The performance of the graduates of the Fort Hays Kansas State College's teacher education program was evaluated by their employers to determine the adequacy of the college's elementary and secondary education programs. The Kansas State Department of Education developed two questionnaires, one consisting of 16 performance-related items for rating elementary school teachers and the other consisting of 12 items for rating secondary school teachers. Using a four-point scale, principals, supervisors, or district heads completed questionnaires for 39 secondary school teachers and 21 elementary school teachers. The responses indicate that a) secondary school teachers attained a mean score of 35.87 out of a possible 48; b) elementary school teachers attained a mean of 44.14 out of a possible 64; c) 92.1% of secondary school teachers were recommended for employment; and d) 95.3% of elementary school teachers were recommended for employment. It appears then that the products of Fort Hays State College's teacher education program are well prepared in relation to their peers. However, the smallness of the sample limits the study, and findings should be considered tentative until they are validated. Further research suggestions include a) a replication of this study with a sample from the three state colleges in Kansas and b) a combined teacher-employer study in which evaluations of teachers are compared with those of their employers. (HMD)
ATTAINMENT OF BEHAVIORAL OBJECTIVES
BY TEACHER EDUCATION GRADUATES

Michael O. Stewart
John Schmeidler

October 1972
Considerable research has been conducted on the adequacy of college programs in the preparation of graduates for their chosen occupation. However, much of this research has been based upon self-report. This is an important dimension to be measured in the evaluation of occupational preparation. Another dimension of equal importance, particularly among recent graduates, is the evaluation by their respective employers of the graduates' preparation. The perception of the adequacy of preparation may differ between these respective observers.

In the past, it has been commonly assumed that there is a direct relationship between academic achievement in college and occupational success. The ultimate criterion for judging many different professional programs in colleges is whether they produce competent graduates who enter the professions and perform effectively.

The Kansas Master Planning Commission of Postsecondary Education has attempted recently to evaluate the preparation of students and graduates of the six Kansas colleges and universities under the Board of Regents. The evaluation was conducted at two critical points: graduates of the class of 1967 and seniors enrolled in the Spring of 1972. (State of Kansas, 1972a and 1972b) These studies provided self-evaluation when students were completing their programs of study and after they had entered their chosen profession or vocation.

Recently there has been some emphasis on making evaluations of performance based upon the attainment of behavioral objectives by the subjects under evaluation. The objectives of a particular program of
study--once they have been identified and stated--can be used as the basis for the evaluation of a program by measuring the students' attainment of them.

The purpose of this study is for employers to evaluate the attainment of behavioral objectives of students who are products of the teacher education program at Fort Hays Kansas State College. This is a pioneer effort. Other studies have asked for a self-report of students who wish to become certified teachers. This has been conducted upon completion of the "teaching block." In addition, employers have been asked to rate teachers in terms of the adequacy of their preparation and success as a teacher (Fort Hays Kansas State College, 1971). However, behavioral objectives were not used as a criteria for employers measuring success or adequacy of preparation.

Procedure

Sample

Subjects were chosen from the senior classes of 1970 and 1971 who, according to Alumni Office records, listed their occupation as either an elementary or secondary teacher. A total of 486 persons were identified as reporting to be employed in a Kansas teaching position. Persons teaching outside of Kansas were eliminated from the study since the vast majority of teaching graduates begin initial employment in the State.

Using a random number table, a 20 percent (N=97) sample was initially chosen. It was hoped that a final sample in excess of 10 percent would be identified so that a meaningful sample size could be obtained based upon an expected response rate of approximately 80 percent. Since it was hoped
to obtain a representative sample by teaching field from the secondary school teachers, some manipulation of the original 20 percent sample was necessary. It was hoped to obtain a final sample of secondary teachers which was proportional to the total number of FHKSC graduates who were certified to teach in a particular teaching field, i.e., their major field of study. It was assumed that the recent graduates would be teaching in their major field. It was realized that this might not always be a valid assumption.

Table I shows the distribution by major field of study of 1970 and 1971 teacher education graduates who were certified to teach. The secondary sample was manipulated randomly to conform generally to this distribution.

Table I

Description of Major Field of Graduates Certified to Teach in 1970 and 1971

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Education</td>
<td>219</td>
<td>45.5</td>
<td>208</td>
<td>44.5</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>263</td>
<td>54.5</td>
<td>259</td>
<td>55.5</td>
</tr>
<tr>
<td>Art</td>
<td>21</td>
<td>4.4</td>
<td>24</td>
<td>5.1</td>
</tr>
<tr>
<td>Business</td>
<td>26</td>
<td>5.4</td>
<td>30</td>
<td>6.4</td>
</tr>
<tr>
<td>English</td>
<td>32</td>
<td>6.7</td>
<td>21</td>
<td>4.5</td>
</tr>
<tr>
<td>Speech</td>
<td>1</td>
<td>.2</td>
<td>9</td>
<td>1.8</td>
</tr>
<tr>
<td>German</td>
<td>1</td>
<td>.2</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Latin</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Spanish</td>
<td>8</td>
<td>1.7</td>
<td>6</td>
<td>1.3</td>
</tr>
<tr>
<td>Home Economics</td>
<td>14</td>
<td>2.9</td>
<td>14</td>
<td>3.0</td>
</tr>
<tr>
<td>Industrial Arts</td>
<td>18</td>
<td>3.7</td>
<td>28</td>
<td>6.0</td>
</tr>
<tr>
<td>Mathematics</td>
<td>25</td>
<td>5.2</td>
<td>13</td>
<td>2.8</td>
</tr>
<tr>
<td>Music</td>
<td>7</td>
<td>1.5</td>
<td>16</td>
<td>3.4</td>
</tr>
<tr>
<td>Physical Education</td>
<td>30</td>
<td>6.2</td>
<td>44</td>
<td>9.4</td>
</tr>
<tr>
<td>General Science</td>
<td>8</td>
<td>1.7</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Biology</td>
<td>8</td>
<td>1.7</td>
<td>8</td>
<td>1.7</td>
</tr>
<tr>
<td>Chemistry</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Physics</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>History</td>
<td>44</td>
<td>9.1</td>
<td>17</td>
<td>3.6</td>
</tr>
<tr>
<td>Econ/Soc/Psych</td>
<td>2</td>
<td>.4</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>Special Education</td>
<td>17</td>
<td>3.5</td>
<td>20</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>481</strong></td>
<td><strong>100.0</strong></td>
<td><strong>467</strong></td>
<td><strong>99.6</strong></td>
</tr>
</tbody>
</table>
After manipulation of the initial 20 percent sample of secondary teachers, 82 subjects were identified as meeting the criteria established for inclusion in the final sample. Questionnaires were mailed to the employers of these teachers.

Instruments

The Department of Education was asked to develop a set of objectives which they hoped teachers, prepared at Fort Hays State, would acquire while a student. Two sets of objectives were prepared—one for students enrolled in the elementary education program and one for students enrolled in the secondary education program. Sixteen objectives were developed for elementary education and twelve objectives were developed for secondary education. The evaluator (superintendent or principal) was asked to rate the subject teacher on the attainment of each objective according to the following scale: excellently 4; well 3; average 2; fair 1; or No Information 0.

All questionnaires were sent to the Superintendent of Schools for the Unified School District in which the subject had taught during 1971-72, according to records of the Alumni Office. A cover letter with instructions for referral of the questionnaire, if necessary, accompanied each questionnaire as did an addressed stamped envelope. Provision was made for identifying the subject field(s) taught in the case of secondary teachers. In the event additional follow-up information was needed, the following additional questions were asked:

If this person did not teach in your school district during 1971-72, please check here and return: If you know what USD this person taught in, please list the number:

I would recommend him or her for employment: YES No

Person has signed a contract for the 1972-73 year in your district: YES NO
Results

Eighty-three percent (N=68) of the questionnaires were returned. Eight of the 68 had to be discarded because of inaccurate information regarding the teaching location or because the individual responding had no information on which to form a judgment. After exclusions and non-returned questionnaires, a sample of 12 percent of the total number of persons who reported to have teaching positions formed the basis for the study. No follow-up was made on the non-returned questionnaires.

Table 2 summarizes the employers' ratings on the attainment of behavioral objectives by FHKSC secondary education graduates of 1970 and 1971. Any rating of "0" was considered not applicable and was not figured in the calculations. A copy of the complete instrument is shown in Appendix A.

Table 2
Ratings of Objectives for Secondary Teachers
N=39

<table>
<thead>
<tr>
<th>Objective</th>
<th>Mean</th>
<th>SD</th>
<th>Percent Below 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Behavior</td>
<td>2.78</td>
<td>.89</td>
<td>7.6</td>
</tr>
<tr>
<td>Behavior Changes</td>
<td>2.58</td>
<td>.89</td>
<td>7.6</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>3.10</td>
<td>.68</td>
<td>2.5</td>
</tr>
<tr>
<td>External Behavior</td>
<td>2.72</td>
<td>.97</td>
<td>12.8</td>
</tr>
<tr>
<td>Subject Competency</td>
<td>3.34</td>
<td>.85</td>
<td>5.1</td>
</tr>
<tr>
<td>Evaluative Procedures</td>
<td>2.79</td>
<td>.92</td>
<td>5.1</td>
</tr>
<tr>
<td>Sense of Humor</td>
<td>3.03</td>
<td>.78</td>
<td>5.1</td>
</tr>
<tr>
<td>Classroom Control</td>
<td>3.17</td>
<td>.97</td>
<td>10.3</td>
</tr>
<tr>
<td>Responds to Criticism</td>
<td>3.23</td>
<td>.81</td>
<td>5.1</td>
</tr>
<tr>
<td>Initiative/Creativity</td>
<td>3.54</td>
<td>.85</td>
<td>2.5</td>
</tr>
<tr>
<td>Innovative</td>
<td>3.10</td>
<td>.85</td>
<td>5.1</td>
</tr>
<tr>
<td>Ability to Fit</td>
<td>3.18</td>
<td>.85</td>
<td>5.1</td>
</tr>
</tbody>
</table>
The overall mean score on the attainment of all objectives for secondary teachers was 35.87 with a standard deviation of 7.64. The highest possible score was 48. This represents an average rating of 2.99 on each objective.

In response to the questions concerning recommending the teacher for employment, 92.31 percent of the employers indicated a positive response. Regarding the question of employment for 1972-73, 76.93 percent of the secondary teachers had signed a contract to remain in the same district in which they had taught during 1971-72. No information was obtained on those who had not signed a contract.

The distribution of the ratings on secondary teachers appeared to be skewed to the right in all cases indicating above average ratings. This was a limitation of the scale used.

More comments concerning the subjects were received from the secondary teacher evaluations than from the elementary teacher evaluations. One principal wrote of a subject that he was "a very fine young teacher. Send us more just like him." Another evaluator commented that ". . . was the best first year teacher I ever supervised. If all of your graduates are trained as well as she, you are doing an excellent job." Finally, one principal wrote a philosophical discourse on the limitations brought about by lack of more teaching experience. He felt that the "halo effect" of the supervising teacher often handicapped the student teacher in "establishing a wholesome classroom atmosphere."

Table 3 summarizes the employers' ratings of the attainment of behavioral objectives by elementary education graduates of 1970 and 1971. A copy of the complete instrument is shown in Appendix B.
Table 3
Ratings of Objectives for Elementary Teachers
N=21

<table>
<thead>
<tr>
<th>Objective</th>
<th>Mean</th>
<th>SD</th>
<th>Percent Below 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Knowledge</td>
<td>3.00</td>
<td>.77</td>
<td>4.7</td>
</tr>
<tr>
<td>Growth Characteristics</td>
<td>3.04</td>
<td>.65</td>
<td>0</td>
</tr>
<tr>
<td>School as Institution</td>
<td>2.95</td>
<td>.82</td>
<td>0</td>
</tr>
<tr>
<td>Learning Theories</td>
<td>2.61</td>
<td>.74</td>
<td>4.7</td>
</tr>
<tr>
<td>Lesson-plan Skills</td>
<td>2.80</td>
<td>.74</td>
<td>4.7</td>
</tr>
<tr>
<td>Attainment of Goals</td>
<td>2.61</td>
<td>1.02</td>
<td>4.7</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>2.80</td>
<td>.98</td>
<td>0</td>
</tr>
<tr>
<td>Behavior Problems</td>
<td>2.85</td>
<td>.91</td>
<td>14.2</td>
</tr>
<tr>
<td>Appropriate Methods</td>
<td>2.75</td>
<td>.71</td>
<td>9.5</td>
</tr>
<tr>
<td>Methods-courses Utilization</td>
<td>2.42</td>
<td>.96</td>
<td>4.7</td>
</tr>
<tr>
<td>Utilizes Research</td>
<td>2.38</td>
<td>1.24</td>
<td>4.7</td>
</tr>
<tr>
<td>Utilizes Evaluative Tools</td>
<td>2.85</td>
<td>.85</td>
<td>0</td>
</tr>
<tr>
<td>Understanding of School Organization</td>
<td>2.90</td>
<td>.64</td>
<td>9.5</td>
</tr>
<tr>
<td>Student Records</td>
<td>3.24</td>
<td>.85</td>
<td>4.7</td>
</tr>
<tr>
<td>Library Use</td>
<td>2.42</td>
<td>1.20</td>
<td>0</td>
</tr>
<tr>
<td>Cooperation</td>
<td>3.33</td>
<td>1.01</td>
<td>9.5</td>
</tr>
</tbody>
</table>

The elementary teachers received an overall mean score on the attainment of all objectives of 44.14 with a standard deviation of 10.37. The highest possible score was 64. This represents an average rating of 2.76 for each objective.

For the elementary teachers, 95.3 percent of the employees indicated that they would recommend the teacher evaluated. All of the elementary teacher sample had signed contracts to remain in the same district for the 1972-73 year.

The distribution of the ratings on elementary teachers appeared to be skewed to the right indicating above average ratings. However, this was to a lesser degree in the case of the elementary teachers than with the secondary
teachers. From a cursory inspection of the distribution of the scores, it was apparent that very low evaluation of one elementary school subject affected the overall rating. Comments on this subject's questionnaire substantiated the low rating but the evaluator added that, "The responses on this questionnaire do not reflect on Hays College as a teacher preparation school."

Generally the other comments by evaluators were positive. However, one principal commented that, "Hays graduates appear to be weak in audio-visual techniques in presenting material."

**Discussion**

**Limitations**

Limitations of this study include the smallness of the sample and the restricting of subjects to those teaching in Kansas. Subjects were limited to 1970 and 1971 graduates. It was anticipated that the effect of the adequacy of a college program is a function of time, and that the longer a person had been out of college the less effect preparation would have on performance. A two year restriction on the sample may have been too severe a criterion.

With the job market such as it is, it is evident from the college's records that: (1) many students who took the teaching block or who majored in elementary education did not apply for certification, and (2) some students who wanted teaching positions could not find employment in Kansas.

No normalized ratings on attainment of objectives were available to compare against the obtained scores. Furthermore, it appeared that some evaluators applied different standards or criteria to the ratings of excellent, well, average, or fair.
The clarity and preciseness of the stated objectives was not studied outside of the Department of Education. No pre-test of the instrument was conducted.

In some cases the distributions of the ratings was skewed. It would have been more desirable to have a rating scale in which a more normal distribution could have been obtained. No inter-correlations between the objectives were obtained. It is hoped that this can be done in the future.

The severe limitation of the correctness and completeness of alumni records hindered the study. Without contacting the teacher directly for employment data, the self-report data from the Alumni Office must be used. Many alumni do not keep their records up to date even though a concerted effort is made by the Alumni Office to keep their records current.

Other restrictions apply to the population for whom the study is applicable. It applies only to bachelor degree graduates of Fort Hays Kansas State College who have been out of college for one or two years and who reported where they were teaching.

The findings of this study were generated from a single sample. Without true validation they should be considered as tentative.

Within those limitations it is possible to discuss the following points.

Conclusions

It appears that the products of Fort Hays State College's teacher education program are well prepared in relation to their peers. It appears that the secondary teachers have attained their behavioral objectives to a greater degree than the elementary teachers. However, both groups were rated well above average.
There was considerably more variance in the ratings of the elementary teachers. Four objectives scores had a standard deviation greater than 1.0. This may be a function of sample size, the very low rating of one subject, the variation in rating standards used by evaluators, or variation in the attainment of particular objectives by these teachers.

The absence of turnover (non-reemployment) in the elementary teachers indicates a high degree of satisfaction between both the teachers and their superintendents. Evidently there is less satisfaction, more mobility, or more attrition among the secondary teachers than the elementary teachers. The non-recommendation rate of the secondary teachers was two-thirds greater among secondary evaluators than elementary evaluators. This further supports the greater degree of satisfactory relationships between teachers and their employers at the elementary level.

Implications

A careful review of the stated behavioral objectives is in order. Students, faculty, and employers need to evaluate these objectives in terms of their respective needs and goals. With an attempt to recruit students from eastern Kansas and outside of Kansas, it will be necessary to analyze whether these objectives are satisfactory and equally applicable to schools, students, parents, and administrators outside of the Western Kansas rural, small school environment.

Students need to be queried as to their knowledge of these objectives upon entering the teacher education program.

It is desirable to replicate this study with a sample from the three state colleges in Kansas. Presumably there would be some commonality as
to the objectives desired by all teacher education programs. The refining of the rating scales and objectives is needed and the validity of the rating scales need to be established.

Finally, a similar or combined teacher-employer study needs to be conducted in which evaluations from the teachers themselves are compared with those of their employers.
REFERENCES


June 14, 1972

Dear Kansas School Administrator:

In order that the teachers prepared at Fort Hays Kansas State College will continue to be among the best-qualified, we are conducting a study to evaluate the teacher-training program at our institution. Enclosed you will find a one and one-half page questionnaire and check list. We would appreciate your taking a few minutes to complete and return it in the enclosed, stamped envelope within the next few days and no later than July 1.

To make this evaluation, a random sample of graduates in elementary or secondary education were chosen so that we might contact the school systems in which they were employed for the 1971-72 school year. Our records indicate the person named on the enclosed evaluation sheet taught at your school or within your school system during the past year; we are asking your help in determining the level of performance exhibited by this person.

If you cannot personally give such an evaluation, we ask that the evaluation sheet be given to that administrator who supervises the teacher and knows the quality of his or her work. If, in fact, the person did not teach within the school system, please so indicate on the next page and return the questionnaire to us.

We hope to use the results of the evaluation to improve current programs and to make plans for future program development.

Your responses will be kept confidential and only the summary of responses from all graduates will be published.

Thank you for your time and effort. Without your help and the information only you can afford us, it would be impossible to complete the evaluation.

Sincerely,

Michael O. Stewart
Director of Institutional Research

W. Clement Wood, Chairman
Department of Education
FORT HAYS KANSAS STATE COLLEGE
Department of Education
Office of Institutional Research

RATING SCALE FOR TEACHER EDUCATION PROGRAMS
Secondary Education

Name

Year of Graduation/Certification 197

If this person did not teach in your school district during 1971-72, please check here and return:  

If you know what USD this person taught in, please list the number

Subject Field(s) taught:

Listed below are several of the objectives that we hope teachers acquire from our program. Please read each of the items below and then using the following codes, give your evaluation.

Excellently-4; Well-3; Average-2; Fair-1; No Information-0

Compared with teachers prepared at other institutions (with the same experience), I would say that the former student named above:

1. comprehends (competently) institutional behavior and its effects on those persons who work in institutions.
2. understands what happens to people when their behavior is changed, as well as how to achieve such (desired) change.
3. understands and effectively utilizes oral and written communication skills.
4. relates to and understands the non-teaching (external-to-the-class-room) behavior of students, colleagues, parents, and administrators.
5. exhibits competency in his/her subject discipline.
6. possesses the ability to devise proper evaluative procedures.
7. exhibits a sense of humor.
8. exhibits adequate classroom control.
9. responds in a professional manner to advice and criticism.
10. possesses initiative and creativity necessary for competent instruction.
11. exhibits the ability to be flexible and willingness to bring about innovative change.
12. has the ability to fit in as part of the total school program.

I would recommend him or her for employment: YES  NO.

Person has signed a contract for the 1972-73 year in your district: YES  NO.

(continued)
Please return as soon as possible in the self-addressed, stamped envelope provided. Thank you for your help.

NAME (print)__________________________________________

TITLE_______________________________________________

USD #_________________________________________________
June 14, 1972

Dear Kansas School Administrator:

In order that the teachers prepared at Fort Hays Kansas State College will continue to be among the best-qualified, we are conducting a study to evaluate the teacher-training program at our institution. Enclosed you will find a one and one-half page questionnaire and check list. We would appreciate your taking a few minutes to complete and return it in the enclosed, stamped envelope within the next few days and no later than July 1.

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Sincerely,

Michael O. Stewart
Director of Institutional Research

MOS: mh
Enclosure
RATING SCALE FOR TEACHER EDUCATION PROGRAMS
Elementary Education

Name ___________________________________________________________________
Year of Graduation/Certification 197______

If this person did not teach in your school district during 1971-72, please check here and return:____
If you know what USD this person taught in, please list the number____

Listed below are several of the objectives that we hope teachers acquire from our program. Please read each of the items below and then using the following codes, give your evaluation.

Excellent-4; Well-3; Average-2; Fair-1; No Information-0

Compared with teachers prepared at other institutions (with the same experience), I would say that the former student named above:

1. applies subject-matter knowledge effectively.
2. identifies the characteristics of how children learn and grow.
3. demonstrates knowledge of the elementary school as a social institution.
4. knows and identifies learning theories.
5. utilizes appropriate lesson plans.
6. strives to attain pre-set and realistic goals.
7. speaks and writes appropriate English in all situations.
8. solves room behavior problems.
9. selects appropriate methods/techniques while reacting and relating to children.
10. associates (competently) material gained from content methods courses.
11. evaluates and utilizes research in education.
12. constructs and utilizes appropriate examinations and other evaluative tools.
13. understands and analyzes the varying forms of current public school organization.
14. maintains appropriate and accurate student records.
15. chooses and lists children's library books to supplement content areas.
16. cooperates effectively with other teachers, administrators and parents.

(continued)
I would recommend him or her for employment: YES____ NO____.
Person has signed a contract for the 1972-73 year in your district: YES____ NO____.

Additional comments:__________________________________________________________________________

__________________________________________________________________________________________

Please return as soon as possible in the self-addressed, stamped envelope provided.
Thank you for your help.

NAME (print)__________________________________________

TITLE_________________________________________________

USD #__________________________________________________