.

**TABLE XI**

**NUMBER OF SUBJECTS IN FIELD OF MATHEMATICS IN WHICH STUDENT TEACHERS ARE REQUIRED TO HAVE A STUDENT TEACHING EXPERIENCE**

<table>
<thead>
<tr>
<th>No. of Subjects</th>
<th>STC</th>
<th>%</th>
<th>UNIV.</th>
<th>%</th>
<th>LAC</th>
<th>%</th>
<th>ALL</th>
<th>%</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44</td>
<td>47</td>
<td>34</td>
<td>51</td>
<td>64</td>
<td>67</td>
<td>142</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>40</td>
<td>24</td>
<td>36</td>
<td>28</td>
<td>29</td>
<td>89</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>3 or more</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>11</td>
<td>4</td>
<td>4</td>
<td>18</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>No reply</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>256</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

* Questionnaire III-1, p. 11.
There is evidence in Table XI that, in at least forty-two percent of the student-teaching programs, there is opportunity for the student teacher to have experience in more than one subject in the field of mathematics. Student teaching in more than one subject field is impossible in at least one-third the institutions responding, because their student-teaching experience is confined to only one class period per day. A student-teaching experience in more than one mathematical subject, as well as some experience in minor fields, is possible only in institutions which have half-day or full-day student-teaching assignments. About forty-five per cent of the institutions reporting have such assignments, according to Table X.

| Type of School In Which Student Teachers Are Assigned |

The type of school in which student teachers are assigned is of considerable importance to the program of student teaching evaluation. In order to discover what types of schools are used by the various institutions, the following question was asked: **In what type of school are your student teachers assigned?** The response to this question is shown in tabular form in Table XII.

**Questionnaire III-7, p. 12.**
### TABLE XII

**TYPE OF SCHOOL IN WHICH STUDENT TEACHERS ARE ASSIGNED**

<table>
<thead>
<tr>
<th>Type of School</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>IAC No.</th>
<th>IAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public schools exclusively</td>
<td>42</td>
<td>45</td>
<td>48</td>
<td>73</td>
<td>79</td>
<td>83</td>
<td>169</td>
<td>66</td>
</tr>
<tr>
<td>Campus schools exclusively</td>
<td>11</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Primarily in public schools</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Primarily in campus schools</td>
<td>11</td>
<td>12</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Must be done in both types</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>May be done in both types</td>
<td>18</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>No response</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>256</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Five of the liberal arts colleges reported that some student teaching is done in private schools, and one reported that some student-teaching assignments are in college sub-freshman mathematics classes.*

Table XII shows that, among the institutions surveyed, about seventy-seven per cent have student-teaching assignments primarily in public schools, while only about thirteen per cent have student-teaching assignments primarily or exclusively in campus schools.

According to Swenson and Hammock, the frequent use of off-

---

campus schools in teacher education is due to (1) increased enrollments in teacher-education institutions making necessary the use of more classrooms than are available in campus schools; (2) the desire to make programs of teacher education more realistic by placing students in typical schools; (3) the increasing emphasis on a variety of direct contacts with children tends to cause teacher-education institutions to turn to the available facility, the public school; and (4) the high cost of building, staffing, and equipping campus schools.

**Student Teaching Supervision**

With more than three-fourths of the institutions surveyed carrying on student teaching primarily or exclusively in public schools, there have arisen various types of co-operative arrangements for the daily supervision of their work. Some institutions rely completely upon the work done by the supervising teacher in the secondary school, and place full responsibility upon that person for the final grading of the student. Other institutions insist that this grading responsibility rests exclusively on the college supervisor. In still other cases, the teacher-training institution and the public school work in very close co-operation and arrive at the evaluation jointly. When student teachers are placed in a campus laboratory school, the supervising teacher in the school carries a large share of the supervisory responsibility, since very often that teacher is also a member of the college faculty.
Table XIII shows the response to this question: Who supervises student teachers in mathematics?

**TABLE XIII**

PERSONS INVOLVED IN STUDENT TEACHING SUPERVISION

<table>
<thead>
<tr>
<th>Type of Supervisor</th>
<th>STC</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Supervising teacher only</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>College supervisor only</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Both supervising teacher and college supervisor</td>
<td>70</td>
<td>75</td>
</tr>
</tbody>
</table>

Table XIII shows that in about eighty-six per cent of the institutions, both a college faculty member and a secondary-school teacher are involved in the supervision.

**Selection and Compensation of Supervising Teachers**

In an attempt to determine what factors are considered in the selection of supervising teachers, the following question was asked:* Which of the following factors do you consider primarily

---

19 Questionnaire IV-1, p. 13.
* Questionnaire IX-1, p. 20.
in selecting supervising teachers? (Weight most, 5 and least, 1). The factors considered, arranged in order of the composite weightings received, were the following: (1) past performance as a supervising teacher (when such data is available); (2) willingness to assist in the teacher-education program; (3) recommendation by the secondary-school principal; (4) professional reputation; (5) familiarity with the objectives of the teacher-training institution; and (6) appropriate schedule in relation to the student's schedule.

College supervisors and school administrators agree generally that student teachers should not be placed in any situation where the supervising teacher is unwilling to have them. Student teachers have a right to be wanted and accepted by their supervising teachers. Any situation in which a supervising teacher feels compelled, against his will, to assist in a program of teacher education should, in the writer's opinion, be avoided.

In order to investigate the methods used in compensating supervising teachers, the following question was asked:* How are the supervising teachers in the secondary school, or the school system, compensated for the work of supervising student teachers? The response to this question appears in Table XIV. Approximately fifty-five per cent of the institutions indicate that they make direct payment to the supervising teacher. The amount is generally determined by the number of student teachers

*Questionnaire IX-2, p. 20.
<table>
<thead>
<tr>
<th>Method of Compensation</th>
<th>STC</th>
<th></th>
<th>UNIV.</th>
<th></th>
<th>IAC</th>
<th></th>
<th>ALL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment to the supervising teachers, a certain amount for each student</td>
<td>43</td>
<td>47</td>
<td>34</td>
<td>51</td>
<td>65</td>
<td>68</td>
<td>142</td>
<td>55</td>
</tr>
<tr>
<td>teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free tuition to the university for all teachers in the co-operating</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free tuition for only those teachers who have student teachers</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Certain privileges in the use of campus facilities</td>
<td>15</td>
<td>16</td>
<td>6</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Payment of a lump sum to the school fund for use in providing additional</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>teaching materials to improve instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No additional compensation (supervising teachers are college faculty</td>
<td>12</td>
<td>13</td>
<td>5</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>members)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No compensation</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>12</td>
<td>13</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>City school housed in college buildings</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced teaching load</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Free tuition to pupils from co-operating schools</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Free tuition for course in supervision</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100</strong></td>
<td><strong>66</strong></td>
<td><strong>100</strong></td>
<td><strong>96</strong></td>
<td><strong>100</strong></td>
<td><strong>256</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
supervised. Sometimes the payment is on an annual basis without regard to the actual number of student teachers, and in some cases the payment is based upon the training and experience of the supervising teacher. The remaining forty-five percent is divided among the various other ways of indirectly compensating a teacher for service. Remittance of tuition fees, certain campus privileges, and payment of a lump sum to the school fund appear to be the other methods used most. Both the direct and the indirect methods of compensation have strengths and weaknesses. Those favoring the indirect method believe that it avoids competition among teachers in the secondary school for jobs as supervising teachers, through which they would receive extra pay. They believe that the teachers who want student teachers most, under the direct compensation system, may be those least competent to supervise. Those who favor direct compensation believe that teachers feel their responsibility more and are inclined to do a more thorough job when they are being paid directly for this work.

It is the writer's opinion that the indirect methods of compensation are sounder professionally, in that they are directed towards general upgrading of the school systems in which student teachers are placed, rather than simply toward paying individual teachers for services. Both the remission of tuition fees for those teachers in the school system who desire further training, and the payment of sums of money to the school fund for the purchase
of additional instructional materials, should contribute toward improvement of the total school system. Sometimes, the money paid to the school fund might be used to hire additional staff members in order to allow more time for the supervising teachers to carry out their responsibilities in supervision.

Factors Considered Most Important in Assigning Student Teachers

The supervising teacher in the secondary school, in whose class the student teacher is placed, is the key person in the daily life of the student teacher. A great deal of importance is attached to what the probable relationship of the supervising teacher and the student teacher will be. This is shown clearly in the tabulation of replies to this question: Which of the following factors do you consider most in assigning student teachers to a particular school? Table XV shows these factors in the order of the frequency with which they were checked by the respondents.

The emphasis upon the student teacher's potential in classroom management indicates that the college faculty member who assigns student teachers must know a great deal about the student's ability to work with people. This implies that the program of laboratory experiences to be carried out previous to the student teaching assignment must provide opportunities for the student

* Questionnaire III-8, p. 12.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Institutions</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC No.</td>
<td>%</td>
<td>UNIV. No.</td>
<td>%</td>
<td>LAC No.</td>
<td>%</td>
<td>ALL No.</td>
<td>%</td>
</tr>
<tr>
<td>(1) Personality of student teacher</td>
<td>41</td>
<td>44</td>
<td>30</td>
<td>45</td>
<td>48</td>
<td>50</td>
<td>119</td>
<td>46</td>
</tr>
<tr>
<td>(2) Personality of supervising teacher</td>
<td>34</td>
<td>36</td>
<td>23</td>
<td>35</td>
<td>45</td>
<td>47</td>
<td>102</td>
<td>40</td>
</tr>
<tr>
<td>(3) Student teacher's potential ability in classroom management</td>
<td>31</td>
<td>33</td>
<td>15</td>
<td>21</td>
<td>31</td>
<td>32</td>
<td>77</td>
<td>30</td>
</tr>
<tr>
<td>(4) Student teacher's experience with socio-economic group</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>(5) Student's preference</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>(6) Supervising teacher's sex</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>(7) Particular needs of student teacher</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>22</td>
<td>9</td>
</tr>
</tbody>
</table>
to develop skill in the area of human relations both with pupils of secondary-school age and with adult groups. The deficiencies of these programs in providing opportunities for students to gain competence in working with secondary-school children have been discussed. (See Tables III and VI).

It also has been established, in the consideration of experiences in peer groups (See page 52), that many occasions to provide opportunities for students to increase their skill in working with their peers and adults are being overlooked constantly in many professional education courses. The result is that in many cases, the student's development in this area is being left to chance. If he happens to be an outgoing personality who enjoys participating in activities, he gains for himself the necessary experiences; otherwise he finds himself at the level of student teaching, and woefully inadequate in the area of human relations. Regardless of these inadequacies, the student teacher is expected to assume a certain role as soon as he enters student teaching. To determine that role is the next consideration.

**Level of Responsibility in Student Teaching Assignments**

In order to determine the level of responsibility usually carried by student teachers in mathematics in their student-teaching assignments, the following question was asked:* Indicate

*Questionnaire III-9, p. 12.*
which of the following items best describes the usual student-teaching assignment at your institution: (1) full teaching responsibility throughout the period of assignment; (2) observation and participation followed by very little full teaching responsibility; (3) a short period of induction through the levels of observation and participation followed by full teaching responsibility; (4) other (describe). The response to this question is tabulated in Table XVI.

### TABLE XVI

<table>
<thead>
<tr>
<th>Institution</th>
<th>Level of Responsibility:</th>
<th>STC</th>
<th>UNIV.</th>
<th>LAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full responsibility throughout period</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Short period of induction followed by full responsibility</td>
<td>80</td>
<td>85</td>
<td>62</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>Observation, participation, little full responsibility</td>
<td>11</td>
<td>12</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

The information assembled in Table XVI indicates that in eighty-nine per cent of the schools reporting, the student-teaching assignment is characterized by a short period of induction through
the levels of observation and participation, followed by full teaching responsibility. There is wide variation in the character of student-teaching assignments. A very small group, approximately three per cent, have full teaching responsibility throughout the assignment, while eight per cent have chiefly observation and participation with very little full responsibility. Since it is evident that the intention, in most institutions, is to place the student teacher, as quickly as possible, into the position of the regular classroom teacher, it would be expected that as many as possible of the usual activities of a classroom teacher should be encountered by the student teacher.

**Student-Teacher Activities in Addition to Class Instruction**

In order to determine the breadth of the student teacher's experience, the respondents to the questionnaire in this study were asked to check all of the activities in which student teachers in their particular institution usually engage. A list of twenty-one such activities was presented for checking and opportunity was provided for the addition of any others which might be included in any given institution. The question asked was as follows: *In addition to complete teaching responsibility in mathematics classes, what other obligations are included in the student-teaching assignment? (Check all those usually included)*

*Questionnaire III-10, p. 12.*
(1) Pre-planning a resource unit
(2) Examining a variety of unit plans which have been used
(3) Planning daily classroom experiences co-operatively with pupils
(4) Improving skill in helping pupils bring mathematics to focus in solving problems arising in their environment
(5) Preparing resource materials for class use
(6) Guiding small group projects
(7) Assisting in development of laboratory materials
(8) Organizing, filing, and storing resource materials
(9) Assisting in planning and conducting field trips
(10) Devising and using various means of evaluating the work of the pupils
(11) Observing in other mathematics classes
(12) Observing in classes in other areas
(13) Leadership of clubs
(14) Supervising of study halls
(15) Assisting with administrative routine in central office
(16) Visiting homes of pupils
(17) Getting acquainted with pupil records for counseling purposes
(18) Assisting the school librarian
(19) Assuming faculty duty in lunchroom supervision
(20) Working on faculty committees
(21) Participating in community activities
(22) Other (Indicate)

The results of this investigation appear in Table XVII. The activities have been arranged in order of the frequency with which they were checked by the total group, beginning with those checked most often.

Approximately half of these items were checked by over half of the group responding. This outcome indicates that student teachers engage in a variety of activities in addition to classroom instruction. There is a very definite implication here for the program of student-teaching evaluation. Here is concrete evidence that, when evaluation is being discussed, there is real need for considering the total situation in which the student teacher is operating. This viewpoint was emphasized earlier in the work of Burns. The use

20 Celia A. Burns, op. cit., p. 278.
### TABLE XVII

**ACTIVITIES ENGAGED IN BY STUDENT-TEACHERS OF MATHEMATICS IN ADDITION TO CLASS INSTRUCTION**

<table>
<thead>
<tr>
<th>Activity</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>IAC No.</th>
<th>IAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devising and using various means of evaluating the work of pupils</td>
<td>71</td>
<td>76</td>
<td>59</td>
<td>89</td>
<td>79</td>
<td>83</td>
<td>209</td>
<td>80</td>
</tr>
<tr>
<td>Getting acquainted with pupil records for counseling purposes</td>
<td>69</td>
<td>73</td>
<td>55</td>
<td>83</td>
<td>69</td>
<td>72</td>
<td>193</td>
<td>75</td>
</tr>
<tr>
<td>Observing in other mathematics classes</td>
<td>55</td>
<td>59</td>
<td>51</td>
<td>77</td>
<td>77</td>
<td>81</td>
<td>183</td>
<td>71</td>
</tr>
<tr>
<td>Improving skill in helping pupils bring mathematics to focus in solving problems arising in their environment</td>
<td>53</td>
<td>67</td>
<td>47</td>
<td>71</td>
<td>57</td>
<td>59</td>
<td>167</td>
<td>65</td>
</tr>
<tr>
<td>Preparing resource materials for class use</td>
<td>61</td>
<td>65</td>
<td>49</td>
<td>74</td>
<td>57</td>
<td>59</td>
<td>167</td>
<td>65</td>
</tr>
<tr>
<td>Pre-planning a resource unit</td>
<td>62</td>
<td>66</td>
<td>43</td>
<td>65</td>
<td>61</td>
<td>64</td>
<td>166</td>
<td>65</td>
</tr>
<tr>
<td>Guiding small group projects</td>
<td>56</td>
<td>60</td>
<td>49</td>
<td>74</td>
<td>55</td>
<td>57</td>
<td>160</td>
<td>63</td>
</tr>
<tr>
<td>Planning daily class activities co-operatively with pupils</td>
<td>61</td>
<td>65</td>
<td>32</td>
<td>48</td>
<td>56</td>
<td>58</td>
<td>149</td>
<td>58</td>
</tr>
<tr>
<td>Examining a variety of unit plans used previously</td>
<td>51</td>
<td>54</td>
<td>43</td>
<td>65</td>
<td>47</td>
<td>49</td>
<td>141</td>
<td>55</td>
</tr>
<tr>
<td>Observing in classes in other areas</td>
<td>47</td>
<td>50</td>
<td>36</td>
<td>55</td>
<td>56</td>
<td>58</td>
<td>139</td>
<td>54</td>
</tr>
<tr>
<td>Assisting in development of laboratory materials</td>
<td>43</td>
<td>46</td>
<td>35</td>
<td>53</td>
<td>36</td>
<td>37</td>
<td>114</td>
<td>44</td>
</tr>
<tr>
<td>Assisting in planning and conducting field trips</td>
<td>49</td>
<td>52</td>
<td>35</td>
<td>53</td>
<td>27</td>
<td>28</td>
<td>111</td>
<td>43</td>
</tr>
<tr>
<td>Supervising of study halls</td>
<td>39</td>
<td>41</td>
<td>25</td>
<td>38</td>
<td>35</td>
<td>36</td>
<td>99</td>
<td>39</td>
</tr>
<tr>
<td>Participating in community activities</td>
<td>32</td>
<td>34</td>
<td>25</td>
<td>38</td>
<td>33</td>
<td>34</td>
<td>90</td>
<td>35</td>
</tr>
<tr>
<td>Organizing, filing, and storing resource materials</td>
<td>28</td>
<td>30</td>
<td>30</td>
<td>45</td>
<td>24</td>
<td>25</td>
<td>82</td>
<td>32</td>
</tr>
<tr>
<td>Leadership of clubs</td>
<td>30</td>
<td>32</td>
<td>25</td>
<td>38</td>
<td>18</td>
<td>19</td>
<td>74</td>
<td>29</td>
</tr>
<tr>
<td>Assuming faculty duty in lunchroom supervision</td>
<td>27</td>
<td>29</td>
<td>19</td>
<td>28</td>
<td>18</td>
<td>19</td>
<td>64</td>
<td>25</td>
</tr>
<tr>
<td>Assisting with administrative routine in central office</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>25</td>
<td>20</td>
<td>21</td>
<td>52</td>
<td>20</td>
</tr>
<tr>
<td>Working on faculty committees</td>
<td>11</td>
<td>12</td>
<td>15</td>
<td>21</td>
<td>13</td>
<td>14</td>
<td>39</td>
<td>15</td>
</tr>
<tr>
<td>Visiting homes of pupils</td>
<td>17</td>
<td>18</td>
<td>9</td>
<td>14</td>
<td>12</td>
<td>13</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>Assisting the school librarian</td>
<td>16</td>
<td>17</td>
<td>12</td>
<td>18</td>
<td>7</td>
<td>7</td>
<td>35</td>
<td>14</td>
</tr>
</tbody>
</table>
of a variety of evaluations, both in number and type, depending upon the total situation is implied.

There is surprising consistency in the ranking according to frequency among the different types of institutions in Table XVII. The variations in the ranking of any single item from the ranking given by the total group do not exceed $\pm 2$, except in the case of two of the twenty-one items. There seems to be reasonable agreement among the different institutions as to the activities in which student teachers of mathematics usually engage. The activities rated among the top seven by the state teachers colleges, universities, and liberal arts colleges separately and collectively are as follows:

1. devising and using various means of evaluating the work of pupils,
2. getting acquainted with pupil records for counseling purposes,
3. observing in other mathematics classes,
4. improving skill in helping pupils bring mathematics to focus in solving problems arising in their environment,
5. preparing resource materials for class use,
6. pre-planning a resource unit,
7. guiding small-group projects.

An examination of this wide range of activities, in which mathematics student teachers engage, emphasizes the need for continuous supervision and evaluation. It has been seen (Table XIII), that the supervision is done to some extent at least, by a supervising teacher in ninety-eight per cent of the institutions. In eighty-eight per cent, a college faculty member was also involved. In order to get a better appreciation of the supervision afforded by
the college supervisors, several questions were designed to determine the qualifications of college supervisors and the extent of their contact with student teachers.

The College Supervisor

If helping the student to improve his teaching is the primary purpose of supervision, it seems certain that the person best qualified to help a mathematics student teacher learn to do a better job of teaching, is one trained in both the subject matter and the teaching of mathematics. The variation in the size and character of the programs in teacher-education institutions, affects their ability to provide such supervision. In some institutions a single faculty member supervises the student teachers in all secondary areas, if not also in the elementary area. To discover the position and background of training of college supervisors of student teachers in mathematics, the following question was asked:*

The college supervisor of student teachers in mathematics is: (1) a member of the department of mathematics, (2) a member of the department of education specializing in mathematics education, (3) the college director of student teaching, (4) some other faculty member without any specialized training in mathematics education, (5) other.

Table XVIII is a summary of the response to this question.

* Questionnaire IV-2, p. 13.
TABLE XVIII

WHO IS THE COLLEGE SUPERVISOR OF MATHEMATICS STUDENT TEACHERS?

<table>
<thead>
<tr>
<th>College supervisor is:</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>(1) A member of department of mathematics</td>
<td>22</td>
</tr>
<tr>
<td>(2) A member of department of education, specializing in mathematics education</td>
<td>19</td>
</tr>
<tr>
<td>(3) The college director of student teaching</td>
<td>40</td>
</tr>
<tr>
<td>(4) Some other faculty member without any specialized training in mathematics education</td>
<td>3</td>
</tr>
<tr>
<td>(5) A faculty member who is a member of both education department and mathematics department</td>
<td>3</td>
</tr>
<tr>
<td>(6) No reply</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
</tr>
</tbody>
</table>
An inspection of this table reveals that approximately half of all institutions report that the college director of student teaching is the supervisor of mathematics student teachers. In some few instances the director may be a person with training in the field of mathematics, but this factor is negligible. It seems quite clear that only forty per cent of the total group of institutions indicate that student teachers in mathematics are supervised by a college faculty member with training in the field of mathematics, i.e. by (1) a member of the department of mathematics, (2) a member of the department of education specializing in mathematics, or (3) a faculty member who is a member of both the mathematics and the education departments. If the institutions devoted specifically to the training of teachers, that is the schools or colleges of education in the universities, and the state teachers colleges, are viewed alone the picture is somewhat brighter. Fifty per cent of this group report that student teachers of mathematics are supervised by persons trained in the field, while only twenty-five per cent of the liberal arts colleges report that mathematics student teachers are supervised by faculty members trained in mathematics.

The fact that college supervisors of student teaching in mathematics lack training in mathematics, is clearly an outstanding weakness in the student-teaching programs in liberal arts colleges. This deficiency is serious in the field of teacher education
because liberal arts colleges train approximately one-half of the secondary-school teachers.  

The Extent of the College Supervisor's Observation of the Student Teacher

In order to determine the nature of the supervision usually afforded by the college supervisor, the following question was asked:  

How often does the college supervisor observe the student teacher? (1) One period per week, (2) Two periods per week, (3) Two periods per month, (4) Other (Indicate). The replies to this question appear in Table XIX. Approximately one-third (thirty-four per cent) of the group indicates that the college supervisor visits the student teacher one or more times each week. In addition, another one-third (thirty-two per cent) indicate that the college supervisor visits every other week or twice per month. There is a wide variation among the various institutions as to the number of visits made by the college supervisor. In some

21


TABLE XIX

FREQUENCY OF THE COLLEGE SUPERVISOR'S OBSERVATION

<table>
<thead>
<tr>
<th>Frequency of observation</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td></td>
<td>No. %</td>
</tr>
<tr>
<td>Daily contact</td>
<td>8 9</td>
</tr>
<tr>
<td>Two periods per week</td>
<td>12 13</td>
</tr>
<tr>
<td>One period per week</td>
<td>12 13</td>
</tr>
<tr>
<td>Two periods per month</td>
<td>27 28</td>
</tr>
<tr>
<td>Once per quarter or sem.</td>
<td>1 1</td>
</tr>
<tr>
<td>Once per month</td>
<td>12 13</td>
</tr>
<tr>
<td>According to need</td>
<td>6 6</td>
</tr>
<tr>
<td>None</td>
<td>3 3</td>
</tr>
<tr>
<td>No response</td>
<td>13 14</td>
</tr>
<tr>
<td></td>
<td>94 100</td>
</tr>
</tbody>
</table>

Institutions the visitation program is very flexible and is arranged according to what the particular student teacher needs. Because of the wide difference in student-teaching situations it is logical that wide variation in supervision should occur. Some institutions select well-trained supervising teachers and pay them regularly for their work. The college supervisor then leaves the major responsibility for supervision and evaluation to the supervising teacher, and sees little or no need to visit the classroom weekly. In certain other cases, supervising teachers are not so carefully
selected and the college must carry the chief responsibility for evaluation. In these cases frequent supervision is necessary. In all institutions where major responsibility for evaluation is in the hands of the college supervisor, there is a great need for that evaluation to be based soundly on some recorded observation of the student teacher's work.

The college supervisor's lack of constant contact with the student-teaching situation emphasizes the need for college supervisors to record their impressions and not let the evaluation of the student teacher rest upon unwritten chance impressions which they remember at the end of the quarter. It is also important that all impressions concerning the student teacher's performance be used to help the student become a successful teacher. This objective can be accomplished either in individual and group conferences or through providing the student with a copy of the supervisor's recorded reactions to his performance, or preferably, both.

Student Teacher's Individual Conferences with College Supervisor

The respondents to the questionnaire indicated that individual conferences are the general rule in most student-teaching programs in their response to this question: How much time does the

23 Questionnaire IV-4, p. 14.
college supervisor devote to individual conferences with the student teacher each week? (1) One-half hour, (2) One hour, (3) Other (Indicate). The response to the question appears in Table XX. Two hundred twenty-nine out of two hundred fifty-six replied to this question.

TABLE XX
TIME SPENT IN INDIVIDUAL CONFERENCES WITH STUDENT TEACHER

<table>
<thead>
<tr>
<th>Amount of Time</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>LAC No.</th>
<th>LAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 - 1 hour weekly</td>
<td>53</td>
<td>57</td>
<td>15</td>
<td>68</td>
<td>72</td>
<td>75</td>
<td>170</td>
<td>66</td>
</tr>
<tr>
<td>2 hours weekly</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>As needed</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>18</td>
<td>16</td>
<td>17</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>No reply</td>
<td>22</td>
<td>23</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>27</td>
<td>11</td>
</tr>
</tbody>
</table>

|               | 94      | 100   | 66        | 100     | 96      | 100   | 256     | 100   |

Seventy-seven per cent of those replying indicated that regular individual conferences were held weekly, while only six per cent indicated that no individual weekly conferences were held. The fact that twenty-seven persons did not respond probably indicates that those institutions do not have regular weekly individual conferences.
At these individual conferences, the usual procedure seems to be to discuss, verbally, the weaknesses and strengths of the student teacher. Suggestions given verbally may be forgotten or misunderstood by the student teacher. In the institutions surveyed, only twenty-three per cent indicate that any written criticisms or suggestions are given to the student teacher. Table XXI shows the response to the following question: At his individual conference with the student teacher, does the college supervisor present the student with: (1) A verbal criticism with suggestions, (2) A brief written criticism with suggestions, a carbon copy which the student keeps, (3) Other (Specify).

**TABLE XXI**

**TYPE OF EVALUATION REPORT PROVIDED THE STUDENT TEACHER BY COLLEGE SUPERVISOR**

<table>
<thead>
<tr>
<th>Type of Evaluation</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>LAC No.</th>
<th>LAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>61</td>
<td>65</td>
<td>47</td>
<td>71</td>
<td>75</td>
<td>78</td>
<td>163</td>
<td>72</td>
</tr>
<tr>
<td>Written</td>
<td>20</td>
<td>21</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td>Both verbal and written</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>No reply</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>256</td>
<td>100</td>
</tr>
</tbody>
</table>

---

24 Questionnaire IV-8, p. 14.
Approximately seventy-two per cent of the group responding reports that the college supervisor relies on strictly verbal discussions with the student teacher. This seems to imply considerable lack of attention to the ways in which evaluation can best be an educative experience for the student. If the primary purpose of evaluation is to help the student improve, concrete written suggestions and criticisms which he should study and make frequent reference to should be provided for the student. Whether these comments are anecdotal or structured in character, at least they should be written.

Group Conferences with Student Teachers

In some of the larger teacher-education institutions, seminars are conducted, separately, for student teachers in each of the subject areas. In other institutions, especially the small colleges, the number of student teachers in a single area, such as mathematics, is so small, that student teachers from all areas meet in a single seminar. Table XXII shows the response to this question: 25 How often is a seminar or conference specifically for all mathematics student teachers held? (1) None, (2) Weekly, (3) Other (Specify). From this table it can be readily seen that about forty-three per cent of the total group have group conferences designed specifically

TABLE XXXI
FREQUENCY OF GROUP CONFERENCES FOR MATHEMATICS STUDENT TEACHERS

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

None
58  12  24  37  65  68  147  57

Weekly
23  25  32  48  24  25  79  31

Occasionally
13  13  10  15  7   7   30  12

94  100  66  100  96  100  256 100

for student teachers of mathematics. Fifty-seven per cent of the entire group do not have a separate seminar for student teachers of mathematics. The percentage of liberal arts colleges not conducting a separate seminar for student teachers of mathematics is much higher than the percentage of universities not conducting a separate seminar, but only slightly higher than the corresponding group of state teachers colleges.

The fifty-seven per cent of the total group which indicated no special seminar for student teachers of mathematics, was asked to respond to the question: 26 If a specific seminar for math student teachers is not held, is a regular one held for all student teachers? (1) Yes, (2) No. This group of one hundred forty-seven,

26 Questionnaire IV-10, p. 114.
constituting fifty-seven per cent of the total group divides into

TABLE XXIII

GENERAL CONFERENCE FOR ALL STUDENT TEACHERS IN ALL AREAS INCLUDING MATHEMATICS

<table>
<thead>
<tr>
<th>Is a Conference Held</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Yes</td>
<td>45</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>58</td>
</tr>
</tbody>
</table>

forty-six per cent showing that a general seminar is held and eleven per cent showing that no student-teaching seminar is held. It is clear that in only forty-three per cent of the total number of programs reported does the student-teaching seminar provide an opportunity for student teachers in the field of mathematics to discuss problems and receive suggestions from a college faculty member trained to handle specific techniques in the teaching of mathematics.

The group seminar seems to afford opportunity primarily for discussion of general teaching methods and procedures. Perhaps the greatest fault of these seminars is the failure to attack specific problems faced by particular student teachers and to
discuss specific ways of meeting those problems. Advice given to student teachers in terms of generalities tends to be of little or no specific help to them. Ideally, a student-teaching seminar should be held for student teachers in each subject area, such as mathematics. This seminar should provide an opportunity for group evaluation of the student-teaching program by bringing together all persons involved: students, college supervisors, and supervising teachers. The principal function of the seminar should be to focus upon problems currently faced by student teachers in the group, and to offer specific suggestions to help them meet more effectively, the challenge in their assignments. The evidence presented indicates that among the institutions surveyed, the seminar, when held, is more often a general one for all areas, than a separate one for each area. To determine whether or not the seminars usually provide opportunities for group evaluation by bringing together the students, college supervisors, and supervising teachers, this question was asked: 27 Are the supervising teachers in the secondary schools invited to attend student teaching seminars on the campus, in which student teachers and college supervisors discuss problems arising in student teaching? (1) Never, (2) Sometimes, (3) Once each quarter or semester, (4) Other (Specify). The response to this question is indicated in Table XXIV, as well as response to the question: 28 If the

27 Questionnaire IV-13, p. 15.

28 Questionnaire IV-14, p. 15.
TABLE XXIV

SUPERVISING TEACHER'S ATTENDANCE AT GROUP CONFERENCES

<table>
<thead>
<tr>
<th>Are they invited?</th>
<th>STC</th>
<th>UNIV.</th>
<th>IAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Never</td>
<td>16</td>
<td>17</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Occasionally (Open Invitation)</td>
<td>42</td>
<td>45</td>
<td>36</td>
<td>54</td>
</tr>
<tr>
<td>At certain times</td>
<td>18</td>
<td>19</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>No reply</td>
<td>18</td>
<td>19</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>100</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

Do they attend?

<table>
<thead>
<tr>
<th></th>
<th>STC</th>
<th>UNIV.</th>
<th>IAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly</td>
<td>21</td>
<td>22</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Often</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Occasionally</td>
<td>21</td>
<td>22</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>Seldom</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Never</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>64</td>
<td>51</td>
<td>77</td>
</tr>
</tbody>
</table>

Secondary school supervising teachers are invited to attend seminars on the campus, do they attend? (1) Regularly, (2) Often, (3) Occasionally, (4) Seldom, (5) Never.

An analysis of the data of Table XXIV indicates that sixty-eight per cent of the total number reporting do, at certain times or occasionally, invite supervising teachers to attend these seminars; but that actually only twenty-eight per cent of the entire group indicates that these supervising teachers attend
either "often" or regularly when invited. This indicates that campus seminars are not being effectively used for group evaluation of student-teaching programs. The absence of supervising teachers from group conferences for student teachers means the absence of a major force in co-operative evaluation and constructive help for student teachers. In addition to the contribution supervising teachers might make in these seminars to assist student teachers, there is also the valuable function they might perform in assisting in the evaluation and improvement of the total student-teaching program.

Conclusions

The data presented in this chapter have been concerned with the various aspects of programs for student teachers in mathematics, programs which exert major influence upon evaluating the student teacher.

Several important conclusions, relating to the various aspects of student teaching programs considered thus far, can now be stated.

1. Annual enrollment in student teaching in mathematics in the institutions responding was low, the average for universities and state teachers colleges being twelve students and for liberal arts colleges, six students.

2. Professional laboratory experiences prior to student teaching, in addition to those incorporated in the special methods course in mathematics, and those which
involve contacts with secondary-school age groups, are primarily at the level of observation.

(3) Professional laboratory experiences, prior to student teaching, which are incorporated in the special methods course in mathematics, are largely observational in character. Only twenty per cent of the programs provide for participation.

(4) Few laboratory experiences are incorporated in general methods courses.

(5) General methods courses offer excellent opportunities for two types of laboratory experiences: (a) participation in secondary-school classes; (b) peer group experiences.

(6) Student teaching assignments occur in the last year, and often final term, of the student's program of teacher preparation.

(7) The student teaching experience is confined to one college term in eighty per cent of the institutions.

(8) Mathematics student teachers have opportunities for experience in only one subject in sixty per cent of the institutions reporting.

(9) Student teaching is done exclusively or primarily in seventy-seven per cent of the institutions reporting.

(10) Both a secondary-school teacher and a college supervisor participate in the supervision of student teachers of mathematics in eighty-six per cent of the institutions.
(11) Supervising teachers are reimbursed directly for their services in fifty-five per cent of the institutions.

(12) The nature of the selection and compensation of the supervising teachers influences the need for intensive supervision by a college staff member.

(13) The probable relationship of the personalities of the student teacher and supervising teacher, and the student teacher's potential ability in classroom management are the two factors most considered in assignment of student teachers.

(14) There is considerable variance in the nature of student teaching assignments, the usual pattern being a short period of induction through the levels of observation and participation, followed by full responsibility for one or more classes.

(15) Almost half of the institutions indicate student teachers spend a half or a full day in the school.

(16) Student teachers engage in a number of activities in addition to classroom instruction in a large percentage of the institutions.

(17) College supervisors of student teaching in mathematics are persons trained in mathematics education in only forty per cent of the institutions.
(18) College supervisors have limited contact with student teachers on the job. Only thirty per cent of the institutions report college supervisors visit student teachers weekly.

(19) Seventy-seven per cent of the institutions report college supervisors have individual conferences with student teachers each week.

(20) College supervisors give primarily verbal suggestions, commendations, and criticisms in the individual conferences. Only twenty-three per cent report written suggestions and criticisms given to students.

(21) Group conferences are held specifically for student teachers of mathematics in only forty-three per cent of the institutions.

(22) Group conferences for student teachers of all areas together are held in forty-six per cent of the institutions, while eleven per cent indicate no student teaching seminar.

(23) Supervising teachers are not attending group conferences on the campus in eighty-two per cent of the institutions.

These conclusions, concerning the nature of current student-teaching programs for mathematics student teachers in the institutions responding to the questionnaire, give rise to several valuable implications for the evaluation of student teaching.
The data, presented in this chapter, indicate that the student-teaching programs vary widely among institutions. In each institution the evaluation of the mathematics student teacher must be conducted with reference to the particular framework in which the student teacher functions. In each student-teaching program certain practices affect the program of evaluation adversely, and others are conducive to effective evaluation. The kind of evaluation which can be conducted and the level of competence which a student teacher may be assisted to achieve through that evaluation are affected by a variety of practices stemming from the following factors:

1. The number of student teachers in relation to the size of the college supervisory staff and the available laboratory facilities.

A heavy load of student teachers in mathematics limits the kind of student-teaching evaluation which can be conducted by college supervisors and supervising teachers. If more than one student teacher must be assigned to a particular supervising teacher during a given quarter, it will be difficult, if not impossible, for that supervising teacher to do a thorough job of evaluation. College supervisors are able to operate effectively only if their load of supervision allows them to make frequent observations of the student teacher.
(2) The level of the experience background of the student at the time of his entrance to student teaching.

The supervisors who conduct the evaluation of a student teacher in mathematics will find it possible to give quite different emphases to their evaluation of the student teacher who has had an extensive background of experience, as compared to that of the student teacher who lacks such background. Supervisors will be able to help the student teacher who has acquired a reasonable competence in conducting a class through extensive previous experience in secondary-school classrooms, to achieve a higher level of competence in specific teaching techniques in mathematics.

(3) The time devoted to student teaching.

Evaluation of the student teacher in mathematics will be affected considerably by the number of class periods per day in which the student teacher is assigned to the school. Evaluation of the student teacher assigned to the school for one class period per day to teach a given mathematics class, will be an evaluation of his ability to teach that class.

However, if the student teacher is assigned to the school for several class periods or, perhaps, for the entire school day, evaluation must take into account his ability to conduct many, if not all, of the activities of a teacher in addition to that of teaching a class in mathematics.

(4) The number of mathematical subjects in which the student has a student-teaching experience.
If the student teacher of mathematics has an experience in more than one subject, evaluation will involve a consideration of the different teaching techniques within the mathematics area. This emphasizes the need for evaluating the student teacher not only as a student teacher in mathematics, but more specifically as a student teacher in algebra or a student teacher in geometry.

(5) The level of responsibility for evaluation, carried by college supervisors.

The nature of the college supervisor's role in evaluation affects the consistency of the evaluation program. When the college supervisor takes a major role in the final evaluation of the student teacher, it is possible for the total group to be evaluated more nearly upon the basis of identical criteria than when different supervising teachers make the evaluations.

(6) The administrative arrangements for student teaching with co-operating public schools.

The effectiveness of the way in which the supervising teacher conducts and evaluates the student teacher's experience is related to how well that teacher's role in teacher education is defined, and how satisfactory the administrative arrangements are. The administrative arrangements include both methods by which supervising teachers are selected and methods by which they are compensated. There is a wide variety of such administrative arrangements.

(7) The college supervisor's background of training and experience and his principal interests.
The effectiveness of the college supervisor as an evaluator of the mathematics student teacher and in making specific suggestions to the student to help him improve his competence as a teacher of mathematics, depends, to some extent, upon the supervisor's background and interests. A college supervisor, not trained in the subject matter and methodology of mathematics, will have to rely upon suggestions and advice of a more general character to help the student teacher.

On the other hand, a college supervisor with training in the subject matter and methodology of mathematics, would be expected to be able to offer specific suggestions to the student, as well as suggestions of a more general nature relating to the characteristics of good teaching which are applicable to teachers of all subjects.

(8) The nature and timing of the individual conference with the college supervisor.

The contribution of the individual conference to the evaluation of the mathematics student teacher is affected by the timing of the conference in relation to the college supervisor's observation of the student teacher at work, and by the type of evaluation report with which the college supervisor provides the student teacher. The individual conference may occur in the school immediately following the supervisor's observation, on the campus later during the same day or the day following the college supervisor's observation, or at some later time. It is possible for the conference, regardless of the time at which it is held, to be devoted
to the following: (1) teaching problems which the student teacher recognizes that he faces in his work; (2) problems of the student teacher as determined by the college supervisor; (3) modern methods of teaching the subject; (4) other topics; or (5) some combination of these. It is possible for the college supervisor to give the student teacher: (1) a verbal report of his observations and suggestions relative to how the student may improve, (2) a written report of this evaluation, or (3) both. The particular combination of these factors which results in a given situation influences considerably the values received by the student from the college supervisor's evaluation.

(9) The nature of the group conference

The contribution of the group conference to the evaluation of the mathematics student teacher will be affected by the area of concern of the group conferring and by the presence or absence of college supervisors and supervising teachers. The effectiveness of the group conference as an instrument of evaluation which emphasizes helping the student improve his teaching competence through specific suggestions will be influenced by whether or not the group conference is designed for student teachers of all areas or for student teachers of mathematics specifically. Its effectiveness will be influenced also by whether or not it is a co-operative effort of all persons concerned in the process of supervision and evaluation.
The relationship of the educational policies of the teacher-education institution and the co-operating secondary schools.

While a teacher-education institution and its co-operating secondary schools need not be in total agreement upon educational policy, it is essential for them to be able to work together, keeping the best interests of the student foremost in their minds. This ability to work together and reach common agreements upon the level of operation is necessary to provide for co-operative evaluation of the student teacher. Teachers in co-operating schools need to be familiar with the objectives of the teacher-education program in which the students are being trained, and to feel a responsibility to assist in educating teachers. It is important for faculty members of the college and the co-operating secondary schools to understand their differences as well as their agreements. All activities which can be extended to provide opportunities for the members of these staffs to meet and discuss their common problems make a contribution toward increased mutual understanding. The group conference, mentioned in the preceding paragraph, is one means of bringing members of these groups together.

The various types of student-teaching evaluation and the methods being used to evaluate student teachers of mathematics will be considered in the following chapters, with full recognition of the influence of these factors upon the program of evaluation.
CHAPTER 3

EVALUATION OF THE MATHEMATICS STUDENT TEACHER

Several important aspects of the general student-teaching program which vitally affect the evaluation program have been considered in the preceding chapter. It is the purpose of this discussion (1) to consider some of the general principles that should govern the evaluation of mathematics student teaching, and (2) to investigate the methods which are being used in the evaluation of mathematics student teachers.

**General Principles for Evaluation**

Flowers\(^1\) states five guiding principles for evaluation in the general field of professional laboratory experiences:

1. Evaluation is an integral part of the learning process.

2. Many of the growth values sought cannot be rated but are best evaluated through critical analysis of descriptive evidence of specific behaviour and situations.

3. Evaluation is a continuous process to be developed co-operatively.

4. The student should have an active part in recording and evaluating his growth and development.

5. The evaluative process used with the college student should demonstrate the principles basic to helping children evaluate their work.

---

Michaelis states eleven such principles for evaluation of student teaching in particular.

1. Evaluation of student teaching must give attention to all aspects of teaching competence.

2. Values must be clarified because they determine the kind of teaching which will be emphasized as evaluation is carried on.

3. Evaluation of student teaching must be done cooperatively.

4. Evaluation is a continuous process and must be operative throughout the entire program.

5. Evaluation is part and parcel of the student teaching process and must not be viewed, as a separate, discrete aspect.

6. Evaluation of student teaching must be carried on in a variety of teaching-learning activities in which teaching competence is observable.

7. Self-evaluation leading to increasing self-direction is an essential feature of sound evaluation.

8. Evaluation is effective to the extent that sound principles of learning are used in the program.

9. A variety of appraisal instruments, techniques, and devices should be used.

10. Evaluative instruments and techniques should be selected in accordance with the needs that exist at a given time.

11. Comprehensive records are needed to assure intelligent interpretation of evidence gathered through evaluation.

An examination of these principles for student-teaching evaluation, as stated by Michaelis, and a comparison of those
stated by Flowers as applicable to evaluation of professional laboratory experiences in general, shows that the principles stated by Michaelis do, in a general way, embrace the five stated by Flowers. Rine, in his recommendations for criteria by which the student-teaching program may be evaluated, makes only two recommendations, dealing specifically with evaluation of the student teacher.

1. It is essential that evaluation of student teaching in secondary mathematics be a continuous and co-operative process throughout the entire period of student teaching.

2. It is recommended that the evaluation of student teaching in secondary mathematics be considered the responsibility of the laboratory teacher, the academic teacher, and the professional education teachers, as a group.

These latter two recommendations are included in both those applicable to the general area of professional laboratory experiences and those applicable to the general area of student teaching.

The following guiding principles are accepted, by the writer, as applicable to the evaluation of student teachers in mathematics. These principles are consistent with those cited as applicable to evaluation in the whole area of student teaching and in the more general area of professional laboratory experiences.

1. Evaluation of student teaching should be considered an integral part of the student-teaching process.

2. Evaluation of student teaching should be considered a continuous process.

3. Evaluation of student teaching should be a co-operative process in which the student teacher, supervising teacher, and college supervisor participate.

4. Evaluation of student teaching should involve self-evaluation by the student teacher, pupil reactions to the student teacher, evaluation of the student teacher by the supervising teacher, and evaluation of the student teacher by the college supervisor.

5. All phases of evaluation of student teaching should make their principal contribution in the area of helping the student teacher improve his competence as a prospective teacher.

**Methods of Evaluating the Mathematics Student Teacher**

With those five guiding principles for the evaluation of the mathematics student teachers as a starting point, four phases of evaluation will be considered: self-evaluation, pupil evaluation, evaluation by supervising teachers, and evaluation by college supervisors. In the remaining sections of this chapter, the methods used in self-evaluation and pupil evaluation will be investigated in an effort to develop some suggested guiding principles relative to those particular aspects of evaluation. The methods of evaluation used by supervising teachers and college supervisors will be considered in Chapter 4.
Self-Evaluation

In order to determine the emphasis upon self-evaluation in the programs for student teachers in mathematics, the following question was asked: Do your student teachers use any type of self-evaluation? (1) No self-evaluation (formal), (2) Written, completely unstructured self-evaluation, (3) A self-evaluation form, mainly structured but with space for additional comments, (4) A completely structured self-evaluation form, (5) Other (Indicate). The response to this question appears in Table XXV. An examination of this table reveals that seventy-three per cent of the respondents indicate that some attention is given to self-evaluation, while twenty-seven per cent indicate that there is no formal self-evaluation in their programs.

TABLE XXV

<table>
<thead>
<tr>
<th>Institutions</th>
<th>STC</th>
<th></th>
<th>UNIV.</th>
<th></th>
<th>LAC</th>
<th></th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal self-evaluation</td>
<td>24 26</td>
<td></td>
<td>21 32</td>
<td></td>
<td>26 27</td>
<td></td>
<td>71 27</td>
</tr>
<tr>
<td>Written, unstructured self-evaluation</td>
<td>15 16</td>
<td></td>
<td>17 25</td>
<td></td>
<td>25 26</td>
<td></td>
<td>57 22</td>
</tr>
<tr>
<td>Mainly structured</td>
<td>35 37</td>
<td></td>
<td>21 32</td>
<td></td>
<td>33 34</td>
<td></td>
<td>89 35</td>
</tr>
<tr>
<td>Completely structured</td>
<td>17 18</td>
<td></td>
<td>7 11</td>
<td></td>
<td>12 13</td>
<td></td>
<td>36 14</td>
</tr>
<tr>
<td>Form variable</td>
<td>3 3</td>
<td></td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td>3 2</td>
</tr>
<tr>
<td>Totals</td>
<td>94 100</td>
<td></td>
<td>66 100</td>
<td></td>
<td>96 100</td>
<td></td>
<td>256 100</td>
</tr>
</tbody>
</table>

Questionnaire Vol. I, p. 15
This question was asked next: What use is made of the student teacher's self evaluation? (1) Used only by the student teacher himself, (2) Must be submitted to the supervising teacher or university supervisor, (3) May be submitted voluntarily to the supervisors. It was inserted in the inquiry in an effort to determine whether or not self-evaluation was considered a vital element in the total evaluation program. The response to that question appears in Table XXVI.

### TABLE XXVI

**USE MADE OF SELF-EVALUATION REPORTS**

<table>
<thead>
<tr>
<th>Use</th>
<th>Institutions</th>
<th>STC</th>
<th>No.</th>
<th>%</th>
<th>UNIV.</th>
<th>No.</th>
<th>%</th>
<th>LAC</th>
<th>No.</th>
<th>%</th>
<th>ALL</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used only by the student teacher himself</td>
<td></td>
<td>8</td>
<td>11</td>
<td></td>
<td>7</td>
<td>16</td>
<td></td>
<td>9</td>
<td>13</td>
<td></td>
<td>4</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Must be submitted to supervising teacher or college supervisor</td>
<td></td>
<td>42</td>
<td>60</td>
<td></td>
<td>25</td>
<td>56</td>
<td></td>
<td>35</td>
<td>50</td>
<td></td>
<td>102</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>May be submitted voluntarily to the supervisors</td>
<td></td>
<td>20</td>
<td>29</td>
<td></td>
<td>13</td>
<td>28</td>
<td></td>
<td>26</td>
<td>37</td>
<td></td>
<td>59</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70</td>
<td>100</td>
<td></td>
<td>45</td>
<td>100</td>
<td></td>
<td>70</td>
<td>100</td>
<td></td>
<td>185</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The data of Table XXVI indicate that self-evaluation is considered important. In fifty-five per cent of the institutions.

---

5 Questionnaire, v-2, p.15.
which reported that they have formal self-evaluation in their student-teaching programs, the self-evaluation must be submitted to the college supervisors. In the remaining forty-five per cent of the cases it is used only by the student teacher, and may be submitted to the college supervisor voluntarily.

It is the writer's opinion that it is highly desirable for the working relationship between the supervisor and the student teacher to be such that the student may present his completed self-evaluation voluntarily to his supervisor for analysis, thereby providing the supervisor a better opportunity to guide him toward improvement. However, the really significant point is that the student teacher actually engages in self-evaluation, analyzing his own strengths and weaknesses. Supervisors should make certain that their student teachers engage in recorded self-evaluation, and endeavor to assist them in the analysis of that evaluation only if the student teacher voluntarily seeks such assistance.

The possible values of self-evaluation by the student teacher have had increasing emphasis in the literature on student-teaching evaluation. Schorling⁶ presents a short check list of "Instructional Activities for Teachers" which is suggested as a self-appraisal instrument for student teachers. Flowers,⁷ among the suggested guides for further developments in the area of recording and evaluating professional laboratory experiences, says,


The student should have an active part in recording and evaluating his growth and development. No one is or should be more concerned with the growth of the learner than the learner himself. The evaluation process should be shared with him at all points and should be so guided as to lead to self-evaluation. Only as the student grows in power to be intelligently self-critical of his work, will be continue to grow constructively when in service.

Essentially the same opinion concerning the importance of self-appraisal is stated by Merriman and Grim: "All of us recognize that a child, a student, or a teacher can improve only by his own initiative.... The area of self-appraisal is one in which we need further data." Nugent makes reference to the importance of self-appraisal and the lack of attention to it.

In student-teaching, self-appraisal has been quite neglected, though there are many good rating blanks for teachers and some effective research has been done in formulating self-appraisal forms for student teachers. There is great need for self-appraisal if we want our students to grow. Studying, planning, organizing, analyzing, questioning, selecting, and evaluating are the only ways by which true growth can be accomplished. During the last few decades we have overemphasized objective testing and rating. Students have become accustomed to checking the results of the thinking of others. It is imperative that we help our students learn how to evaluate their own growth and achievement thoughtfully.

More recently, Park has emphasized the need for recorded self-evaluations and presented a "Suggested Guide and Record For

8 Pearl Merriman and Paul R. Grim, op. cit., p. 134.


Student Teachers in Observation of or Preparation for Group Activities.* This guide consists of a list of sixteen questions for the student teacher to consider in planning for and teaching a unit. The professional bulletin No. 2 of the Association for Student Teaching11 says, concerning self-evaluation:

Students should learn to think critically about their own accomplishments. Unless they can do this they lack sound foundation upon which growth can be built. This means that supervising teachers should help student teachers become quite objective in their self-analysis, and to develop a real desire to improve the quality of their teaching. If evaluation is a co-operative experience, it can become a motivating force toward self-analysis and self-evaluation on the part of the student, and it can do much to encourage him to progress in accordance with his own potentialities.

The increasing emphasis upon self-evaluation is substantiated further by the respondents in this study who contributed copies of the evaluation instruments being used in their institutions.

Instruments of Self-Evaluation

In addition to the wide variety of multi-purpose rating devices, designed for use in self-evaluation as well as for evaluation by the supervising teachers and college supervisors, the writer received twenty-five rating devices devoted solely to self-evaluation. These ranged in character from simple check lists of student-teacher activities to be used by the student teacher in any subject area

---

to point up those activities in which he needs further experience, to a quite elaborate self-evaluation device, designed specifically for use with student teachers in mathematics. These self-evaluation instruments are designed, primarily, for use periodically, once or twice per quarter or semester. A few are intended for use each week. Three different examples of weekly self-evaluation forms are included as illustrative of this type of instrument. The first of these (See page 109) is designed for use only by the student teacher and seeks no written response. It consists of a list of questions separated into five categories: Personal Characteristics, Emotional and Mental Characteristics, Condition of Classroom, Ability as a Teacher of Pupils, and Ability as a Teacher of Subject Matter.

The second weekly self-evaluation form (page 112) is mainly a structured form and is a report to the college supervisor. Some space is provided for written comments and there is space provided for the student teacher to indicate what days in the following week he expects to be in full charge of the class. Providing some opportunity for the college supervisor to have an indication of the plans for the following week would be a definite help to the college supervisor in planning his visits to student teachers.

The third weekly self-evaluation form is also designed for reporting to the college supervisor. In design, it is a form

---

12 Student Teacher's Self-Evaluation, contributed by Marion, College, Marion, Indiana.

13 Student Teacher's Weekly Report, contributed by Drake University, Des Moines, Ia.

14 A Student Teaching Evaluation Form, contributed by Indiana University, Bloomington, Indiana. See page 113.
PART I - INSTRUMENTS FOR
STUDENT TEACHER SELF EVALUATION

STUDENT TEACHERS

(Please read twice a week and answer each question frankly in your own mind.)

A. PERSONAL CHARACTERISTICS

Is my voice well-modulated?
Do I avoid speaking too rapidly?
Do I in every way avoid giving the impression of hurrying?
Do I make every effort to relax, especially when situations become tense?
Do I try to prevent crises by pleasantry?
Am I growing in my power of self-control?
Do I have a hobby outside the school that gives me pleasure and satisfaction?
Do I keep myself physically fit, by well regulated habits of eating and sleeping?
Do I make thoughtful preparation of each lesson I teach?
Do I try to gain the respect of every pupil?

B. EMOTIONAL AND MENTAL CHARACTERISTICS

Can I accept criticism without becoming too disturbed?
Do I ask for and welcome suggestions from those who have observed my work?
Am I willing to face squarely my own personality handicaps and try to correct them?
Am I tolerant even of the intolerant?
Am I genuinely open-minded?
Am I sufficiently flexible that I may meet new situations joyfully?
Do I promote friendliness by being friendly?
Do I appreciate and comment upon excellent work done by my fellow-teachers?
Do I have the scientific attitude?
Do I take part in the discussion in teachers' meetings?
Does my reading include:

A. Books dealing with
   (1) Mental hygiene
       Psychology
       Education
   (2) Literature—ancient and modern
   (3) Methods
B. MANY TYPES OF NEWSPAPERS AND MAGAZINES.
Do I contribute occasionally to educational literature?
Am I willing to give time and thought to parent education?
Am I interested in and acquainted with the functions of the whole school?

C. CONDITION OF CLASS ROOM

Do I pay attention to heat, light and ventilation?
Do I make every effort to prevent eye-strain?
Am I conscious of the fact that a disorderly room makes for disorderly and confused thinking?
Am I on the alert to prevent fatigue on the part of the group or individuals in the group?
Do I change the seating often so that the advantage of center-front is equalized?

D. ABILITY AS A TEACHER OF PUPILS

Am I able to create an atmosphere of happiness?
Is order or discipline inherent in my work (not maintained by fear of consequence)?
Do I endeavor to be conscious of every child's assets and liabilities (mental, emotional, physical, spiritual)?
Do I avoid judging children by adult standards?
When a child doesn't measure up to my standards, rather than criticising him, do I look for causes?
Am I sure that at all times I consider the child before the subject matter?
Do I, in general, use subject matter as a means to an end and not an end in itself?
Do I capitalize all efforts that show initiative and originality?
Has every child confidence that I will try to see his problem from every angle?
Do I have personal interviews with each child as often as time permits?
Do pupils voluntarily come to me for advice?
Am I mindful of attendant learnings? (That is, in being made to study his spelling lesson, a child may learn to dislike the subject, not to mention teacher, and school).
Have I learned to recognize the most serious behavior problems—timidity, unsociableness, discouragement?
Am I able to be impersonal in dealing with behavior problems? Can I analyze behavior problems and work out several possible solutions?
E. ABILITY AS A TEACHER OF SUBJECT MATTER

Have I specific objectives definitely formulated in all my work?
Do I make sufficient use of pictures, objects, charts, maps, blackboards, slides, moving pictures, and radio?
Do I motivate work by excursions, special reports, radio broadcasts, and the appearance of persons before my class?
Have I capitalized the children's personal environment?
Am I conscious of each child's interests?
Am I mindful of individual differences and abilities?
Do I give all children equal opportunities and equal amount of attention?
Have I given due attention to development of appreciations?
Am I helping children to form good work habits?
Am I teaching children how to study effectively?
Are my children taking more and more responsibility for their own improvement?
Is each child increasing in ability to give attention even when the work is uninteresting to him?
Is there evidence that my pupils are increasing in power of self-control? In initiative?
Do my pupils attack hard work gladly?
Do a large percentage of my pupils participate in every recitation?
Do I help the group to sum up day by day and week by week the information gained?
Do I give each child the stimulating feeling of success by making him conscious of his own growth from time to time?
Do I make the subject so clear and interesting that pupils welcome the work or recitation period?
Do I start work promptly and keep everything moving without seeming to hurry?
Do I encourage pupils to help each other?
Do I keep clearly before me the laws of learning?
Do I expect to be just an average teacher?
I. During this week I

1. Had charge of the class for 100%, 75%, 50%, 25%, less than 25% of the period. Underline one.
   a. With supervision.
   b. Without supervision.

2. Conducted a class discussion.

3. Lectured to the class.

4. Prepared and presented a laboratory demonstration.

5. Prepared a class quiz.

6. Administered a quiz or examination.

7. Did some personal counseling with students.
   a. During the class period.
   b. Outside of regular class hours.

8. Did some work outside of class hours for the supervising teacher.

9. Had a conference with the supervising teacher.

10. Agreed for the most part with the methods used by the supervising teacher.

11. Feel that I had good rapport with the supervising teacher.

II. I think my most valuable experience this week, as far as my teaching or observation is concerned, was:

III. Plans for next week (Dates: Mon. to Fri. ) include my having charge of the class on the days checked:

Signature of Student Teacher
Purpose of this report. The Director of Student Teaching, your methods instructors, and your supervisors wish to secure from you a continuous brief record of your student teaching experience so that we may be more effective in helping you to develop the competencies which you need for successful teaching. This report should also help you to appraise the experience that you are gaining and to plan with your supervising teacher the continuing experiences which will be most useful to you.

Instructions for making the report. In order to help you in preparing this report you should keep a diary or daily log in which you jot down very briefly the things that you do and the questions that occur to you growing out of your student teaching experience. On each Friday of your student teaching experience complete the report using the spaces provided in the questionnaire and mail the report to your field supervisor at University School, Bloomington, Indiana.

1. Summarize below what you consider to be the most significant thing that you have gained from your student teaching experience in the past week.
2. Indicate briefly what you have done in gaining a wide variety of experiences in your student teaching during the past week. In what ways are you gaining understanding of the:

(a) Organization and administration of the school;
(b) Relationship between the school and the community;
(c) Methods and techniques for learning to understand pupils;
(d) Role of the classroom teacher in the guidance program;
(e) Discipline as an aspect of school morale and character education;
(f) Handling of routine and classroom management;
(g) Planning together by teacher and pupils;
(h) Provision for individual differences;
(i) Use of audio-visual aids;
(j) Extracurricular duties of a teacher;
(k) Evaluation of instruction;
(l) Professional growth of teachers.

3. What problems have you encountered and what help do you need?
115

Do you have a special reason for wanting a representative of the student teaching office to call on you soon?

NOTICE: Please use the back if more space is needed
providing ample space for the student teacher to write a detailed account of his experiences during the week just completed. This form is completed and mailed to the college supervisor if he is in any difficulty or in need of assistance.

Most of the self-evaluation instruments contributed are designed definitely for infrequent use, usually two or three times per quarter or semester. Some institutions use several different types of self-evaluation devices. Among the instruments examined, which are specifically mid-term self-evaluation instruments, the simplest type is the activity check list. These check lists, used with other self-evaluation instruments, provide for more extensive self-analysis. An example of the Student Teacher Activity list is included. (See pages 117-119). This activity list consisting of forty-two broad categories, with provision for the student teacher to write down under each the specific activities in which he has engaged, is illustrated on pages 117-119. A list of the activities of student teachers in mathematics, other than the regularly carried on in the classroom instructional activities at Milne School is illustrative of what can be done to bring the check list type of device closer to the day-by-day problems of the mathematics student teacher. Two additional activity check lists are included.

15 "Student Teacher Activity Record," Southern Illinois University, Carbondale, Illinois. (This is an 8 page printed form)

16 Milne School, New York State College for Teachers, Albany, New York. See pp. 120-121.

17 See Appendix, p. 329-331 Activities of Student Teachers, Montana State College, Bozeman, Montana, also Suggested Activities for Student Teachers, The Ohio State University (designed by Miss Julia Atkins, Supervisor of Mathematics Student Teachers).
The following list of activities is to be used as a record of experiences which the student teacher has had during his student teaching. The student teacher should write in specific things he has learned in each of the activities he lists.

1. Assist with out-of-school activities related to the class or grade in which you are teaching, such as Future Homemakers of America, Girls Athletic Association, Science Club, Literary Club, and Writing Club.

2. Assist with school activities which are not related specifically to individual classes but pertain to the entire school, such as athletic games, newspaper, and yearbook.

3. Attend assemblies, dramatic productions, and athletic events. Assist whenever possible.

4. Attend faculty meetings and general teachers' meetings including County Institute and the Illinois Education Association.

5. Attend and participate in parent meetings, such as P.T.A. Meet the parents of the children whom you teach.

6. Help to supervise playground, noon-time activity, cafeteria, library, or study hall. Whenever possible take full charge.

7. Learn the customs, traditions, and patterns of community life in the area which your school serves.

8. Learn the history of the school district in which the student teaching is being done.

9. Participate in scheduled conferences with students under the guidance of the supervising teacher; have some unscheduled conferences with students.

10. Seek causes for student behavior problems.

11. Give special assistance to exceptional pupils, such as the socially underprivileged, the slow learners, the physically handicapped, and the fast learners.
12. Have conferences with parents under the supervision of the school principal or supervising teacher.

13. Visit in the homes of your pupils, in classes or grades where it is customary to visit.

14. Become acquainted with the philosophy, policies, and objectives of the school.

15. Become familiar with the plan of the building.

16. Visit other classrooms and in some cases other public schools, upon the approval of the school principal and your supervisor.

17. Participate in informal talks with various teachers about general training.

18. Become acquainted with the work of the school nurse, guidance program, teen-town, and any other social agency that works with the students.

19. Inspect and understand the student-record system, assisting under the supervising teacher.


21. Assist in the administration and scoring of standardized tests, quizzes, and examinations.

22. Assist with fire drills, nurse inspection, Red Cross X-ray, audiometer tests, and speech tests.

23. Attend school or group social functions.

24. Confer with school principal and superintendent at their convenience.

25. Become acquainted with and use up-to-date desirable teaching aids. Construct some of these for yourself.

26. Compile a bibliography of accepted supplementary materials in your major field of interest. Do not hesitate to call upon your supervisor or consultant for aid.

27. Familiarize yourself with professional literature: books, magazines, and catalogues. Know the sources of these materials.

28. Develop orderly habits of students entering and leaving the room.
29. Be responsible for art center, bulletin board, center of interest, or other means of adding interest to the room.

30. Check on room temperature, humidity, amount of light, and other physical aspects of the room.

31. Make democracy live by planning mock elections during regular election periods and assisting with real elections whenever officers of the student body are to be elected.

32. Make and use a daily lesson plan.

33. Practice writing on the blackboard in order that students will have a minimum amount of difficulty in reading your writing.

34. Prepare a seating chart and learn the names of the students as soon as possible.

35. Develop progress charts in skill activities.

36. Plan field trips with classes. Be sure to observe local school policy.

37. Use audio-visual aids in your teaching.

38. Have experience with a variety of methods including diversified discussion techniques, drill, recitation, demonstration, and supervised study.

39. Practice as well as read a good code of teacher ethics (National Education Association).

40. Speak before assemblies, home rooms, and club groups.

41. Keep a diary of every day's experiences. Use a regular notebook and briefly describe the happenings of every day that you are a student teacher.

42. Have contact with varied social activities in the community, such as parties, suppers, teas, card parties, dances, and movies.
A CHECKLIST FOR MILNE MATHEMATICS TEACHERS

During your practice teaching at Milne, in the classroom and in conferences, you will undergo many experiences basic to good teaching. In addition you should participate in other activities and acquire other skills. Below is a checklist for Milne mathematics student teachers.

1. Learn to operate the following audio-visual aids:
   a. Motion picture projectors.
   b. Film strip projector.
   c. Multi-speed phonograph.

2. Learn to operate the following duplicating machines:
   a. Mimeograph machine (including cutting of stencil, use of stylus and mimeoscope)
   b. Liquid duplicator (prepare master copy)
   c. Hectograph Duplicator (prepare master copy)

3. Learn the operation and classroom use of the following instruments:
   a. Sextant
   b. Transit
   c. Plane table and alidade
   d. Angle mirror
   e. Hypsometer-clinometer
   f. Slide Rule
   g. Pantograph
   h. Dead reckoning computer

4. Familiarize yourself with text materials as follows:
   a. Examine available texts in mathematics.
   b. Examine available workbooks.
   c. Examine available regents examination review books.
   d. Examine the New York State syllabi for grades 7-12.
   e. Examine available standardized tests and familiarize yourself with their administration.

5. Familiarize yourself with enrichment materials as follows:
   a. Examine available yearbooks of the National Council of Mathematics Teachers.
   b. Prepare mathematical models suitable for classroom use.
   c. Familiarize yourself with books available in the high school library.
d. Prepare an interesting bulletin board on a mathematical theme (use the LeRoy lettering set)

e. Assemble materials from newspapers, magazines, etc. which might be used in classroom instruction.

f. Investigate the community resources for practical applications of secondary school mathematics (field trips, outside speakers, etc.)

6. Familiarize yourself with guidance and administration as follows:

a. Complete the practice exercise in keeping an attendance register.

b. Study the guidance folders of pupils in your class.

c. Write a sample letter of application to a principal of a school.
In addition to these "activity check lists" there are at least two other general types of evaluation forms designed specifically for mid-term self-evaluation. One of these may be called the "Question and Answer" type. The examples of this type, examined by the writer, are widely different in design. The most common design consists of several broad categories, under which appear several questions of this type: "Do I welcome criticism?" and "Do pupils readily co-operate with me?" Some of these forms are for use by the student teacher only and consequently, do not call for a written statement of evaluation. Other forms require him to check on a three- or five-point scale the degree to which he feels he exhibits the stated or implied behaviour. An example of these "Question and Answer Type" forms for self-evaluation appears on pages 123-125. An additional example appears in the Appendix.19 Self-evaluation forms similar to the examples shown but not included here, were contributed by several other institutions.20

The third general type of form for mid-term self-evaluation is the list of traits or qualities to be rated. This type consists of a random list of traits, qualities, and abilities or a list of

18 Student Teacher's Check List, University of California, Berkeley, California.

19 Self-Rating Scale for Teachers, University of Southern California, Los Angeles, California. See pp. 332-334.

20 Southeastern State College, Durant, Oklahoma; Fairmont State College, Fairmont, West Virginia; Calvin College, Grand Rapids, Michigan; Montana State College, Bozeman, Montana; University of Colorado, Boulder, Colorado; Northwestern University, Evanston, Illinois; Huron College, Huron, South Dakota; Clarion State Teachers College, Clarion, Pa.
UNIVERSITY OF CALIFORNIA, BERKELEY

STUDENT TEACHER'S CHECK LIST

I. Personal Characteristics

A. General appearance
1. Is my personal appearance as pleasing as I can make it?
2. Is my posture correct?
3. Is my dress attractive in color and style?
4. Is it appropriate for the classroom?
5. Is it neat, fresh, and clean?
6. Is it becoming?
7. Am I always well groomed?

B. Health
1. Do I have due regard for my health at all times?
2. Do I give evidence of sufficient sleep? Adequate nutrition? Wholesome relaxation?

C. Voice
1. Is my voice effectively pitched and well modulated?
2. Is the quality pleasing?
3. Do I articulate distinctly?

D. Personal qualities
1. Am I courteous in my relations with my students, with other teachers, and with those in authority?
2. Do I give evidence of refinement in my manner and conversation?
3. Am I a good example for my students to imitate?
4. Do I find pleasure in my teaching?
5. Am I always optimistic and energetic?
6. Am I punctual and reliable in the matter of all records and reports?
7. Do I possess initiative?
8. Do I possess self-reliance?
9. Am I tactful?
10. Do I exercise good judgment?
11. Am I resourceful?
12. Am I able to appreciate the student's side of a question and to afford sympathetic help in the solution of difficulties?
13. Am I cheerful, pleasant, and approachable?

E. English
1. Is my pronunciation accurate?
2. Is my enunciation clear and distinct?
3. Have I a perceptible accent?
4. Is my use, choice, and arrangement of words of the best?
5. Is my grammar accurate?
6. Is my vocabulary adequate and appropriate?
7. Does my written English conform to the best standards of correct usage?

II. Professional Equipment

A. Is my academic preparation entirely adequate?
B. Have I a well-rounded specific training for teaching?
C. Do I have a mastery of the subject matter I am teaching?
D. Do I have a loyal and co-operative professional attitude?
E. Do I give evidence of capacity for professional growth?
F. Have I the ability and disposition to be reflective?

III. Teaching

A. Management
   1. Do I attend to ventilation, light, and heat?
   2. Do I care for the physical well being of pupils with special disabilities?
   3. Does my classroom give evidence of good housekeeping?
   4. Am I prompt and absolutely dependable in matters of administrative routine such as taking of attendance, examining slips for absence, tardiness, etc.
   5. Do I routinize collection and distribution of papers, books, and other supplies in a manner most economical of class time?
   6. Do I post attendance and marks in the supervising teacher's class record book daily?
   7. Am I economical in the use of school supplies?
   8. Do I encourage my pupils to be economical in the use of school supplies and their own supplies?
   9. Is good order, or discipline, inherent in the work of my class?

B. Preparation
   1. Have I a thorough knowledge of the subject matter I am teaching?
   2. Do I prepare lesson plans thoughtfully?
   3. Do I select and organize subject matter effectively?
   4. Do I read and study related topics in order to enrich my teaching?

C. Teaching Techniques
   1. Do I distinguish the various types of lessons and use each appropriately?
      a. Presentation of new material?
      b. Drill?
      c. Test?
      d. Supervised study?
e. Appreciation?
f. Recitation?
g. Review?
h. Inductive development?
i. Deductive development?
j. Laboratory?
k. Project?

2. Does my plan for each period provide for a variety of activity?

3. Does my plan for each period include generalization, summary, or organization?

4. Are my questions stimulating and thought provoking?

5. Am I skillful in encouraging students' initiative?

6. Am I skillful in encouraging students' participation?

7. Am I skillful in making the assignment?

8. Do I prepare and utilize illustrative materials from other fields?

9. Do I understand pupil difficulties?

10. Am I successful in alleviating such difficulties?

11. Do I care for individual needs?
traits, qualities, and abilities classified under certain major headings. The rating scale is usually a five-point scale but occasionally a three-point scale is used. Only rarely do these forms provide space for written comments. Often the traits and qualities listed are difficult to interpret and may be ill-defined. The items included in a number of these forms are in such general terms that they fail to be significant to the student teacher. An example of a self-evaluation form consisting of a list of traits and abilities to be checked according to a scale, has been included for purposes of illustration. An additional example of this type is included in the Appendix. Although they are not included here, other self-evaluation forms of a similar character were received from several institutions.

The self-evaluation devices exhibited thus far have been, for the most part, intended for general use in any subject area. The only outstanding example of a self-evaluation form that is specifically for student teachers in mathematics and has come to the writer's attention is the one devised by Pingry. This

---

23 Northeastern State College, Tahlequah, Oklahoma; Miles College, Birmingham, Michigan; Minot State Teachers College, Minot, North Dakota; University of North Dakota, Grand Forks, North Dakota.
UNIT III - EVALUATING TEACHING EFFICIENCY

Rate yourself on the following chart. Please rate your teaching success as objectively as possible. Your rating will have no effect on your grade in student teaching. A strictly objective rating will help you to discover the weaknesses in teaching that you need to overcome.

STUDENT TEACHER RATING CHART

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Interest in work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Resourcefulness.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Dependability.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Self-control.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Self-confidence.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Co-operating with training teacher, administrator, and colleagues.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Pupil-teacher relations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Voice.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Selection of subject matter.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Organization of subject matter.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Presentation of subject matter.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Promptness in starting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Pupil morale.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Use of materials.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Care of materials.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Time allotment to topics (points of emphasis).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Variety in method and in use of devices.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Skill in questioning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Skill in motivating work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Skill in stimulating thought.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Definiteness in instruction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Pupil activity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Provision for individual differences.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Mastery of subject matter by class.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Assignments.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Participation of pupils in recitation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Use of multisensory aids.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Rating
check list is divided into seven main categories: (1) Teaching for Understanding; (2) Teaching Which May Hinder Development of Understandings or Contribute to Misunderstandings; (3) Teaching for Enjoyment and Enrichment; (4) Teaching Contributing to the Annoyance of the Students or Hindering the Development of Enjoyments; (5) Teaching for Transfer; (6) Teaching for Skills and Technique; and (7) Teaching to Improve Problem-Solving Ability. Under each of these major headings are extensive lists of student-teacher activities, some of which should be conducted frequently and some, perhaps, only occasionally. The total instrument is sixteen pages in length and is recommended by its author for use only three times during the student-teaching experience. It is accompanied by an extensive bibliography and in the body of the list each activity is accompanied by references to the bibliography. This means that the student teacher can read references relating to any one of the suggested activities if he is not conversant with them, or if he feels the need for greater understanding of them.

The instructions, appearing on the introductory page are:

USE OF CHECK LIST

"A sincere teacher of any subject frequently evaluates his own teaching in an informal manner. This evaluation is accomplished by the teacher reconstructing the experiences of the past classes and thinking, "How could I have done it differently and better?" This check list has been designed for such a teacher. By reading through the items in this check list, the teacher will become aware of some techniques or activities he might have used."
It is not expected that a superior teacher will do all of the activities listed here. Some of the activities are of such a nature that they should be done very often in the classes. Other activities in the list, however, should probably be done only occasionally. This check list is simply a reminder of some recommended procedures. Keyed to each suggestion are some pertinent readings found in the materials listed in the bibliography at the end of the check list.

INSTRUCTIONS TO STUDENT TEACHERS

"Three times during your student teaching experience you should attempt to evaluate your own teaching, making use of this check list. The evaluations should be made at the ends of the second, fourth, and sixth weeks.

When you make the evaluation for the first time, write a "1" in the appropriate column after each item. At the second evaluation write a "2" in the appropriate column. Make a "3" in the columns at the third evaluation. This will enable you to see where you have changed the emphasis in your teaching.

When the University supervisor comes to visit you, bring this evaluation sheet with you to the interview.

You are to keep two copies of this check list. You may keep one copy, and the student copy is to be filed with the University supervisor at the end of the student teaching experience."

The items which follow are illustrative of the activities which appear in the check list designed by Pingry. 25

I. Teaching for Understanding

3. Teacher requests students to give their statements in their own words to help insure against mere memorization of textbook words.

6. The concept or relationship at hand is connected to a previous concept or relationship from the mathematical background of the students.

25 Pingry, op. cit., p. 3.
12. The teacher is careful to have the students supply reasons for the steps in their thinking.

16. The class has a laboratory period, using instruments or in some way applying concepts of mathematics in the laboratory.

II. Teaching Which May Hinder Development of Understandings or Contribute to Misunderstandings

2. Pace of the development is too rapid for the students to follow.

5. Procedures or rules are memorized without the students knowing the reasons for the rules.

7. Questions are discouraged by the teacher's attitude toward them.

9. Students and teacher make frequent use of the words cancel, transpose, and other similar shortcut words without understanding them.

III. Teaching for Enjoyment and Enrichment

2. Students are encouraged by various means to note the geometric form in nature, architecture, engineering and art.

5. Students are led to understand that algebra is the shorthand of mathematics and is really a symbolic, powerful, and beautiful language.

8. Students' attention is called to the role mathematics has played in technological or scientific advances.

12. Displayed about the room are charts, diagrams, models, etc., showing the place of mathematics in industry, nature, art, etc.
IV. Teaching Contributing to the Annoyance of the Students or Hindering the Development of Enjoyments

1. The teacher's personality and/or attitude toward the students was such as to contribute to the annoyance of the students.

2. The physical conditions of the room such as poor lighting, poor ventilation, etc., were such as to contribute to the annoyance of the class.

V. Teaching for Transfer

1. Students' attention is directed to similarities that exist between the topic at hand and similar topics from within and without mathematics.

5. Students are provided with mathematical and practical applications of the topic at hand.

VI. Teaching for Skills and Techniques

1. Class practices on a formal set of exercises by either written or oral means.

5. Students practice substitution in a formula or a rule.

8. Students memorize facts, relationships, theorems, etc., and teacher drills students on these memorizations.

VII. Teaching to Improve Problem-Solving Ability

3. The teacher helps the students with the reading of verbal problems by asking them to find the meanings of words, asking them to read slowly and deliberately, and asking them to reread several times.

4. The teacher provides fast learners and slower learners with problems at their level of achievement.
Recognition is given to the student who is able to solve a problem by an ingenious method.

The complete check list devised by Pingry, of which the foregoing items are excerpts, is a very worthwhile instrument for student teachers of mathematics to use, as suggested by its author, two or three times during the student-teaching experience. The major strengths of the Pingry check list, in this writer's opinion, are the following: (1) It focuses upon teaching procedures in the area of mathematics, specifically; and (2) It includes ready references to which the student teacher can turn for help in areas in which he feels deficient. On the other hand, the major weaknesses of this instrument, in this writer's opinion, are these: (1) It is long and cumbersome to use; and (2) Some of the items are stated in such general terms that the student teacher would, in certain cases, find it somewhat difficult to determine the relationship between his recent teaching experiences and the items as they are stated on the check list. It is the writer's opinion that some additional self-evaluation instruments, briefer and designed for more frequent use, could be profitably used along with the check list designed by Pingry.

The discussion of various types of self-evaluation and the presentation of illustrations of these types were not undertaken here in an effort to reach a decision that one particular type of self-evaluation device is to be preferred over all others. Each method has certain strengths and weaknesses, and no single device
can secure all of the valuable evidence. In fairness to the self-evaluation programs of the institutions credited with submitting the various evaluation instruments, it must be emphasized that the instrument cited was, in many cases, not the only one in use in that institution, and that the instrument was submitted only because it exemplified a particular type of self-evaluation.

Self-Evaluation Conclusions and Recommendations

The data secured in the questionnaire, together with information gained through an examination of a number of self-evaluation instruments used in various institutions, support, in the writer's judgment, the following conclusions:

(1) Self-evaluation, using some type of record form, is engaged in by student teachers in mathematics in approximately three-fourths of the institutions responding.

(2) Slightly more than half of the group reporting that recorded self-evaluations are made indicate that the student teacher is required to submit his self-evaluation report to the college supervisor.

(3) Most of the self-evaluation instruments, contributed by the respondents in this study, were designed for use no more than two or three times per quarter or semester. Only a few were designed for use weekly.
(4) All of the instruments, except one, were designed for general use in any subject area.

(5) The self-evaluation instruments examined may be classified in three main categories: (a) Activity Check Lists, (b) Question and Answer, and (c) Check List of Traits or Qualities to be rated.

The following guiding principles for programs of self-evaluation by student teachers of mathematics are recommended by the writer:

(1) Unrecorded self-evaluation should be continuous throughout the student-teaching experience.

A student teacher can improve only by his own initiative. If the student teacher is to develop into a teacher who will continue to grow professionally during his years of service, he must develop the ability to be self-critical. This ability in self-analysis is developed. Improvement by the student teacher is effected through his own initiative. The student needs to analyze his own weaknesses and strengths continuously throughout the student-teaching experiences in order to reach the highest possible level of competence. This self-appraisal should be so continuous that the use of formal instruments of evaluation would be completely impracticable from the standpoint of both time and effort. This continuous self-analysis might be aided by the use of simple instruments, such as an activity check list, which the student teacher might rapidly scrutinize in
order to make mental notes of the level of his own performance.

(2) Comprehensive self-evaluation, through use of formal instruments, should be undertaken several times during the quarter or semester.

The practice of having student teachers use rather comprehensive self-evaluation instruments two or three times each quarter or semester does not, in any sense, minimize the need for continuous informal self-analysis. The use of this formal self-evaluation procedure, together with continuous informal self-analysis, strengthens the evaluation program. Self-evaluation, through the use of formal instruments, provides the student with a real opportunity to: (1) make a more comprehensive analysis of his own performance through a consideration of a wide variety of factors, only a portion of which would likely be considered in the informal self-evaluation process; and (2) formulate and record his self-analysis, thus providing himself with a record with which he may compare subsequent self-evaluations. These comparisons will allow the student to analyze further his own professional growth.

(3) Student teachers should use more than one type of self-evaluation instruments.

The use of more than one type of self-evaluation instrument provides greater opportunity for comprehensive evaluation. For example, the use of an activity check list provides the student with an opportunity to indicate the range of activities in which
ne has engaged, but it provides no opportunity for him to evaluate such competencies as providing for individual differences, planning together by teachers and pupils, teaching to improve problem-solving ability, etc.

(4) Self-evaluation instruments should provide the student teacher with an opportunity to write comments freely.

No matter how well constructed an instrument for self-evaluation may be, it is only an approximation of the instrument which fits the needs of a given individual. Inclusion of space for freely written comments gives the student an opportunity to record all of the points which occur to him and, in fact, to adapt the form to his own individual needs.

(5) Self-evaluation instruments lacking in explicit instructions or clearly defined terms should be avoided.

A self-evaluation instrument which contains a list of teaching traits or abilities which are difficult to define clearly, or a rating scale which is described by ambiguous terms, does not afford the student teacher a means by which he can plan constructive improvement. In the writer's opinion, an instrument containing descriptions of what a student teacher does when, for example, he is "teaching for understanding," provides an improved opportunity for self-analysis.

(6) Recorded self-evaluation by the student teacher in mathematics should include the use of at least one
instrument designed specifically for the area of mathematics.

Self-evaluation is undertaken by the student teacher in order to determine weaknesses in teaching performance, and thus find ways of improving his skills in teaching. This effort to find ways of improving is a search for very definite suggestions relative not only to the student teacher's teaching ability in general, but also to his specific ability to teach mathematics. The mathematics student teacher's self-evaluation is strengthened, in the writer's opinion, by the use of an instrument such as the one developed by Pingry, in which areas such as the following are included: teaching for understanding, teaching for transfer, teaching for skills and techniques, and teaching to improve problem-solving ability.

**Pupil Evaluation of the Student Teacher**

Utilization of pupil reactions in the total process of student-teaching evaluation has been a controversial matter. It is significant that this aspect of evaluation is not mentioned by the sub-committee of the American Association of Teachers Colleges in their monumental work in the field of professional laboratory experiences.

However, the 1948 yearbook of the Association For Student Teaching, See pp. 129-132.

27 John C. Flowers, et al., *op. cit.*, pp. 31-33, and pp. 254-256.

contains a chapter on pupil reactions. In that chapter, Bryan outlines the type of opinion questionnaire used in securing pupil reactions at Western Michigan College, Kalamazoo, Michigan.

It appears that there is disagreement not only among the members of the profession on whether or not such pupil reactions should be sought, but also, upon what methods should be used in securing them and what use should be made of them if they are secured. In order to determine whether persons charged with responsibility for supervision of student teachers in mathematics are making use of pupil reactions in student-teaching evaluation, the following question was incorporated in the questionnaire:

Do you have pupil evaluation of the student teacher? (1) Yes, (2) No. The response to this question appears in Table XXVII.

### TABLE XXVII

<table>
<thead>
<tr>
<th>Pupil Evaluation Used</th>
<th>STC</th>
<th>UNIV</th>
<th>LAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Yes</td>
<td>25</td>
<td>29</td>
<td>32</td>
<td>86</td>
</tr>
<tr>
<td>No</td>
<td>62</td>
<td>34</td>
<td>63</td>
<td>159</td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>66</td>
<td>96</td>
<td>256</td>
</tr>
</tbody>
</table>

---


30 Questionnaire V-3, p. 16.
Approximately one-third of the institutions report that they utilize pupil evaluation of the student teacher. Bryan\textsuperscript{31} states that "the student-opinion questionnaire is being used in an increasing number of classrooms in colleges, high schools, and elementary schools." The response in this study seems to indicate that the institutions which now make use of pupil evaluation in their programs for student teachers in mathematics are still in the minority.

The institutions which report use of pupil evaluation seem to favor an instrument which is at least partially unstructured. Table XXVIII shows the response to the following question:\textsuperscript{32}

If you have a pupil evaluation, what type is it? (1) None used, (2) Completely structured form, (3) Structured with space for additional comments, (4) Completely unstructured, (5) Other (Specify).

Fifty per cent of this group use completely unstructured pupil evaluation, and another thirty-three per cent report that a partially unstructured form is used. The opinions of the supervising teachers in the campus high school at Western Michigan College at Kalamazoo, as reported by Bryan,\textsuperscript{33} are unanimous in their support of the pupil-opinion questionnaire used there.

On the basis of limited evidence, secured through the use of pupil evaluation of student teachers in mathematics at The Ohio

\textsuperscript{31} Bryan, op. cit., p. 112.
\textsuperscript{32} Questionnaire V-L, p. 16.
\textsuperscript{33} Bryan, op. cit., pp. 111-112.
<table>
<thead>
<tr>
<th>Type</th>
<th>STC No.</th>
<th>STC %</th>
<th>UNIV. No.</th>
<th>UNIV. %</th>
<th>IAC No.</th>
<th>IAC %</th>
<th>ALL No.</th>
<th>ALL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely structured form</td>
<td>5</td>
<td>20</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>9</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Structured with space for additional</td>
<td>8</td>
<td>32</td>
<td>10</td>
<td>34</td>
<td>10</td>
<td>32</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>comments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completely unstructured</td>
<td>12</td>
<td>46</td>
<td>15</td>
<td>52</td>
<td>16</td>
<td>50</td>
<td>43</td>
<td>50</td>
</tr>
<tr>
<td>Variable-selected by student teacher</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
State University, the writer believes that much benefit may be derived from the use of pupil reactions. Continuous suggestions and advice from supervisors on certain deficiencies of the student teachers usually brought about some improvement. When pupils mentioned the same deficiencies almost complete reform resulted.

The writer's limited evidence, relative to the use of forms for pupil evaluation of the student teacher, indicated that more usable responses were received if the instrument employed was structured, at least so far as major headings were concerned. This writer agrees with Bryan that

34 "if there is another method of teacher self-improvement that produces better results with so little expenditure of time and effort, it has not come to the writer's attention."

The controversy regarding what use should be made of the pupil reactions or evaluations of student teachers, seems to revolve about whether or not these pupil evaluations should be used only by the student teacher or whether they should be placed in the hands of college supervisors and the supervising teachers. Some insist that student teachers need the help of supervisors in interpreting the various pupil reactions, and particularly the conflicting reactions among the pupils as a group. Others leave the use of these pupil evaluations exclusively to the student teacher. The writer's experience indicated that student teachers were anxious to capitalize upon these pupil reactions in order to effect improvement in their teaching, and that the student teachers voluntarily

34 Bryan, op. cit., p. 112.
submitted the pupil evaluations to the college supervisor for his assistance in interpretation. Student teachers seemed to develop increased ability to receive criticism and to make use of it in strengthening their weaknesses as teachers.

It would be most injudicious to regard pupil evaluations as valid ratings of the student teacher. Pupil reactions may be taken as one valuable contributing factor in the total rating of the student teacher's performance. Probably their greatest value is that they provide one more source of guidance to the student teacher as he seeks to raise his level of competence. If pupil reactions to a given student teacher are practically unanimously adverse in nature, it would seem safe to conclude that the student teacher has some serious deficiencies.

**Instruments to Secure Pupil Reactions**

To illustrate one attempt upon the part of a student teacher to secure pupil reactions and to make use of those reactions, the form devised and used by a student teacher in mathematics at The Ohio State University is included. (See pp.112-113). This is a two-page form, the first page being devoted to unstructured comments on the good and bad points of the student teacher, the way he teaches, and the class itself. The second page is somewhat more structured in terms of specific questions to be answered. The student teacher in mathematics who designed and used this form received a great deal of benefit from it, only not from the pupil
reactions received but from the total experience of devising and administering the instrument itself. To the writer, one of the most outstanding points about the whole operation was the way in which this student teacher tried to analyze and utilize these reactions to help the pupils and himself. On a single page, distributed to all students, was the summary of the pupil reactions. (See p.144).

---

**PAGE ONE**

Below, in the proper column, list what you think are good points and bad points about Mr. Jones, about the way he teaches the class, and about the class itself.

<table>
<thead>
<tr>
<th>GOOD POINTS</th>
<th>BAD POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Do you like school? Why?

2. What could be done to make school better?

3. Which subjects do you like best? Which subjects do you dislike?
   1. __________________________    1. __________________________
   2. __________________________    2. __________________________
   3. __________________________    3. __________________________

4. What do you like best about the way this class is taught?

5. What do you dislike most about the way this class is taught?

6. What do you think Mr. Jones could do to make this a better?
THESE ARE SUGGESTIONS WHICH YOU HAD IN YOUR PAPERS

If you will try to:

1. Keep from making too much noise.
2. Be polite to all other members of the class.
3. Keep from throwing paper, chalk, erasers, etc.
4. Leave the room as clean or cleaner than you found it.
5. Take your seats when the bell rings and do not roam around the room.

I will try to:

1. Be more strict yet not mean.
2. Explain the work so everyone understands it.
3. Keep a sense of humor and be friendly.
4. Make our mathematics as interesting and as much fun as I know how.
5. Help those who need it.
6. Have more boardwork, races, and contests if the class shows me that they want them.
This student teacher demonstrated, clearly, a genuine concern for one of the cardinal principles in the use of any instrument of evaluation: the obligation to relay back the data, in summary form, to those participating, so that all participants may benefit from the total operation. While the use of pupil evaluation in the mathematics student teaching programs surveyed in this study, is not now extensive, it can be said that the reports from those who have experimented with this type of evaluation are enthusiastic over this valuable source of data. Bryan\(^{35}\) says that "the chief obstacle to general adoption of this (pupil-opinion) procedure is psychological—the natural tendency to avoid criticism" and that "the best time to help teachers overcome this obstacle is at the very beginning of their teaching career." Student teachers in mathematics known by the writer to have used pupil evaluation exhibited growth in their ability to receive and put to good use critical remarks, not only from pupils, but from adults as well.

Instruments used to secure pupil reactions range from the type already illustrated, partially structured with emphasis upon freely written comments, to the completely structured form. Pupils are asked to remain anonymous in the written instructions on most, if not all, of these forms. The following illustration of an instrument, somewhat more structured than the previous illustration, but still allowing opportunity for comments is given by Burr,

\(^{35}\) Bryan, op. cit., p. 112.
This form consists primarily of questions seeking a "yes" or "no" response. (See page 147). Another type of instrument, included for purposes of illustration, consists of ten major areas of teacher traits or abilities with several possible alternative behavior descriptions to be checked. This instrument entitled, "Pupil Reactions to Student Teacher"37 (See page 148-150) allows the pupil to make a general statement about the teacher and asks him to estimate the probable success of the student teacher on a five-point scale.

A more detailed and completely structured form for pupil reactions is the one designed by Bryan and Yntema.38 It consists of ten questions, each of which has five possible answers to be checked. These answers are labeled: Excellent, Good, Average, Below Average, and Poor. In the writer's opinion, the instrument would be more effective without these labels and much less conducive to "halo" effect. Several other respondents consulted in

---


37 Contributed by Plymouth Teachers College, Plymouth, New Hampshire.

PART II - INSTRUMENTS FOR PUPIL

EVALUATION OF THE STUDENT TEACHER

WHAT DO YOU THINK OF YOUR TEACHER?

1. Do you think that I have treated you with respect?... Yes__ No__
2. Do you think I have been fair to everyone?......... Yes__ No__
3. Do I give you enough help with your work?......... Yes__ No__
4. Do you think I expected or asked too much of you?... Yes__ No__
5. Did I use words that were too big, words that you
did not understand?................................. Yes__ No__
6. Do you think that I do too much of the talking in
group work?......................................... Yes__ No__
7. Do you think I ever bluffed you or the group to
cover up my not knowing something?................. Yes__ No__
8. Do you think that I can laugh at myself when the
joke is on me?........................................ Yes__ No__
9. Do you think of me as a person you want to have
as a teacher?....................................... Yes__ No__
10. Have you gained something special from my being here?Yes__ No__
    If you have, what was it?______________________
    __________________________________________________________________________________

11. As a teacher, are there things you would like me to
do differently?..................................... Yes__ No__

12. Are there any other things you would like to say
about my work with you?........................... Yes__ No__
    If there are, please write them here.__________
    __________________________________________________________________________________

Burr, Harding, Jacobs, Student Teaching
in The Elementary School. New York:
Appleton-Century-Crofts, Inc., 1950,
pp. 392, 393.
Very shortly your student teacher will complete his period of practice teaching. He is interested in having your opinion as to how successful he has been in his teaching. The following questions have been prepared to assist you in expressing your opinion. Please check the statement or statements which most clearly represent your feeling.

PLEASE BE FRANK IN YOUR EXPRESSIONS. YOUR SIGNATURE IS NOT REQUIRED ON THIS FORM.

1. Personal appearance

Is always neatly dressed.
Sometimes "over dresses."
Usually is neatly dressed.
Needs considerable improvement.
In what way?

2. Ability to explain the lessons

Always explains very clearly.
Sometimes can explain things clearly.
Does not seem to always know the lesson himself.
Does not explain the lessons clearly.
Will probably have difficulty in teaching if he does not improve.
How do you suggest he improve?

3. Friendliness in the classroom

Is not kind when he corrects pupil's mistakes.
Gives extra help to pupils who need it.
Is easy to talk to both in and out of class.
Does not seem to understand pupils.
Does not seem to be interested in pupils.
Usually seems interested in pupils.

4. Fairness in grading

Always give the grades earned.
Gives fair grades.
Gives fair grades sometimes.
Grades some pupils too low.
Grades some pupils too high.
Never seems to be fair in grading.
Explains the meaning of the grades he gives.
5. **Discipline**

- Does not act "bossy".
- Doesn't seem to know how to keep order in the classroom.
- Is too easy-going.
- Is able to hold the attention of most of the pupils most of the time.
- Has no control over his temper.
- Always finds fault with everything we do.
- Doesn't seem to recognise disorder in the classroom.
- Is cheerful both in and out of class.

6. **Amount of outside work assigned**

- Gives just the right amount.
- Is too easy on those who do not do their homework.
- Gives too much outside work.
- Does not explain the homework.
- His assignments are easily understood.
- Usually gives an assignment without explaining why or how it is to be done.

7. **Liking for teaching**

- Always seems to enjoy his teaching.
- Makes the lessons interesting.
- Gives everyone an opportunity to discuss and ask questions.
- Helps us in answering our questions.
- Seems "dry" in his teaching.
- Doesn't seem to enjoy his work.
- Has a friendly smile.
- Never smiles.
- Has both "good" and "bad" days.

8. **Voice**

- His voice is not distracting.
- Is difficult to hear from where I am sitting.
- Voice is easy to listen to throughout the period.
- His voice is too high.
- His voice is too low.
- Doesn't speak clearly or distinctly.
- Needs a lot of improvement.
- His voice is very pleasant.
9. Mannerisms

- Has a few mannerisms but they are not objectionable.
- Has many mannerisms which are distracting.
- Is free from any mannerisms.
- Has several mannerisms which are very objectionable. What are they?

10. Knowledge of subject matter

- Seems to know his subject but lacks confidence.
- Acts as if he were a "know-it-all".
- Lacking in both confidence and knowledge of subject matter.
- Knows his subject and appears confident.
- Doesn't mind being corrected by pupils.
- Will admit a mistake when it is called to his attention.

Comments:

Please make additional comments that you feel might be helpful in describing your student teacher's strengths and weaknesses. Did you enjoy having him as a teacher? Did he help you learn? Would you care to have him as a regular teacher? Do you have any suggestions that will help him improve?

As a summary of your impression, please check on the scale below approximately where you think your student teacher stands.

<table>
<thead>
<tr>
<th>Estimate of Probable Success as a Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior Teacher</td>
</tr>
</tbody>
</table>
this study, contributed similar pupil evaluation instruments.39

**Summary of Pupil Evaluation**

The data secured from the questionnaire, and the information secured through examining instruments used to obtain pupil reactions to the student teacher, support in the writer’s judgment, the following conclusions:

1. **Approximately one-third of the institutions responding in this study make use of pupil reactions as a part of the program of student-teaching evaluation.**

2. **Of this one-third, at least half make use of totally unstructured pupil evaluation forms.**

3. **Most of the forms used to secure pupil reactions, which were examined in this study, were partially structured with emphasis upon freely written comments.**

The following guiding principles for programs of pupil evaluation of the student teacher are recommended by the writer:

1. **Student teachers should secure pupil reactions of their teaching performance.**

---

39 "Questionnaire," Western Michigan College, Kalamazoo, Michigan; "Student's Report on Student Teacher," Drake University, Des Moines, Iowa; "Pupil Evaluation on Student Teaching," Texas College of Arts and Industries, Kingsville, Texas; "Pupil Rating of Student Teachers," Georgia Teachers College, Collegeboro, Georgia; "A Pupil's Rating Scale of An Instructor," Hiram College, Hiram, Ohio; "The Student Rates the Teacher," University of Southern California, Los Angeles, California; "Pupil Reaction to Instruction," University of Colorado, Boulder, Colorado; "Evaluation of Student Teaching," Huron College, Huron, South Dakota.
Student teachers are very sensitive to the reaction of their pupils, just as speakers are sensitive to the response of their audiences. The reactions of pupils can be secured with a minimum of time and effort on the part of the student teacher. They provide, perhaps, the most economical means of effecting rapid improvement of the student teacher. Such reactions are of primary importance in guiding the student teacher toward improvement, and any other use made of these pupil reactions requires careful consideration.

(2) Pupil evaluation of the student teacher should be secured about the middle of the quarter or semester.

The maximum value cannot be gotten from pupil reactions to the student teacher if they are secured very early or very late in the quarter or semester. If these reactions are sought early in the term the pupils often are not acquainted with the student teacher and his teaching performance sufficiently to be able to state their reactions in a meaningful way. If the student teacher waits until late in the quarter he has too little time to profit from the pupils' reactions.

(3) In pupil evaluation pupils should remain anonymous.

Few pupils are inclined to incur voluntarily the displeasure of their teacher. The reactions of the pupils, if they remain anonymous, will be more frank and honest because they have no fear of teacher retribution against any individual pupil.

(4) The type of instrument used to secured pupil reactions should be geared to the maturity level of the pupils.
It is important that the instructions concerning the use of the instrument and the structured portion of the instrument be written in terms which can be easily understood by pupils at the grade level involved. For example, the instrument, shown on pages 142-143, used by a student teacher at The Ohio State University, is a rather simple instrument which contains no involved instructions or items and which might be used with pupils in the upper grades of the elementary school with ease. On the other hand, the instrument used at Los Angeles State College of Applied Arts and Sciences, shown on pages 338-343, is much more detailed and more suitable for use at the senior high school or college level.

(5) An adequate instrument to secure pupil reactions should be partially structured and thus insure an opportunity for freely written comments by pupils.

This means that pupils, regardless of their maturity level, need some guides to follow in formulating and recording their reactions to a student teacher. The student teacher needs to determine, through his knowledge of his own pupils, the amount and kind of structure which will be likely to elicit the most intelligent response from his group. The use of some structure makes it possible for the student teacher to get from several of his students their opinions concerning certain specified aspects of his teaching. By providing space for freely written comments, the individual pupil may state his opinion about any other aspects of the student teacher's performance which impress him particularly.
(6) The student teacher should summarize the pupil reactions and find ways of utilizing them to help improve the total teaching-learning situation.

All participants in any evaluation process have a right to share in any benefits which may be derived from an analysis of the data which is secured. It is possible for the teaching-learning situation to be improved in certain respects through the initiative of the pupils, if they are provided with a summary of their own reactions, just as well as through the initiative of the student teacher.

(7) Pupil reactions should be used by the student teacher but not by the supervisors unless the student teacher voluntarily submits them.

This principle emphasizes that pupil reactions should be used primarily as a means to help the student improve his teaching and not as an element in determining his grade. The student teacher should understand that the reactions of his pupils will not be used to embarrass him in any way and that, in fact, no one will solicit an opportunity to learn what those reactions are unless the student teacher, himself, seeks the counsel of his supervisors in interpreting the pupil reactions.

Chapter Summary

The importance of the contributions which both self-evaluation and pupil evaluation may make to a comprehensive program of student-
teaching evaluation, has been emphasized in the preceding discussion. The evidence which has been presented indicates that self-evaluation is more widely emphasized in student-teaching programs than in pupil evaluation. About three-fourths of the institutions responding in this study use some form of recorded self-evaluation, while about one-sixth of the same group make use of pupil evaluation. Self-evaluation, using an instrument for recording the evaluation, is undertaken usually no more than two or three times during the period of student teaching. An examination of the self-evaluation instruments indicates that virtually all such instruments, currently used by mathematics student teachers, are designed for use by student teachers in all areas, not just for mathematics specifically.

The following guiding principles for self-evaluation and pupil evaluation are, in the writer's opinion, consistent with those cited in the literature as applicable to the more general areas of professional laboratory experiences and student teaching, and are based upon the data assembled, as well as upon an examination of a number of evaluation instruments:

1. Unrecorded self-evaluation should be continuous throughout the student-teaching experience.
2. Comprehensive self-evaluation, through use of formal instruments, should be undertaken several times during a quarter or semester.
3. Student teachers should use more than one type of self-evaluation instrument.
(4) Self-evaluation instruments should provide the student teacher with an opportunity to write comments freely.

(5) Self-evaluation instruments lacking in explicit instructions or clearly defined terms should be avoided.

(6) Recorded self-evaluation by the student teacher in mathematics should include the use of at least one evaluation instrument designed specifically for the area of mathematics.

(7) Student teachers should secure pupil reactions to their teaching performance.

(8) Pupil evaluation should be secured about the middle of the quarter or semester.

(9) In pupil evaluation pupils should remain anonymous.

(10) The type of instrument used to secure pupil reactions should be geared to the maturity level of the pupils.

(11) An adequate instrument to secure pupil reactions should be partially structured and thus insure an opportunity for freely written comments by pupils.

(12) The student teacher should summarize the pupil reactions and find ways of utilizing them to help improve the total student teaching-learning situation.

(13) Pupil reactions should be used by the student teacher, but not by the supervisors unless the student teacher voluntarily submits them.
CHAPTER 4

METHODS OF EVALUATION USED BY SUPERVISORS OF STUDENT TEACHERS IN MATHEMATICS

The Role of Supervisors in Evaluation

It was indicated earlier (Table XIII) that eighty-six per cent of the respondents in this study report that student-teaching supervision involves both a college supervisor and a supervising teacher. No indication was given as to the relative roles of these supervisors in the actual supervision and evaluation of student teachers. Furthermore, no indication was given as to the number of institutions in which the supervising teacher and college supervisor are one and the same person. In some teacher-education institutions which have campus laboratory schools in which student teachers are assigned, it is true that the supervising teacher is also the college supervisor. This situation sometimes exists when all teachers in the campus school are members of the college or university faculty. In institutions where student teachers are placed in off-campus co-operating schools, the college supervisor and the supervising teacher are usually two distinct persons. The college supervisor may, in these cases, take a very minor role in the supervision and evaluation of student teachers, or he may, in fact, assume almost complete responsibility. The college supervisor who plays a minor role may simply transmit to the college registrar the evaluation made by the supervising teacher.
This wide latitude in responsibilities assumed by college supervisors affects, very considerably, the program of student-teaching evaluation. Regardless of the fact that the responsibility for evaluation, when it is taken by college supervisors, varies considerably, the supervising teacher is, or should be, a key person in evaluation. The supervising teacher has continuous, daily contact with the student teacher which enables him more than any other person, to assemble data on the student teacher's performance.

In an effort to determine the relative roles of the supervising teacher and the college supervisor in final evaluation of the student teacher, the following question was included in the questionnaire: ¹ Who is responsible for the final grade of the student teacher? (1) Supervising teacher in the secondary school, (2) College supervisor, (3) College supervisor with advice from supervising teacher, (4) Other (Indicate). The response to this question appears in Table XXIX.

There is a clear indication here that the final responsibility for the grade rests heavily upon the college supervisor. The college supervisor is responsible in a total of seventy-five per cent of the cases, but in fifty-six per cent he secures advice from the supervising teacher. The survey shows that in another twenty-one per cent of the institutions the supervising teacher alone is

¹ Questionnaire, Sec. VII-1, p.16.
responsibility. This shows that while the ultimate responsibility for the final grade rests upon the college supervisor, the grade is based, to a lesser or greater degree, upon judgments relayed to the college supervisor by the supervising teacher. A further evidence of the importance of the role of the supervising teacher in evaluation is that among the evaluation instruments contributed by the colleges responding in this study, one hundred two were specifically designed for the use of supervising teachers, while only seventy-eight were designed for the use of college supervisors, and possibly half of those were intended also for the use of supervising teachers.
Evaluation by Supervising Teacher

The prominence of the supervising teacher's role in evaluation is stressed by Flowers\(^2\) who concludes that, in the study of one-hundred fifty-seven institutions, excluding liberal arts colleges, "the final evaluation of the student teacher in most cases" is made by supervising teachers. The supervising teacher, who has daily contact with the student teacher, must, of necessity, be the key person in making evaluation "continuous."

To determine the emphasis which the supervising teacher gives to available sources of data in formulating his final evaluation of the student teacher, the following question was asked:\(^3\) Upon what do supervising teachers in the secondary schools base their quarter or semester evaluation of the student teacher? (Check all alternatives applicable in your program) (1) Standard tests of pupil performance, (2) Locally developed teacher rating scales (3) Observations of, and conferences with, the student teacher, (4) Self-appraisal by the student teacher, if any, (5) Pupil evaluations or reactions to the student teacher, (6) Conferences with the college supervisor, (7) Other (Indicate). The response to this question is indicated in Table XXX.

An examination of the frequency with which the different bases of evaluation were checked reveals clearly that the supervising teacher bases his evaluation primarily upon (1) observations

\(^2\) John G. Flowers and others, op. cit., p. 255.

\(^3\) Questionnaire V-5, p. 16.
TABLE XXX

BASES OF SUPERVISING TEACHER'S FINAL EVALUATION OF THE STUDENT TEACHER

<table>
<thead>
<tr>
<th>Bases of Evaluation</th>
<th>Frequency Checked by Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Standard tests of pupil performance</td>
<td>18</td>
</tr>
<tr>
<td>Locally developed student teacher rating scales</td>
<td>51</td>
</tr>
<tr>
<td>Observations of and conferences with the student teacher</td>
<td>81</td>
</tr>
<tr>
<td>Self-appraisal by student teacher, if any</td>
<td>40</td>
</tr>
<tr>
<td>Pupil evaluations or reactions to the student teacher</td>
<td>32</td>
</tr>
<tr>
<td>Conferences with the college supervisor</td>
<td>58</td>
</tr>
</tbody>
</table>

of, and conferences with, the student teachers; and (2) conferences with the college supervisor. The use of locally developed rating scales is third, in frequency of use, with slightly over half the institutions checking that item. While 185 institutions (Table XXVI, p. 104) indicated that they made some use of student self-evaluation, only 90, less than half the first number, say that such self-appraisal is considered in the supervising teacher's final evaluation.
The writer does not wish to question the value of conferences as a means of securing evaluative data, but the evidence presented indicates that too much depends upon this one means of gathering data, and that insufficient use is being made of other methods of evaluation. The timing of these conferences with student teachers is important, if they are to make their maximum contribution as an evaluative device. Sometimes they are conducted immediately after the student teacher has finished his teaching activity for the day, and this seems to the writer to be the most desirable time. Often these conferences have to be fitted into several small units of time, the only ones available in the supervising teacher's busy schedule; sometimes they must be postponed until another day. When the conference cannot be held immediately, or very soon, after the student teacher finishes his teaching for the day, the supervising teacher should form the habit of recording the main points he has observed, so that the conference can be of maximum value to the student teacher. Some teachers record the essential points discussed in conferences so that student teachers have at hand, at all times, a record of suggestions for improvement made by the supervising teacher.

The need for supervising teachers to have records at hand detailing the strengths and weaknesses of the student teacher's work is not as widely recognized as would seem desirable. Only fifty-seven per cent of the replies indicate the use of student-teacher rating scales (a written record) as a basis of the super-
vising teacher's final evaluation. Only thirty-five per cent of the reports indicate that student self-appraisal is so considered. Self-appraisal is usually in terms of a written report, structured or unstructured, and includes such items as daily logs, weekly reports, mid-term and final self-evaluations. There is a definite indication that the supervising teacher comes to the job of final evaluation equipped chiefly with information carried in the memory and gained from observations and conferences.

The failure of supervising teachers to record reactions to the student teacher's work is a serious block, in the writer's opinion, to promoting common understanding of the principles, techniques, and major outcomes of the evaluation program. To have genuinely co-operative evaluation, the student, the supervising teacher, and the college supervisor must have a common understanding and acceptance of the evaluative criteria.

Instruments of Evaluation Used by Supervising Teachers

Instruments of evaluation used by supervising teachers may be divided into two main categories: (1) those designed for use in evaluating the teaching of a single lesson, and (2) those designed for mid-term, over-all appraisal of the student teacher. Most of the one hundred thirteen rating forms, which are specifically for the use of the supervising teacher and were secured by the writer for this study, fall in the second category. Included among the instruments for mid-term appraisal are those designed primarily
for final evaluation, and those designed for weekly use. Sixty-
four of the one hundred thirteen forms examined were designed
specifically for use by the supervising teacher in final evaluation.
An additional thirty-eight forms were for use in final evaluation,
at mid-term, and perhaps as many as three or four times during the
student-teaching experience. Four of the evaluation instruments
were designated specifically for weekly use, and the remaining
seven were for use by the supervising teacher in recording his
reactions to the teaching of a single lesson.

From this sampling of the instruments for evaluation used by
supervising teachers, it must be concluded that the primary purpose
of the formal instruments used is to secure data upon which to base
the final grade and perhaps to do some final counseling with the
student as to his strengths and weaknesses. This provides further
substantiating evidence that most of the evaluation conducted by
the supervising teacher for the purpose of assisting the student
teacher to increase his teaching competence, is on an informal basis.

The writer examined forms used for rating the teaching of a
particular lesson, and discovered that they are mainly lists of teacher
traits and abilities about which the supervising teacher is asked to
write comments. Some of the instruments have only a few broad
headings under which the supervising teacher is to comment, (See
page 167) while others have several major headings with a break
down of teacher traits, abilities, and activities with space following
for each comment. (See page 168). An examination of these forms

4 Critic Teacher's Report, West Virginia Wesleyan College, Buckhannon,
West Virginia.

5 Student Teacher Report, Hunter College High School, New York City.
and similar ones reveals that, while the broad categories have widely differing titles, the points covered in the over-all are very much the same. All of these instruments are designed to help the supervising teacher secure data relative to: (1) the personal characteristics of the student teacher; (2) the effectiveness of his preparation for or planning of the lesson; (3) his teaching procedures; (4) his ability to motivate and secure pupil participation, and hold the attention of the class; (5) his use of teaching aids; and (6) the efficiency of his conduct of classroom routine. All of these instruments were designed for general use and not specifically for student teachers of mathematics.

The broad categories of evaluation, which appear on the forms designed for evaluation by the supervising teachers, several times during the quarter, are, in general, similar to those which appear on the forms just examined, but the difference comes in the breakdown of items in these broad categories. An example of the weekly report of the supervising teacher is shown on pages 169-170. The items which appear in the forms used periodically, seek a judgment formed by the supervisor in a number of consecutive observations of the student teacher in action, whereas the items in the forms for rating a single lesson are designed to record the behavior observed at a given time. An example of an evaluation instrument designed

---


7 Supervising Teacher's Report of Student Teaching, Huron College, Huron, South Dakota.
for use several times during the student-teaching experience is shown on pages 171-175. This particular instrument provides space for recording ratings made at three different times during the student-teaching period. Some other institutions use very similar forms. The recording, on a single sheet, of several ratings made at different times, has the obvious advantage of presenting a visual picture of the change occurring in the student teacher's performance. However, it is the writer's opinion that the presence on the sheet of the previous rating, is apt to influence or confuse the rater as he makes the second and third evaluations and that it is, therefore, preferable to use separate forms each time a rating is made.

Examples of the forms used in one institution for mid-term and final evaluations are shown on pp. 176-177. These forms cover about the same range of qualities to be rated and use a five-point scale. The five-point scale is the most common, the points being named in various ways, such as the following scale: (1) Superior, (2) Good, (3) Fair, (4) Poor, (5) Unsatisfactory. The terms used to define these five points on the scale are nearly as numerous as the different instruments employing this type of scale for evaluation. Some instruments use five-points and describe

---

Evaluations of Student Teacher, Southwestern Louisiana Institute, Lafayette, La.

9 Notable examples of similar form are those used by State Teachers College, Edinboro, Pa. and Georgia Teachers College, College-boro, Ga.
PART III - INSTRUMENTS OF EVALUATION
USED BY SUPERVISING TEACHERS

CRITIC TEACHER'S REPORT

<table>
<thead>
<tr>
<th>Critic Teacher</th>
<th>Lesson Number</th>
<th>Student Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Subject Taught</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I. REACTION OF TEACHER

II. REACTION OF PUPILS

III. SUGGESTIONS
<table>
<thead>
<tr>
<th>NAME OF STUDENT TEACHER</th>
<th>Subject of Recitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PERSONALITY**

<table>
<thead>
<tr>
<th>Posture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice</td>
</tr>
<tr>
<td>Diction</td>
</tr>
<tr>
<td>Use of English</td>
</tr>
<tr>
<td>Manner</td>
</tr>
<tr>
<td>Native Ability</td>
</tr>
</tbody>
</table>

**SKILL IN PLANNING**

<table>
<thead>
<tr>
<th>Apportionment of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical development of lesson</td>
</tr>
<tr>
<td>Clarity</td>
</tr>
<tr>
<td>Thoroughness</td>
</tr>
<tr>
<td>Knowledge of subject</td>
</tr>
<tr>
<td>Objectives immediate ultimate</td>
</tr>
</tbody>
</table>

**PRESENTATION**

<table>
<thead>
<tr>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill in questioning</td>
</tr>
<tr>
<td>Use of illustrative material</td>
</tr>
<tr>
<td>Use of blackboards</td>
</tr>
<tr>
<td>Use of other teaching devices</td>
</tr>
<tr>
<td>Proper emphasis</td>
</tr>
<tr>
<td>Power to arouse interest</td>
</tr>
</tbody>
</table>

**CLASSROOM MANAGEMENT**

<table>
<thead>
<tr>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupil attention</td>
</tr>
<tr>
<td>Pupil activity</td>
</tr>
<tr>
<td>Posture</td>
</tr>
<tr>
<td>English of pupils</td>
</tr>
<tr>
<td>Strongest feature of the recitation</td>
</tr>
<tr>
<td>Weakest feature of the recitation</td>
</tr>
<tr>
<td>Improvement or lack of improvement</td>
</tr>
</tbody>
</table>

**REMARKS—use reverse side**

-------------------------------
Critic Teacher

------------------------------
Head of Dept.
Name of Student | Semester | Year | Dates to
--- | --- | --- | ---
School | Subject (if high School) | Grade (if elementary)

**Observation and Teaching Time**
(to be checked each day)

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Total Time</th>
<th>Tuesday</th>
<th>Total Time</th>
<th>Wednesday</th>
<th>Total Time</th>
<th>Thursday</th>
<th>Total Time</th>
<th>Friday</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed</td>
<td>from...to...</td>
<td>...</td>
<td>from...to...</td>
<td>...</td>
<td>from...to...</td>
<td>...</td>
<td>from...to...</td>
<td>...</td>
<td>from...to...</td>
<td>...</td>
</tr>
<tr>
<td>Taught</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
</tr>
<tr>
<td>Total Time</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
<td></td>
<td>...</td>
</tr>
</tbody>
</table>

**Evaluation for the Week**
(Check each item in appropriate column using as a standard the quality of teaching that may reasonably be expected of beginning teachers. Hand this report to your principal at the end of the week.)

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Very Good</th>
<th>Average</th>
<th>Below</th>
<th>Unsatisfactory</th>
</tr>
</thead>
</table>

**I. Personal and professional qualities**

1. General appearance (is well groomed, wears suitable apparel)
2. Personality (congenial, poised, approachable, courteous, energetic)
3. Industry (willing to work, conscientious, interest in the work)
4. Initiative (resourceful, sees what needs to be done, takes responsibility)
5. Co-operation (prompt, dependable, profits by supervisory criticism)

**II. Classroom management**

1. Gives adequate attention to light, ventilation, etc.
2. Uses supplies, equipment and teaching aids to advantage.
3. Develops smooth routine
1. Maintains conditions conducive to learning
5. Makes good use of time and gets things done
6. Develops pupil responsibility

III. Instructional skill
1. Knows the subject matter
2. Has lessons well planned
3. Arouses pupil interest
4. Encourages pupil activity
5. Stimulates pupil thinking
6. Conveys ideas clearly
7. Uses good English
8. Speaks with pleasing voice and inflections
9. Speaks distinctly and enunciates clearly
10. Gives clear and adequate instructions and assignments
11. Takes sympathetic attitude toward pupils' problems and difficulties
12. Recognizes abilities and needs of individual pupils
13. Evaluates pupil achievement understandingly

Evaluative Summary
Deserves special commendation for______________________________
Has made improvement in_____________________________________
Needs especially to improve in__________________________________

In comparison with other student-teachers I consider (him, her) in general:
EXEMPLARY; VERY GOOD; AVERAGE; SOMETHING BELOW AVERAGE;
UNSATISFACTORY.

Supervising Teacher
SOUTHWESTERN LOUISIANA INSTITUTE
Lafayette, Louisiana

Dates: First Rating: Name:
Second Rating: Class:
Third Rating: Supervisor:

EVALUATIONS OF STUDENT TEACHER

This sheet will be a permanent record of all three ratings made. After each rating the sheet will be sent to SLI for checking and comments. After the third evaluation it will be retained in the files at SLI. If at the time of rating you feel that certain items listed are not applicable they may be left unmarked or crossed out. Numbers of the various rankings will be used instead of checks as has been done.

EVALUATION: (1) Superior; (2) Good; (3) Average; (4) Poor; (5) Unsatisfactory

I. QUALIFICATIONS FOR TEACHING

A. Appearance
   1. Grooming
   2. Appropriate dress

B. Manner
   1. General Impression
   2. Enthusiasm
   3. Poise
   4. Speech
   5. Voice; tone and volume

C. Attitude
   1. Interest in teaching
   2. Promptness for appointments
   3. Promptness with work
   4. Ability to recognize and improve weak points
   5. Desire to improve by:
      a. Evaluating and using suggestions
      b. Seeking conferences needed
      c. Reading
      d. Professional activities
Evaluations of Student Teacher (Continued)

6. Understanding and use of professional ethics

D. Preparation for teaching
   1. Knowledge of subjects taught
   2. planning
   3. Use of the principles of group psychology
   4. Understanding of learning processes
   5. Speaking ability
   6. Writing ability
   7. Spelling ability
   8. English Usage
   9. Experience in leading group activities

E. Personality traits
   1. Liking for children
   2. Originality
   3. Initiative
   4. Judgment
   5. Sense of humor
   6. Patience
   7. Stability
   8. Efficiency
   9. Disposition
  10. Ability to work with others

F. Relationships
   1. With pupils in class
   2. With pupils out of class
   3. With other student teachers
   4. With supervisor
   5. With other members of faculty
   6. With community

II. USE OF OBSERVATIONS

A. Interest in observing
B. Ability to recognize good teaching practices
C. Skill in writing good reports on classes observed
D. Ability to use information gained while observing
III. PLANNING FOR TEACHING

A. Knowledge of pupils
   1. I. Q. ratings
   2. Cumulative records
   3. Personal contacts
   4. Home visits
   5. Efforts to secure information
   6. Use made of knowledge gained

B. Pre-planning
   1. Recognition of importance
   2. Selection of subject matter
      a. For importance
      b. For use
      c. For interest
      d. For abilities
      e. For time allotted
      f. For school resources
      g. For community resources
   3. Organization of subject matter
   4. Adaptation to needs and abilities
   5. Growth in subject matter
   6. Variety in methods
   7. Ability to recognize and formulate aims
   8. Ability to plan motivation
   9. Ability to anticipate difficulties
  10. Suggestions beyond text
  11. Ability to prepare assignments adapted to interest and ability
  12. Ability to provide for individual differences
  13. Ability to plan the effective use of illustrative material

C. Preparation for classes
   1. Familiarity with work planned
   2. Preparation of illustrative material
   3. Readiness of equipment and supplies
   4. Room arrangement

IV. INSTRUCTION OF CLASS

A. Teaching
   1. Ability to command attention
   2. Ability to guide discussion
   3. Ability to formulate questions
Evaluations of student teacher (Continued)

4. Ability to handle the unexpected
5. Ability to assign homework
6. Ability to give class directions
7. Skill in managing laboratory
8. Ability to arouse and maintain interest
9. Ability to guide pupils in using principles taught
10. Ability to secure pupil participation in planning
11. Ability to "put over" subject
12. Ability to use or adapt plan as needed
13. Use of illustrative material
14. Use of school and community resources
15. Use of evaluation devices
16. Use of summaries
17. Use of time

B. Pupil Achievement
1. Increase of knowledge
2. Increase of abilities
3. Influence on attitudes and ideals
4. Influence on habits of study
5. Influence on desire to continue study of subject

C. Discipline
1. Prevention of discipline problems
2. Ability to keep all class members occupied
3. Proper standards of discipline
4. Ability to maintain consistently
5. Efficiency in opening and closing class.

V. RECORDS

A. Ability to record information gained about pupils
B. Ability to record grades
C. Efficiency in keeping records

VI. EXTRA CURRICULAR ACTIVITIES

A. Use of third hour
B. Ability to sponsor
C. Participation at high school
D. Participation at college
E. Participation in community

VII. SPECIAL STRENGTHS OF THIS TEACHER:
Date:
Evaluations of student teacher (Continued)

VIII. IMPROVEMENTS NEEDED
Date:

IX. EXTRA CURRICULAR ACTIVITIES AT HIGH SCHOOL
Date:

COMMENTS BY DIRECTOR OF STUDENT TEACHING:
Date:
COLLEGE OF EDUCATION

University of Washington

Critic Teacher Report on Cadet Teaching

Preliminary report on ______________ for period ending ____________ 195

School __________________________ Subject __________________________

Actual number of times cadet has taught to date _______________

Indicate your evaluation of the cadet's work to date.

<table>
<thead>
<tr>
<th>Qualities of Teaching Ability</th>
<th>Supr.</th>
<th>Good</th>
<th>Aver.</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Voice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Adaptability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Enthusiasm and Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Self-control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Tact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Grasp of Subject Matter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Co-operative Spirit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Professional Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Interest in Pupils</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Use of English</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Skill in Observation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Skill in Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Skill in Sensing Classroom Difficulties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A check in this column indicates need for definite improvement on part of cadet in order to do successful work.

Please make any suggestions that would assist the supervisor and director in improving the quality of work this cadet is doing. (These might include character traits, methods of instruction, subject background, and the like.)

Date ________________________ Critic Teacher ________________________
COLLEGE OF EDUCATION
University of Washington

Critic Teacher Report on Cadet Teaching

Final report on ____________ for period ending ____________ 19__

School ___________________ Subject ___________________

Indicate your evaluation of the cadet's work during the present semester:

<table>
<thead>
<tr>
<th>Qualities of Teaching Ability</th>
<th>Supr.</th>
<th>Good</th>
<th>Aver.</th>
<th>Fair</th>
<th>Poor</th>
<th>Improv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Qualities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Voice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Poise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Dependability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Tact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sense of Humor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Enthusiasm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Qualities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Attitude toward Teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Knowledge of Subject Matter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Promptness in Meeting All Requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Willingness to Assume Responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Amenability to Suggestion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Understanding of Pupils</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Use of English</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Co-operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Management:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Discipline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Neatness of Room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Economic Use of Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Care of Routine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Attention and Response of Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Techniques:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Motivation of Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Attention to Individual Differences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Lesson Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Skill in Supervising Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Skill in Presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Skill in Evaluating Pupil Achievement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Knowledge of Teaching Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please give a brief, composite estimate of this cadet as a prospective teacher, including possibility of growth, and areas in which cadet needs further training or supervision:

Date ____________________ Critic Teacher ____________________
three of the points. Example:

**INITIATIVE**

| Finds things to do without supervision;              | Works well with suggestions;                           | Requires prodding;                                   |
| works on own initiative;                            | needs some help                                         | shirks responsibility;                               |
| enterprising; self-reliant                           |                                                          |                                                    |

Another illustration of an attempt to describe, in this case four points of the scale, is shown by the following example, taken from an evaluation instrument designed by a supervising teacher in secondary-school mathematics:

**The Practice-Teacher's Control of Emergencies and Unexpected Situations**

- Superior ability to cope with unexpected situations in a controlled manner.
- Capable of control in unexpected situations.
- Copes with most unexpected situations.
- Usually loses control in an unexpected situation.

In some cases where three or more points on a scale are defined, the points are also named. An illustration from a rating form of this type is given below:

**Degree of Participation in Class Activities**

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupils hostile, careless, indifferent to</td>
<td>Pupils agreeable, doing required</td>
<td>Pupils eager, absorbingly interested;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11 From: "Participator Rating Scale," University of Wisconsin, Department of Education.

12 From: "Rating and Self-Appraisement Scale for Practice Teachers," by C. Hopkins, Minot State Teachers College, Minot, N. D.

13 "Evaluation of Student Teachers," Georgia Teachers College, Collegeboro, Ga.
work, held to undesirable tasks making occasional voluntary contributions putting forth best effort to achieve worthwhile goals.

It is the writer's opinion that much of the good which might result from describing points on the scale is negated by naming them. Without these old familiar names the evaluator would be required to read the descriptions and check the one best describing the situations, and some of the so-called "halo" effect might be eliminated. With the five points named, the evaluator's over-all opinion of the student tends to carry him down a vertical line checking most items according to that over-all opinion of the student as being excellent, good, or whatever it may be.

Instruments of evaluation used by supervising teachers solely for final evaluation are not, for the most part, unlike those forms already cited, which are used for both mid-term and final evaluation. An additional example of a form designed strictly for final evaluation is included in the Appendix. This form is an attempt to combine the rating on a five-point scale, with written comments and suggestions relating to each trait rated. It is this writer's opinion that the supervising teacher using this form for evaluation would be required to give considerable thought in the preparation of an evaluation, and that this particular instrument has definite advantages over either


the straight check list with a five-point rating scale or the broadly-structured instrument in which all reactions are in terms of written comments.

Evaluation by Supervising Teachers

Conclusions and Recommendations

Upon the basis of the response to the questionnaire, an examination of the instruments of evaluation used and the literature on evaluation, the following conclusions, concerning evaluation of the student teacher by the supervising teacher, may be stated:

1) The evaluation by the supervising teacher is considered in determining the final grades of the student teacher in seventy-seven per cent of the institutions responding.

2) Only 57 per cent of those responding indicate that the supervising teacher records his evaluation of the student teacher.

3) Eighty-nine per cent of those responding indicate that the supervising teacher bases his evaluation of the student teacher upon "observations of, and conferences with the student teacher."

4) Of the one hundred thirteen forms designed for use by the supervising teacher and examined by the writer, only seven were for use in the evaluation of the teaching of a single lesson.

5) One hundred two of the one hundred thirteen forms were for use in periodic, mid-term, or final evaluation. Four of the forms were specifically for weekly use.
(6) None of the instruments examined was designed specifically for use in the area of mathematics.

(7) Most of the evaluation instruments used by supervising teachers, employ a scale, the points of which are defined by ambiguous terms, such as Good, fair, poor, average, etc.

The evaluation of the student teacher in mathematics, which is conducted by the supervising teacher, may become more effective, in the writer's judgment, if the following recommended guiding principles are applied:

(1) Supervising teachers should be encouraged to record comprehensive mid-term evaluations of the student teacher, two or three times during the student-teaching period.

While much of the evaluation conducted by supervising teachers must be informal and unrecorded, it is desirable for them to make some recorded evaluations so that (a) the student teacher can refer repeatedly to those evaluations as a resource for helping him to improve his teaching, and (b) the supervising teacher may accumulate specific evidence supporting his final judgment concerning the student teacher's ability and success. In cases in which the supervising teachers do not have final responsibility for the grade of the student teacher, their advice to the college supervisor is considered a major factor in determining the grade.

(2) Instruments used in the mid-term evaluation of the mathematics student teacher by the supervising teacher should provide opportunity for recording an evaluation
of the student teacher's ability to carry the responsibilities of a teacher in addition to classroom instruction.

In the instruments which supervising teachers use for evaluations, this breadth of coverage is significant because it is the supervising teacher who has continuous contact with the student teacher and, therefore, the opportunity to observe how he functions in many teacher activities in addition to classroom teaching. The recording of data concerning the student teacher's ability to conduct various teacher activities is valuable information for the college supervisor especially.

(3) Supervising teachers should be encouraged to make recorded evaluations of the student's teaching of a single mathematics lesson.

It is impossible for most supervising teachers to make extensive use of written evaluations of the teaching of individual lessons. It is possible, however, for these evaluations to be made for the teaching of certain selected lessons. These might well be those lessons in which the student teacher is introducing a new topic in mathematics. Recorded evaluations of such teaching performance would be of lasting value to the student teacher, particularly if he were provided a copy of the evaluation report which he might retain as a permanent reference.

(h) Supervising teachers should use instruments designed for use in the particular area of mathematics, for making mid-term evaluations of student teachers in mathematics.
The use of instruments designed for evaluating the student teachers in the particular area of mathematics helps to emphasise evaluation as a means of assisting the student become an increasingly competent teacher rather than to stress evaluation for purposes of determining a grade. These instruments which are intended for use with student teachers of mathematics specifically afford the supervising teacher an opportunity to make very definite suggestions concerning the strong and weak points of the student teacher's performance, not only as a teacher, generally, but as a teacher of mathematics, specifically. Supervising teachers need a means of recording not just suggestions about the general weaknesses of the student teacher, but actual suggestions which state specifically what he did wrong when he taught a lesson in algebra in which a topic, such as directed numbers, was introduced. Supervising teachers need to use in their evaluation, instruments which emphasise both the general attributes of a good teacher and the specific attributes of a good mathematics teacher.

(5) Supervising teachers should use instruments of evaluation which consist of descriptions of behaviour which is observable by the evaluator, in order to gather data about the student teacher.

Supervising teachers need to use forms for evaluation which are data-collecting devices, as opposed to judgment-gathering devices for recording their observations of the student teacher. Data so collected can be of great assistance to the college supervisor,
not simply for grading purposes, but primarily for counseling purposes. Instruments which consist of rating scales to be checked, with the points of the scale defined by such ambiguous terms as fair, average, poor, etc., cause supervising teachers to record judgments as to certain traits or abilities of the student teacher. The college supervisor finds that there is considerable variation in the way in which supervising teachers interpret the various terms, as well as in their bases of judgment. A collection of such judgments cannot result in consistent student-teaching evaluation.

**Evaluation by the College Supervisor**

The data of Table XXIX (See page 159) indicate that the college supervisor is totally responsible for final evaluation of the student teacher in nineteen per cent of the institutions reporting, and responsible with advice from supervising teachers in another fifty-six per cent of the institutions. This heavy dependence upon the supervising teacher for help in the college supervisor's final evaluation is further substantiated by the response to the following question:  

**16** Upon what do college supervisors base their quarter or semester evaluation of the student teacher? (Check all alternatives applicable in your program).

---

*Questionnaire V-6, p. 16.*
(1) Standard tests of pupil performance, (2) Pupil evaluations of, or reactions to, the student teacher, (3) Observation of, and conferences with, the student teacher, (4) Self evaluation by the student teacher himself, if any, (5) A series of ratings completed during visits to the student teacher's classroom, using structured rating forms, (6) Conferences with the supervising teacher in the secondary school, (7) Other (Explain). The response to this question is contained in Table XXXI.

**TABLE XXXI**

**BASES OF COLLEGE SUPERVISOR'S FINAL EVALUATION OF THE STUDENT TEACHER**

<table>
<thead>
<tr>
<th>Bases of Evaluation</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIC</td>
</tr>
<tr>
<td>Standard tests of pupil performance</td>
<td>5</td>
</tr>
<tr>
<td>Pupil evaluations of, or reactions to, the student teacher</td>
<td>13</td>
</tr>
<tr>
<td>Observations of, and conferences with, the student teacher</td>
<td>68</td>
</tr>
<tr>
<td>Self evaluation by the student teacher himself, if any</td>
<td>32</td>
</tr>
<tr>
<td>A series of ratings completed during visits to the student teacher's classroom, using structured rating forms</td>
<td>27</td>
</tr>
<tr>
<td>Conferences with the supervising teacher in the secondary school</td>
<td>60</td>
</tr>
<tr>
<td>Other: closing individual conference</td>
<td>2</td>
</tr>
</tbody>
</table>
An inspection of this table reveals that 196 institutions checked conferences with supervising teachers as a basis of their final evaluation. This represents about seventy-seven per cent of those responding to the questionnaire. Only 97 checked "A series of ratings completed on visits to the student teacher." This represents only thirty-eight per cent of the total group responding and only slightly more than half the number who indicated dependence upon conferences with the supervising teacher. The situation seems to be that college supervisors depend very heavily upon conferences with student teachers and supervising teachers in formulating their final evaluation, and that they do not except in thirty-eight per cent of the group, make a series of written ratings during the quarter or semester.

By comparison with the data of Table XXX concerning the bases of the supervising teacher's evaluation, it can be concluded that supervising teachers emphasize use of written ratings more than do college supervisors. In that table, 146 institutions checked, indicate that supervising teachers use student-teacher rating scales, as opposed to the 97 which indicate college supervisors complete a series of ratings on their supervisor's visits to the student teacher.

It is necessary to point out that a large majority of college supervisors use an evaluation form of some type by which to report
their final evaluation to the placement service of the institution.
The fact that college supervisors use such evaluation forms but do not, for the most part, complete them with a series of prior ratings as a basis, can be seen readily by comparing the data of Tables XXXI and XXXII. Ninety-seven institutions indicate that a series of ratings made by college supervisors is used as basis of final evaluation in Table XXX. Table XXXII is a summary of the replies to this question: What type of evaluation device is being used by the college supervisor? (1) Completely structured, (2) Structured with space for additional comments, (3) Completely unstructured, (4) None, (5) Other (Indicate).

**TABLE XXXII**

**TYPES OF EVALUATION DEVICES USED BY COLLEGE SUPERVISORS**

<table>
<thead>
<tr>
<th>Types</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STC</td>
</tr>
<tr>
<td>(1) Complete structured</td>
<td>6</td>
</tr>
<tr>
<td>(2) Structured with space for additional comments</td>
<td>56</td>
</tr>
<tr>
<td>(3) Completely unstructured</td>
<td>14</td>
</tr>
<tr>
<td>(4) None used</td>
<td>4</td>
</tr>
<tr>
<td>(5) Both types (1) and (3)</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>13</td>
</tr>
</tbody>
</table>

---

*Questionnaire VI-1, p. 16.*
Of the 256 replies, 192 state that an evaluation device, completely or partially structured, is used by the college supervisor. This number is almost double the number indicating the use of a series of ratings throughout the student-teaching experience. This means, to the writer, that this group of 192 includes final rating forms used by college supervisors in reporting final evaluation. The conclusion that college supervisors, in many cases, use an evaluation instrument only for final evaluation is further supported by the fact that of the 88 evaluation forms received in this survey, which were specifically for college supervisors, 47 were for final evaluation only, 12 could be used as final evaluation or mid-term evaluation, and only 29 were for use of the college supervisor to record reactions to the student teacher as he is observed teaching a given lesson.

**Principal Emphases in the College Supervisor's Evaluation**

Whether or not the college supervisor records his evaluation of the student teacher, he makes it in terms of certain criteria, emphasizing certain ones more than others. To determine what criteria for evaluating student teachers are most emphasized by college supervisors, the following question was asked: 18 What has been the relative emphasis upon the following aspects of student teaching in evaluation by college supervisors? (Weight these on a ten-point scale, using 10 to indicate most emphasis.) (1) Personal traits

---

18 Questionnaire VI-7, p. 17.
or qualities, (2) Classroom management or control, (3) Skill in human relations, (4) Specific techniques in teaching the subject being taught, (5) Participation in school community activities, (6) Use of teaching techniques consistent with modern trends in teaching mathematics, (7) Immediate preparation and planning, (8) Emotional balance and maturity, (9) Genuine interest in teaching, (10) Skill in conducting the drill or recitation type lesson, (11) Other (Indicate). The response to this question appears in tabulated form in Table XXXIII. The average of the weightings assigned to each item by each of the groups responding, has been computed. The items have been arranged in this table, according to average weightings assigned by the total group, in descending order of emphasis.

<table>
<thead>
<tr>
<th>Institutions</th>
<th>STC</th>
<th>UNIV.</th>
<th>IAC</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal traits or qualities</td>
<td>6.0</td>
<td>8.0</td>
<td>8.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Skill in human relations</td>
<td>6.7</td>
<td>7.9</td>
<td>7.8</td>
<td>7.5</td>
</tr>
<tr>
<td>Interest in teaching</td>
<td>7.3</td>
<td>7.4</td>
<td>7.8</td>
<td>7.5</td>
</tr>
<tr>
<td>Classroom management and control</td>
<td>7.4</td>
<td>7.6</td>
<td>7.4</td>
<td>7.4</td>
</tr>
<tr>
<td>Emotional balance and maturity</td>
<td>6.8</td>
<td>7.5</td>
<td>7.2</td>
<td>7.1</td>
</tr>
<tr>
<td>Specific teaching techniques in the subject being taught</td>
<td>7.3</td>
<td>7.8</td>
<td>6.6</td>
<td>7.0</td>
</tr>
<tr>
<td>Immediate preparation and planning</td>
<td>6.3</td>
<td>7.7</td>
<td>7.0</td>
<td>6.9</td>
</tr>
<tr>
<td>Use of techniques consistent with modern trends in teaching mathematics</td>
<td>6.8</td>
<td>7.2</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>Skill in conducting drill or recitation type lesson</td>
<td>4.3</td>
<td>4.1</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Participation in school-community activities</td>
<td>3.8</td>
<td>3.5</td>
<td>3.7</td>
<td>3.7</td>
</tr>
</tbody>
</table>
An analysis of Table XXXIII provides some interesting results. There appears to be general agreement among the various types of institutions as to those criteria which are most emphasized and those least emphasized, but there is wide disagreement in the ranking of the ones in between. "Personal traits or qualities" is emphasized most by all institutions. "Skill in conducting the drill or recitation type lesson" and "Participation in school-community activities" are least emphasized by all institutions responding. There is reasonable agreement as to the emphasis given: "Classroom management and control," "Emotional balance and maturity," and "Use of Teaching Techniques Consistent with Modern Trends in Teaching Mathematics." The largest discrepancy in ranking occurs in relation to: "Skill in human relations," "Interest in teaching," "Specific techniques in teaching the subject," and "Immediate preparation and planning." Liberal arts colleges rank "Specific techniques in teaching the subject" much lower than do State Teachers Colleges and Universities. The wide variation in ranking the criteria between the extremes seems to indicate that all of the institutions consider these items important, and that perhaps the exact emphasis is considered of little consequence. This point is further substantiated by the fact that a large group of the respondents, (roughly one-third), failed to answer this particular question.

An attempt was made to secure the opinion of the respondents, as to the specific techniques in teaching mathematics which are emphasized most in the college supervisor's evaluation of the student teacher. The following question was asked: 19

19 Questionnaire VI-6, p. 18.
emphasis would you place upon the following teaching techniques when evaluating a student teacher in mathematics? (Mark those you emphasize most 10, and those least 1, and use intermediate digits).

1. Providing for individual differences, 2. Maintaining a desirable balance between teacher and pupil participation, 3. Effective use of available school and community resources, 4. Use of physical devices and models to increase understanding, 5. Capacity for utilizing current pupil interest in developing learning situations, 6. Emphasis on democratic rather than autocratic procedures, 7. Skill in use of questions, 8. Clarity of explanations, 9. Economy in use of time, 10. Planning and giving assignments, 11. Ability to help students use mathematics to solve problems which arise in their environments in every day life, 12. Skill in using general applications of mathematics to science and other fields, 13. Ability to use various methods which provide variety during a class period, 14. Ability to motivate pupils through effective orientation to a lesson, 15. Ability to develop and use evaluation techniques which stimulate pupil performance and understanding, 16. Providing opportunity for pupil discovery. The response to this question appears in Table XXXIV. The average of the weightings, assigned by each group of persons responding to each of the items, was computed. The items in the table are arranged in order of the average weightings assigned by the group as a whole, and are in descending order of emphasis.
### TABLE XXXIV

**EMPHASES ON SPECIFIC TECHNIQUES IN TEACHING MATHEMATICS**

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation by effective orientation to lesson</td>
<td>8.2</td>
</tr>
<tr>
<td>Utilizing current pupil interest</td>
<td>8.1</td>
</tr>
<tr>
<td>Providing for individual differences</td>
<td>7.8</td>
</tr>
<tr>
<td>Clarity of explanations</td>
<td>7.7</td>
</tr>
<tr>
<td>Maintaining balance of teacher-pupil participation</td>
<td>7.7</td>
</tr>
<tr>
<td>Using math. to solve problems of everyday living</td>
<td>7.0</td>
</tr>
<tr>
<td>Planning and giving assignments</td>
<td>7.4</td>
</tr>
<tr>
<td>Democratic rather than autocratic</td>
<td>7.4</td>
</tr>
<tr>
<td>Skill in use of questions</td>
<td>7.0</td>
</tr>
<tr>
<td>Providing variety of methods in class period</td>
<td>7.6</td>
</tr>
<tr>
<td>Developing and using evaluation techniques</td>
<td>7.3</td>
</tr>
<tr>
<td>Providing opportunity for pupil discovery</td>
<td>7.3</td>
</tr>
<tr>
<td>Use of general application of math. and science</td>
<td>7.2</td>
</tr>
<tr>
<td>Use of physical devices and models</td>
<td>6.7</td>
</tr>
<tr>
<td>Effective use of school-community resources</td>
<td>6.4</td>
</tr>
<tr>
<td>Economy in use of time</td>
<td>6.0</td>
</tr>
</tbody>
</table>

As was true in Table XXIII, there is reasonable agreement as to the extremes but considerable variation of opinion in between. The first five techniques listed are the top five in emphasis: Motivation by effective orientation to the lesson, utilizing current pupil interest, providing for individual differences, clarity of explanations, and maintaining balance of teacher-pupil participation.
 Ranked last or near the bottom are these: Effective use of school and community resources and economy in use of time. There is considerable variation in opinion among the respondents from the different types of institutions. Again it seems, since about one-third of the respondents did not answer this question, that there is a feeling that all of these techniques are important and that there is a refusal, on the part of many supervisors, actually to analyze their own criteria and indicate those they emphasize most or least. This may indicate failure of many institutions to identify properly for student teachers, the criteria upon which they are to be evaluated. The fact that such a small percentage of the college supervisors actually make a series of recorded evaluations of the student teacher's work is evidence, in itself, that too much is done verbally and that student teachers do not have at hand, for reference, a form in which explicit criteria for evaluation are listed.

Evaluation Instruments Used by College Supervisors

Only thirty-eight per cent of the respondents indicated that the student teacher's final grade was based upon a series of ratings completed by the college supervisor. Of the rating forms used exclusively by college supervisors and contributed in this study, only thirty-three per cent (29 out of 88) were designed for use while observing the student teach a given lesson. It is by employing this type of evaluation device, that the college supervisor can
record his analysis and suggestions for improvement and provide direct help to the student teacher. Only if the evaluation is discussed with the student teacher and a copy given to him, can, what the writer believes to be the greatest purpose of evaluation, be achieved. That purpose is this: to help the student teacher improve and become a more effective student teacher.

**Evaluating a Single Lesson**

The twenty-nine evaluation forms designed for use by college supervisors in rating the teaching of a single lesson in mathematics are, with two exceptions, applicable to other fields as well. The two forms which are titled specifically for use in analyzing a mathematics lesson are shown on pages 195-196. A close inspection of these forms indicates that they are applicable also in other areas. These forms are largely structured and provide space for comments. Several institutions contributed similar forms, mainly structured in character and applicable in any subject area. An example of an evaluation form which is almost completely unstructured is shown on page 197. Several institutions contributed similar

---

20 "Analysis of a Mathematics Lesson," Philip Peak, University of Indiana, Bloomington, Indiana.

21 "Student Teacher Appraisal Sheet," New York University, School of Education.

**UNIVERSITY OF INDIANA, BLOOMINGTON, INDIANA**

**PART IV - INSTRUMENTS OF EVALUATION**

**USED BY COLLEGE SUPERVISORS**

**ANALYSIS OF A MATHEMATICS LESSON**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Subject:</th>
<th>No. in class:</th>
<th>Topic:</th>
</tr>
</thead>
</table>

### ROUTINE AFFAIRS

- Ventilation
- Lighting
- Appearance of the desk
- Collection and Distribution

### TEACHING PROCEDURES

- Presentation, new material
- Assignments
- Planning of lesson
- Pupil Participation
- Teacher-Pupil Balance
- Use of Illustrations
- Skill of Questioning
- Measuring achievement
- Economy in use of time
- Use of drill and review
- Development of ideas
- Handling of pupil questions
- Methods of helping pupils
- Meeting individual differences
- Methods of creating interest
- Clarity of explanations
- Emphasis on important facts
- Local applications
- Attainment of aims
- Evaluation of day's teaching

### CLASSROOM MANAGEMENT

- Promotion of self-discipline
- Student co-operation
- Industry of each pupil
- Use of equipment
- Use of outside material
- Level of Pupil Control

### PERSONAL

- Voice
- Habits: hands, face, etc.
- Appearance
- Mastery of the day's work
- Language usage
- Breadth of knowledge
- Patience
- Habits of accuracy

| | | |
|---|---|---|---|
| GC | PG | SR |

**Suggestions and Comments**
**ANALYSIS OF A MATHEMATICS LESSON (CONTINUED)**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Subject:</th>
<th>No. in class:</th>
<th>Topics:</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Suggestions and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PERSONAL (CONTINUED)**

- Writing on the board
- Initiative
- Knowledge of current affairs
- Pupil analysis

Developed by Philip Peak
University School
Bloomington, Indiana

Rated by ______________________
STUDENT TEACHER APPRAISAL SHEET

Name of Student ____________________________ School __________________

Subject & Year __________________ Time ______ Attendance (Girls) __________

Co-operating Teachers ______________________ Date __________________

Commendable Features of Class Features Needing Attention:
Meeting:

Evaluation: __________________________ Signature __________________________

Visit Number __________________________ Position __________________________

(Any additional comment which you may wish to make on the reverse side will be helpful)

(over)

Summary Comments
EVALUATION SHEET
College of Education
University of Minnesota

Teaching of Mathematics
Donovan A. Johnson, Instructor

Name of Student Teacher

Topic of Demonstration

Direction: Rate each item according to this code: excellent (a), above average (b), average (c), below average (d), very weak (e). Comment in the space provided regarding the basis of the rating.

1. Introduction
2. Presentation, method, illustration
3. Organisation, preparation, selection of material
4. Use of blackboard
5. Use of instructional materials
6. Poise, posture, manner
7. Speech (pitch, volume, enunciation)
8. Expression (vocabulary, grammatical construction, forcefulness)
9. Appearance (dress, grooming)
10. Personality (enthusiasm, sense of humor, sincerity, congeniality)

Comments

Strong points

Suggestions for improvement

Composite Rating
forms which are largely unstructured. The form used at the College of Education, University of Minnesota, shown on page 198, is a good example of an evaluation device which emphasizes freely written comments, but which is structured sufficiently to focus those comments upon certain criteria for the teaching of a lesson. A similar form used in the New York City Public Schools is shown in Appendix II, pp. 352. Several other institutions contributed evaluation forms of this general character.

It is the writer's opinion that some structure is desirable in rating form to be used by a college supervisor as he sits in the student teacher's class. This type of form, if well constructed, can help focus the supervisor's attention upon important factors which he might otherwise overlook. The nature of the structure in forms studied varies considerably. It is desirable that the structure

23 State University of Iowa, Iowa City; University of Denver, School of Education; Westminster College, New Wilmington, Pennsylvania; Geneva College, Beaver Falls, Pa.; Montana State University; State Teachers College, Valley City, North Dakota; State University of New York, New York School for Teachers, Albany; State Teachers College, Kutztown, Pa.; State Teachers College, St. Cloud, Minnesota; West Virginia Wesleyan College, Buckhannon, W. Virginia; University of Connecticut, Storrs, Connecticut.


25 Report on Classroom Visit by Supervisor, New York City Public Schools.
or the forsa should not be so complex as to be distracting to the evaluator and that there be provision for written comments on the face of the form. More attention needs to be devoted to the techniques of teaching mathematics in the construction of these rating forms. All of the forms in the general category under consideration were examined, but only two of them were designed for mathematics. Moreover, a close examination of them indicated that they were equally applicable in other areas.

Mid-Term and Final Evaluation by College Supervisor

Approximately two-thirds of the evaluation instruments designed primarily for the use of college supervisors and contributed by the institutions responding in this study, can be used for final or mid-term evaluations. These instruments for evaluation are of three major types: (1) the list of teacher traits or characteristics to be checked according to a scale, with or without space for written comments by the evaluator; (2) the list of general criteria or topics, with reference to which the evaluator is asked to write specific comments; and potential teaching ability; and (3) the totally unstructured report form upon which the evaluator is asked to write a detailed statement about the student teacher's status and potential as a teacher.
The first type is the most common. Most of the instruments of this classification, which were examined by the writer, consist of a list of teacher traits and abilities to be checked according to a five-point scale, with provision for a few written comments by the evaluator. Generally the five points on the scale are not defined in relation to each of the traits or abilities being evaluated. An extract from an evaluation instrument of this type, for use of the college supervisor in making a final evaluation, is shown below.

A. Scholarship
1. Possesses a broad cultural understanding
2. Understand social values and implications of his field, etc.

B. Professional Competence
7. Understanding of young people

C. Personal Qualities
26. Appearance
31. Emotional balance, etc.

The reverse side of the evaluation form contains a request that the evaluator write a characterization (not exceeding 200 words) of the student teacher.

Many evaluation instruments of this general type are much briefer than the one cited. Only a half-dozen are more extensive. These are the ones in which the points of the scale are defined in relation to the trait or ability being rated. An example follows:

---


Section I Professional Competencies of the Student Teacher

2. Skill in directing learning in pointing class activities toward the solution of problems. Skill in questioning, assigning lessons clearly, supervising study, leading discussions, drawing all pupils into class activities.

Could not observe

5 4 3 2 1 ( )

5 4 3 2 1

Outstanding, Good, Little Average, Direction Poor, Pupils
Class handled unnecessary Class moves fair, Class confused.
exceptionally well. motion. Well along at not well Little
co-ordinated. regular rate. co-
direction. Direction clear, ordinated
Moves slowly.

The evaluator using the form is asked to circle the number to the right, which corresponds to the number on the scale denoting the best description of the behaviour of the student teacher.

In the opinion of the writer, the fact that the criteria are so broad and include several different teacher activities make the checking of the form very difficult, whereas a student teacher may rate (5) in his "skill in questioning," he may rate (1) in "assigning lessons clearly." The use of the terms outstanding, good, average, fair, and poor in the definition of the points on the scale seems to vitiate partially, at least, what the designer of the form seeks, a rating based upon highly differentiated items of observable behaviour as opposed to a rating based largely upon an over-all opinion formed by the rater. These criticisms notwithstanding, the writer feels this form is to be preferred over those using
5, 4, 3, 2, 1 or the terms excellent, good, fair, poor, and unsatisfactory without any attempt to define them in relation to the criteria under consideration.

A few other examples of evaluation instruments, submitted by other institutions which are of this general type, were examined but are not included here.

The second general category of evaluation instruments used for final or mid-term evaluation by college supervisors is the list of broad areas of criteria or topics. The evaluator is asked to refer to the criteria in order to write specific comments indicating his reactions to the student teacher's work and potential teaching ability. An example of the general topics upon which the supervisor is asked to focus his evaluation follows. Space for comments is provided following each of the areas described.

1. Enthusiasm, interest, seriousness of purpose, initiative, creativeness, imagination, teaching techniques, variety and quality, relation of present learning to the needs of students in everyday living, ability to converse with pupils at their level of understanding.

2. Command of subject matter (identify subject), preparation for work observed, use of English language.

3. General teaching rapport with pupils, with critic, and with departmental supervisor.


4. Encouragement of pupil creativeness, imagination, and initiative both in group work and as individuals.

5. Classroom and laboratory management, attention to physical aspects of room, good housekeeping, etc.

6. Further remarks.

The most elaborate evaluation instrument of this type examined requires the evaluator to focus his written comments on four main topics: The Student Teacher as a Person, As a Classroom Teacher, As a Member of the Profession, and As a Citizen. In the body of this record form there is space for summarization under those four headings and also space for written comments upon various characteristics included in each of these major topics. For example, under "The Student Teacher as a Person," the following characteristics appear with space for comments: Appearance, Speech, Health, Initiative, Dependability, Tact. This same procedure is followed for each of the other major topics.

The third and last major type of evaluation instrument used by college supervisors for final or mid-term evaluation of the student teacher is "the totally unstructured report form upon which the evaluator is asked to write a detailed statement about the student teacher's status and potential as a teacher." This type of form contains, usually, some brief directions at the top of the sheet, requesting this freely written statement.


After examining these three major types of instruments employed in evaluation, it is the writer's opinion, that the completely structured check-list type of instrument, while providing future employers with comparable information about all prospective teachers, actually fails to provide the person examining it with an accurate picture of the student teacher. The completely unstructured form allows the college supervisor to make a statement which may give the person reading it a glimpse of the student teacher as an alive and active individual and at the same time, provide little information which is comparable to that which is recorded concerning another student teacher. It seems the best evaluation must be some combination of these techniques. The school official, examining an evaluation form as he considers the possibility of employing a teacher, not only wants to learn as much about what kind of person the prospective teacher really is and what his level of competence is in a teaching situation but he also must have some idea as to how this person rates in relation to a number of specific characteristics considered desirable or necessary for potential teaching success so that some comparison among job applicants can readily be made.

College Supervisor's Evaluation Conclusions and Recommendations

1. College supervisors are considered responsible for the student teacher's final grade by seventy-five per cent of the questionnaire respondents, but fifty-six per cent report that advice is secured from the supervising teacher.

2. Seventy-five per cent of the respondents reveal that college supervisors emphasize observation and conferences with the student teacher and supervising teacher, in arriving at the final evaluation.
3. Only thirty-eight per cent of the respondents state that the college supervisor's final evaluation is based upon a series of recorded ratings during visits to the student teacher on the job.

4. Seventy-five per cent of the respondents report that college supervisors make use of an evaluation form, partially or totally structured in character.

5. A comparison of the percentages in (3) and (4) above reveals that a large number of college supervisors use such evaluation forms for final evaluation only and that this final evaluation is not, therefore, supported by any record of evaluations made during the period of student teaching.

6. College supervisors in all types of the institutions studied gave principal emphasis in their evaluation to "Personal traits or qualities" of the student teacher.

7. College supervisors in all types of institutions gave least emphasis in their evaluation to the student teacher's "skill in conducting the drill or recitation type lesson" and "participation in school and community activities."

8. College supervisors in all types of the institutions studied, gave heavy emphasis in evaluation to "classroom management and control" and "emotional balance and maturity."

9. Specific techniques in the teaching of mathematics which were emphasized most by college supervisors in their evaluation of student teachers were the following:
1) Motivating by effective orientation to the lesson
2) Utilizing current pupil interest
3) Providing for individual differences
4) Clarity of explanations
5) Maintaining a balance of teacher and pupil participation

10. The following specific techniques in the teaching of mathematics were emphasized least by college supervisors:
   1) Use of general applications of mathematics to science
   2) Use of physical devices and models
   3) Use of school and community resources
   4) Economy in use of time

11. Only thirty-three per cent of the rating forms exclusively employed by college supervisors and contributed by institutions in this study were designed for use in evaluating the teaching of a single lesson.

12. Most of the devices designed for use in evaluating the teaching of a single lesson are partially structured and have space for the written comments of the evaluator.

13. A large majority of the evaluation forms used by college supervisors for final or mid-term evaluation, consist of lists of traits or abilities to be checked according to a scale, usually a five-point scale, with no attempt made to define each of the points in reference to the particular trait or ability to be evaluated.

14. Most of the evaluation instruments for the use of college supervisors in final or mid-term evaluation, allow some space for freely written comments by the evaluator.
The following guiding principles for evaluation by the college supervisor are recommended by the writer:

(1) College supervisors should make use of recorded evaluations of the student teacher's work several times during the student-teaching assignment.

When the college supervisor conveys his impressions of the student teacher's performance to the student verbally and records them only in his memory, the student cannot refer to suggestions offered by his supervisor except as he remembers the verbal comments. Neither can the college supervisor make suitable comparisons among his own ratings of the student's performance; thus, he is inclined to become uncertain as to what sort of final evaluation he should give the student teacher. In the writer's opinion, it is possible that student teachers' grades tend to be high, not because of an excellent performance, nor because of the fact that the selective process has been so good that only the best students remain, but simply because the college supervisor has no recorded series of evaluations which he can cite as justification for giving a lower grade.

(2) College supervisors should develop and use instruments designed to record their reactions to the student teacher's handling of a single mathematics lesson.

Since college supervisors, in many cases, make only occasional observations of short duration in the schools in which student teachers are placed, they often see the student teacher function in only one of the numerous activities of a teacher, that of classroom instruction.
This increases the importance of the use by the college supervisor of instruments designed for recording evidence concerning the student's teaching of a single mathematics lesson. As was pointed out in connection with the use of such instruments by supervising teachers, they afford the supervisor a means of recording his impressions for later reference in determining student growth in teaching competence and they afford the student teacher a reference to which he may turn for study of the suggestions which have been given by the supervisor.

(3) College supervisors should make it a regular practice to provide the student teacher with copies of the evaluations which they make.

Making certain that the student teacher has a copy of the evaluation for personal reference is more important in the case of the evaluations made by college supervisors than it is for the evaluations made by supervising teachers, because the college supervisor is not available at all times for questions and discussion of his suggestions as is the supervising teacher. It is desirable for the supervising teacher to provide the student teacher with copies of his evaluations, but, if this is not done, the student teacher can usually have access to the supervising teacher's own copies throughout the student-teaching period.

(4) Evaluation instruments employed by college supervisors should include space for the evaluator to write comments.

This principle is essential in the instruments to be used by supervising teachers, as well as for those used by college supervisors.
It is probably impossible to design an evaluation instrument which will provide adequate opportunity for the evaluator to record all of the particular items which he feels are significant. The provision of space for comments allows each evaluator to adapt the form to his own use more satisfactorily than is possible with the use of a completely structured form.

(5) College supervisors should make use of evaluation instruments designed specifically for use with mathematics student teachers.

This principle was stressed in connection with the evaluation made by supervising teachers. It means that the evaluation report should afford the supervisor a means of point out to the student not only his weaknesses in general teaching practices, but also his specific weaknesses in the teaching of mathematics.

(6) Instruments used by college supervisors in mid-term evaluation of the student teacher should be designed to make use of descriptions of observable behaviour.

The importance of this principle has been stressed in connection with evaluation by supervising teachers, but its importance in the evaluation by the college supervisor is based upon an additional consideration. College supervisors in their occasional and brief observations of the student teacher tend to form an overall opinion of his performance. These college supervisors need the assistance an instrument composed of behaviour descriptions to help them focus upon the specific behaviour of the student which contributes to the student teacher's strength or weakness. An instrument composed of a list of traits to be rated according to a scale the points of which are defined by terms such as good, fair,
and poor, does not serve this purpose. Such an instrument provides simply a means of recording judgments on certain items, and these judgments are difficult to separate, in the mind of the evaluator, from a general, overall judgment of the student teacher.

(7) College supervisors should make use of a variety of appropriate evaluation instruments.

An extensive use of a variety of techniques is needed in the evaluation of a student teacher. Certain evaluation instruments properly employed can make a major contribution in the collecting and recording of data upon which to base an evaluation. No particular evaluation instrument or instruments should be relied upon to the exclusion of other evaluation techniques, such as informal conferences and anecdotal records. All known devices for collecting data about the student teacher should be used to help in developing competence in teaching as well as in the determination of the final evaluation.

(8) The evaluative criteria to be used in judging the work of student teachers of mathematics should be understood and accepted by the student teachers and supervisors alike.

This principle is a direct outgrowth of the general idea, stated earlier, that all evaluation procedures should make their greatest contribution in helping the student teacher to improve his teaching competence. It is not possible for an evaluation to make that contribution if the criteria are not revealed to the student teacher. He needs to understand them well and accept them if he is to profit from a supervisor’s evaluation based upon them. In fact, these criteria may be
presented to the student teacher in the form of a complete set of the various evaluation instruments which supervisors use. These same instruments often serve to assist the student teacher in self-evaluation.

(9) The evaluative criteria used in instruments for the evaluation of mathematics student teachers should include those criteria, applicable to student teaching, which have been applied in the evaluation of previous laboratory experiences.

This principle is a specific application of the general viewpoint that, if an adequate evaluation is to be made, it must be based, at least partially, upon the previous training and the experiential background of the student teacher. It is important that identical criteria be applied, so far as practicable, so that: (1) the factor of student growth can be appraised; and (2) an analysis can be made of the value of various pre-student teaching experiences, in the development of the student teacher.
Chapter Summary

The evaluation of the mathematics student teacher is a co-operative endeavor of both the supervising teacher in the secondary school and the college supervisor. In rare instances these two supervisors may be the same person. The college supervisor is responsible for the final evaluation and grading of the student teacher in most cases. The supervising teacher provides the college supervisor with important data upon which the final evaluation is based. In fact, the supervising teacher is the key person in the daily evaluation of the work of the student teacher. The evidence presented reveals that both the college supervisor and the supervising teacher rely heavily upon verbal advice and suggestions to the student teacher, and use evaluation instruments primarily for recording their final evaluations.

Only a very few evaluation instruments designed for use by the supervising teachers in evaluating the work of the student teacher in the teaching of a single lesson, were contributed in this study. However, among the evaluation instruments received, those designed for the use of college supervisors in evaluating the teaching of a single lesson constituted about one-third of the entire group of evaluation instruments for use by college supervisors. In this rather large group, only two were instruments applicable specifically to the field of mathematics. All of the others were more general in nature and could be used in other areas. A large proportion of the rating forms used by supervisors are of the rating-scale type, in which a list of traits or abilities is to be checked according to a scale, the points of which are poorly defined
by such ambiguous terms as superior, fair, good, and so forth. In this type of instrument, no effort is made to define the points of the scale in relation to the specific trait or ability to be evaluated.

An examination of the data assembled in this study, the rating forms contributed by various institutions, as well as the literature in the field, supports in the writer's opinion, the following guiding principles for the evaluation of mathematics student teachers by their supervisors:

(1) Supervising teachers should be encouraged to record a comprehensive evaluation of the student teacher two or three times during the student-teaching period. These evaluations should involve a consideration of his ability to carry the responsibilities of a teacher, in addition to classroom instruction.

(2) Supervising teachers should be encouraged to make recorded evaluations of the student's teaching of a single mathematics lesson.

(3) Supervising teachers should use instruments, designed for use in the particular area of mathematics, for making mid-term evaluations of student teachers in mathematics.

(4) Supervising teachers should use instruments of evaluation which consist of descriptions of behaviour which is observable by the evaluator, in order to gather data about the student teacher.

(5) Instruments used in the mid-term evaluation of the mathematics student teacher by the supervising teacher should provide opportunity for recording an evaluation of the student teacher's ability to function in any one of the jobs included in the total range of teacher
activities.

(6) College supervisors should make use of recorded evaluations of the student teacher's work several times during the student-teaching assignment.

(7) College supervisors should develop and use instruments designed to record their reactions to the student teacher's handling of a single mathematics lesson.

(8) College supervisors should make it a regular practice to provide the student teacher with copies of the evaluations which they make.

(9) Evaluation instruments employed by college supervisors should include space for the evaluator to write comments.

(10) College supervisors should make use of evaluation instruments designed specifically for use with mathematics student teachers.

(11) Instruments used by college supervisors in mid-term evaluation of the student teacher should be designed to make use of descriptions of observable behaviour.

(12) College supervisors should make use of a variety of appropriate evaluation instruments.

(13) The evaluative criteria to be used in judging the work of student teachers of mathematics should be understood and accepted by the student teachers and supervisors alike.

(14) The evaluative criteria used in instruments for the evaluation of mathematics student teachers should include those criteria, applicable to student teaching, which have been applied in the evaluation of previous laboratory experiences.
An extensive list of recommended guiding principles for programs of evaluation of student teaching in mathematics has just been formulated in the preceding discussion. Certain of these recommended principles are of particular importance in relation to a consideration of possible improvements in the evaluation instruments used by college supervisors and supervising teachers. Those selected by the writer to be used as a basis in devising improved evaluation instruments for use of supervisory personnel are as follows:

(1) All phases of evaluation of student teaching in mathematics should make their principal contribution in the area of helping the student teacher improve his competence as a teacher of mathematics.

(2) The evaluative criteria used in instruments for the evaluation of mathematics student teachers should include all of those criteria applicable to student teaching, which were applied in the evaluation of previous laboratory experiences, in order that: (a) the important factor of student growth may be appraised; and (b) the contribution of various professional laboratory experiences toward producing capable student teachers may be analyzed.

(3) The use of evaluation instruments, particularly for the area of mathematics, should be encouraged as opposed to the use of instruments of general applicability in all fields.
(4) The use of recorded evaluation of the teaching of a single lesson should be emphasized.

(5) Mid-term recorded evaluation should be given more emphasis.

(6) Evaluation instruments used for mid-term evaluation of mathematics student teachers should cover the total range of activities in which the student teachers ought to engage.

(7) The use of evaluation instruments for mid-term and for final evaluation, using descriptions of observable behaviour to be checked by the evaluator, should be encouraged, rather than the use of a list of teacher traits to be checked according to a scale on which the points are described by ambiguous terms.

(8) All formal evaluation instruments should provide the evaluator an opportunity to write comments.

(9) The student teacher should always be aware of, and understand, the criteria upon which he is to be evaluated.

Any instrument suggested for use in the evaluation of mathematics student teachers must depend for its validity, upon research yet to be completed, which may ultimately and positively define the factors of student-teaching competence. For the time being, in the absence of such positively defined factors or criteria, evaluation must proceed upon the basis of a set of criteria assumed to be critical in determining the success or failure of student teachers.
The set of critical factors suggested by Andrews\(^1\) as a basis for developing evaluation instruments for many of the pre-student teaching experiences consists of six personality patterns. It was assumed that the critical factors in the success and failure of student teachers are personal factors. It has already been pointed out (See Table XXXIII) that personal factors were most emphasized by supervisors in the institutions reporting in this study. The reader must recognize that the use of the word critical does not imply that other important factors are not present. The six personality patterns referred to above are as follows\(^2\):

(a) Interest in teaching  
(b) Emotional balance and general maturity  
(c) Ability to attract, interest, and get along with children  
(d) Skill in human relations with peers and adults  
(e) Intellectual and professional energy  
(f) Breadth of interests

A similar list of factors, arrived at in independent research, appears in the 1951 Yearbook of the Association for Student Teaching.\(^3\) In using the list of six personality patterns, outlined above, as bases upon which to collect evidence on possible success or failure of student teachers

---


\(^2\) Ibid., L. O. Andrews, p. 4.

\(^3\) Charlotte Junge: "Readiness for Off-Campus Student Teaching," 30th Yearbook, Association for Student Teaching, 1951, pp. 28-39.
from performance in pre-student-teaching experiences, it was assumed
that a given experience would provide data on certain of the six areas,
while other experiences might provide data relative to other areas considered.

To illustrate how the evaluation of student teaching in mathem-
atics should relate to the evaluation of prior experiences so that the
contributions of these prior experiences to student-teaching performance
can be better judged, the writer has chosen to consider the problem of
student-teaching evaluation with those six areas as a basis. The first
major concern in this connection is to determine whether or not the
student-teaching experience itself is a major source of specific data
in each of the six areas. After much consideration, the writer has in-
cluded the following five of the criteria upon which the student-teaching
experience provides direct and specific evidence: (1) Emotional balance
and maturity; (2) Ability to attract, interest, and get along with
children; (3) intellectual and professional energy; (4) Breadth of
interests; and (5) Skill in human relations with peers and adults. The
broad criterion, "Interest in Teaching," was not included because (1)
it is assumed that those students greatly lacking in interest rarely
reach the student-teaching assignment; and (2) that most of the student-
teaching experience provides some indirect evidence in relation to this
criterion but very little direct evidence. The student-teaching ex-
perience, as it is now organized in many institutions, is not a primary
source of data for the category of "Skill in human relations with peers
and adults." It has, however, been included because it is deemed
desirable for student-teaching experiences to include broader school and community contacts involving the needed skill in contacts with peers and adults far beyond the now prevalent situation where student teachers often have contact with only one supervising teacher.

The importance of these six areas is further substantiated by the response in this study which appears in Table XXXII. The following areas are those most emphasized in student-teacher evaluation by college supervisors: (1) Personal traits or qualities, (2) Skill in human relations, (3) Interest in teaching, (4) Classroom management and control, (5) Emotional balance and maturity, and (6) Specific techniques in teaching the subject. An analysis of this response reveals that four of the six areas mentioned are emphasized: Interest in teaching, Skill in human relations (both with adults and children), and Emotional balance and maturity. The rather nebulous category—Personal traits or qualities—may be considered to cut across all six areas. The two of the six not stated specifically among those emphasized by college supervisors are "Intellectual and professional energy" and "Breadth of interests." These are very closely akin, however, to "Specific techniques in teaching the subject," since most of the evidence in these two areas is gained by considering how the student teacher goes about teaching the lesson.

In view of the criteria which are assumed as being applied to the program of pre-student-teaching experiences, and in view of the emphases
given by college supervisors in their evaluation, the writer proposes
the following areas of evaluative criteria as bases for the construction
of an evaluation instrument for use by the college supervisor or supervi-
sing teacher, periodically, during the student-teaching experience.

Criteria

1. Emotional balance and maturity
2. Ability to attract, interest, and get along with children
3. Intellectual and professional energy
4. Skill in human relations with peers and other adults
5. Breadth of interests
6. Conduct of classroom routine
7. Knowledge of mathematics and related fields
8. Specific techniques in the teaching of mathematics

In the work of Andrews\(^4\), relative to evaluation of pre-student-
teaching experiences, the first five criteria were defined in the following
manner. Under each definition appears a list of behavior descriptions
considered to present evidence in relation to the particular criterion
by a jury of 9 college supervisors of student teaching and 18 public
school teachers. These behavior descriptions, as stated, present
positive evidence of the personality pattern indicated.

1. EMOTIONAL BALANCE AND MATURITY

This concept involves a consideration of the mental health and
general maturity of the individual. Included is a consideration of the
presence or absence of psycho-neurotic tendencies, the level of stability,

\(^4\) Ibid., L. O. Andrews.
and the way in which new or problematic situations are approached and handled. The presence or absence of such personal traits as poise, dependability, co-operativeness, open-mindedness, self-confidence, loyalty, self-control, stability, and sense of humor is involved. The following examples of behavior show positive evidence of emotional balance.

1. Adjusts well to new or unusual situations
2. Meets obligations promptly and effectively
3. Exhibits maturity of thought and action
4. Exhibits no psycho-neurotic tendencies or mannerisms
5. Meets problematic situations with an independently planned course of action
6. Acts with judgment appropriate to his level of maturity
7. Accepts criticism without resentment; is willing to learn
8. Is able to work well with a group
9. Is able to see humor in situations involving himself as well as others
10. Assumes responsibility for the results of his own actions

II. ABILITY TO ATTRACT, INTEREST, AND GET ALONG WITH CHILDREN

An individual's ability to work effectively with children depends upon his genuine interest in them and his understanding of children and their problems. He must be able to communicate with them effectively.
Some skill in working with children in groups is needed. Getting along with children will be facilitated if the individual has such traits as personal magnetism, animation, resourcefulness, patience, fairness or impartiality, cheerfulness, and kindliness.

One's skill in getting along with children will be evidenced by such behavior as the following:

1. Converses freely with children; promotes a friendly atmosphere.
2. Secures the confidence, respect, and cooperation of the group of children; boys and girls seek opportunities to visit with him.
3. Adjusts readily to the age, grade, and ability level of the children.
4. Is resourceful in helping a group or individuals plan and carry out regular work and creative activities.
5. Has a generally neat and attractive appearance.
6. Is not handicapped by any noticeable sight or hearing deficiencies.
7. Exhibits no deficiencies in speech or voice quality which are annoying to boys and girls.
8. Shows leadership by contagious enthusiasm for the task at hand.
9. Is consistent in dealing with problems of management and discipline, generally refraining from snap judgments, particularly in situations of emotional stress.

III. INTELLECTUAL AND PROFESSIONAL ENERGY

This concept involves the individual's essential vigor, the creativity of his imagination, his performance under pressure, his general
level of accomplishment, and his ambition. Such personal traits as initiative, forcefulness, originality, perseverance, purposefulness, and zealoulessness are involved here.

Some behavior evidences of this concept are suggested below.

1. Is able to stand up well under pressure.
2. Is ambitious without being personally aggressive.
3. Is challenged to exert extra effort on problems which are difficult or seem impossible to solve.
4. Exhibits facility in proposing ideas and solutions.
5. Shows ability to initiate and carry out proposed courses of action to solve problems.
6. Is stimulated by everyday experiences and environment to engage in independent investigation, study, and skill development.
7. Sustains consistent effort to reach long-range objectives.
8. Practices good health habits, is mentally and physically vigorous.

IV. SKILL IN HUMAN RELATIONS WITH PEERS AND OTHER ADULTS

An individual's skill in getting along with his peer and other adults involves his ability to meet people graciously and to enter easily into conversation with them, a genuine interest in other people, respect for their opinions, willingness to compromise differences, and faith in the sincerity of one's fellow men. Significant personal traits are friendliness, politeness, courtesy, geniality, tact, sincerity, appreciation, and optimism.
Some suggested evidences of skill in relations with peers and other adults are the following behavior patterns:

1. Looks for, and expects to find, good in other people.
2. Tries to co-operate even under difficult circumstances.
3. Appreciates assistance and suggestions from others.
4. Demonstrates ability to follow directions.
5. Receives satisfaction from playing any role well, even though it is secondary in nature.
7. Respects opinions differing from his own and makes a genuine effort to compromise whenever possible without violating major convictions or beliefs.
8. Gives credit to others when credit is due.
9. Generally refrains from harsh or undue criticism of others.

V. BREADTH OF INTERESTS

An evaluation of an individual's breadth of interests involves a consideration of the scope of his school activities, community activities, work experiences, and leisure-time pursuits. The extent of the individual's participation, the level of leadership responsibility successfully undertaken, and the quality of discernment and judgment developed are emphasized. The individual with great breadth of interests will generally become more tolerant, observant, sociable, understanding, resourceful, and sensitive to the needs and problems of individuals and society.
The following examples of behavior indicate positive evidence of breadth of interests:

1. Has occupied positions of leadership in several different groups or organizations.

2. Receives genuine satisfaction from working with people.

3. Shows interest in many different community activities and projects for social betterment.

4. Seeks experiences in all phases of school life and with a wide range of types of students.

5. Willing to try new activities and to accept challenging responsibilities.

6. Enjoys the role of both participant and spectator in a wide variety of indoor and outdoor activities.

7. Exhibits a wholesome curiosity about the familiar, the strange, the bizarre, the unusual.

8. Tends to reflect on the deeper significance and meaning of various experiences.

9. Respects and attempts to understand people of other races, creeds, and colors.

The definitions and behavior descriptions, as stated above, are accepted as applicable for evaluation of student teaching in mathematics. The additional criteria suggested earlier are defined, by the writer, in the following paragraphs; and descriptions of observable behavior which give positive evidence of these abilities of student teachers accompany the definitions.
VI. CONDUCT OF CLASSROOM ROUTINE

The student teacher who conducts classroom routine effectively will be sensitive to his physical surroundings and the available resources. Effective delegation of responsibility for routine affairs to responsible pupils, and punctuality in handling routine contribute to the classroom operation.

1. Is sensitive to and properly handles ventilation, lighting, and heating.
2. Starts and finishes class on time.
3. Asks class members to help in collecting and distributing homework and writing assignments on the blackboard.
4. Assignments of suitable length and degree of difficulty are given.
5. Assignments are made in a clear and concise fashion well before the end of the class period.
6. Leaves classroom in good condition at the end of the period.

VII. SPECIFIC TECHNIQUES IN THE TEACHING OF MATHEMATICS

A student teacher's ability to teach a particular mathematical topic depends upon several factors: his ability in planning and introducing the topic, his skill in the use of questions, his knowledge of and ability to apply tried and tested teaching methods pertinent to the topic, his effective use of teaching aids, and his procedures in evaluating pupil progress.
(a) Planning

1. Does adequate pre-planning.
2. Emphasizes teacher-pupil planning in developing classroom activities.
3. Provides a sufficient breadth of experiences to meet the ability range of the class.
4. Has available materials and projects to keep all pupils profitably engaged during the class period.
5. Is willing to change some of his plans in order to capitalize upon pupil interests.

(b) Introducing a topic

1. Gives a broad overview of the unit or topic before beginning any of its parts.
2. Makes use of a variety of techniques when presenting new material, so as to make it intelligible to all pupils.
3. Encourages pupils to bring to class problems from their everyday living which fall within the range of the topics being studied.
4. Uses, as illustrative material, as many real situations in the lives of pupils as possible.

(c) Use of Questions

1. Skilled in use of questions which stimulate and clarify pupil thinking.
2. Relies heavily upon questioning, rarely gives the answers to the class, but instead, helps the class to find them.
3. Makes certain that each pupil's question is heard and understood by the entire class.

4. Makes sure that answers to all questions raised are heard and understood by the entire group.

5. Avoids the use of leading questions.

(d) Classroom Methods

1. Emphasizes understanding rather than manipulation and memorization.

2. Clarifies algebraic operations by referring to examples from arithmetic.

3. Insists that pupils check results.

4. Diagnoses pupil difficulties by asking them to give examples.

5. Teaches through comparison and contrast, rather than repetition.

6. Introduces specific mathematical techniques when the need for them arises, rather than in isolation.

7. Avoids classroom monotony by well-timed shifts in type of activity.

8. Realizes that pupil understanding does not come automatically by observation of examples worked by the teacher.

9. Mingles with the group while conducting the class.

(e) Use of Teaching Aids

1. Uses many physical models and instruments.

2. Encourages pupils to construct instruments for immediate use.
3. Makes skillful use of blackboard diagrams and illustrations.

4. Uses films and slides only when they are pertinent to immediate class needs and interests, and only after proper orientation of the class.

5. Uses only films and slides with which he is familiar and which he has previewed.

(f) Evaluation of Pupil Progress

1. Makes careful appraisal of homework.

2. Uses all written work of pupils to help diagnose difficulties.

3. Uses evaluation as a teaching—learning device.

4. Seeks ways of evaluating pupil performance other than that in the manipulative aspects of mathematics.

VIII. KNOWLEDGE OF MATHEMATICS AND RELATED FIELDS

The mathematics student teacher needs a true appreciation of the power of mathematics and its relationship to other fields of knowledge if he is to inspire his pupils to seek a deeper understanding of mathematical subjects. This knowledge of mathematics and closely related fields will be evidenced by the student teacher's resourcefulness in illustrating mathematical ideas and citing applications of mathematical theory in related scientific fields. It will be further evidenced by his ability to judge what topics are beyond the maturity level of his pupils, and by his familiarity with the literature through which he is able to suggest, readily, sources of information for pupils to use in the study of special topics.
1. Cites sources of additional information readily.

2. Is familiar with all necessary and important texts and reference books in mathematics.

3. Is resourceful in illustrating mathematical principles.

4. Is able to suggest a variety of interesting applications of mathematics to science.

5. Avoids logical development of rules or principles which are beyond the level of maturity of the class.

6. Is able to give "on the spot" examples; thinks creatively.

The eight criteria defined and illustrated by behavior descriptions in the preceding paragraphs are assumed to be the basis for the evaluation instruments suggested for use by supervisors in evaluating student teaching in mathematics. Two types of instruments will be considered: (1) those used to evaluate the teaching of a single lesson; and (2) those used for periodic or final evaluation. Examples of both types, devised by the writer, will be discussed in the following sections.

PROPOSED INSTRUMENT FOR USE OF SUPERVISORS IN EVALUATING THE TEACHING OF A SINGLE MATHEMATICS LESSON

The supervisor who observes a student teacher as he teaches a single lesson mathematics can make profitable use of an evaluation form upon which to record his impressions and suggestions for the student teacher's improvement only if that evaluation form is (1) reasonably brief and (2) organized in such a way as to help the supervisor focus
upon requisites in the teaching of the lesson, as nearly as possible, in the order in which they are observed by the supervisor. An evaluation form, devised with these principles in mind, has been designed by the writer to record evidence relating to only six of the eight major criteria described earlier. The student teacher's performance in the teaching of a single lesson does not, in the writer's opinion, provide sufficient opportunity for the supervisor to secure evidence as to the student teacher's "skill in human relation with peers and adults" nor as to the "breadth of his interests." Therefore, this proposed evaluation form is based upon: (1) Conduct of classroom routine, (2) Knowledge of mathematics and related fields, (3) Techniques in teaching mathematics, (4) Ability to attract, interest, and get along with children, (5) Emotional balance and maturity, and (6) Intellectual and professional energy.

The form, devoted to the student teacher's performance during a single class period, quite naturally emphasizes collection of evidence relating to the first and third criteria listed. The order in which the six areas are placed seemed, in view of the writer's experience, to be the order in which the supervisor is most likely to collect evidence. The relative importance of the six areas was not considered in arriving at this order.

In an attempt to keep this instrument brief and easy to handle, only some of the items suggested in the preceding section where the areas are defined, have been used. Since the instrument is only four pages in length, the space available for freely written comments by the
evaluator is necessarily limited.

EVALUATION OF STUDENT TEACHING IN MATHEMATICS

Form No. 1 (General)

Teaching the Mathematics Class

<table>
<thead>
<tr>
<th>Student's Name</th>
<th>Date</th>
<th>Class</th>
<th>School</th>
<th>Supervising teacher</th>
</tr>
</thead>
</table>

Instructions: Enter in the parentheses preceding each behavior description an appropriate code figure to indicate your observation of the student.

1. Conduct of Classroom Routine

( ) (1) Is sensitive to, and acts promptly to provide, proper physical conditions in the classroom, including heat, light, and ventilation.

( ) (2) Begins and finishes class on time.

(5) student behavior is as indicated by the statement — superior.

(4) student performance is at a somewhat lower level than described, but — strong.

(3) student performance is definitely not outstanding and needs improvement, but may be considered — good.

(2) student performance is barely acceptable — satisfactory.

(1) student performance is below the level required for credit in student teaching — unsatisfactory.

(0) No opportunity to observe this behavior.
( ) (3) Makes it possible for pupils to play a real role in efficient classroom routine by assisting in giving assignments, collecting and distributing homework, etc.

( ) (4) Makes assignments in a clear, concise fashion early in the class period rather than hurriedly after the closing bell.

Comments:

II. Ability to Attract, Interest, and Get Along with Children

( ) (1) Provides opportunities for pupils to visit with him and confide in him.

( ) (2) Speaks in a pleasant, well-modulated voice, without apparent effort.

( ) (3) Provokes favorable and willing response from pupils.

( ) (4) Appears to have genuine interest in the pupils and their problems.

( ) (5) Works skillfully with groups of pupils.

Comments:

III. Teaching Techniques in Mathematics (The Lesson)

A. Planning

( ) (1) Introduces the lesson skillfully through excellent pre-planning.

( ) (2) Encourages pupil initiative in teacher-pupil planned class activities.

( ) (3) Keeps most pupils profitably employed throughout the class period.
( ) (4) Provides class experiences of sufficient breadth to meet total ability range of the class.

( ) (5) Capitalizes on current pupil interests, even if it means abandoning a carefully laid plan of his own.

Comments:

B. Introducing the Topic

( ) (1) Makes use of problem material from everyday life situations of the pupils.

( ) (2) Focuses pupil attention upon the meaning of terms and operations.

( ) (3) Uses a variety of techniques when presenting new material in order to make it intelligible to all pupils.

( ) (4) Begins every topic by emphasizing its importance in the context of the total unit of study.

Comments:

C. Use of Questions

( ) (1) Stimulates and clarifies pupil thinking through skillful use of questions.

( ) (2) Relies heavily upon questioning, preferring not to tell all the answers to the class but rather to help the class find them.

( ) (3) Makes certain that each pupil's question is heard and understood by the entire class.

( ) (4) Insists upon all pupils hearing and understanding the answers to questions raised by class members.
D. Classroom Methods

( ) (1) Avoids monotony by well-timed shifts in type of activity.

( ) (2) Introduces a specific mathematical technique when the need for it arises, rather than in isolation.

( ) (3) Emphasizes understanding rather than memorization and manipulation.

( ) (4) Clarifies arithmetical processes by referring to operations with physical objects, and algebraic operations by referring to arithmetical or geometrical examples.

( ) (5) Diagnoses pupil difficulties by asking them to give examples.

( ) (6) Teaches through contrast and comparison, rather than repetition.

( ) (7) Realizes that a few teacher-worked examples are not synonymous with understanding.

( ) (8) Insists upon pupils checking results.

( ) (9) Moves around among the group while conducting the class.

Comments:

E. Use of Teaching Aids

( ) (1) Uses appropriate physical models and instruments to help develop understanding.

( ) (2) Conducts planned program by which pupils construct instruments for immediate use in solving problems.
( ) (3) Uses blackboard diagrams and illustrations skillfully.

( ) (4) Uses films and slides only when they are pertinent to the topic being studied and only with suitable orientation and planned follow-up.

Comments:

F. Evaluation

( ) (1) Makes careful appraisal of the homework of students having particular difficulties in an effort to diagnose those difficulties.

( ) (2) Uses all written work of pupils to help diagnose difficulties.

( ) (3) Uses evaluation as a teaching–learning device.

( ) (4) Seeks ways of evaluating pupil performances in other than the manipulative aspects of mathematics.

Comments:

IV. Knowledge of Mathematics and Related Fields

( ) (1) Cites sources of additional information readily.

( ) (2) Is familiar with a wide variety of texts and reference books in mathematics.

( ) (3) Is very resourceful with illustrations of mathematical principles.

( ) (4) Suggests readily a variety of interesting applications of mathematics to science.

( ) (5) Avoids logical development of rules or principles beyond the maturity level of the class.

Comments:
V. Emotional Balance and Maturity

( ) (1) Adapts very quickly and easily to new or changing conditions.

( ) (2) Meets all obligations promptly and effectively.

( ) (3) Appears to have a good sense of humor.

( ) (4) Accepts criticism graciously and tries to improve.

( ) (5) Appears calm and poised; is not easily upset.

( ) (6) Is consistent in appropriate behavior and attitudes.

( ) (7) Is quite mature in appearance and actions.

VI. Intellectual and Professional Energy

( ) (1) Appears physically vigorous.

( ) (2) Appears mentally alert.

( ) (3) Foresees problems and meets them effectively.

( ) (4) Recognizes his own errors, initiates corrective action, and carries it through.

( ) (5) Stands up well under pressure of heavy work schedule.

VII. General Comments and Recommendations:

Signature of Evaluator

This proposed evaluation instrument is designed to be applicable for use by the supervisor regardless of the particular topic of the day's lesson. Recognising that the principal purpose of all student-teaching evaluation should be to offer concrete suggestions which help the student teacher to improve his teaching competence, the writer has
undertaken one further step, the development of an evaluation instrument designed for the teaching of a particular topic in mathematics. The use of such an instrument would more specifically point out to the student teacher just what he did and did not do while teaching a specific topic. One topic in algebra has been chosen to illustrate such an instrument. That topic is Solving Verbal Problems.

**Evaluating the Teaching of a Specific Topic**

The evaluation instrument to be used by the supervisor while observing a student teacher conduct a lesson about "Solving Verbal Problems" would be different from the instrument just proposed in the preceding section. Part III of the instrument would be specifically designed to focus the supervisor's attention upon desirable techniques in handling the particular topic, Solving Verbal Problems.

The writer has attempted to determine the significant items concerning the topic, the solving of verbal problems, which should be included in the evaluation form, by collecting, from the literature on the teaching of mathematics, the techniques which are emphasized in teaching this topic. The list of items follows.

1. Does the method of solving begin with a natural algebraic interpretation of the elements of the problem? 
2. Do the problems involve one unknown or more?

---

Nathan Lazar: *The Teaching of Algebra* (Education 762), Class notes, Ohio State University, 1951.

Nathan Lazar: "One Unknown or Two," *The Mathematics Teachers* 26 (March 1933) pp. 176-182.
3. Is the student aware of what we are doing mathematically, what we are doing it for, and by what right? Is everything done mysteriously?*

4. Are students allowed to struggle first with a long method of solving before being shown short cuts?*

5. Are problems of suitable degree of difficulty being used?*

6. Is the every-day English in the problem first translated to mathematical English and then to symbols?6

7. Do pupils realize that direct translation from words to equations often leads to error? Is the fact properly illustrated by the student teacher?*

8. Is the first letter of the name of the unknown quantity used as its symbol whenever possible?7

9. Do students make drawings or illustrations of the problems?8

10. Are verbal problems given which differ from each other sufficiently to require analysis on the part of the pupil rather than a number of problems of the same kind where one can be used as a model in solving the rest?9

6 Nathan Lazar, op. cit.

7 C. G. F. Franzen: Improvement Sheet for First Year Algebra.

8 Ibid., C. G. F. Franzen.

11. Are pupils "learning by doing" in the class under teacher
guidance and actually discovering solutions, rather than being shown
how to solve problems by the teacher?  

12. Are pupils urged to list verbally the various quantities
mentioned in the problem before attempting to express them algebraically?  

13. Does the teacher emphasize that a condition in the problem leads
to a relation between the quantities mentioned?  

14. Is the use of diagrams considered important and utilized in
problems which lend themselves to illustrations?  

15. Do a sufficient number of problems occur which include some non-
essential facts as well as those essential so that pupils are called
upon to judge those necessary to solution of the problem?  

16. Does the teacher introduce problems that express activity of
youth?

---


Margaret McKim: _The Reading of Verbal Material in 9th Grade Algebra, Appendices I and II._

12 J. O. Hassler and R. R. Smith, _op. cit._, p. 287.
P. E. Ellis: _op. cit._


14 J. H. Minnich, _op. cit._, p. 117.

15 E. R. Breslich, _op. cit._, p. 186.
Paul Ligda, _op. cit._, pp. 66–67.
17. Does the teacher avoid too many difficult problems at one time?  
18. Does the teacher lead pupils to recognize specific problems as belonging to one type or another? 
19. Are problems used which have situations within the pupils' understanding and their ability to appreciate the significance of them? 
20. Is the teacher possessed with the necessary background of general education, work experience, and intellectual curiosity to be familiar with these problem situations? 
21. Can the teacher handle field trips, paint word pictures, draw diagrams and sketches, direct dramatizations, use models, pictures, and reference sources? 
22. Does the teacher recognize, while using predominantly practical problems, that practical problems have their merits? 
23. Do the pupils have an understanding of the concept of equality? 
24. Are pupils encouraged to solve problems by both algebraic and arithmetic processes when these possibilities exist, or completely discouraged from using arithmetic solutions when algebraic processes are more efficient? 

---

17 J. J. Powell, op. cit., p. 38.
18 Kinney and Purdy, op. cit., p. 69.
19 Ibid.
20 Ibid.
21 Ibid.
22 Ibid.
23 Kinney and Purdy, op. cit., p. 70.
25. Does the teacher provide problem-reading experience so that the ability to read mathematics may be increased and lack of pupil understanding detected?  

26. Does the teacher conduct oral and written exercises to help the pupil determine what is given and what is to be found?  

27. Is the student encouraged to locate the connection between the unknown and given data, at least to try something?  

28. Does the teacher use the technique of a dictionary of English-algebra to facilitate translation of terms and phrases of English to algebra?  

29. Is the pupil encouraged to attempt to formulate part of the problem, omitting the rest for the present?  

30. Are pupils encouraged to relate new problems to previously solved problems or to other areas of study?  

---  

24 Kinney-Purdy, op. cit., p. 71  
25 Ibid.  
26 Kinney-Purdy, op. cit., p. 72.  
28 Kinney-Purdy, op. cit., p. 72.  
29 Ibid.
31. In supervised study, does the student teacher reveal the proper type of analysis only when the pupil is ready to go ahead himself, rather than just show him the whole solution?  

32. Is the pupil urged to verify and generalize solutions, always keeping reason before symbolism?  

33. Does the teacher try to determine and classify the difficulties which pupils experience in solving verbal problems?  

34. Does the teacher group problems as frequently in mixed sets as by types? (Problems in everyday life do not occur in classified sets.)  

35. Does the teacher insist that pupils develop the habit of checking by substituting the results obtained back in the conditions of the problem?  

36. Are problems to be solved in this order: (1) number problems to learn method; (2) simple and perfectly understood situations (boys buying marbles); (3) everyday life situations understood fairly well; and (4) industrial problems.  

---

30 Kinney-Purdy, op. cit., 73.  
31 Ibid.  
32 E. R. Breslich, op. cit., p. 188.  
33 E. R. Breslich, op. cit., p. 189.  
34 E. R. Breslich, op. cit., p. 196.  
35 Paul Ligda, op. cit., p. 77.
37. Is the student advised first to guess or estimate the answer when attempting to solve a problem?  

38. Is the teacher aware that problems which interest the pupil are valuable, but that all problems which can be used in elementary solutions of verbal problems, except those from formulas, are fictitious?  

39. Are the meanings of words and phrases stressed?  

In the compilation of this list of techniques, there was no attempt to make an exhaustive search such as would be necessary to cite all references in which a particular technique has been pointed out. At least one reference is cited for each item. An examination of this list reveals that there is some overlapping in ideas and that some of the biases of the various writers are included. An effort was made to include, in the evaluation instrument which follows, those items from the list which are considered significant for all student teachers, regardless of the particular bias they or their supervisors may have concerning desirable techniques for teaching the solution of verbal problems. However, the portion of the form devoted to classroom methods must reflect an approach. It is recognized that the form, as constructed, reflects the multiple-unknown approach to verbal problems. A rather comprehensive bibliography relating to this topic is found in Chapter VII.

---

36 Paul Ligda, op. cit., p. 79.


Section III of our proposed evaluation instrument, for use of supervisors in recording impressions relative to a student teacher's performance in teaching his class about "Solving Verbal Problems," would take the following form.

III. Teaching Techniques (Solving Verbal Problems)

Planning

( ) 1. Seeks constantly to build up a fund of verbal problems which are interesting, real, and of practical value to students.

( ) 2. Provides many opportunities for students to work together in problem solving.

( ) 3. Helps most pupils to be profitably employed throughout the class period.

( ) 4. Plans class activities so as to meet the total range of ability.

( ) 5. Emphasizes pupil initiative and interests in planning the day's activities.

Comments:

Introducing the Topic

( ) 1. Makes use of problem material from everyday life situations of the pupils.

( ) 2. Stresses the meaning of words and phrases.

( ) 3. Urges pupils to list the various quantities in the problem verbally, before attempting to express them algebraically.

( ) 4. Helps pupils to construct occasionally an English-algebra dictionary.
5. Emphasizes the fact that a condition in the problem leads to a relation between the quantities mentioned.

6. Asks pupils to translate the condition of the problem from every-day English to mathematical English and then to symbolism.

Comments:

Use of Questions

1. Stimulates and clarifies pupil thinking through skillful use of questions.

2. Relies heavily upon questioning, preferring not to tell the class his subject, but rather to find it out from them.

3. Makes certain that every pupil question is heard and understood by the entire class.

4. Insists upon all pupils hearing and understanding the answers to all questions raised by class members.

Comments:

Classroom Methods

1. Introduces problems of appropriate degree of difficulty.

2. Avoids too many difficult problems in a single lesson.

3. Requires pupils to solve by detailed plan with understanding, before permitting short-cuts.

4. Uses problems grouped in mixed sets as often as problems grouped by type.

5. Includes some problems which have insufficient data and some with surplus data.
6. Urges pupils to solve by arithmetic, when this is possible, as well as by algebra.

7. Encourages pupils to develop ability to recognize problems as belonging to a particular type.

8. Helps pupils to discover solutions instead of simply showing them how to solve problems.

9. Insists upon pupils guessing or estimating the answer before actually solving the problem.

10. Requires pupils to check results by substituting them in the original conditions of the problem.

Comments:

Use of Teaching Aids

1. Insists that pupils use diagrams in all problems which lend themselves to illustration.

2. Is skillful in use of blackboard illustrations.

3. Urges pupils to develop visual aids which help in problem solving.

Comments:

Evaluation

1. Makes careful appraisal of homework in an effort to diagnose pupil difficulties.

2. Uses all written work of pupils to help diagnose difficulties.

3. Uses evaluation as a teaching-learning device.
4. Seeks ways of evaluating pupil performance in other than the manipulative aspects of mathematics.

Comments:

**Strengths and Weaknesses of the Proposed Instrument**
**For Evaluating the Teaching of a Single Mathematics Lesson**

For purposes of discussion of the proposed instrument, we shall assume that Section III of the instrument is designed for a specific topic and takes a form such as that proposed for the topic: Solving Verbal Problems. It is the writer's judgment that the instrument so constituted has the following definite strengths: (1) It clearly illustrates evaluation strictly as a means of stimulating improvement in teaching, as opposed to evaluation as a means of determining a grade; (2) It is sufficiently brief to be usable by the supervisor during his classroom visit; (3) It's arrangement is conducive to a chronological application during the course of the supervisor's observation; (4) It provides a set of criteria which is of real assistance to the supervisor in focusing his attention upon the requisites of a good student-teaching performance; (5) It offers the student a written report and analysis of his teaching competence based upon a given observation by his supervisor; (6) It affords the supervisor a means of making specific suggestions for improvement to the student teacher concerning his presentation of a specific topic in mathematics; (7) It provides an opportunity for the supervisor to make written notes and comments on the student teacher's performance; and (8) It tends to reduce the
possibility of the supervisor recording a "halo" effect due to its mechanical construction, eliminating the checking of a scale arranged by columns.

This proposed instrument is not without its weaknesses. It is the writer's opinion that the following weaknesses must be considered in further experimentation: (1) The use of a five-point scale, which seems necessary to maintain brevity, causes the evaluator to make rather difficult interpretations in order to decide what gradation of the stated behavior he has actually observed; (2) The use of the five-point scale, despite the advantage of the instrument's mechanical construction, promotes a recording of a "halo" effect; (3) An instrument designed for use in evaluating the teaching of a particular mathematical topic implies long-term research and laborious development of instruments for all major topics; (4) For the sake of making the form brief, a rather inadequate amount of space is provided for freely written comments and suggestions; and (5) The evaluation of the teaching of a single lesson does not provide data relating all of the eight areas suggested.

It is the writer's opinion that, for an instrument designed to be of maximum value in assisting a mathematics student teacher to improve his teaching competence, the advantages of this proposed instrument far outweigh its disadvantages and that extensive experimental use of this technique will serve to establish its merit and assist in further improving it.
Proposed Instrument for Use of Supervisors in Mid-term and Final Evaluation of Student Teaching in Mathematics

The instrument designed for use in mid-term or final evaluation of a mathematics student teacher differs in several important respects from the instrument designed for use of the supervisor as he observes the student teaching a mathematics class. The supervisor, in the mid-term or final evaluation, is taking a backward look at the student teacher’s work and recording a composite evaluation based upon his collective observations. This is a very difficult task. Every supervisor forms an overall judgment of a given student teacher’s competence, and it is extremely difficult for him to separate his evaluation of a particular aspect of the student teacher’s competence from his general overall impression. This tendency of supervisors, when evaluating a student teacher, to assign the same rating to most, if not all items in the evaluation instrument, indicating the student teacher is excellent in all respects or good in all respects, is generally referred to as the “halo” effect. Most evaluation instruments currently used for mid-term and final evaluation do not assist supervisors in recording their observations in such a way as to minimize the “halo” effect.

While instruments for mid-term and final evaluation more often emphasize the objective of determining the student teacher’s final grade than the objective of helping the student teacher to improve his teaching competence, it is the writer’s opinion that these evaluation instruments can be and should be designed to accomplish both of these objectives. The following guiding principles should be emphasized in
the construction of instruments for mid-term and final evaluation:

1. Mid-term and final evaluation instruments should cover the total range of activities in which student teachers engage.

2. Observable behavior of student teachers should be used in mid-term and final evaluation instruments, rather than a list of traits or characteristics which are not clearly defined.

3. Descriptions of different levels of behavior which can be observed should be utilized rather than the same scale by which all items in the instruments are to be rated.

4. Adequate space for freely written comments should be provided.

An evaluation instrument designed to illustrate the application of these principles is presented here. It must be understood that this proposal is most certainly not intended to be the final answer in the construction of improved instruments for use in the mid-term and final evaluation of student teachers in mathematics. This instrument is designed to evaluate the student teacher upon the basis of all of the eight criteria presented earlier in this chapter: (1) Emotional balance and maturity; (2) Ability to attract, interest, and get along with children; (3) Intellectual and professional energy; (4) Skill in human relations with peers and adults; (5) Breadth of interests; (6) Conduct of classroom routine; (7) Knowledge of mathematics and related fields; (8) Specific techniques in the teaching of mathematics.
An Evaluation of the Student Teacher in Mathematics

<table>
<thead>
<tr>
<th>Student's Name</th>
<th>Date</th>
<th>Class</th>
<th>School</th>
<th>Supervising Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluator

Instructions to the Evaluator

In the parentheses preceding each item, write the figure which refers to the behavior description which best describes the student teacher's present behavior. *(Indicate your judgment as to his growth in the space provided by "L," "S," or "M," meaning Little, Some, and Much respectively.)*

* Enter "0" if you have not had an opportunity to observe behavioral evidence of this quality.

I. Emotional Balance and Maturity

( ) A. Adaptability to New or Changing Conditions.

1. Takes changes in stride.
2. Becomes easily flustered.
3. Is completely thrown off balance.
4. Adapts very quickly and easily.
5. Disturbed, recovers quickly.

Growth ( ) Comment:

( ) B. Consistency in Appropriate Behavior and Attitudes

1. Seems very erratic.
2. Is reasonably consistent.
3. Is somewhat unpredictable.
4. Seems always quite consistent.
5. Is somewhat erratic.

Growth ( ) Comment:

( ) C. Reaction to Criticism

1. Accepts criticism rather reluctantly.
2. Violently resents criticism.
3. Receives criticism gratefully and utilizes it in attempting to improve.
4. Accepts criticism but does little to correct his deficiencies.
5. Tends to resent any criticism or suggestions from supervisors.

Growth ( ) Comment:

( ) D. Self-Confidence

1. Exhibits extreme lack of self-confidence.
2. Always appears at ease in teaching situation, very self-confident.
3. Appears self-confident in most situations.
4. Is definitely handicapped through lack of self-confidence.
5. Self-confidence seems easily shaken in emergency situations.

Growth ( ) Comment:

( ) E. Sense of Humor

1. Has an excellent sense of humor.
2. Is quick to recognize humorous situations and able to laugh at his own mistakes.
3. Appears too serious, seldom smiles.
4. Has a poor sense of humor, almost never smiles.
5. Enjoys a joke more when it is on someone else.

Growth ( ) Comment:

( ) F. Dependability

1. Meets all obligations promptly and effectively.
2. Rarely fails to meet his obligations satisfactorily.
3. Devotes insufficient attention to details, meets most major obligations.
4. Is definitely lacking in dependability.
5. Is completely unreliable.

Growth ( ) Comment:

( ) G. Maturity in Appearance and Actions

1. Very immature in appearance and actions.
2. Seems quite mature.
3. Unusually mature in appearance and actions.
4. Appears somewhat immature.
5. Seems to have the usual maturity commensurate with his age and experience.

Growth ( ) Comment:

II. Ability to Attract, Interest, and Get along with Children.

( ) A. Classroom Atmosphere

1. Has a very friendly approach to students; encourages free expression.
2. Seems to have a very tense and unfriendly attitude toward students.

3. Approaches students with a rather formal but pleasant attitude.

4. Is friendly to students and promotes a permissive atmosphere in the class.

5. Seems tense, tends to curb free expression.

Growth ( ) Comment:

( ) B. Democratic vs. Autocratic Procedures

1. Consistently uses a democratic approach.

2. Usually but not consistently democratic in approach.

3. Resorts to dictatorial procedures in times of stress.

4. Often utilizes dictatorial methods, makes little effort to be democratic.

5. Seldom if ever uses a democratic approach, almost always dictatorial.

Growth ( ) Comment:

( ) C. Voice and Speech

1. Speaks in a pleasant, well-modulated voice, without apparent effort.

2. Is handicapped in a major way by voice and speech deficiencies.

3. Does not achieve maximum effectiveness as a teacher because of deficiencies in speech and voice quality.

4. Possesses no deficiencies in speech or voice quality which contribute to ineffective teaching.
5. Speech and voice constitute a minor asset to this student's teaching ability.

Growth ( ) Comment:

( ) D. Pupil Response

1. Children avoid him and refuse to discuss their problems with him.
2. Children are generally passive toward this student teacher, except the occasional one to whom he shows special attention.
3. Children generally react favorably to this teacher.
4. Children respond reluctantly and impersonally.
5. Children seek opportunities to visit with him and confide in him.

Growth ( ) Comment:

( ) E. Conduct of Group Activities

1. Skilled in the use of co-operative, democratic methods in dealing with a group both inside and outside the classroom.
2. Able to conduct a group activity satisfactorily.
3. Seems able to win the respect of children in handling group activity but fails to get enthusiastic co-operation.
4. The group activity proceeds with little, if any, reference to this student teacher's presence.
5. Almost completely without skill in handling groups of children.

Growth ( ) Comment:
F. Interest in Children and Their Problems

1. Exhibits no interest in or understanding of children and their problems.

2. Seems intensely interested in children; continually seeks to broaden his understanding of them and their problems.

3. Appears really interested in children and their problems but does little to broaden his understanding.


Growth ( ) Comment:

G. Attitude toward Students

1. Seems very ill at ease in the presence of his students.

2. Appears distant and impersonal in his relations with students.

3. Is naturally retiring in nature but always pleasant.

4. Makes pupils feel that they know him; becomes acquainted with most of his class rapidly.

5. Appears completely at ease with his students and makes them feel at home with him.

Growth ( ) Comment:

III. Intellectual and Professional Energy

A. Mental and Physical Vigor

1. Generally appears exhausted and slow to respond to pupil ideas and questions.
2. Appears overworked and unable to keep up with an alert and energetic student group.

3. Seems to be just able to meet requirements of his assignment in physical and mental vigor.

4. Possesses physical and mental vigor sufficient to go beyond the minimum activities required by his assignment.

5. Appears keenly alert and vigorous both physically and mentally, well able to undertake a heavy work schedule.

Growth ( ) Comments:

( ) B. Initiative in Planning the Student-Teaching Experience

1. Willingly takes the initiative in developing plans for his student-teaching experiences; prefers to rely upon himself.

2. Takes some initiative but relies heavily upon his supervisors for planning and guiding his experience.

3. Relies almost completely upon supervisors for planning and directing his experience in the school.

4. Willing to act upon plans and suggestions made by supervisors, seldom initiates any plans for himself.

5. Has to be urged to act upon plans after supervisors assist in formulating them.

Growth ( ) Comment:

( ) C. Recognition of Problems

1. Recognizes a problem when it arises; is able to conceive ways of dealing with it, but often fails to follow through to a solution.
2. Recognizes problems readily when they arise, conceives plans for solving them, and follows through effectively until a final solution is reached.

3. Is able to foresee problems; conceives methods of solving them, and plans to deal with them effectively, following through to a solution.

4. Fails to recognize many problems which arise, lacks resourcefulness in planning to solve problems already recognized.

5. Seldom recognizes the most glaring problems which arise, insensitive to problems.

Growth (  ) Comments:

(  ) D. Recognition of His Own Errors

1. Is usually able to recognize his own mistakes but finds it difficult to do anything to improve the situation.

2. Has keen sense of recognition of his own mistakes, always able to initiate some corrective action.

3. Is sometimes able to recognize his own errors but fails completely in planning corrective action.

4. Seldom, if ever, becomes aware of his own mistakes and is helpless, therefore, to rectify them.

5. Recognizes his own errors readily but is lacking in ability to correct them himself.

Growth (  ) Comments:
E. Ability to Formulate Professional Opinions

1. Seems receptive to questions asked by supervisors but is not adept in answering confidently.

2. Is evasive if asked by supervisors for an opinion upon a professional matter.

3. Seldom has a well-formulated opinion when asked a professional question.

4. Speaks with positiveness that carries conviction when asked a professional question.

5. Lacks confidence in expressing his own opinion, even when he has it well-formulated.

Growth ( ) Comments:

IV. Skill in Human Relations with Peers and Adults

A. Acceptance by the School Staff

1. Accepted by the school staff more as a student than as a co-worker.

2. Well accepted as a faculty member by the entire staff and accorded faculty privileges.

3. Accepted as a faculty member only by those staff members with whom he worked closely.

4. Tolerated by the staff as a college student whom they are expected to help.

5. Considered by the staff to be strictly a college student who is expected to help them with their work.

Growth ( ) Comments:
B. Response to Advice and Suggestions by Staff Members.

1. Respects advice or suggestions offered but seldom uses them as basis for his action.

2. Rejects advice and suggestions from staff members.

3. Appreciates and graciously accepts any aid or advice offered by staff members.

4. Is reluctant to accept suggestions or advice from his supervising teacher.

5. Uses the advice received from staff members in formulating courses of action.

Growth ( ) Comments:

C. Tolerance of Co-Workers

1. Distrusts other people, suspicious.

2. Looks for and expects to find good in other people, receptive to their opinions.

3. Intolerant of the opinions of others, generally considers his own viewpoint correct.

4. Is given to undue or harsh criticism of others.

5. Always tolerant and receptive toward opinions of others, willing to discard personal bias.

Growth ( ) Comments:

V. Breadth of Interests

A. Interest in Community Activities and Issues

1. Exhibits extreme lack of awareness of, or interest in, community activities.
2. Shows some interest in community activities and issues.

3. Participates in community activities only when required to do so.

4. Seizes every opportunity to participate in community activities.

5. Seems willing to participate in community activities when urged to do so.

Growth ( ) Comments:

( ) B. Tolerance of Persons of Other Races, Creeds, and Colors

1. Seems eager to work with people regardless of their differing origins.

2. Accepts graciously any contacts with persons of other races, creeds, and colors.

3. Seems barely able to tolerate persons of other races, creeds, or colors.

4. Seems distant toward, and hesitant about working with, people of other races, creeds, or colors.

5. Is obviously cold toward, and quite intolerant of, persons of other races, creeds, or colors.

Growth ( ) Comments:

( ) C. Willingness to Guide Extra-Curricular Activities

1. Seeks opportunities to function in extra-curricular activities as well as the curricular activities of the school.

2. Is avowedly interested only in the teaching activity of the school.
3. Willingly accepts work with extra-curricular activities as a part of his job.

4. Helps with extra-curricular activities only when required to do so and with reluctance.

5. Makes an obvious effort to escape any work with extra-curricular activities.

Growth ( ) Comments:

( ) D. Willingness to Assume Leadership

1. Assumes responsibility for leadership occasionally and with reluctance.

2. Avoids assuming any leadership responsibilities in the school.

3. Enjoys carrying leadership responsibility and does it well.

4. Accepts leadership responsibility only when it is urged upon him.

5. Seeks opportunities to exert leadership.

Growth ( ) Comments:

VI. Conduct of Classroom Routine

( ) A. Sensitivity to the Physical Conditions of Classroom (Heating, Lighting, Ventilation)

1. Completely oblivious to their effect upon children.

2. Attends to physical conditions only if he becomes uncomfortable himself.

3. Recognizes, but attaches little importance to needed improvements in physical conditions—seems too busy to both...
4. Seems generally sensitive to physical conditions but does not give them consideration routinely.

5. Makes needed adjustment in physical conditions in the classroom his first order of business when he enters.

Growth ( ) Comments:

B. Punctuality in Conduct of Class

1. Gets off to a slow start; runs overtime at the end of the period.

2. Seems pressed for time, allows routine matters to take up too much time.

3. Usually prompt in beginning and closing classes.

4. Generally makes effective use of class time.

5. Always prompt, uses class time wisely.

Growth ( ) Comments:

C. Availability of Reference Materials and Demonstration Equipment.

1. Has readily accessible the available reference and demonstration materials which may be needed in the day's work.

2. Makes certain that a wide variety of materials is accessible without giving any thought to the specific items which may be needed.

3. Makes little effort to become familiar with available materials and to plan for their effective use.

4. Seems totally insensitive to the need for a collection of teaching materials.
5. Is familiar with all teaching materials on hand and tries to secure additional materials needed in the work planned.

Growth ( ) Comments:

D. Giving Assignments

1. Often gives hurriedly a hastily selected assignment after the closing bell when pupils are leaving the room.
2. Assignments are given in a clear and concise fashion, not hurriedly.
3. Carefully selected assignments are often given hurriedly at end of the period.
4. Gives rather poorly chosen assignments but makes them understood by most of his pupils.
5. Gives well chosen assignments and devotes sufficient time to making them intelligible to all students.

Growth ( ) Comments:

E. Classroom Management and Discipline

1. Acts quickly on basis of snap judgments.
2. Often acts ill advisedly, overlooking important factors.
3. Devotes very little attention to problems which arise; acts along path of least resistance.
4. Uses good judgment but fails to bring the student's viewpoint into his decision and action.
5. Deliberates carefully, insists that the student be aware of the need for and desirability of the course of action.

Growth ( ) Comments:
VII. Knowledge of Mathematics and Related Fields

A. Acquaintance with Mathematical Literature

1. Seldom able to suggest a suitable reference to students who seek to delve into a topic more thoroughly.

2. Seems unfamiliar with many well-known sources of mathematical materials.

3. Is familiar with a rather limited number of reference materials in mathematics.

4. Usually able to suggest a possible source of further information on the topic being considered.

5. Always has a ready reference at his finger tips.

Growth ( ) Comments:

B. Ability to Stimulate Interest in Mathematics

1. Fails completely to make mathematics live for his students by showing implications of mathematical principles in modern life.

2. Rarely brings mathematics close to the everyday life of his students.

3. Is able occasionally to focus the mathematics being studied upon a problem within the everyday experiences of all of his students.

4. Stimulates only the pupils of better-than-average ability by discussions of topics in advanced mathematics.

5. Stimulates interest in further study of mathematics through skillful excursions into the elementary aspects of advanced topics and through significant practical application.
Growth ( ) Comments:

C. Awareness of Significant Applications of Mathematics in Related Fields

1. Exhibits no knowledge of, or interest in, applications of mathematics in related fields.
2. Seems aware of and interested in mathematical applications but unable to utilize them in teaching.
3. Occasionally uses significant mathematical applications in his teaching.
4. Makes good use of mathematical applications in his teaching.
5. Seeks opportunities to increase his own knowledge of and use of mathematical applications.

Growth ( ) Comments:

D. Reaction to Pupil Questions

1. Squelches a pupil who asks a question which he is unable to answer.
2. Obviously ignores a question if he feels he is unable to answer.
3. Seldom admits he doesn't know the answer to a question, deliberately evade answering directly.
4. Attempts to answer all questions asked, sometimes admits he is not certain about the answer.
5. Frankly admits his inability to answer a given question, readily suggests sources of information where the information can be obtained.

Growth ( ) Comments:
VIII. Specific Techniques in the Teaching of Mathematics

A. Providing Opportunity for Pupils to Participate in Planning

1. Does no pre-planning, depends completely upon teacher-pupil planning.

2. Plans all class activities in advance, providing no opportunity for pupils to participate in planning.

3. Does extensive pre-planning, leaving pupils only a minor role in helping to plan classroom activity.

4. Is willing to set aside his own carefully laid plans to capitalize upon current pupil interest in planning cooperatively certain class activities.

5. Is skilled in providing adequate opportunity for teacher-pupil planning of class activities within the framework of his overall pre-planning.

B. Providing for the Total Range of Ability in the Class

1. Seems insensitive to the needs of the pupils at the extremes of the ability range, plans only for the large middle group in the class.

2. Seems unable to plan successfully to meet the need, which he recognizes, for a wider range of activities to meet the total ability range.

3. Plans adequately for the large middle group in the ability range and plans some remedial work for those of lesser ability.
4. Attempts to plan activities to meet the total range of ability. Most pupils seem profitably employed during the class period.

5. Successfully provides for the total range of ability, not only providing remedial work for students of low ability, but also providing projects for the more able students, which lead them further into the field of mathematics.

Growth ( ) Comments:

C. Introducing a Topic

1. Begins a new topic in isolation and without establishing its relationship to understandings previously acquired.

2. Makes very little attempt to show any relation of the new topic to those studied previously.

3. Gives an overview of the entire unit at the beginning; seldom follows through to show the relationship of individual topics as they are studied.

4. Seems unable to make completely intelligible to his pupils, his understanding of the relationship of a new topic to the unit as a whole and to topics previously considered.

5. Succeeds in making understandable to his pupils the relationship of new topics to others studied earlier and to the unit as a whole.

Growth ( ) Comments:
D. Use of Various Techniques in Presenting a Topic

1. Uses the one approach recommended in the textbook and adheres to it strictly.

2. Occasionally varies the textbook approach.

3. Has good understanding of different approaches to a topic, sometimes uses more than one.

4. Makes use of the techniques he is familiar with in presenting new material, to help make it intelligible to all pupils.

5. Seeks to add to his knowledge of techniques for presenting various new topics and utilizes every opportunity to use a variety of techniques, testing their effectiveness.

Growth ( ) Comments:

E. Selection of Problem Material

1. Follows strictly the lists of problems available in the textbook.

2. Uses some problems from other textbooks available, as well as that in the text used by the class.

3. Provides some problem material which he feels is close to the everyday life of his students.

4. Uses any problems from everyday life that students volunteer to provide.

5. Seeks ways of helping pupils find problems of importance in their everyday living, and encourages them to bring these problems to class.

Growth ( ) Comments:
F. Answering Pupil Questions

1. Answers a given pupil's question individually, makes no effort to involve other pupils in the class.

2. Answers the question of a pupil so that all can hear, even though they didn't hear the question.

3. Makes some effort to have all students benefit from the question asked by an individual student, at least by making certain that all students hear the question.

4. Makes certain that both question and answer are heard by all.

5. Focuses the attention of all students upon hearing and understanding both questions and answers originating from either students or student teacher.

Growth ( ) Comments:

G. Skill in Questioning

1. Uses few questions, lectures or tells his subject to his students.

2. Uses many leading questions.

3. Unskilled in using questions which are appropriate and stimulate thought.

4. Relies heavily upon questioning, preferring not to tell all the answers to his students, but to have them discover the answers.

5. Skilled in posing questions which stimulate and clarify pupil thinking.

Growth ( ) Comments:
H. Shifting the Type of Class Activity

1. Uses complete class period for a single type of activity such as blackboard work.

2. Insists upon numerous quick shifts in type of class activity during every period, completely disregarding current class interests.

3. Sometimes recognizes the monotony resulting from prolonged activity of one type and introduces a new activity.

4. Avoids monotony in the classroom by making a desirable number of shifts in class activity giving some consideration to the current interest of the pupils.

5. Makes well-timed shifts in classroom activity, considering the interest being manifested at the time by the students.

Growth Comments:

I. Teaching Through Contrast and Comparison as Opposed to Repetition

1. Uses problems of varying character in each assignment, including those with insufficient data and those with excess data.

2. Makes some assignments involving two or more differing types of problems; emphasizes method of attack rather than following a model solution.

3. Follows text-book lists of problems, usually most problems assigned can be worked by the illustrative example provided.

4. Relies almost completely upon pupil understanding resulting from working a large number of problems of identical nature.
5. Works an illustrative example and assumes pupils understand and can immediately work a quantity of similar examples.

Growth ( ) Comments:

( ) J. Diagnosing Pupil Difficulties in Mathematics

1. Makes absolutely no effort to diagnose the individual student's difficulties in mathematics.

2. Sometimes tries to learn something about the student from one of his former teachers in an effort to diagnose his difficulties in mathematics.

3. Uses some diagnostic materials that are available to try to learn more about the student who is having difficulty.

4. Does a good job of diagnosing individual student difficulties in mathematics; fails to follow up with remedial procedures.

5. Makes every effort to help diagnose the mathematical difficulties of individual students and follows through with necessary remedial work.

Growth ( ) Comments:

( ) K. Developing Understanding of Algebraic Operations

1. Tries to develop a mastery of algebraic operations in isolation, without reference to corresponding operations of arithmetic, and without reference to any immediate use to be made of them.

2. Introduces specific algebraic operations when the need for them arises and clarifies them by referring to arithmetic operations.
3. Makes some attempt, as he follows the textbook order of topics, to clarify algebraic examples by referring to arithmetic examples.

4. Departs occasionally from a specified order of algebraic topics to consider a topic for which there is immediate use.

5. Clarifies algebraic operations through reference to arithmetic and provides good illustrations of their use.

Growth ( ) Comments:

( ) L. Checking Problem Solutions

1. Does not ask pupils to check results obtained in solving problems.

2. Tells pupils to look in the "answer book" to see if they obtained the correct result.

3. Sometimes suggests that pupils compare their results as a check.

4. Occasionally suggests that pupils check results obtained in the original conditions of the problem.

5. Regularly insists that pupils check results in the original condition of the problem and takes every opportunity to point up the results of failure to check results.

Growth ( ) Comments:

( ) M. Use of Physical Devices and Illustrations in Teaching Mathematics

1. Relies almost completely upon blackboard diagrams, using any physical models that are available.
2. Seldom tries to improve understanding of a problem through any kind of illustration, on blackboard or otherwise.

3. Makes use of blackboard illustrations only.

4. Relies heavily on blackboard illustrations, makes wise use of all physical devices available and tries to secure some in addition.

5. Makes skillful use, in his teaching, of blackboard illustrations and some of the physical devices obtainable commercially helps pupils construct some devices for their own use in developing understanding.

Growth ( ) Comments:

( ) N. Use of Slides, Films, and Filmstrips

1. Seems completely unaware of the existence of slides, films, and filmstrips.

2. Examined the slides, films, and filmstrips available at the school, suitable for use in his class, only through the insistence of the supervising teacher, and used very few, if any.

3. Used a variety of slides, films, and filmstrips, which were available at the school, without planning a suitable orientation or adequate follow-up.

4. Made well-timed use of slides, films, and filmstrips available in the school, and secured some additional ones from outside sources.
5. Skillful (1) in selecting films, slides, and filmstrips for use in his class; (2) in preparing his class for viewing of such materials; and (3) in conducting a meaningful follow-up for them.

Growth ( ) Comments:

( ) 0. Construction and Use of Evaluation Procedures

1. Relies completely upon the supervising teacher to select and provide the tests and evaluation techniques to be used with the class.

2. Uses textbook tests, standardized tests, or those available in school files which have been used in previous years, primarily for purposes of determining grades.

3. Devises most of his own tests, attempting to fit them to the class activities; times them with grading periods.

4. Seeks to make every test used, regardless of its origin, a genuine teaching device, de-emphasizing test scores as basis of grades.

5. Constructs his own evaluation instruments, considering the particular activities in which the class has engaged, and constantly seeks ways to evaluate other than the manipulative side of mathematics.

**Strengths and Weaknesses of the Proposed Instrument**

For Mid-term or Final Evaluation of the Mathematics Student Teacher

In summarizing the strong and weak points of the instrument just presented, it must be emphasized that the instrument is not intended to
be all-inclusive, so far as the sub-headings under each of the eight major criteria are concerned, but to be illustrative of the items which may be justifiably included in these areas. It is the writer's opinion that this proposed instrument has the following strengths: (1) The mid-term or final evaluation offers opportunity for the evaluator to record evidence relating to all eight of the major criteria; (2) The influence of the "halo" effect is minimized in this instrument, which is usually applied, at least partially, for the purpose of grading; (3) The evaluator is asked only to record what he observes as the behavior of the student teacher; (4) This evaluation instrument is designed specifically for the mathematics student teacher; (5) Since the instrument is designed to fit the mathematics student teacher, it provides the evaluator an opportunity to make very specific suggestions for the student's improvement as a teacher of mathematics and is not designed exclusively to serve as a basis for grading. (6) The instrument serves as a means of collecting and recording evidence concerning the student teacher's competence in the conduct of all activities of the school, not just the teaching of a mathematics class; (7) Space for freely written comments and suggestions is provided throughout the instrument.

The principal weaknesses of this proposed instrument are, in the writer's opinion, the following: (1) It is rendered long and cumbersome to use through a somewhat natural desire to include a rather large number of items under each area; (2) A considerable amount of refinement of the behavior descriptions in such an instrument is desirable and involves
continuous research; (3) The five behavior descriptions following each item appear in an unordered sequence, and the weighting assigned by the writer to each, needs further checking by at least jury opinion. It is the writer's considered opinion that, through extensive experimentation with its use, by supervisors of student teachers of mathematics, an instrument of this type will provide the prospective teacher with significant suggestions through the application of which he may improve his teaching effectiveness, and that it will provide the prospective employer with much more valuable evidence concerning the prospective teacher's potential than most evaluation instruments currently used.

Summary

The significant guiding principles, developed earlier, for programs of evaluating student teachers in mathematics have been applied in this chapter to illustrate two types of proposed evaluation instruments: (1) those for use in rating the mathematics student teacher's teaching of a specific lesson, and (2) those for use in a mid-term or final evaluation of the mathematics student teacher. Finally, the specific strengths and weaknesses of the proposed instruments, as seen by this writer, have been stated explicitly.
CHAPTER 6

SUMMARY OF THE STUDY

The greatest value which may come from this study lies in the use persons concerned with the preparation of mathematics teachers can take of it. It is the major purpose of this summary to state briefly the findings in this study which may stimulate, and in some degree, point the way toward, improved evaluation practices for those engaged in the supervision of mathematics student teachers.

The Problem

This study was designed: (1) to determine what methods of evaluating student teachers of mathematics are now in use; (2) to investigate the factors in student-teaching programs that exert a major influence upon the evaluation process; (3) to suggest some guiding principles for evaluation of mathematics student teachers; and (4) to propose some techniques which may contribute toward improved evaluation of the student teacher in mathematics.

Method

In this study, the student teaching programs of a selected group of institutions were examined, with particular emphasis upon techniques of evaluating student teachers in mathematics. Data concerning these programs was secured by questionnaire. In addition to this data, a review of the available literature was made and a
number of evaluation instruments, contributed by the various
institutions responding to the questionnaire, were examined.
Replies to the questionnaire were received from 256 of the 366
persons to whom it was submitted. An effort was made to select
individuals having a primary interest in the training of mathematics
teachers. The procedures employed in this selection, were as follows:

(1) Specialists in mathematics education who, during the pre­
ceding five years, had participated in programs of the
National Council of Teachers of Mathematics devoted to
the education of mathematics teachers.

(2) Supervisors of mathematics student teachers, directors
of student teaching, or heads of education departments,
who were members of the Association for Student Teaching,
during the year 1951-52, and who were located in institu­
tions from which no representative had been selected in
(1).

(3) Deans of colleges of education, or heads of institutions
engaged in teacher education, listed in the Educational
Directory, whose enrollments were approximately 400 or
more, and from which no representative had been selected
in (1) and (2).

These 366 persons were distributed geographically in 45 states
and the District of Columbia.

Summary of Conclusions and Recommendations
An analysis of the data secured concerning the student teaching programs in various institutions show the widely differing practices. Persons responsible for evaluation should recognize the important influence of such factors as the adequacy of available laboratory facilities, the time devoted to student teaching, the persons responsible for supervision and evaluation, and the kind of conferences which are held. Evaluation must be conducted in reference to the total structure in which the student and the supervisor are operating. The extent to which certain methods of evaluation can be utilized meaningfully depends upon a complex of factors.

An investigation of the literature yielded some guiding principles which have been proposed in the general area of student-teaching evaluation and in the broader area of evaluation of professional laboratory experiences. Five general, guiding principles for evaluation of student teaching were accepted, by the writer, as a starting point for the study and development of additional guiding principles, applicable specifically to the evaluation of student teaching in mathematics. Those guiding principles are as follows: 1

1. Evaluation of student teaching should be considered an integral part of the student-teaching process.

2. Evaluation of student teaching should be considered a continuous process.
3. Evaluation of student teaching should be a co-operative process in which the student teacher, supervising teacher, and college supervisor participate.

4. Evaluation of student teaching should involve self-evaluation by the student teacher, pupil reactions to the student teacher, evaluation of the student teacher by the supervising teacher, and evaluation of the student teacher by the college supervisor.

5. All phases of evaluation of student teaching should make their principal contribution in the area of helping the student teacher improve his competence as a prospective teacher.

As stated in the fourth principle, four types of evaluation of the student teacher were considered: self-evaluation, pupil evaluation, evaluation by the supervising teacher, and evaluation by the college supervisor. The methods used in each of these types of evaluation were investigated for the purpose of suggesting some guiding principles, relative to each, which may be applied to effect improvement in the evaluation of the mathematics teacher.

**Self-Evaluation**

An analysis of the data secured on self-evaluation supports the following conclusions:

1. Self-evaluation, using some type of record form, is engaged in by student teachers in mathematics in approximately three-fourths of the institutions responding.

---

2 Chapter 3, pp.133-134.
2. Slightly more than half of the group reporting that recorded self-evaluations are made indicate that the student teacher is required to submit his self-evaluation report to the college supervisor.

3. Most of the self-evaluation instruments, contributed by the respondents in this study, were designed for use no more than two or three times per quarter or semester. Only a few were designed for use weekly.

4. All of the instruments, except one, were designed for general use in any subject area.

5. The self-evaluation instruments examined may be classified in three main categories: (a) Activity Check Lists, (b) Question and Answer, and (c) Check List of Traits or Qualities to be rated.

The following guiding principles for programs of self-evaluation by student teachers of mathematics are recommended by the writer:

1. Unrecorded self-evaluation should be continuous during the student-teaching experience.

2. Comprehensive self-evaluation, through use of formal instruments, should be undertaken several times during a quarter or semester.

3. Student teachers should use more than one type of self-evaluation instrument.

4. Self-evaluation instruments should provide the student teacher with an opportunity to write comments freely.

5. Self-evaluation instruments lacking in explicit instructions or clearly defined terms should be avoided.

6. Recorded self-evaluation by the student teacher in mathematics should include the use of at least one evaluation instrument designed specifically for the area of

---

Cahpter 3, pp. 134-137.
mathematics.

Pupil Evaluation

An analysis of the data, secured by the questionnaire and pertaining to pupil evaluation, supports the following conclusions:

1. Approximately one-third of the institutions responding in this study make use of pupil reactions as a part of the program of student-teaching evaluation.

2. Of this one-third, at least half make use of totally unstructured pupil evaluation.

3. Most of the forms used to secure pupil reactions, which were examined in this study, were partially structured with emphasis upon freely written comments.

The following guiding principles for pupil evaluation are recommended by the writer:

1. Student teachers should secure pupil reactions to their teaching performance.

2. Pupil evaluation should be secured about the middle of the quarter or semester.

3. In pupil evaluation the pupils should remain anonymous.

4. The type of instrument used to secure pupil reactions should be geared to the maturity level of the pupils.

---

4 Chapter 3, pp. 151.

5 Chapter 3, pp. 151-154.
5. An adequate instrument to secure pupil reactions should be partially structured and thus insure an opportunity for freely written comments by pupils.

6. The student teacher should summarize the pupil reactions and find ways of utilizing them to help improve the total student teaching—learning situation.

7. Pupil reactions should be used by the student teacher but not by the supervisors, unless the student teacher voluntarily submits them.

**Evaluation by Supervising Teachers**

An analysis of the data assembled, which deals with evaluation by supervising teachers, supports the following conclusions:

1. The evaluation by the supervising teacher is considered in determining the final grade of the student teacher in seventy-seven per cent of the institutions responding.

2. Only fifty-seven per cent of those responding state that the supervising teacher records his evaluation of the student teacher.

3. Eighty-nine per cent of those responding point out that the supervising teacher bases his evaluation of the student teacher upon observations of, and conferences with the student teacher.

---

Chapter 4, pp. 180-181.
4. Of the one hundred thirteen forms, designed for use by the supervising teacher and examined by the writer, only seven were for use in the evaluation of the teaching of a single lesson.

5. One hundred two of the one hundred thirteen forms were for use in mid-term, or final evaluation. Four of the forms were specifically for use weekly.

6. None of the instruments examined was designed specifically for use in the area of mathematics.

7. Most of the evaluation instruments, used by supervising teachers, employ a scale, the points of which are defined by ambiguous terms, such as good, fair, poor, average, etc.

The following guiding principles for evaluation by supervising teachers are recommended by the writer:

1. Supervising teachers should be encouraged to record comprehensive mid-term evaluations of the student teacher two or more times during the period of student teaching.

2. Instruments used in the mid-term evaluation of the mathematics student teacher by the supervising teacher should provide opportunity for recording an evaluation of the student teacher's ability to carry the responsibilities of a teacher, in addition to classroom instruction.

3. Supervising teachers should be encouraged to record

---

Chapter 4, pp. 181-183.
evaluations of the student's teaching of a single mathematics lesson.

4. Supervising teachers should use instruments designed for use in the particular area of mathematics for making midterm evaluations of student teachers in mathematics.

5. Supervising teachers should use instruments of evaluation which consist of descriptions of behavior which is observable by the evaluator, in order to gather data about the student teacher.

Evaluation by College Supervisors

The following conclusions, concerning evaluation by college supervisors, are supported by an analysis of the data assembled:

1. College supervisors are considered responsible for the student teacher's final grade by seventy-five per cent of the questionnaire respondents, but fifty-six per cent report that advice is secured from the supervising teacher.

2. Seventy-five per cent of the respondents reveal that college supervisors emphasize observation and conferences with the student teacher and the supervising teacher in arriving at the final evaluation of the student teacher.

3. Only thirty-eight per cent of the respondents state that the college supervisor's final evaluation is based upon a series of recorded ratings during visits to the student.

---
8 Chapter 4, pp. 205-207.
teacher on the job.

4. Seventy-five per cent of the respondents report that college supervisors do make use of an evaluation form, partially or totally structured in character.

5. A comparison of the percentages in (3) and (4) above reveals that a large number of college supervisors use such evaluation forms for final evaluation only, and that this final evaluation is not, therefore, supported by any record of evaluations made during the period of student teaching.

6. College supervisors in all the types of institutions studied gave principal emphasis in their evaluation to the "personal traits or qualities" of the student teacher.

7. College supervisors in all types of institutions gave least emphasis in their evaluation to the student teacher's "skill in conducting the drill or recitation type lesson" and "participation in school and community activities."

8. College supervisors in all the types of institutions studied placed much emphasis on evaluation of "classroom management and control" and "emotional balance and maturity."

9. Specific techniques in the teaching of mathematics which were emphasized most by college supervisors in their evaluation of student teachers were the following:

   1) Motivating by effective orientation to the lesson;

   2) Utilizing current pupil interest;
3) Providing for individual differences;
4) Clarity of explanations;
5) Maintaining a balance of teacher-pupil participation.

10. The following specific techniques in the teaching of mathematics were emphasized least by college supervisors:
   1) Use of general applications of mathematics to science;
   2) Use of physical devices and models;
   3) Use of school and community resources;
   4) Economy in use of time.

11. Thirty-three per cent of the rating forms exclusively employed by college supervisors and contributed by institutions in this study were designed for use in evaluating the teaching of a single lesson.

12. Most of the devices designed for use in evaluating the teaching of a single lesson are partially structured, providing space for the written comments of the evaluator.

13. A large majority of the evaluation forms used by college supervisors for final or mid-term evaluation consist of lists of traits or abilities to be checked, according to a scale, usually a five-point scale, with no attempt made to define each of the points in reference to the particular trait or ability to be evaluated.

14. Most of the evaluation instruments for the use of college supervisors in final or mid-term evaluation allow some
space for freely written comments by the evaluator.

The following guiding principles for the evaluation of student teachers in mathematics, by the college supervisors, are recommended by the writer:

1. College supervisors should make use of recorded evaluations of the student teacher's work several times during the student-teaching assignment.

2. College supervisors should develop and use instruments designed to record their reactions to the student teacher's handling of a single mathematics lesson.

3. College supervisors should make it a regular practice to provide the student teacher with copies of the evaluations which they make.

4. Evaluation instruments employed by college supervisors should include space for the evaluator to write comments.

5. College supervisors should make use of evaluation instruments designed specifically for use with mathematics student teachers.

6. Instruments used by college supervisors in mid-term evaluation of the student teacher should be designed to make use of descriptions of observable behavior.

7. College supervisors should make use of a variety of appropriate evaluation instruments. (This includes: anecdotal records, check lists of teacher activities, structured and unstructured forms for evaluation.)
8. The evaluative criteria to be used judging the work of student teachers of mathematics should be understood and accepted by student teachers and supervisors alike.

9. The evaluative criteria used in instruments for the evaluation of mathematics student teachers should include those criteria, applicable to student teaching, which have been applied in the evaluation of previous laboratory experiences.

Suggested Evaluation Instruments for the Use of Supervisors

Three instruments for the use of supervisors in the evaluation of mathematics student teachers, which were designed by the writer, are presented. Two of these are intended for use in evaluating the teaching of a single mathematics lesson, while the other is for use in mid-term evaluation. These instruments are intended to be illustrative only. They constitute an attempt to suggest what kind of evaluation instruments result if the guiding principles recommended in this discussion are applied to the task of developing appropriate instruments for evaluation. The strengths and weaknesses of the proposed instruments are discussed in detail.

The first of the two instruments proposed for use in evaluating the teaching of a single mathematics lesson is a general form which could be used by the supervisor as he observes the mathematics student teacher conduct any lesson whatsoever. The second instru-

See Chapter 5, pp. 233-238, 246-249, 253-277.
ment is an adaptation of the first, in which the section on teaching techniques in mathematics is designed for use in evaluating the student teacher as he teaches a lesson on the particular topic of solving verbal problems. This latter instrument was designed upon the basis of research into various techniques of teaching verbal problems which appear in the literature on the teaching of mathematics.

The specific nature of the instrument, proposed for use in evaluating the teaching of a lesson in solving verbal problems, implies that supervisors should construct similar instruments for all major topics. The magnitude of such a task is immediately recognized. It is suggested that, since supervisors can evaluate, in such great detail, only a limited number of individual lessons taught by the student teacher, the construction of such instruments might be limited to those applicable to introductory lessons for topics with which pupils usually have considerable difficulty.

The third instrument, designed by the writer, is intended for the use of the supervisors, two or more times during the period of student teaching. This instrument affords the supervisor a means of recording an evaluation of the student teacher, which is based upon observations of his work, not only in classroom teaching, but also in other activities. It is a more comprehensive type of appraisal than the evaluation of the teaching of lessons in mathematics. The instrument illustrates the use of descriptions of behavior, as observed by the evaluator, rather than lists of traits or qualities which are to be rated on a scale. The supervisor
is asked to check the statements which seem to him to describe the
student teacher who is being evaluated. The emphasis in this instru-
ment is upon recording evidence, rather than upon formulating judg-
ments concerning the student teacher's performance. Such evaluation
provides suggestions for improvement to the student teacher, as well
as bases for a final grade. The use of this kind of evaluation
instrument is limited by its length and the time which is required
to complete it.

**Recommendations for Further Research**

1. It is recommended that institutions which are engaged in the
preparation of mathematics teachers, conduct extensive research
which may contribute to a determination of the critical factors
in the success or failure of student teachers.

The success or failure of any program of student-teaching
evaluation depends upon the validity of the criteria upon which the
evaluation is based. For the purposes of this study, in suggesting
desirable evaluation instruments for the use of supervisors of
student teachers in mathematics, a set of criteria were assumed,
upon which the instruments were based. Research is needed to
support the use of those critical factors as a basis for evaluation.

A possible approach to this problem might be to study the
relationship of the available objective data concerning a group
of prospective mathematics teachers, to their performance in student-teaching. A second approach might be to study the extent to which the pattern and extensiveness of previous experiences of such a group of students is related to their student-teaching performance.

2. It is recommended that supervisors of student teachers in mathematics experiment with the type of instrument proposed in this study,¹¹ for the evaluation of a single lesson, in order to determine its usefulness as a means of communicating suggestions for improvement to the student teacher.

If the principal purpose of evaluation is to help the student teacher to become a more competent teacher of mathematics, then it is important that supervisors report to the student teacher his specific strengths and weaknesses. The degree of specificity desirable in the evaluation instrument needs extensive study.

A possible approach to this problem might be to use the proposed instrument with different groups of student teachers in mathematics, over a period of several college quarters. The supervisor would need to note, specifically, in a number of consecutive observations, the amount of improvement which resulted from suggestions which were conveyed to the student teacher, primarily by means of the evaluation instrument. As a part of this investigation, securing the reactions of the student teachers to the use of the instrument,

¹¹ Chapter 5, pp. 246-249.
might prove very valuable. Another possible approach might involve the use of a control-group situation, in which the instrument would be used with one group of student teachers and not with another group, in an effort to determine how effective such an instrument is in conveying suggestions for improvement to the student teacher.

3. It is recommended that supervisors of student teachers in mathematics devise a series of instruments pertaining to the teaching of several topics in arithmetic, algebra, and geometry, and appraise their effectiveness through applying them to the evaluation of several groups of student teachers in mathematics.

Experimentation with a number of instruments designed for evaluating the teaching of certain topics in mathematics would provide more conclusive evidence as to the desirability of their use. The procedure for designing a series of evaluation instruments applicable to the teaching of particular topics is illustrated in Chapter 5, where the construction of the instrument for evaluating the teaching of a lesson on solving verbal problems is described. An evaluation of the effectiveness of such instruments might be conducted with the co-operation of a number of supervising teachers, college supervisors, and student teachers, asking each one to assess the value of the instruments from his own viewpoint.

4. It is recommended that supervisors of student teachers in mathematics develop and experiment with more meaningful instruments of evaluation, which employ descriptions of observable
An examination of a wide variety of evaluation instruments now in use reveals a widespread use of scales described by qualitative but somewhat ambiguous words such as superior, good, and fair. Only a few attempts have been made to relate observable behavior to the criteria being considered. This type of instrument has been illustrated in a very rough experimental form in Chapter 5, pages 253-277.

Experimentation with this type of evaluation instrument might involve securing an opinion form a jury of experts in the field of the teaching of mathematics, as to what behavior is related to each of the suggested criteria, and what behavior may be observed in a student teaching situation.

5. It is recommended that research be conducted in the development of evaluation instruments, for the use of supervisors, which may also be used by the student teachers in self-evaluation.

While instruments designed specifically for self-evaluation are needed, it is desirable for all instruments, used in the evaluation of student teachers in mathematics, to be so intelligible to the student teacher that they may serve also in self-evaluation. Any new instrument designed for the use of supervisors might well be submitted to a number of student teachers for trial use in self-evaluation as a part of the process of refinement.
6. It is recommended that supervisors of student teachers in mathematics encourage student teachers to experiment with various methods of securing and of analyzing pupil reactions to their teaching ability.

This aspect of student teaching evaluation has been given somewhat less emphasis than self-evaluation and evaluation by supervisors in most institutions. Those institutions which have made extensive use of pupil evaluation generally recommend it as a valuable means of securing improvement in student teaching performance.

More study of the value of pupil evaluation need not be confined to some large scale research design. Supervisors of student teachers in any institution, who encourage student teachers to secure pupil evaluations, may make a contribution to the study of pupil evaluation by reporting their findings. When such reports have stimulated the use of pupil evaluation in a large number of institutions a more detailed appraisal of pupil evaluation might be undertaken.

Further research, contributing to the improved evaluation of student teaching in mathematics, can also make a vital contribution toward a solution of the broader problem of evaluating the total program of laboratory experiences prior to student teaching. Evaluation procedures are needed which make it possible to differentiate among student teachers in mathematics. When student teaching performance is evaluated effectively it will be possible to study the experientia
backgrounds of selected mathematics student teachers in relation to their level of performance in student teaching. Such a study would make it possible to determine what prior experiences or what patterns of prior experience make the greatest contribution to the development of a successful student teacher in mathematics.
BIBLIOGRAPHY

PART I - GENERAL

American Association of Teachers Colleges. Sub-Committee of the Standards and Surveys Committee. School and Community Laboratory Experiences In Teacher Education. Oneonta, New York; 1948, 340 pp.


Association For Student Teaching. 30th Yearbook, Off Campus Student Teaching. Lock Haven, Pa.: 1951, 206 pp.


Brink, W. G. "Administration of Student Teaching In Universities Which Use the Public Schools." Educational Administration and Supervision 31 (October, 1945), pp. 393-402.

Blyler, D. M. "Student Teaching In The American Association of Teachers Colleges." Educational Administration and Supervision 33 (February 1947), pp. 75-87.


Huebner, Max S. "Development of a Student Teaching Record Form by a Workshop on Student Teaching." 27th Yearbook, Association For Student Teaching. Lock Haven, Pa.: 1948, pp. 33-8.


Lazar, Nathan. Lectures, Education 762, The Ohio State University, Summer, 1950.


BIBLIOGRAPHY

PART II - SOLVING VERBAL PROBLEMS


Buckingham, G. E. "The Relationship Between Silent Reading Ability and Ability In First Year Algebra," Mathematics Teacher 30 (March 1937), pp. 130-132.


Jackson, W. N. "The Relation Between the Table, Verbal Statement, Formula, Equation and Graph," School Science and Mathematics 42 (February 1942), pp. 142-156.


Lasar, N. "One Unknown or Two," Mathematics Teacher 26 (March 1933), pp. 176-821.


Parker, Elsie G. "Developing Ability to Solve the Verbal Problem the Basic Aim of the Ninth Grade Course," School Science and Mathematics 19 (October 1919), pp. 599-604.


Watson, V. "Reading in Mathematics," Mathematics Teacher 26 (May 1933), pp. 277-82.


APPENDIX I
APPENDIX I

A list of persons responding to the questionnaire arranged alphabetically by states and institutions.

Abbreviations

SC - State College
STC - State Teachers College
(L) - Liberal Arts College

Alabama

Athens College (L), Athens, A. R. Mead, Dean of Instruction
Birmingham-Southern (L), Birmingham, J. M. Malone, Prof. of Education
Judson College (L), Marion, Robert Bowling, Prof. of Education, and Mary E. Beckman, Asst. Prof. of Education
Miles College (L), Birmingham, James S. Sutton, Chem., Div. of Natural Sciences
State Teachers College, Florence, W. H. Waite, Acting Head, Educational Psychology
State Teachers College, Livingston, J. W. Harbour, Jr., Assoc. Prof. of Education
State Teachers College, Troy, Claude M. Nie, Director of Student-Teaching
Talladega College (L), Talladega, Wolsey D. Gay, Prof. of Education
Tuskegee Institute, Box 338, Tuskegee, Vernon McDaniel, Assoc. Prof. of Secondary Education.

Arizona

Arizona State College (L), Flagstaff, Chester K. Davis, Assoc. Prof. of Education
Arizona State College (L), Tempe, Wm. F. Padlich, Jr., Assoc. Prof. of Education
University of Arizona, Tucson, Vergil H. Hughes, Asst. Prof. of Education

313
Arkansas

Arkansas A. & M. College, College Heights, J. D. Moore, Assoc. Prof. of Education
Arkansas State College (L), State College, Lyle J. Dixon, Asst. Prof. of Mathematics
Arkansas STC, Conway, Imon E. Bruce, Director of Student Teaching
Henderson STC, Arkadelphia, Ark., Mary Lee Foster, Assoc. Prof. of Mathematics
Hendrix College (L), Conway, John S. Warren, Prof. of Education.

California

Fresno State College, Fresno 4, California, Miss Alice K. Bell, Prof. of Mathematics
Humboldt State College, Arcata, K. I. Ingebritson, Asst. Prof. of Education and Psychology
Los Angeles State College (L), L. A., Gerald Q. Shephard, Asst. Prof. of Education
Occidental College, (L), L. A., Edwina J. Snider, Co-ordinator of Education
Sacramento State College, Sacramento, H. Stewart Moredock, Asst. Prof. of Science and Mathematics
San Francisco State College (L), San Francisco, Arthur J. Hall, Asst. Prof. of Mathematics
San Jose State College, San Jose, H. F. Jamison, Assoc. Prof. of Mathematics
University of California, Berkeley, James H. Hoge, Supervisor of Teaching of Mathematics
University of California at Los Angeles, 943 Fourth Avenue, Los Angeles 19, Attilio A. Bissiri, Supervisor of Teacher Training, Mathematics and Science
University of Southern California, School of Education, 3518 University Avenue, Los Angeles 7, R. A. Fleischer, Supervisor, Education.
Whittier College (L), Whittier, John H. Bright, Prof. of Education.

Connecticut

Hillyer College (L), Hartford, Donald W. Russell, Dean, Division of Education
Teachers College of Connecticut, New Britain, John P. Beem, Asst. Prof. of Mathematics
University of Bridgeport, Bridgeport, G. L. Fish, Prof. of Education
University of Connecticut, Storrs, Connecticut, Rolf W. Larson, Asst. Prof. of Education
Colorado

Colorado College (L), Colorado Springs, John S. Jordan, Prof. of Education
Colorado State College of Education, Greeley, Forest W. Fisch, Assoc. Prof. of Mathematics
University of Colorado, Boulder, Harold M. Anderson, Asst. Prof. of Education
University of Denver, Denver 10, Louis A. Breternitz, Prof. of Education

Florida

Florida State University, Tallahassee, Ernest W. Cason, Prof. of Education, and R. L. Goulding, Co-ordinator of Student Teaching
Stetson University (L), DeLand, R. L. Longstreet, Prof. of Education
University of Florida, Gainesville, Florida, Kenneth P. Kidd, Assoc. Professor of Education
University of Miami, Miami, Orlie M. Clem, Prof. of Secondary Education
University of Miami (L), Miami, John R. McKelvey, Asst. Prof. of Education
University of Tampa (L), Tampa, Robert L. Mohr, Prof. of Education

Georgia

Agnes Scott College and Emory University (L), Emory University, Georgia, Sam P. Wiggins, Assoc. Prof. of Education
Berry College, (L), Mt. Berry, Georgia, Mary Ellen Perkins, Co-ordinator of Student Teaching
Georgia Teachers College, Collegeboro, Thomas C. Little, Prof. of Education

Idaho

University of Idaho, College of Education, Moscow, Hervon L. Snider, Assoc. Prof. of Education

Illinois

Bradley University, College of Education, Peoria, M. E. Mac Donald, Dean
Illinois (Continued)

Eastern Illinois State College, Charleston, Harry L. Metler, Prof. of Education
Illinois S. T. University, Normal, Illinois, T. E. Rine, Assoc. Prof. of Mathematics
Northern Ill. STC, De Kalb, Director of Student Teaching
Northwestern University, 212 Lent Building, Evanston, E. H. C. Hildebrandt, Assoc. Prof. of Mathematics
Northwestern University, Evanston, Cail M. Inlow, Asst. Prof. of Education
Southern Illinois University, College of Education, 510 W. Main St., Carbondale, Clarence Stephens, Instructor, University School
University of Chicago, 5835 Kimbark Avenue, Chicago 37, M. L. Hartung, Assoc. Prof. of Education
University of Illinois, 1206 W. Springfield, Urbana, Robert E. Pinge, Asst. Prof. of Education, College of Education and Department of Mathematics
Western Illinois State College, Macomb, John C. Roberts, Director of Training
Wheaton College (L), Wheaton, Dr. John H. Fadenrecht, Prof. of Education

Indiana

Anderson College (L), Anderson, Carl Kardatske, Prof. of Education
Ball STC, Muncie, E. Graham Pogue, Assoc. Prof. of Education
Butler University, Indianapolis, Dr. John W. Best, Prof. of Education
Goshen College (L), Goshen, Silas Hertzler, Prof. of Education
Hanover College (L), Hanover, Indiana, Dr. R. M. Kutz, Director of Teacher Training
Indiana Central College (L), Indianapolis, Roy V. Davis, Asst. Prof. of Education
Indiana STC, Terra Haute, Donald M. Sharpe, Director of Prof. Lab. Experiences
Indiana STC, Terra Haute, Dr. Walter O. Shriner, Prof. of Mathematics
Indiana University, Bloomington, Philip Peak, Instructor of Education
Marion College (L), Marion, Clayton O. Lanore, Director of Teacher Education
Oakland City College, Oakland City, Esther K. Crawford, Dir. of Student Teaching
Purdue University, Lafayette, R. R. Ryder, Assoc. Prof. of Education
University of Notre Dame, (L), Notre Dame, L. F. Robinson, Assoc. Prof. of Education
Iowa

Central College (L), Pella, Walter D. Dekock, Prof. of Education
Coe College (L), Cedar Rapids, H. H. Brooks, President
Drake University, Des Moines, L. S. Flaum, Prof. of Education
Luther College (L), Decorah, Ia., Stanley F. Johnston, Assoc. Prof., Education and Psychology
Iowa STC, Cedar Falls, Herbert F. Miller, Asst. Prof., Department of Teaching
State University of Iowa, Iowa City, H. Vernon Price, Assoc. Prof. of Mathematics

Kansas

Kansas STC, Pittsburg, Kansas, Helen Kriegman, Instructor of Mathematics
University of Kansas, Lawrence, Karl D. Edwards, Director of Student Teaching
University of Wichita, Wichita, Kansas, Cecil B. Read, Head, Department of Mathematics

Kentucky

Asbury College (L), Wilmore, Dr. J. W. Devor, Professor of Education
Eastern Kentucky State College, Richmond, J. D. Coates, Prof. of Education
Kentucky Wesleyan College, (L), Owensboro, H. M. Pyles, Prof. of Education
Murray State College, Murray, E. B. Gunter, Assoc. Prof. of Education
Nazareth College (L), Louisville, Kentucky, Sister Clara Francis, Chairman, Department of Education
Transylvania College (L), Lexington, A. B. Crawford, Prof. of Education
University of Louisville (L), Louisville, Mr. Oppenheimer, Head, Department of Education
Ursuline College (L), Louisville, Sister M. Merici, Head, Department of Education

Louisiana

Centenary College (L), Shreveport, La., A. J. Middlebrooks, Head, Department of Education
Louisiana Polytechnic Institute (L), Ruston, D. P. Noah, Prof. of Education
Louisiana State University, College of Education, Baton Rouge, W. A. Lawrence, Prof. of Education
Southwestern Louisiana Institute, Box 23 S. L. I. Lafayette, LA., J. B. Wooley, Director of Teacher Training

Maryland

Hood College (L), Frederick, Miss Evelyn Mudge, Head, Department of Education
Morgan State College (L), Baltimore, Virgil A. Clift, Head, Department of Education
University of Maryland, College Park, Henry Breckbill, Asst. Dean, College of Education

Massachusetts

Boston University, 332 Bay State Road, Boston, Henry W. Syer, Assoc. Prof. of Mathematics
Springfield College (L), Springfield, Robert E. Markarian, Assoc. Prof. of Education
STC at Boston, Huntington Avenue, Boston, James D. Ryan, Prof. of Mathematics
STC, Fitchburg, William R. Tracey, Asst. Prof. of Education

Michigan

Calvin College (L), Grand Rapids, Cornelius Jaarsma, Prof. of Education
Central Michigan College of Education, Mt. Pleasant, Kenneth T. Bordine, Prof. Psychology and Education
Hope College (L), Holland, J. J. VerBeek, Prof. of Education
Michigan SC, East Lansing, Carl H. Cross, Assoc. Prof. of Secondary Education
Nazareth College (L), Nazareth, Sister M. Gabrielle, Assoc. Prof. of Education
Northern Michigan College of Education, Marquette, Holmes Boynton, Head, Dept. of Mathematics
Northern Michigan College of Education, Marquette, W. C. Hoppes, Director of Student Teaching
University of Michigan, School of Education, Ann Arbor, Phillip S. Jones, Asst. Prof. of Mathematics
Western Michigan College, Kalamazoo, Clarence Hackney, Mathematics Supervisor, Campus School
Minnesota

College of St. Catherine (L), St. Paul, Katherine Diley, Instructor, Education
- Hamline University (L), St. Paul, Kenneth R. Doane, Prof. of Education
- Mankato STC, Mankato, Edwin M. Boyne, Prof. of Education
- STC, Stillwater, John E. Buckler, Asst. Prof. of Education
- Teachers College, St. Cloud, Minn., Anderson, Mathematics Department
- Teachers College, St. Paul, Fred Meering, Chairman, Supervisors of Student Teaching
- Teachers College, Winona, Glenn E. Fishbaugh, Director of Training
- St. Thomas College, (L), St. Paul, Raphael Thuente, Director of Student Teaching
- University of Minnesota, Donovan A. Johnson, Associate Prof. of Education

Mississippi

Mississippi Southern College, Hattiesburg, (Name Omitted)

Missouri

Central Missouri State College, Warrensburg, M. S. Schott, Prof. of Education
- N. E. Missouri STC, Kirksville, Dr. Wray M. Rieger, Head, Division of Science and Mathematics
- Northwest Missouri STC, Maryville, Dr. Leon F. Miller, Chairman, Division of Education and Leonard Levy, Supervising Teacher
- State College, Cape Girardeau, Mo., W. A. Ownbry, Instructor, Education, Springfield, Missouri, (Name Missing)
- University of Missouri, Columbia, J. S. Maxwell, Assoc. Prof. of Education
- Washington University, St. Louis 5, E. J. Reynolds, Asst. Prof. of Education

Montana

Great Falls College, (L) Great Falls, Mont., Eleanor M. Dougherty, Head, Department of Education
- Montana State College, Bozeman, Milford Franks, Head, Department of Education and Psychology
- Montana State University, Missoula, John L. Moody, Instructor, of Education
Nebraska

Nebraska STC, Chadron, K. W. Findley, Prof. of Education
Union College, (L), Lincoln 6, Nebr., E. M. Codwallader,
Chairman, Department of Education
University of Nebraska, Teachers College, Lincoln, Milton
W. Beckmann, Asst. Prof. of Secondary Education

Nevada

University of Nevada, Reno, Burton C. Newbry, Asst. Prof.
of Education

New Hampshire

Keene Teachers College, Keene, Alex F. Ferrodin, Director
of Student Teaching
STC, Plymouth, B. Everard Blanchard, Prof. of Education

New Jersey

STC, Glassboro, S. G. Winans, Dean of Instruction
Montclair STC, Montclair, N. J., Virgil S. Mallory, Head,
Dept. of Mathematics
Montclair STC, Upper Montclair, W. Scott Smith, Prof.
Department of Integration
N. J. STC, Paterson, Kenneth White, Dean
Rutgers University, New Brunswick, J. Donald Neill, Acting
Dean, School of Education
STC, Trenton, Carl N. Shuster, Head, Department of Mathematics

New Mexico

University of New Mexico, Albuquerque, J. W. Difendorf,
Prof. of Education

New York

Brooklyn College (L), Brooklyn, William L. Schaaf, Assoc.
Prof. of Education
City College of New York (L), 138th St. and Convent Avenue,
New York City, W. I. Pearman, Assoc. Prof. of Education
New York (Continued)

Colgate University (L), Hamilton, John A. Finger, Asst. Prof. of Education
Columbia University, Teachers College, New York City 27, Phil C. Lange and M. F. Rosskopf
Columbia University, Teachers College, New York City 27, Howard F. Fehr, Prof. Teaching of Mathematics
Fordham University, 302 Broadway, New York City 7, Kathryn I. Scanlon, Asst. Prof. of Education
Hofstra College (L), Hempstead, Thomas J. Brown, Director of Student Teaching
Hunter College (L), New York City, Abraham Raskin, Co-ordinator of the Sciences
N. Y. SC for Teachers, Albany, Randolph S. Gardner, Prof. of Education
New York University, School of Education, New York City 3, New York, John J. Kinsella, Prof. Mathematics Education
Queens College (L), Flushing, Nathan S. Washton, Asst. Professor of Education
STC, New Palts, Richard F. Klix, Prof. of Education
University of Rochester (L), Rochester, Frances Horler, Asst. Prof. of Education

North Carolina

Duke University (L), Durham, Jonathan C. McLendon, Asst. Prof. of Education
East Carolina College, Mrs. Ellen C. Fleming, Asst. Prof. of Mathematics

North Dakota

Minot STC, Minot, Catherine Hoskin, Assoc. Prof. of Education
STC, Valley City, J. W. O'Connell, Campus High School
N. W. State Normal and Ind. College, Ellendale, N. D., Joe Nichols, Head, Department of Education
University of North Dakota, Grand Forks, Frank L. Steeves, Director of Student Teaching

Ohio

Baldwin Wallace College (L), Berea, A. John W. Luttrell, Director of Teacher Training
Bowling Green State University, Bowling Green, Ralph L. Beck, Assoc. Prof. of Education
Ohio (Continued)

Bowling Green State University, Bowling Green, Wayne F. Cornell, Assoc. Prof. of Mathematics
Central State College, Wilberforce, Ohio, G. F. Woodson, Prof. of Mathematics
College of Wooster (L), Wooster, W. E. Stoneburner, Prof. of Education
Denison University (L), Granville, S. D. Schaff, Instructor, Education
Findlay College (L), Findlay, L. T. Stratton, Prof. of Education
Heidelberg College (L), Tiffin, (Name missing)
Hiram College, (L), Hiram, Frank N. Harsh, Head, Department of Education
Kent State University, Kent, A. L. Heer, Prof. Student Teaching
Lake Erie College (L), Painesville, Kathryn S. Bennett, Prof. of Education
Marietta College (L), Marietta, R. G. Guthrie, Head, Department of Education
Miami University (L), Oxford, Orval L. Ulry, Asst. Prof. of Education
Rio Grande College, Rio Grande, Clara E. Poston, Prof. of Education
Ohio University, Athens, Carl H. Roberts, Secondary Student Teaching
Ohio Wesleyan University (L), Delaware, C. F. Alter, Asst. Prof. of Education
University of Cincinnati, Teachers College, Cincinnati 21, R. S. Gex, Assoc. Prof. of Education
University of Toledo, Toledo, Frank R. Hickerson, Prof. of Education
Wilmington College (L), Wilmington, E. M. Derby, Asst. Prof. of Education
Youngstown College (L), Youngstown, J. F. Swartz, Assoc. Prof. of Education

Oklahoma

Northeastern State College, Tahlequah, Vernon W. Burrows, Asst. Prof. of Education
Northwestern State College, Alva, John B. Stout, Director of Training
Oklahoma A. & M. College, Stillwater, James H. Zant, Prof. of Mathematics
Oklahoma A. & M. College, Stillwater, Raymond J. Young, Asst. Prof. of Education
Southeastern State College, Durant, A. L. Pool, Prof. of Education
Oregon

Lewis and Clark (L), Portland, Chester C. Frisbie, Prof. of Education
Oregon State College, Corvallis, Stanley E. Williamson, Assoc. Prof. of Education
University of Oregon, Eugene, Paul E. Kambly, Prof. of Education

Pennsylvania

Dickinson College (L), Carlisle, J. C. McCullough, Prof. of Education
Duquesne University, Pittsburgh 19, Lawrence A. Griffin, Asst. Prof. of Education
Franklin and Marshall, (L), Lancaster, Mrs. Dorothy W. LeFevre, Asst. Prof. of Education
Geneva College (L), Beaver Falls, Pa., John S. Moisaac, Prof. of Education
Grove City College (L), Grove City, Pa., J. W. MacDonald, Director of Student Teaching
Muhlenberg College (L), Allentown, Victor B. Johnson, Assoc. Prof. of Education
Penn. State College (L), State College, James H. Moyer, Prof. of Education
Bloomsburg STC, Bloomsburg, Ernest H. Engelhardt, Prof. of Education
STC, California, Pa., Thomas M. Gilland, Prof. of Education
Clarion STC, Clarion, Richard C. Skinner, Assoc. Prof. of Education
STC, East Stroudsburg, John R. Wildrick, Assoc. Prof. of Education
STC, Edinboro, L. W. Van Laningham, Director of Student Teaching
STC, Indiana, Joy E. Mahachek, Prof. of Mathematics
STC, Kutztown, E. F. Stoudt, Director, Laboratory School
STC, Lock Haven, Allen D. Patterson, Chairman, Department of Education
Mansfield STC, Mansfield, Jessie Grigsby, Supervisor in Training School
STC, Slippery Rock, Mary Lou Fisher, Asst. Prof. Laboratory School
West Chester STC, West Chester, Hale Pickett, Head, Department of Mathematics
Temple University, Teachers College, Broad and Montgomery Streets, Philadelphia 22, Harry F. Garner, Asst. Prof. of Education
University of Pennsylvania, School of Education, 3812 Walnut Street, Philadelphia, Chester G. Stocker, Director of
Student Teaching
University of Scranton, (L), Scranton, Lawrence J. Lennon, Assoc. Prof. of Education
Waynesburg College (L), Waynesburg, E. C. Noyes, Acting Head, Psychology and Education
Westminster College, (L), New Wilmington, L. H. Wagenhorst, Chairman, Department of Education and Psychology

Rhode Island

Brown University (L), Providence, C. Emanuel Ekstrom, Prof. of Education
Providence College (L), Providence, Rev. R. G. Quinn, Prof. of Education

South Carolina

Winthrop College (L), Rock Hill, S. J. McCoy, Dean and Director of Teacher Education

South Dakota

Augustana College (L), Sioux Falls, R. W. Schlicht, Assoc. Prof. of Education
General Beadle State Teachers College, Madison, C. E. Sear, Director of Secondary Student Teaching
Huron College (L), Huron, Cleata Thorpe, Asst. Prof. of Education
Northern STC, Aberdeen, Hilton P. Hesling, Chairman, Division of Education and Psychology

Tennessee

E. Tenn. SC, Johnson City, Miss Velma Cloyd, Assoc. Prof. of Mathematics
George Peabody College for Teachers, Nashville, C. B. Van Antwerp, Assoc. Prof. of Education
Maryville College (L), Maryville, Dr. Lincoln Barker, Prof. Psychology and Education
Middle Tennessee State College, Murfreesboro, W. B. Bowdoin, Assoc. Prof. of Education
University of Tennessee, College of Education, Knoxville, E. S. Christenbury, Assoc. Prof. of Education
Texas

Abilene Christian College (L), Abilene, A. Z. Hays, Asst. Prof. of Education
A & I College, Kingsville, Norman C. Mohn, Assoc. Prof. of Education
Baylor University, Waco, B. M. Hanna, Asst. Prof. of Education
North Texas State College, Denton, R. Wayne Adams, Prof. of Education
Stephen F. Austin State College, Nacogdoches, LeRoy McClendon, Assoc. Prof. of Education
University of Houston, Houston, L. M. Freeman, Chairman, Department of Secondary Education
The University of Texas, Austin, John W. McFarland, Asst. Prof. Curriculum and Instruction

Utah

Brigham Young University (L), Provo, A. John Clarke, Assoc. Prof. of Education
Utah State Agricultural College (L), Logan, (Name missing)

Virginia

Longwood College, Farmville, Malcolm Graham, Asst. Prof. of Mathematics and J. P. W. Young, Department of Education
Madison College, Harrisonburg, Paul Houchell, Prof. of Education
Virginia State College (L), Petersburg, Miss Dorothy N. Batts, Asst. Prof. of Education
William and Mary College (L), Williamsburg, Howard K. Holland, Assoc. Prof. of Education

Washington

Central Washington College, Ellensburg, Mr. Dickson, Asst. Education
College of Puget Sound (L), Tacoma, Raymond L. Powell, Prof. of Education
State College of Washington, Pullman, Martha Brockman, Asst. Prof. of Education
University of Washington, College of Education, Seattle 5,
H. Boroughs, Jr.
Washington State College, Ruth J. Runke, Asst. Prof. of Education

West Virginia

Bluefield State College, Bluefield, J. Lee Irving, Prof. of Education
Davis and Elkins College (L), Elkins, Mrs. Richard Talbott, Director of Student Teaching
Fairmont State College (L), Fairmont, Edmund Collins, Prof. of Education
Marshall College, Huntington, Paul N. Musgrave, Director of Student Teaching
University of West Virginia, Morgantown, May L. Wilt, Instructor, Mathematics
West Liberty State College, West Liberty, Mrs. Freda Y. Conaway, Head, Division of Education
West Virginia Wesleyan, (L), Buckhannon, Dr. Edna Caroline Miller, Prof. of Education

Wisconsin

Marquette University, (L), Milwaukee, M. Arline Albright, Director of Student Teaching
Ripon College (L), Ripon, Clifford C. Crump, Prof. of Mathematics
University of Wisconsin, J. R. Mayor, Prof. of Mathematics and Education
Wisconsin State College, River Falls, Philip S. Anderson, Department of Education
Wisconsin State College, Stevens Point, Burton R. Pierce, Teacher, Training School
Wisconsin State College, Superior, V. E. Van Patten, Prof. of Education
Wisconsin State College, Whitewater, A. I. Winther

Wyoming

University of Wyoming, College of Education, Glennie Bacon, Asst. Prof. of Mathematics Education

D. C.

George Washington University, Washington 6, Blake S. Root,
Assoc. Prof. of Education
Wilson Teachers College, Ella Marth, Prof. of Mathematics
APPENDIX II
ACTIVITIES OF STUDENT TEACHERS

The following is a list of the majority of activities in which student teachers usually engage. Though "number" is not always an indication, it has been found that the better student teachers engage in a greater number. The quality is also better for the better teachers. Enough value can be placed in the list to merit its use for self-evaluation by the student teacher and for evaluation by the supervising teacher.

You are asked to look these over carefully and to make with a 1 those you engage in much of the time, with a 2 those you engage in part of the time, and with a 3 those you engage in seldom.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructs class as a group</td>
<td></td>
</tr>
<tr>
<td>Assists poor pupils</td>
<td></td>
</tr>
<tr>
<td>Checks and keeps attendance record</td>
<td></td>
</tr>
<tr>
<td>Prepares tests and examinations</td>
<td></td>
</tr>
<tr>
<td>Grades papers</td>
<td></td>
</tr>
<tr>
<td>Checks problems and notebooks</td>
<td></td>
</tr>
<tr>
<td>Regulates physical conditions of room</td>
<td></td>
</tr>
<tr>
<td>Supervises laboratory work adequately</td>
<td></td>
</tr>
<tr>
<td>Makes Unit plans</td>
<td></td>
</tr>
<tr>
<td>Collects illustrative material</td>
<td></td>
</tr>
<tr>
<td>Has conferences with supervisor</td>
<td></td>
</tr>
<tr>
<td>Assists with reports and grade cards</td>
<td></td>
</tr>
<tr>
<td>Diagnoses problem of pupils</td>
<td></td>
</tr>
<tr>
<td>Outlines and diagrams on blackboard</td>
<td></td>
</tr>
<tr>
<td>Classroom research for supervising Teacher</td>
<td></td>
</tr>
<tr>
<td>Writes observation reports</td>
<td></td>
</tr>
<tr>
<td>Aids in discipline</td>
<td></td>
</tr>
<tr>
<td>Makes charts</td>
<td></td>
</tr>
<tr>
<td>Attends meetings</td>
<td></td>
</tr>
<tr>
<td>Supervises playgrounds &amp; bldg.</td>
<td></td>
</tr>
<tr>
<td>Plans and arranges seat work</td>
<td></td>
</tr>
<tr>
<td>Gives individual instruction</td>
<td></td>
</tr>
<tr>
<td>Stimulates laggards</td>
<td></td>
</tr>
<tr>
<td>Assists with class routine</td>
<td></td>
</tr>
<tr>
<td>Discusses tests with pupils</td>
<td></td>
</tr>
<tr>
<td>Keeps records of written work</td>
<td></td>
</tr>
<tr>
<td>Makes assignments</td>
<td></td>
</tr>
<tr>
<td>Gives demonstrations</td>
<td></td>
</tr>
<tr>
<td>Prepares daily lesson plans</td>
<td></td>
</tr>
<tr>
<td>Supervises study period</td>
<td></td>
</tr>
<tr>
<td>Prepares stencils &amp; materials</td>
<td></td>
</tr>
<tr>
<td>Has conferences with pupils</td>
<td></td>
</tr>
<tr>
<td>Grades oral work &amp; reports</td>
<td></td>
</tr>
<tr>
<td>Gives remedial instruction</td>
<td></td>
</tr>
<tr>
<td>Supervises projects</td>
<td></td>
</tr>
<tr>
<td>Takes charge of make-up work</td>
<td></td>
</tr>
<tr>
<td>Gives stories and talks</td>
<td></td>
</tr>
<tr>
<td>Plans and arranges bulletin board</td>
<td></td>
</tr>
<tr>
<td>Gives drills and reviews</td>
<td></td>
</tr>
<tr>
<td>Makes record of progress charts</td>
<td></td>
</tr>
<tr>
<td>Accompanies on field trips</td>
<td></td>
</tr>
<tr>
<td>Charge of entire classroom</td>
<td></td>
</tr>
<tr>
<td>Occasionly</td>
<td></td>
</tr>
</tbody>
</table>
QUESTIONS TO ASK YOURSELF ON CLASSROOM ACTIVITIES

In addition to checking yourself on how many of these activities you do, and how well you do them you might keep asking yourself daily the following questions:

1. Is there definiteness and clearness of aim in my daily lessons and in my work in general?
2. Are assignments purposeful, clear and well made?
3. What success have I had in stimulating interest?
4. Do pupils respond well to my teaching?
5. How skillful am I in eliciting discussion and in directing it?
6. Is attention given to individual differences?
7. Do I have ability to point out relationships and applications of the subject?
8. Is there adequate orientation of previous work?
9. Am I skillful in motivating the work?
10. Do I have a democratic classroom?
11. Do I have clearness in expression and illustration?
12. Are there satisfactory pupil-teacher relations?
13. Do I have ability to hold the class attention?
14. Have I helped in the development of the all-school purposes?
15. Am I economical in the use of class time?
16. Have I understood adolescents?
17. How well is training in appreciation and attitudes being developed?
18. Am I business-like about being on time, having materials ready, etc.?
19. Have I contributed to the development of an ability to be tolerant of ideas of others?
20. Do I get class attention promptly?
SUGGESTED ACTIVITIES FOR STUDENT TEACHERS
(in addition to actual teaching)

1. Keep (or assist in keeping) study halls.
2. Keep (or assist in keeping) records.
3. Assist with clubs or other extra-curricular activities.
4. Attend faculty meetings.
5. Grade tests.
6. Administer tests.
7. Work in school office.
8. Assist in counseling students.
9. Assist with Home Room activities.
10. If possible, have daily conferences with supervising teacher.
11. Tutor individual (or small groups of) students.
12. Be responsible for (or assist with) duties such as hall, lunch, and detention.
13. Assist with the use of audio-visual aids.
14. Make contacts with parents by attending PTA meetings or by similar activities.
15. Become acquainted with school policies relative to:
   a. reporting tardiness and absence.
   b. giving hall and library passes.
   c. fire drill.
   d. civil defense drill.
   e. excusing students from class.
16. Attend school assemblies.
17. Observe and, if possible, participate in core classes.
18. Attend faculty committee meetings.

REMARKS
SELF-RATING SCALE FOR TEACHERS

I Classroom Management

1. Does my class work begin and end on time?
2. Is attendance taken economically?
3. Is demonstration work done effectively?
4. Does class work proceed smoothly and orderly?
5. Are pupils responses well directed and expressed?
6. Is the class attention keen and continuous?
7. Do you have good discipline?
8. Is the group courteous and co-operative?
9. Do I keep the room neat and in good order?
10. Do I pay attention to lighting and ventilation?
11. Do I get complete and accurate reports promptly to office?

II Personal Qualities

1. Is my voice pleasing and enunciation clear?
2. Am I physically well qualified?
3. Is my daily dress suitable?
4. Are my general manners suitable?
5. Do I use correct English?
6. Do I show evidence of the following qualities?
   a. Self-control and poise.
   b. Tact.
   c. Decisiveness.
   d. Enthusiasm.
   e. Resourcefulness.
   f. Sympathy.
   g. Fair-mindedness.
   h. Sense of humor.
   i. Thoroughness.

III The Classroom Recitation

1. Do I have a clear and worthy aim for the lesson?
2. Is my lesson planned to secure this?
3. Am I resourceful in adapting unexpected developments to my plan?
4. Are my aims attained?
5. Do I test my work frequently?
6. Do I allow time for a good assignment?
7. Are my assignments clear and definite?
8. Do I know the group has mastered the previous assignment?
9. Does the assignment involve activity of the group?
10. Do my assignments include helpful suggestions as to methods of study?
11. Are pupils kept busy the entire period?
12. Is there proper balance between teacher and pupil activity?
13. Do I utilize supplementary materials outside the textbook?
14. Do you succeed in injecting elements of character training into your work?
15. Is proper amount of drill given to secure mastery of necessary skills and facts?
16. Are class discussions interesting and participated in by all?
17. Were my questions well distributed?
18. Do the pupils ask questions?
19. Are questions well expressed and correct in technique?
20. Do I emphasize questions requiring thought, as well as those requiring information?
21. Do pupils show that they have a clear understanding of what to do to prepare the lesson?
22. Is my laboratory work conducted without confusion or waste of time?
23. Is laboratory work purposeful, so that it involves thinking by pupils, or does it merely call for following directions?
24. Do I keep a regular check on class progress?
25. Do I make sure that the significance of each day's work has been interpreted to the class?
26. Do I supplement work with blackboard demonstration?
27. Do I constantly strive for variety and interest in my daily class work?
28. Do I make allowances for individual differences? In assignments and questions?
29. Do I wander too much, and consequently get over too little territory?
30. Do I talk down to the pupils' level?

Check your rating in the proper column for the various items contained in the scale. This is your personal rating of some elements of your own practice teaching work.

It is hoped that the items that have been checked in the No or C column will serve as the basis for discussion in our
individual or group conferences. Practical suggestions and
general information shall be given for the purpose of further
strengthening your strong points and improving your weakest
features.

Your own honest rating should give you a fair indication as
to your rating in the minds of your supervisors.
DIRECTIONS: Below you will find a series of areas pertinent to success in teaching, particularly defined with reference to the experiences characteristic of student teaching. Using your best judgment, rate your recent behavior on each part. Think critically and be as objective as you can. (See yourself as others see you.)

To
Yes Some No
Extent

I. Personal-Social Adequacy:

A. Speech, mannerisms and bodily posture
1. Physical defects affecting speech.
2. Use the English language effectively (grammar, suitable vocabulary, enunciation).
3. Speak at a moderate rate, with pleasant quality, variation in tempo and pitch, and suitable volume to be easily heard.
4. Look directly at the class while talking.
5. Use distracting mannerisms.
6. Vary my facial expressions and make adequate use of gestures.
7. Sit and stand erect and relaxed, and walk gracefully.

REMARKS

B. Appearance:
8. Moderate use of cosmetics (if a lady) or being clean-shaven (if a man)
9. Satisfactory grooming of hair, fingernails and bodily cleanliness.
10. Good taste in clothing: appropriateness, fit, selection, combination, reasonable variety, and upkeep.

REMARKS

*Sioux Falls, South Dakota
C. Workmanship:
11. Dependability in getting jobs done.
12. Satisfaction only when work meets acceptable standards.
13. Willingness to shoulder responsibilities, without "passing the buck."

REMARKS

D. Relationships with pupils:
14. Pupils show as much courtesy and respect to me as they do to the supervising teacher.
15. Pupils have talked to me before and after class on informal, friendly basis.
16. Pupils have been provided opportunities for successful experiences.
17. I have helped pupils maintain and improve peer status and security.
18. I have made as many provisions for individual differences as possible under the circumstances.

REMARKS

E. Relationships with supervising teacher, supervisor and fellow-student teachers:
19. Taken suggestions without resentment or rationalization.
20. Brought lesson plans to the supervising teacher for approval before attempting to teach.

REMARKS

II. Attitudes toward teaching:
21. Shown an enthusiasm about my work.
22. Looked for causes of pupil failures, rather than rationalizing them.
23. Shown an eagerness to begin teaching on a full-time basis.
24. Envisioned the job of teaching as a means of promoting desirable growth in pupils.

REMARKS
III. Competence in the classroom—I have shown growth in:

25. Using a variety of techniques.
26. Preparing tests thoughtfully.
27. Maintaining well-ordered activities rather than random movement.
28. Making case studies of pupils whenever possible.
29. Integrating the learning experiences of my pupils (within class and outside).
30. Command an interest in the subject area.
31. Achieving effective pupil interest during class period.
32. Handling the routine, mechanical aspects of classroom management effectively.
33. Treating my subject field as a means to an end rather than as an end in itself.
34. Encouraging pupil initiative, planning and activity.
35. Meeting new situations as they arise.
36. Acquiring poise before pupils.

REMARKS

_________________________________________________________

_________________________________________________________

Signed ___________________________

Date ___________________________
INSTRUMENT FOR THE EVALUATION
OF STUDENT REACTIONS *

FORM 2

Following are ten questions which should be answered by you and the other students in this class. If you answer them frankly and honestly, the results will give your teacher information on how you feel about this course, the teacher, and the procedures used. This information will help the teacher to adjust teaching procedures to the needs of students in the future. Your teacher will never know how you, as an individual, answered the questions presented below. This leaflet has been arranged in such a manner that you can answer all questions without revealing your name through your handwriting. Do not write your name or the name of the teacher on any of these sheets. They will be collected and thoroughly shuffled before they reach the hands of your teacher, who will remain in front of the room until after all questions have been answered.

EXAMPLE

1. WHAT IS YOUR OPINION CONCERNING THE SYMPATHY SHOWN BY THIS TEACHER?

Excellent . . . Always kind, considerate, and friendly.
Always able to see and understand the student's point of view when a question, problem, or difficulty arises.

Good . . . . . Nearly always kind, considerate, and friendly. Nearly always able to understand the student's position and willing to help students through their difficulties.

Average Generally kind, considerate and friendly, but every once in a while fails to see the student's point of view.

Below Average Tries to be kind and helpful but is often impatient, grouchy, and sarcastic. Usually has difficulty in seeing the student's side of a question.

Poor . . . . . Almost always harsh, grouchy, fault-finding, and inconsiderate.

* Los Angeles State College of Applied Arts and Sciences, Los Angeles, California
The circle around "average" in this example means that this "example teacher" received a rating of average (generally kind, considerate and friendly) on question 1.

THIS SUGGESTION WILL HELP YOU. Try to avoid giving a high rating on all questions or a low rating on all questions. Do this: first, look over all the questions on which you are going to give a rating and then make your rating on the two questions on which this teacher deserves the highest rating; second, make your rating on the two questions on which this teacher deserves the lowest rating; third, make your rating on the remaining six questions.

1. WHAT IS YOUR OPINION CONCERNING THE SYMPATHY SHOWN BY THIS TEACHER?

**Excellent . . .** Always kind, considerate, and friendly. Always able to see and understand the student's point of view when a question, problem, or difficulty arises.

**Good . . . . .** Nearly always kind, considerate, and friendly. Nearly always able to understand the student's position and willing to help students through their difficulties.

**Average . . . .** Generally kind, considerate and friendly, but once in a while fails to see the student's point of view.

**Below Average .** Tries to be kind and helpful but is often impatient, grouchy, and sarcastic. Usually has difficulty in seeing the student's side of a question.

**Poor . . . .** Almost always harsh, grouchy, fault-finding, and inconsiderate.

2. WHAT IS YOUR OPINION CONCERNING THE DISCIPLINE PRACTICED BY THE MEMBERS OF THIS CLASS?

**Excellent . . .** Everyone is so interested in and busy with the class work that no discipline problems ever arise.

**Good . . . . .** Nearly all students are so interested in and busy with the class work that very few discipline problems ever arise.
Average . . . . Good co-operation is evident on the part of most students. Most students pay attention to the work at hand.

Below Average . Occasionally members of the class are too inattentive and disorderly to do well the things that they should be doing.

Poor . . . . Frequent general disorder. Work is often interrupted by disorderly and noisy students.

3. WHAT IS YOUR OPINION CONCERNING THE FAIRNESS OF THIS TEACHER'S DECISIONS REGARDING THE STUDENTS?

Excellent . . Absolutely fair and impartial in all matters. Every student always gets a fair "break."

Good . . . . . . Tries to be fair and nearly always succeeds.

Average . . . Most students are treated fairly. A few receive special advantages and a few fail to receive their just deserts.

Below Average . Certain favorites nearly always receive undeserved favors and privileges and certain disliked students are discriminated against.

Poor . . . . Very unfair. Many decisions are influenced by things that should have no influence. Marked favoritism shown toward some students while others never get a fair "break."

4. WHAT IS YOUR OPINION CONCERNING THE ABILITY OF THIS TEACHER TO EXPLAIN THINGS CLEARLY?

Excellent . . All explanations are easily understood. Students have no difficulty understanding the points or things that this teacher discusses from time to time. Even hard things are made to seem easy.

Good . . . . . Nearly all explanations are easily understood.

Average . . . Most of the explanations and comments of this teacher are understood by students.

Below Average . Nearly half of the explanations and comments by this teacher are hard to understand.
Poor . . . . Most explanations are difficult to understand. Students generally have trouble in understanding what this teacher really tries to say.

5. WHAT IS YOUR OPINION CONCERNING THE EXTENT TO WHICH THIS TEACHER ASSISTS IN MAKING THE CLASS WORK INTERESTING?

Excellent . . . Does everything possible to make the class interesting. The teacher is very enthusiastic, has a good sense of humor, and knows how to help the students to get and to retain interest in the class work.

Good . . . . Does a good job in helping to make the class work interesting. Most students are interested most of the time.

Average . . This teacher does about as well as most teachers I have had in helping students to get and to retain interest in the class work.

Below Average. The class work is not very interesting. The teacher is indifferent and unconcerned at times.

Poor . . . . Students are bored most of the time. This teacher does not know how to work with a class in a way that keeps the students interested in the work being done.

6. WHAT IS YOUR OPINION CONCERNING THE ABILITY OF THIS TEACHER TO ASSIST STUDENTS IN PLANNING AND ORGANIZING CLASSROOM WORK?

Excellent . . . This teacher is unusually efficient in classroom leadership. All students always have well-made and clearly understood plans for the classroom work.

Good . . . . This teacher does a good job of assisting most students to make plans that are useful in guiding their efforts.

Below Average. This teacher often does a poor job of helping to plan this work. As a result, much time is wasted.

Poor . . . . The students seldom have clearly understood plans in mind. They often waste time when they should be working.
7. WHAT IS YOUR OPINION CONCERNING THE EXTENT TO WHICH THIS TEACHER SPEAKS IN AN ENGAGING MANNER WITH A CLEAR AND DISTINCT VOICE?

Excellent . . . Always speaks clearly, distinctly, and in a manner that encourages students to pay attention.

Good . . . . . Nearly always speaks clearly, distinctly, and in a manner that helps students to pay attention.

Average . . . . Fairly clear and distinct. Once in a while it is difficult to understand the teacher.

Below Average . Rather difficult to understand. Usually speaks in a monotone; has difficulty in speaking distinctly.

Poor . . . . . Almost always difficult to understand; voice is very poor; doesn't make his words and sentences clear.

8. WHAT IS YOUR OPINION CONCERNING THE PRIDE THIS TEACHER TAKES IN HIS PERSONAL APPEARANCE?

Excellent . . . Always very neat and clean in dress and personal appearance.

Good . . . . . Nearly always careful about his personal appearance.

Average . . . Generally careful about his personal appearance.

Below Average . Often careless about his personal appearance.

Poor . . . . . Very careless. Seems to care nothing about his appearance.

Does this instructor take an equal amount of pride in the neatness and appearance of the classroom? Underline your answer: More - Less - About the same.
9. WHAT IS YOUR OPINION CONCERNING THE VALUE THAT THE STUDY OF
THE TOPICS AND PROBLEMS OF THIS CLASS HAS FOR YOU?

Excellent . . . Considering the things that are being studied
the manner in which the class is being con­
ducted, I think that I have profited as much
or more from this class than from any other
class in which I have ever been enrolled.

Good . . . . I rate this class above average in useful­
ness and value.

Average . . . I judge this class to be about average in use­
fulness and value.

Below Average . The things that I have gotten from this
class may be helpful to me sometime, but
I doubt it.

Poor . . . . I think that the time spent in this class
to date has been a complete waste of time
for me.

10. WHAT IS YOUR OPINION CONCERNING THE GENERAL (ALL-ROUND)
TEACHING ABILITY OF THIS TEACHER?

Excellent . . One of the strongest teachers I have ever
had from the standpoint of real teaching
ability.

Good . . . . Has more teaching ability than most of
the teachers I have had but cannot be
classed as one of the very best.

Average . . . Neither outstanding nor inferior—falls
about in the middle.

Below Average . Weaker than most of the teachers I have
had but not one of the very poorest.

Poor . . . . One of the poorest teachers I have ever
had from the standpoint of real teaching
ability.
NAZARETH COLLEGE, MICHIGAN

STUDENT EFFICIENCY REPORT

Student Teacher ____________________ School ____________________

Subject or Grade __________________ Date ____________________

Reported by ________________________________

Definiteness and clearness of aim:

Knowledge of subject matter:

Success in stimulating interest:

Skill in eliciting and directing discussion:

Ability to point out relationships and applications of subject:

Skill in motivating work:

Clearness in expression and illustration:

Ability to hold class to attention:

Economical use of class time:

Training in concomitants (appreciation, attitudes, etc.):

On reverse side write comments on the following points:

1. Strong points in recitation
2. Weak points in recitation
3. Additional comments

(Discuss with student-teacher at the end of class period.)
**NAZARETH COLLEGE**  
Louisville

**Rating Sheet for Student Teachers**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Name of student</th>
<th>Grade</th>
<th>Critic teacher</th>
<th>Date</th>
</tr>
</thead>
</table>

**Check in columns at right:**  
VH, very high; H, high; M, medium; L, low; VL, very low

**Factors for Rating**  
VH | H | M | L | VL

### I. PERSONAL AND SOCIAL

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Personal appearance</td>
</tr>
<tr>
<td>B</td>
<td>Considerateness; tact</td>
</tr>
<tr>
<td>C</td>
<td>Self-control</td>
</tr>
<tr>
<td>D</td>
<td>Enthusiasm; inspiration</td>
</tr>
<tr>
<td>E</td>
<td>Use of English</td>
</tr>
<tr>
<td>F</td>
<td>Voice</td>
</tr>
<tr>
<td>G</td>
<td>Courtesy; refinement</td>
</tr>
<tr>
<td>H</td>
<td>Originality</td>
</tr>
</tbody>
</table>

### II. ATTITUDE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Toward work</td>
</tr>
<tr>
<td></td>
<td>1. Thoroughness</td>
</tr>
<tr>
<td></td>
<td>2. Promptness</td>
</tr>
<tr>
<td></td>
<td>3. Willingness</td>
</tr>
<tr>
<td>B</td>
<td>Toward pupils</td>
</tr>
<tr>
<td>C</td>
<td>Toward teacher in charge</td>
</tr>
</tbody>
</table>

### III. MECHANICS OF TEACHING

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Preparation</td>
</tr>
<tr>
<td></td>
<td>1. Plans: definite; well-developed</td>
</tr>
<tr>
<td></td>
<td>2. Knowledge of material</td>
</tr>
<tr>
<td>B</td>
<td>Procedure</td>
</tr>
<tr>
<td></td>
<td>1. Recitation in general</td>
</tr>
<tr>
<td></td>
<td>2. Questioning ability</td>
</tr>
<tr>
<td></td>
<td>3. Use of visual material</td>
</tr>
<tr>
<td></td>
<td>4. Assigning technique; directing of study</td>
</tr>
<tr>
<td></td>
<td>5. Development of meanings</td>
</tr>
<tr>
<td></td>
<td>6. Motivation</td>
</tr>
<tr>
<td>C</td>
<td>Control of class</td>
</tr>
<tr>
<td></td>
<td>1. Discipline</td>
</tr>
<tr>
<td></td>
<td>2. Class co-operation and interest</td>
</tr>
</tbody>
</table>

**D. General comments on specific strengths and weaknesses should be appended on the opposite side.**

**General Grade (A, B, C, D) suggested:** ( ________ )
DEPARTMENT OF SECONDARY EDUCATION
VIRGINIA STATE COLLEGE
PETERSBURG, VIRGINIA

FINAL EVALUATION OF SENIOR TEACHERS

CADET TEACHER __________________________ DATE __________

SUPERVISING TEACHER __________________________

SCHOOL ________________________________________________________

Subject(s) to which Cadet Teacher has been assigned ...

<table>
<thead>
<tr>
<th>Subject(s) Assigned</th>
<th>Grade</th>
<th>Days</th>
<th>Hours of Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observation Period: Date began __________ Date ended __________

Teaching Period: Date began __________ Date ended __________

Total number of hours Cadet Teacher observed and participated in related class activities... __________

Total number of hours Cadet Teacher taught............ __________

Total number of hours Supervising Teacher spent in directing Cadet Teacher (teaching and observation)................................. __________

Final grade of Cadet Teacher................................. __________

Specific functions carried out in connection with related class activities:

SIGNED: __________________ , Supervising Teacher

__________________________ , Principal

__________________________ , Head,
Department of Secondary Education
<table>
<thead>
<tr>
<th>Teacher Traits</th>
<th>Answer</th>
<th>Grade</th>
<th>Evidence which proves it</th>
<th>Problems arising and suggestions for improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interested in his work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Adequate knowledge of subject matter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Children like him</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Traits</td>
<td>Answer</td>
<td>Grade</td>
<td>Evidence which proves it</td>
<td>Problems arising and suggestions for improvement</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>-------</td>
<td>--------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Yes or No</td>
<td>A, B, C, D, F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Plans his work well

5. Takes criticism well

6. Shows initiative and resourcefulness
<table>
<thead>
<tr>
<th>Teacher Traits</th>
<th>Answer</th>
<th>Grade</th>
<th>Evidence which proves it</th>
<th>Problems arising and suggestions for improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Handles disciplinary problems well</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Understands children</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Interested in community activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sec. Ed. For VII - B

<table>
<thead>
<tr>
<th>Teacher Traits</th>
<th>Answer</th>
<th>Grade</th>
<th>Evidence which proves it</th>
<th>Problems arising and suggestions for improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Is emotionally stable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Are morals good?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Is health good?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF SECONDARY EDUCATION
VIRGINIA STATE COLLEGE
PETERSBURG, VIRGINIA

DATE: ________________________

SUPERVISOR: ___________________________  CADET: ___________________________

SUBJECTS TAUGHT
__________________________________________________________

PERIOD OF CADET TEACHING ______________________ (First or Second Nine Weeks)

Please summarize briefly the judgments made on the attached evaluation sheets in terms of:

(1) The Cadet's strengths—

(2) The Cadet's Weaknesses—

In what, as in-service teacher, will the student need the greatest amount of help and guidance?
REPORT ON CLASSROOM VISIT BY SUPERVISOR

Teacher_________ Date_________ Period_______ Room_______ Subject_______

I. THE LESSON:
   a. Type of Recitation
   b. Topic
   c. Textbook
   d. Procedure

AIM OF THE RECITATION

II. THE ROOM:
   a. Floor
   b. Windows
   c. Lights
   d. Blackboards
   e. Realia

PROCEDURE

III. THE TEACHER:
   a. Preparation
   b. Planning
   c. Manner and Attitude
   d. Use of English - Voice

COMMENDABLE FEATURES

IV. THE PUPILS:
   a. Posture
   b. Books
   c. Homework
   d. Order and Discipline
   e. Responsiveness - Participation
   f. Interest and Attention
   g. Pupil-teacher Activity
   h. Individual Differences

CONSTRUCTIVE SUGGESTIONS

V. THE RECITATION:
   a. Definiteness of Aim - Motivation
   b. Attainment of Aim
   c. Connection with Previous Knowledge
   d. Clinching or Resume
   e. Appropriateness
   f. Oral Work
   g. Written Work
   h. Skill in Questioning
   i. Drill (Habit Formation)
   j. Review
   k. Use of Blackboards and Illustrative Material
   l. Stimulation of Thought
   m. Socialized Procedure
   n. Multiple-sense Appeal

VI. ROUTINE FACTORS:
   a. Economy of Time
   b. Distribution and Collection of Material
   c. Assignment of Homework
   d. Checking on Written Work
   e. Correction of Errors

Supervisor

Teacher

VII. COMMENDABLE FEATURES:

I shall be glad to discuss this report with the teacher.

VIII. CONSTRUCTIVE SUGGESTIONS

IX. GENERAL ESTIMATE

(Copy of a form used in a high school in an eastern city.)
UNIVERSITY OF CALIFORNIA
Los Angeles

REPORT OF STUDENT TEACHING

Name ______________________________________________________________
Last Name First Name Middle Name

Major __________ Minor __________ Credential Sought __________

Subject Taught ___________________ Grade Level ________ School ________

Dates: From __________ to __________ University Course No. _____ Units ______

Previous Teaching

Part I. Rating Scale F D C B A

A. SCHOLARSHIP
1. Possesses a broad cultural understanding
2. Understands social values and implications of his field
3. Sees relationships of his field to all fields
4. Understands content of his subject as needed in secondary schools
5. Seeks to grow intellectually

B. PROFESSIONAL COMPETENCE
7. Understanding of young people
8. Skill in planning
9. Creative ability
10. Judicious selection and use of instructional materials
11. Success in carrying out plans
12. Effective teacher-pupil relationships
13. Constructive leadership
14. Resourcefulness in teaching
15. Achievement of discipline through responsible citizenship
16. Provision for individual differences
17. Attention to English skills as related to subject
18. Skill in evaluation of pupils' growth and achievement
19. Initiative in achieving objectives
20. Conscientiousness in meeting responsibilities
21. Adaptability to a variety of teaching situations
22. Attention to supplies and equipment
23. Attention to health conditions
24. Co-operation with colleagues
### Part I. Rating Scale

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>D</th>
<th>C</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C. PERSONAL QUALITIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Sincere courtesy of manner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Effectiveness of speech</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Forcefulness without offensive aggressiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Health and health habits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Emotional balance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Wholesome philosophy of life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Professional mindedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Social adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Total number of checks by column**

<table>
<thead>
<tr>
<th>Score value</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

**Score (score value of each column times number of checks in each column)**

**Average score (sum of scores divided by total checks)**

**FINAL GRADE**

Score values of final grades:

- A = 4.6 - 5.0
- B = 3.6 - 4.5
- C = 2.5 - 3.5
- D = 1.5 - 2.4
- F = 1.0 - 1.4
Part II. Quintile Ratings

1st........../ 2nd........../ 3rd........../ 4th...../ 5th (highest)....

Part III. Characterization (limit of 200 words is suggested)

Signed ______________________________ Training Teacher

Signed ______________________________ Supervisor or Co-ordinator

Approved ______________________________ Director of Teacher Training

Date ___________________________ 19

5m-12, '50 (2967s)0183
### SECTION I. PROFESSIONAL COMPETENCIES OF THE STUDENT TEACHER

| 1. Skill in selecting learning experiences. Skill in choosing motivating, varied, rich experiences to promote understanding, suitable to the age, interests, and needs of class members and potential contributors to many aspects of pupil development. |
|---|---|---|---|---|---|
| **Outstanding.** | **Skillful.** | **Average.** | **Good.** | **Fair.** | **Little.** |
| **5** | **4** | **3** | **2** | **1** | **0** |

- Chooses excellent experiences with suitable for varied experiences.
- Instrumental in classroom experiences.
- Dependent on a class of same class experiences.
- Tests few time experiences.

| 2. Skill in directing learning, in pointing class activities toward the solution of problems. Skill in questioning, assigning lessons clearly, supervising study, leading discussions, drawing all pupils into class activities. |
|---|---|---|---|---|---|
| **Outstanding.** | **Good.** | **Little.** | **Average.** | **Class Direction Poor.** |
| **5** | **4** | **3** | **2** | **1** | **0** |

- Well handles unnecessary moves along at a regular rate.
- Regular rate, well coordinated.
- Direction clear, coordinated.
- Direction, slow.

| 3. Skill in discovering and meeting pupil needs. Teacher aware of developmental tasks of children, finds what needs of pupils are, understanding in skillful formulation of objectives. Skill in differentiating instruction on basis of interests, needs, differences—in meeting challenge of wide ability range. |
|---|---|---|---|---|---|
| **Highly skillful.** | **Skillful.** | **Average.** | **Fair.** | **Unskilled.** |
| **5** | **4** | **3** | **2** | **1** | **0** |

- Discerns seen trying.
- Seen trying only minor.
- Same instruction for everyone.
- Variations for everyone.
- No awareness of differences.
4. **Skill in evaluating pupil achievement and growth.** Teacher evaluation shows awareness of all aspects of child's development. Progress seen as growth toward outlined objectives. Use made of varied evaluative devices. Summation and use of evaluative data constructive.

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>54321( )</th>
</tr>
</thead>
</table>

5. **Skill in pupil-teacher relationships.** Skill in controlling classroom democratically, with a minimum of domination and autocratic pressure. Teacher-pupil relationship free from fear; mutual respect shown. Methods used for control of class psychologically sound and promote the mental health of pupils, building for eventual self-discipline for each pupil.

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>54321( )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. **Skill in group leadership.** Teacher is skillful group leader in class activities, is adept at questioning and leading discussions, applying principles of group dynamics in the classroom situation and utilizing forces within the group for action. Pupils are rather widely drawn into classroom activities.

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>54321( )</th>
</tr>
</thead>
</table>
7. Knowledge of subject matter taught, coupled with a broad general education and general information.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Outstanding grasp of subject. Widely informed. Shows mastery of subject taught.</td>
</tr>
<tr>
<td>4</td>
<td>Subject known adequately.</td>
</tr>
<tr>
<td>3</td>
<td>Incomplete and/or faulty grasp of subject. Narrowly informed on general topics.</td>
</tr>
<tr>
<td>2</td>
<td>Poor grasp of subject. Unaware of facts. Some mis-statements.</td>
</tr>
<tr>
<td>1</td>
<td>Faqly well informed generally. No mis-statements.</td>
</tr>
</tbody>
</table>

8. Knowledge and understanding of, and interest in, children, including an understanding of the role of personal relationships in learning. Knowledge of principles which impel children to action.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Outstanding. Much evidence that he knows problems of pupils; is sensitive to their feelings.</td>
</tr>
<tr>
<td>4</td>
<td>Gves evidence indicating good understanding of pupils; how they develop and learn.</td>
</tr>
<tr>
<td>3</td>
<td>Evidence that he knows common problems of pupils; how they develop and learn.</td>
</tr>
<tr>
<td>2</td>
<td>Some understanding, interest in, or understanding of, pupils as to be well informed.</td>
</tr>
<tr>
<td>1</td>
<td>No evidence of understanding, interest in, or understanding of, pupils as to be well informed.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Outstanding. Skillful in reaching pupils, in conveying meaning of points. Illustrates adequately.</td>
</tr>
<tr>
<td>4</td>
<td>Average. Generally manages to reach well understood pupils. Illustrates by pupils.</td>
</tr>
<tr>
<td>3</td>
<td>Fair. Not managed to reach well understood pupils. Illustrates by pupils.</td>
</tr>
<tr>
<td>2</td>
<td>Poor. Talks above (or below) class.</td>
</tr>
<tr>
<td>1</td>
<td>Seems unable to communicate with pupils.</td>
</tr>
</tbody>
</table>

10. Interest in teaching as an occupation.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Vitally interested in task at hand.</td>
</tr>
<tr>
<td>4</td>
<td>Great interest in in teaching seen through actions of teacher.</td>
</tr>
<tr>
<td>3</td>
<td>Interested in work. Applies self to task. Seen to like teaching.</td>
</tr>
<tr>
<td>2</td>
<td>Seems little interested in teaching or in going through the motions.</td>
</tr>
<tr>
<td>1</td>
<td>Bored with task.</td>
</tr>
</tbody>
</table>

Could not observe.
### SECTION II. PERSONAL QUALIFICATIONS OF THE STUDENT TEACHER: INTERESTS, ATTITUDES, AND RESOURCES

11. Intelligence, including personal and professional judgment, foresight, intellectual acuity.

<table>
<thead>
<tr>
<th>Superior</th>
<th>Highly intelligent</th>
<th>Good</th>
<th>Average</th>
<th>Like</th>
<th>Fair</th>
<th>Qualities</th>
<th>Poor</th>
<th>Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Superior: Highly intelligent
- Good: Average in typical student
- Average: Not widely seen
- Like: Insufficient to be intelligent
- Fair: Qualities
- Poor: Qualities

12. Sense of humor. Sees the humorous and happy side of the situation.

<table>
<thead>
<tr>
<th>Superior</th>
<th>Mature sense of humor</th>
<th>Good</th>
<th>Well-developed sense of humor</th>
<th>&quot;Gives and Takes&quot;</th>
<th>Fair</th>
<th>Get or Poor</th>
<th>Cannot</th>
<th>Take a joke</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Superior: Mature sense of humor
- Good: Well-developed sense of humor
- Average: "Gives and Takes"
- Like: Meets involved
- Fair: Get or Poor
- Poor: Cannot take a joke


<table>
<thead>
<tr>
<th>Superior</th>
<th>Appealing appearance</th>
<th>Very attractive</th>
<th>Attractive, neat</th>
<th>Fair</th>
<th>Not always looking appeal</th>
<th>Unattractive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clean, well</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>groomed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dresses with taste</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Superior: Appealing appearance
- Good: Very attractive
- Average: Attractive, neat
- Like: Clean, well groomed
- Fair: Not always looking appealing
- Poor: Unattractive


<table>
<thead>
<tr>
<th>Excellent voice</th>
<th>Good voice quality</th>
<th>Voice acceptable</th>
<th>Fair voice</th>
<th>Poor speech habits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discriminating use of words</td>
<td>Speaks well. Above average.</td>
<td>No disturbing quality.</td>
<td>Use of words fair. Some speech errors.</td>
<td></td>
</tr>
</tbody>
</table>

- Excellent voice
- Good voice quality
- Voice acceptable
- Fair voice
- Poor speech habits

- No disturbing quality
- Use of words fair
- Some speech errors

- Many errors in usage

5 4 3 2 1

Superior. Can be trusted absolutely. More responsible than most people. Dependable, has sense of responsibility. Conscientious, prompt, punctual.

16. Enthusiasm, energy, drive, forcefulness, initiative.


17. Attitude toward work. Teacher shows he is objective, co-operative, open-minded, and will accept criticism.

Outstanding. Attitudes present in considerable degree. Strong attitudes in fair degree. Teacher seen to possess these attitudes in fair degree. Teacher shows some evidence of presence of those desired attitudes. Attitudes described.

18. Originality, resourcefulness, creativeness.


19. Prospects as a teacher. On basis of your contacts, how good a teacher do you think he will become in a few years?


Signed by observer ____________________________
It is understood that human behavior is too complex a thing to be indicated accurately by a single number or a single letter. Yet we must reduce it to a single dimension for the purposes of assigning a mark. Below are several devices for summarizing the information on the rating scale. One or more of these might be helpful to you in assigning a mark for the student teaching. You need not use any of them if you do not wish to do so.

I. Rating Profile

1. Selecting learning experiences
2. Skill in directing learning
3. Meeting pupil needs
4. Evaluating achievement
5. Pupil-teacher relations
6. Group leadership skills
7. Knowledge of subject
8. Knowledge of children
9. Skill in communication
10. Interest in teaching
11. Intelligence
12. Sense of humor
13. Attractive appearance
14. Voice quality, English usage
15. Reliability
16. Enthusiasm, force, energy
17. Attitude toward work
18. Originality, creativeness

II. Average Ratings.

1. Sum of ratings, Part I
   Average rating, Part I

2. Sum of ratings, Part II
   Average rating, Part II

3. Total sum of ratings
   Total average rating

III. Prospects as a Teacher:
   Outstanding..........
   Good................
   Average............
   Poor...............
   Should not teach....

IV. Grade assigned to Student Teaching: ________

Signed

———

36a
On each of the topics below, write short pointed remarks which will convey your impression of the work of this student. Use statements, words, phrases, etc.

I. **Effectiveness in teaching as evidenced by:**

   (a) Enthusiasm - interest - seriousness of purpose - initiative - creativeness - imagination - teaching techniques, variety and quality - relation of present learning to the needs of students in everyday living - ability to converse with pupils at their level of understanding.
(b) Command of subject matter (identify subject) — preparation for work observed — use of English language.

(c) General teaching rapport —

1. With pupils, i.e., mutual respect — considerateness — confidence — group control.

2. With critic and with department supervisor, i.e., co-operation, etc.

(d) Encouragement of pupil creativeness, imagination and initiative both in group and as individuals.

(e) Classroom and laboratory management — attention to physical aspects of room — good housekeeping, etc.
II. If you were in a position to employ this student would you;
(Please check)

Employ him eagerly?

Employ him with satisfaction?

Employ him with some misgiving and reluctance?

Employ him only if no one else were available?

Not even consider employing him?

III. Placement recommendation - Indicate one or both.

Junior High School Level ☐ Senior High School Level ☐

IV. Further remarks:
SUMMARY PROFILE

Based on the evidence presented in the following pages, it is my opinion that of all student teachers I have had or teachers I have known as they started their first year of teaching, this student teacher should be rated as follows:

<table>
<thead>
<tr>
<th>I. The student teacher as a person</th>
<th>As good as the best.</th>
<th>Below average.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Appearance</td>
<td>(Upper 10 or 15%)</td>
<td>(Lower 10 or 15%)</td>
</tr>
<tr>
<td>B. Speech</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Initiative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Dependability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Tact</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. The student teacher as a classroom teacher

A. Use of instructional materials
B. Guidance of learning
C. Understanding of pupils

III. The student teacher as a member of the profession

A. Professional growth
B. Professional relationships
C. Professional attitudes

IV. The student teacher as a citizen

A. Community participation
B. Democratic attitudes

In addition to this summary the placement office desires a summarizing statement or letter indicating the student teacher's outstanding strengths and weaknesses. This should be done in relationship to the four broad areas indicated above. This statement may be made on the back of this sheet or attached to it in the form of a letter to the placement office.
SUMMARIZING STATEMENT

The following summary is based upon evidence submitted in this record. This summary is to be used in the placement office as a part of the student's professional credentials. The total record will be available in the student's file in that office.

I. The Student Teacher as a person

II. The Student Teacher as a classroom teacher

III. The Student Teacher as a member of the profession

IV. The Student Teacher as a citizen
STUDENT TEACHING RECORD (CONTINUED)

THE USE OF THIS RECORD

The chief purpose of this record is to guide the learning of college students during the period of student teaching. It is the opinion of the group proposing this form that it should be used primarily to aid in the improvement of teaching and not merely to pass judgment upon the teaching observed. Incidental to its instructional value is its place in determining the final grade of the student in his teaching. For this reason this record has been made with the central idea of it being used throughout the teaching assignment for the purpose of collecting evidence of the students growing competence as a prospective teacher.

Keeping this record is the joint responsibility of the student teacher and the supervisor. Each will have a copy to use as a work sheet. Near the conclusion of the teaching assignment they will work out a copy of the record to be returned to the student teaching office. This copy will, in turn, be submitted to the college placement office as a part of the student's professional credentials. It will bear the signature of both the supervising teacher and the student teacher, indicating that the student has seen the record and evaluation before it is submitted.

In the guidance of the student's work in teaching, this record serves two large purposes. The first is to call attention to the broad range of activities and responsibilities of modern teaching. The second is to serve as a data gathering device upon which evaluations can be made. Those responsible for making and revising the record recognize that they have made some broad assumptions about the larger responsibility of the teacher as well as what effective teaching includes. It is also recognized that items suggested in this form are not equally applicable to all teaching areas or in all teaching situations. The supervising teacher and student teacher will use those ideas that are pertinent and feel free to add others. It is not expected that all teachers will be able to collect evidence in all the items suggested.

It is believed that evidence can be accumulated and evaluations made in four broad areas; the student as a person, the student as a classroom teacher, the student as a member of the profession, and the student as a citizen. Under each of the major headings specific items of information are asked for which describe behavior on the part of the student teacher in one of the areas. Continuously throughout the teaching assignment these items should be brought to

*For a two-year period, 1951-53, grades or marks will not be given in Student Teaching. Our registrar will record only that the student has or has not received credit in the course.
STUDENT TEACHING RECORD (CONTINUED)

THE USE OF THIS RECORD

the attention of the student. If the student has had no opportunity to exhibit his competence or understanding it may indicate limited opportunities for growth. If the student has had such opportunity a record of the activities should be kept in the appropriate spaces.

It is suggested that all entries in the record be dated. This may be done by placing the actual date before the entry or by indicating whether the example or instance occurred during the first, second, third, etc., week of the assignment. This practice should aid materially in interpreting the anecdotes.

In addition to the student teacher's use of this form it is recommended that the student keep a brief running account of his teaching experience. This may be done in the form of a daily or weekly log. The student should also keep samples of professional material such as lesson plans, outlines of work, unit plans, tests, and evaluation devices.

This edition of the Student Teaching Record will be used first in 1948-49. It is a revision of an earlier record devised by a group of supervising teachers in the summer of 1947. The present revision is based upon the suggestions of those using the original form in 1947-48. It is subject to continuous revision. Suggestions for its improvement are always welcome.
I. The Student Teacher as a Person

The student and supervisor are asked to submit evidence under the following topics that reveal some of the characteristics of the student as a person. Do not use general descriptive words like good, medium, poor, fair.

A. Appearance (grooming, appropriateness of dress)

B. Speech (voice quality, volume, correctness, effectiveness)

C. Health (vitality, habits, stamina, emotional stability)

D. Initiative (self-direction, alertness, original, imaginative)

E. Dependability (prompt, responsible, meets obligations)

F. Tact (tolerant, courteous, co-operative, thoughtful)
II. The Student Teacher as a Classroom Teacher

A. Major Teaching Responsibility (During each assignment the student teacher is expected to carry out at least one large block of classroom work for which he has the primary responsibility. Briefly describe this unit or units of work giving the title and amount of time involved.)

Mention briefly additional teaching, extra-curricular and community responsibilities accepted by the student teacher.
B. Use of Instructional Materials (Instructional materials are here broadly conceived. The student and supervisor are asked to give specific examples under each of the following topics.)

1. Preparation and background of the student teacher (strengths and weaknesses in academic preparation, breadth of interest, travel, work or recreation experiences, resourcefulness)

2. Variety (audio-visual aids, radio programs, bulletin boards, exhibits, maps, charts, globes, blackboards, student made equipment, demonstrations, visiting speakers, duplicated materials, magazines, government and state publications, fiction, biography, reference)

3. Selection and care (securing, purchasing, organization, filing)

4. Community resources (excursions, visiting speakers, visits within the school, surveys, problem situations)

5. Background and experience of pupils used as instructional aids (illustrations, misconceptions, suggestions, questions, values and opinions)
C. Guidance of Learning (Under the following topics should be indicated the methods and techniques used by the student teacher.)

1. Planning (long-range or unit planning, daily planning, thoroughness, usability, flexibility, modifications in material and method to meet needs of various individuals and sub-groups, recognition of immediate problems, recognition of the broad aims and objectives of education)

2. Pupil participation in planning (setting up goals, planning ways of reaching them, accepting responsibility, selecting activities, anticipating consequences)

3. Group activities (committees at work, discussions, dramatizations, games, contests, stunts, panel discussions, group projects, division of class in groups)

4. Individual activities (reports, pupil demonstrations, remedial teaching, interviews, oral reading by pupils, reviews)
5. Functioning of subject matter (setting up hypotheses and generalizations, making inferences, determining trends, seeing cause and effect relationships, applying principles, analyzing propaganda, dealing with controversial issues, solving problems, meeting immediate needs, changes in attitude and behavior)

6. Evaluation (pupil participation in evaluation, continuous evaluation, anecdotal records, observation, cumulative records, problem situation tests, performance tests, use of standardized tests, elimination of competition, progress reporting)

7. Conventional techniques (conducting a recitation, use of questions, supervised study, lecturing, assignments, drills, reviews, quizzes, examinations)
D. Understanding of Pupils (In the following sections should be recorded instances that indicate the student teacher's ability to get along with and help individuals meet social, personal, and emotional needs. His understanding of human growth and development and mental hygiene should be revealed.)

1. Attitude toward pupils (honest liking and sincere regard for boys and girls; pleasant and cheerful on meeting them and dismissing them; reaction to tardiness, incomplete work, noise and confusion; providing security and recognition for varying temperaments and levels of ability)

2. Basis of relationship (uses available records of pupils, observes pupils out of class, recognizes environmental influences, seeks information from others, home visits, extra-class activities, personal conferences)
3. **Basis for co-operation** (concept of authority, concept of leadership, belief in joint responsibility, use of democratic processes, faith in the thinking process as a means of solving problems, resolution of conflicts, freedom of expression, development of common concerns, recognition of minority opinion)

4. **Individual counseling** (case study, student teacher sought by pupils, types of personal problems studied, number of students counseled, thoroughness of individual studies, results of counseling)
III. The Student Teacher as a Member of the Profession.

Under the following headings the student and supervisor should record activities, interests, and ways of attacking problems that indicate the student's prospects as a genuinely professional person.

A. Professional Growth (studies problems involved in teaching, reads professional books and magazines, active in professional organizations, attends staff and group meetings, tries new plans and ideas)

B. Professional Relationships (ethical conduct, assumes share of responsibilities, co-operates in all school activities, contacts with parents and home, invites cooperation, restrains himself from talking disparagingly of associates and school, discrete in discussing school problems, keeps confidences)

C. Professional Attitudes (scientific attitude, critical and analytical, not bound by tradition, open to conviction, accepts conclusions of experimental studies, belief in democratic processes in education, concept of leadership, concept of the place of education in a democratic society, sense of responsibility to youth)
IV. The Student Teacher as a Citizen

While all student teaching assignments do not afford equal opportunity for the student to reveal himself as a member of the community it is believed that the student's effectiveness as a citizen is an important responsibility of the college. Students and teachers are urged to place in this section items which indicate the student's concept and practice of citizenship.

A. Community Participation (range of college activities and interests, acquaintance with community resources and problems, use of community resources and problems in teaching, support of community affairs, information and interest concerning state, national, and international affairs)

B. Democratic Attitudes (accepts citizenship responsibilities; freedom from strong prejudices against differing religious, political, economic, social and racial groups; concern for political aspects of democracy; concern for economic side of democracy; the resolution of conflict situations)
RECOMMENDATION BLANK

Recommendation For: ____________________________

Directions: The Placement Bureau is preparing credentials for
this candidate to be sent to various school officials. As student
teaching recommendations are of particular importance to school
administrators, your careful attention to this recommendation will
be appreciated. Please write briefly your opinion of the personal
and professional qualifications of the student named above. This
information is for use of the Placement Bureau and is never shown
to the student.

Brief and specific statements of characteristics that are
directly related to teaching success are most sought after by
boards and superintendents and influence them most in the selection
of teachers. Avoid generalizations and statements that do not
relate to the candidate's qualification as a teacher.

Give such estimations of the student's appearance, character,
health, scholarship, instructional skill, professional attitude,
ability to meet changing conditions, and the ability to get along
with others that would be helpful to you if you were employing
the teacher.

Facts that the Placement Bureau should know, but are not to
be included in the student's credential folder, should be written
on the back of this sheet.

This candidate did practice teaching under my supervision in the
Grade Level:

Credit _______ No Credit _______.

Return this recommendation directly to: Director of Student
Teaching, Arizona State College, Tempe, Arizona. Check by Student
Teaching Office ______. 
I, John James Evans, was born near Martinsburg, Knox County, Ohio, July 21, 1917, son of Harry B. and Rose C. (Rouse) Evans. I received my secondary school education in the public schools of Martinsburg, Ohio. My undergraduate training was obtained at Kenyon College, Gambier, Ohio and at The Ohio State University, Columbus, Ohio. I received the degree of Bachelor of Arts, Cum Laude, With Honors in Mathematics, from Kenyon College in 1938, and the degree of Bachelor of Science in Education from The Ohio State University in 1939.

In 1940, I received the degree of Master of Arts, in the field of Mathematics, from The Ohio State University. In 1940-41 I taught Mathematics and Science in the Frankfort High School, Frankfort, Ohio. From August 6, 1941 until March 25, 1946, I served on active duty in the United States Army Air Force, entering as a Private and returning to inactive status as a Captain. Most of this period was spent in the Southwest Pacific Area as a weather forecaster. From February 25, 1946 until June 7, 1948, I held the position of Assistant Professor of Mathematics at Marietta College, Marietta, Ohio. On August 10, 1947, I married Caroline Marguerite Truman of Akron, Ohio, a teacher of English in the secondary schools.

From June 15, 1948 until September 30, 1949, I held the position of Statistician in the State Teachers Retirement System of Ohio. I resigned this position to enter The Ohio State University in October, 1949 for the purpose of enrolling in further graduate work leading
to the Doctor of Philosophy degree. In 1950-51, I served as Research Assistant in the Student Field Experience Office, College of Education, The Ohio State University. During this period, on April 19, 1951, a son, John William, was born. During 1951-52 and 1952-53, I held the position of Assistant Co-ordinator of Student Field Experience, and since January 1, 1953, I have served as Acting Co-ordinator of Student Field Experience, College of Education, The Ohio State University.