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ABSTRACT

This paper discusses the follow-up assessment of University of Kentucky teacher education graduates. An instrument was developed and administered to first-year teachers and their internship committee members (resource teachers, principals, and teacher educators) participating in the Kentucky Beginning Teacher Internship Program. Respondents were asked to identify the degree of difficulty that the intern teachers experienced in each of 20 competency areas. Over 4 academic years, approximately 70 percent of the teacher education graduates have responded to the survey and given permission for committee members to participate. Results are passed on to the various college program faculties, who use the findings to create new courses, revise existing courses, and develop in-service workshops. Overall, both quantitative and qualitative responses have been complimentary of the University's teacher education programs. Comments from graduates have consistently suggested that field experiences be increased, courses and instructors within the professional sequence be better linked, theory be directly related to practice, and instruction of political and administrative aspects of teaching be expanded. Appendices provide: (1) a table of the percentage of graduates and their internship committee members rating graduates as proficient or above on selected teacher competencies, and (2) a copy of the assessment instrument. (JDD)

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**Determining the Success of Teacher Preparation by Assessing
What Teacher Education Graduates Know and Are Able to Do**

Paper presented at the CREATE Annual National Evaluation Institute
Gatlinburg, Tennessee
July, 1994

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Determining the Success of Teacher Preparation by Assessing What Teacher Education Graduates Know and Are Able To Do

Introduction

Educational reports, the media, and the teaching profession itself have recently focused somewhat less than favorable attention on the performance of new teachers and the quality of the teacher education programs that prepare these teachers. These images of new teachers portray them as ill-prepared for the duties and responsibilities of the classroom. In response to this attention, it is imperative that teacher education institutions continuously monitor and assess the effectiveness of their programming.

In its redesigned accreditation standards, the National Council for Accreditation of Teacher Education (NCATE) advocates the importance of follow-up studies of teacher education graduates. The compliance criteria associated with standard II.B, "Relationships with Graduates," states:

- (1) The unit keeps abreast of emerging evaluation techniques and engages in regular and systematic evaluations, including follow-up studies, to determine the success and quality of graduates in the professional education roles for which they were prepared.
- (2) The results of evaluation efforts, including follow-up studies of graduates, are used by the unit to modify and improve programs. (NCATE, 1992, p. 52)

Although teacher preparation institutions generally agree that follow-up studies would provide valuable feedback for directing program development and improvement strategies, and although NCATE and some state departments of education require follow-up studies, many institutions continue to experience problems in designing and implementing effective teacher and employer follow-up procedures. Evidence to

support this statement can be found as one examines the number of teacher education institutions that are having difficulty meeting the NCATE standard related to relationships with graduates, specifically the criteria related to follow-up studies.

Typically, follow up studies have consisted of mailed surveys containing questions relating to graduates' levels of satisfaction with their programs of study. Graduates are asked to identify strengths and weaknesses of their programs and to provide information about their intentions for further study. The information provided is often so general that its usefulness is insignificant. In addition, the data collected from most such studies reflect only respondent self analysis of teaching effectiveness. Thus, no comparisons with the knowledge and performance of other new teachers can be made.

For several years, the College of Education at the University of Kentucky utilized this traditional approach to learning more about its programs from its graduates. The survey instrument used consisted of general, open-ended questions relating to graduates' perceptions of their preparation program and their instructional effectiveness. The instrument was neither normed or criterion referenced. Responses were generally below twenty percent, and respondents tended to give non-specific answers to survey questions. Such data were not prescriptive to those faculty responsible for program quality and revision. Consequently, it became clear to faculty concerned with assessing program effectiveness that a more objective and exacting follow-up process was needed. This paper will describe the process used to develop the current assessment of University of Kentucky teacher education graduates, selected findings, and examples of how findings have been used for program development. Also presented are some revisions of the follow-up assessment currently being piloted to reflect the focus on outcomes-based education reform efforts in Kentucky.

Development of the Assessment Process

Encouraged by the efforts in Georgia in 1980 to implement a new teacher assessment system and the development and adoption of a summative, new-teacher observation instrument by Florida in 1983, Kentucky initiated the Kentucky Beginning Teacher Internship Program in 1985. This program is a support program for first-year teachers that also involves a formal evaluation component. Three team members--typically a resource teacher in the new teacher's content area, the new teacher's principal, and a teacher educator--formally observe the new teacher periodically throughout the year and meet with the new teacher to discuss the preparation and progress of the new teacher's professional development plan.

University of Kentucky faculty were involved with this program at its inception. While involved, several became aware of the ways the internship team experience could enhance the curriculum revision process. Their opportunity to observe the classroom practices of graduates and to identify the strengths and weaknesses of such practices allowed them to return to their campuses with ideas for program improvement. Several of these participants soon began to explore ways that the University might be able to take advantage of the opportunities provided by the Kentucky Teacher Internship Program to improve the College's follow-up process, and Sandidge (1989) engaged in research to determine intern teachers' and resource teachers' perceptions of beginning teacher problems, concerns, and support within the context of the Kentucky Beginning Teacher Internship Program.

Development of the Instrument

In order to develop an instrument that could be used to identify competencies of first-year teachers, Sandidge (1989) examined a number of earlier studies of the problems typically encountered by novice teachers. Included was a study conducted by Shelley (1979) that examined the logs kept by teachers during their first three months

of teaching to determine the problems they experienced and the severity of the problems. Major problems included group and individual disruptions; inability of new teachers to plan instruction to match students' differing ability levels; communications with parents; difficulty in giving clear directions during classroom instruction; and routine management procedures such as lunch counts.

An ethnographic study of first-year teachers conducted by Applegate, et. al. (1977) revealed that novice teachers expressed problems with managing the classroom, handling discipline, making and upholding decisions, evaluating students, and separating their personal and professional lives. They also indicated that they experienced problems with student opinions of the teacher, opinions and actions of colleagues, lack of parental concern, relationships with administrators, operating equipment, managing paperwork and time, and organizing curricula.

Sweeney (1984) surveyed new teachers, experienced teachers, cooperating teachers, and principals regarding their perceptions of the problems of new teachers. New teachers were perceived as least adequate in understanding and managing behavior problems in the classroom, managing mainstreamed students with handicapping conditions, working with students with learning problems, and understanding the influence of laws and policies related to schools.

A comprehensive review of the international literature on perceived problems of beginning teachers conducted by Veenman (1984) revealed the following problems: classroom discipline, motivating students, dealing with individual differences, assessing students' work, relations with parents, organization of class work, insufficient materials and supplies, dealing with problems of individual students, heavy teaching load resulting in insufficient preparation time, relations with colleagues, planning of lessons and school days, effective use of different teaching methods, awareness of school policies and rules, determining learning level of students, knowledge of subject matter, burden of clerical work, relations with principals/administrators, inadequate school

equipment, dealing with slow learners, dealing with students of different cultures and deprived backgrounds, effective use of textbooks and curriculum guides, lack of spare time, inadequate guidance and support, and large class size.

Based upon the review of the literature, and relying heavily upon the work done by Veenman (1984), Sandidge developed an instrument that was administered to intern teachers and resource teachers during the initial implementation of the Kentucky Teacher Internship Program. The instrument included: knowledge of subject matter, presentation of subject matter, communication skills, classroom organization, time management, management of paperwork, daily lesson planning, long-term instructional planning, use of instructional materials, ability to meet individual needs, understanding of cultural differences, evaluation of student performance, management of student conduct, motivation of students, expectations for student work and behavior, relationships with parents, relationships with other teachers, relationships with school administrators, and knowledge of school and district policies and procedures. The intern and resource teachers were asked to identify the degree of difficulty that the intern teachers experienced in each area using a Likert scale ranging from one to five, from no difficulty to an extremely large degree of difficulty.

Implementation of the Pilot Assessment

As a result of Sandidge's findings, the College concluded that a follow-up instrument comprised of frequently perceived problems of first-year teachers completed by the graduate as well as by all of the other members of the Kentucky Teacher Internship Program team would provide valuable information to faculty for the purposes of program improvement. Consequently, with funding provided by the Appalachia Educational Laboratory for a pilot study, Sandidge's instrument was modified to identify twenty competencies. Two versions of the instrument were prepared. On one, first-year teachers were asked to rank the degree of difficulty they

experienced in each area. On the other, each member of the Kentucky Teacher Internship evaluation team was asked to rank the first-year teacher's proficiency on the same twenty items. Demographic data were also collected from each intern, and comments were sought from all participants in the follow-up study. Both versions of the revised instrument were evaluated by members of the Kentucky Association of Teacher Educators and the executive board of the Kentucky Association of Colleges for Teacher Education.

Following the preparation of the instrument, the College worked with the Kentucky Department of Education to identify those interns who were graduates of the University of Kentucky, and a stratified sample was selected. Each intern in the sample was contacted and asked to participate and to sign a consent form allowing the other members of the Kentucky Teacher Internship team to participate as well. A small stipend (\$10) was offered to interns and committee members upon completion of the assessment.

Upon receipt of consent forms from the interns, the appropriate version of the instrument was disseminated to each member of the intern team. Team members were asked to complete the instrument independently of one another near the end of the internship year. Approximately 95 percent of the sample completed the study. At the completion of the pilot, the responses and comments made by the resource team members were analyzed. Also studied were those comments received relating to the instrument itself. It was determined that the process resulted in more specific information than had been previously received using the more traditional survey method. It was also determined that the method of eliciting feedback from all members of the graduate's internship team using a revised instrument should be continued.

Selected Findings and Results

The University of Kentucky has continued to assess its teacher education graduates with the assistance of their internship team members. Each year, UK interns are identified and contacted to ascertain their willingness to evaluate themselves and to be evaluated by their other team members for the purpose of improving the teacher preparation program at the University (though stipends are no longer available). Data have now been collected for academic years 1988-89, 1989-90, 1990-91, and 1991-92. With the exception of 1991-92 when teachers were heavily involved in implementing components of the Kentucky Education Reform Act (KERA), approximately 70 percent of the graduates have responded to the survey each year and given permission for committee members to participate as well.

The returned questionnaires produced rich and varied qualitative and quantitative data. Overall, both quantitative and qualitative responses have been complimentary of the University's teacher education programs. Certain patterns have emerged from the data throughout the years. The table in Appendix I outlines summary data for a three-year period from 1989 to 1992 from graduates and the principals, resource teachers, and teacher educators who served on graduates' internship committees. Data presented in the table represent the percentage of graduates, principals, resource teachers, and teacher educators who rated the teaching performance of the graduates as proficient or higher (i.e., a rating of 3, 4, or 5) on the identified teacher competencies.

The survey results contained in the table in Appendix I are based upon responses from 194 graduates, 119 principals, 122 resource teachers, and 101 teacher educators. Data indicate that a majority of graduates and their internship committee members believe that graduates are proficient in the 20 teacher competencies. As an example, on the first category, 100 percent of the graduates, principals, resource

teachers, and teacher educators rated graduates as proficient or highly proficient in the area of knowledge of subject matter.

From the qualitative data can be found many statements of intern need for more coursework and practice in working with classroom management and discipline and for longer experiences in the schools prior to the internship year. At the same time, the respondents repeated their appreciation for their faculty, for their curriculum, and for the internship experience. From the quantitative data, two broad patterns emerged: (1) intern teachers appeared to be more critical of their abilities than were committee members and (2) a number of intern teachers and larger numbers of principals, teacher educators, and resource teachers reported they were unable to make judgments about the intern teachers' abilities to work with cultural differences and with individuals with handicapping conditions.

Once data from each survey cycle are fully analyzed, feedback is provided to the various College program faculties who then use the findings to modify and improve programs. Through follow-up studies, College of Education graduates have expressed a need for additional assistance in various areas. Programs have responded by adding new courses, modifying existing courses, and offering professional development workshops, seminars, and conferences. Two areas that teachers have most frequently and consistently identified as problem areas have been classroom organization and management of student conduct. In addition to these requests for continuing professional development in these areas, a classroom management and discipline course has been instituted as an elementary program requirement.

Graduates have also expressed a need for more extensive and earlier field experiences. As a result of this identified need, additional clinical and laboratory experiences have been added as teacher education requirements. According to survey responses, relationships with parents have created problems for some graduates; these teachers perceived themselves as lacking expertise in this area. Therefore, the course,

Working with Parents, has become a requirement for early elementary education majors.

With the availability of computer technology in school programs for disabled and gifted children, special education teachers have begun to request assistance with utilization of computers in the classroom. As a result of these requests and extramural funding in the area of special education technology, the Department of Special Education has offered graduate level programming and coursework designed to enable teachers to incorporate microcomputer technology into their instructional programs. In addition, the Department has instituted post-masters and post-doctoral programs in special education technology.

Using input from graduates of the Vocational Agricultural Education Program, faculty members have expanded or strengthened several areas of the preparation program, including work with exceptional learners, providing guidance, using the computer, and record keeping. Also, at the request of graduates, graduate-level courses have been offered in off-campus locations convenient to students' residences and work sites. Feedback from vocational home economics graduates indicated a need for instruction in the areas of working with students with special needs and teaching entrepreneurship in home economics. Also, an additional course, Teaching Home Economics in the Middle School, was taught in an effort to assist those teachers teaching in junior high schools that were being converted to middle schools. Other courses taught in response to student feedback included: the use of computer technology in home economics instruction, teen pregnancy/parenthood education, and entrepreneurship in home economics.

In response to requests from internship team member respondents in northern Kentucky, the Department of Administration and Supervision initiated joint programming with Northern Kentucky University in order to deliver a portion of its

Ed.D. program to northern Kentucky. This effort has now extended to western and eastern parts of the Commonwealth.

Comments from graduates have also been considered in planning workshops, seminars, and conferences to meet the instructional and curricular needs of teachers. Professional development workshops and seminars are primarily designed around the most frequently teacher-requested topics.

Perhaps the most significant and comprehensive use of the data has been in the redesign of teacher education programs in the College. Charged with examining the content and delivery of the teacher education program, an interdisciplinary faculty committee relied heavily on the data provided by the graduates in assessing the effectiveness of the program. The committee noted that comments from graduates consistently suggested that: field experiences be increased, courses and instructors within the professional sequence be better linked, theory be directly related to practice, and the instruction of the political and administrative aspects of teaching be expanded. Consequently, when the faculty of the College adopted the committee's report in 1992, they responded to these comments by accepting recommendations for the development of a field-based, outcomes-based teacher education preparation program that integrated course instruction across disciplines. Teams of faculty with expertise in curriculum and instruction, administration, policy studies, special education, school law, multicultural education, technology, and content disciplines are working together to plan instruction for secondary education cohorts in an intensive, one-year, master's degree program. The instruction will be delivered in blocks of time--the professional sequence of 24 hours of credit is contained in four courses--by varying combinations of team members. Continuous assessment of the students will be conducted by the instructional teams and by the program faculties responsible for making the student admissions and retention decisions. Students' knowledges and abilities will be assessed using portfolios and on-demand performance tasks twice during the program--once near the mid-point and once

at the end. In addition to assuring that all students will demonstrate proficiency in meeting the outcomes specified by the program before graduation and licensure, this assessment process will provide the College with data that might be compared with the follow-up data to determine what, if any, proficiency diminishes in the time between completion of a program and securing a teaching position.

Current Revisions to the Instrument

It is clear that faculty in the College have found the information collected from the internship team members to be beneficial in their curriculum planning and wish to see the assessment continue. However, as the College became involved in the process of dramatically changing its teacher preparation program, requiring graduates to demonstrate proficiencies in areas additional to those currently assessed, it became apparent that a redesign of the follow-up instrument would be necessary. Redesign was also warranted given the changes that had already been made in the teacher education program to reflect implementation of the components of the Kentucky Education Reform Act. Consequently, during the 1992-93 academic year, a committee of faculty and administrators began to examine the instructional implications of the Kentucky Education Reform Act of 1990. The committee members also examined the teacher educator outcomes developed and adopted by the University of Kentucky faculty in 1992 to determine whether proficiencies not already measured by the College's follow-up instrument should be added.

The committee determined that some additional items should be assessed, developed those items, and revised the instrument to reflect the changes. This revised instrument (Appendix II) was field tested during the spring of 1994, assessing 1993-94 year interns. Data collected from the field test will be used to evaluate the revision of the instrument for future use in the assessment of teacher education program graduates at the University of Kentucky.

Summary

The implementation of a teacher internship program in Kentucky presented an opportunity for the improvement of the follow-up evaluation of graduates being conducted by the College of Education at the University of Kentucky. An instrument identifying teacher competencies was developed and administered to the graduates and to the teacher educators, administrators, and resource teachers who comprised the graduates' intern support and evaluation teams. Data collected from these follow-up assessments have consistently shown that graduates of teacher preparation programs at the University of Kentucky are judged to be proficient by all members of the internship team. Even so, trend data and respondent comments have provided information that has allowed program faculties to continue to improve the teacher preparation program by creating new courses, revising existing courses, and developing in-service workshops and institutes. The value of the information gathered with the assistance of all members of the graduates' internship teams is viewed as so significant that the process is being adapted to reflect education reform and to assess the resulting expectations for teachers.

APPENDIX I

Percentage of Graduates and Their Internship Committee Members Rating Graduates as Proficient or Above on Selected Teacher Competencies 1989-92

Teacher Competencies	% of Graduates (n=194)	% of Principals (n=119)	% of Resource Teachers (n=122)	% of Teacher Educators (n=101)
Knowledge of subject matter	100	100	100	100
Presentation of subject matter	100	98	100	98
Adapting instruction to cultural differences	100	98	100	97
Adapting instruction to handicapping conditions	94	98	100	96
Use of instructional media and supplies	98	99	98	98
Evaluation of student performance	100	100	100	100
Classroom organization	98	98	98	95
Time management	97	98	98	97
Management of paperwork	96	98	99	96
Daily lesson planning	97	97	98	97
Long-term instructional planning	97	98	99	99
Communication skills	100	100	98	99
Management of student conduct	94	90	94	97
Motivation of students	98	97	97	100
Expectations for student work and behavior	99	99	98	99
Relationships with parents	98	97	97	98
Relationships with other teachers	99	98	96	97
Relationships with administrators	100	99	97	99
Ability to meet individual needs	99	97	98	99
Knowledge of school and district policies and procedures	90	97	94	97

Scale: 1 (least proficient) to 3 (proficient) to 5 (highly proficient)

APPENDIX II

FOLLOW-UP OF UNIVERSITY OF KENTUCKY GRADUATES PARTICIPATING IN THE KENTUCKY TEACHER INTERNSHIP PROGRAM Spring 1994

The purpose of this follow-up study is to gather information regarding the teaching performance of intern teachers who are University of Kentucky graduates. This information will assist the College of Education in evaluating and improving its academic programs. In the remainder of this form are 24 competencies, five context descriptors, and demographic data. Please rate your own competencies on the 1 to 5 scale, rate your role within the school context, and complete the remainder of the survey. Please circle your response.

		least proficient	proficient	highly proficient	unable to judge		
1.	Knowledge of subject matter	1	2	3	4	5	U
2.	Presentation of subject matter	1	2	3	4	5	U
3.	Adapting instruction to cultural differences	1	2	3	4	5	U
4.	Adapting instruction to handicapping conditions	1	2	3	4	5	U
5.	Use of instructional media and supplies	1	2	3	4	5	U
6.	Evaluation of student performance	1	2	3	4	5	U
7.	Classroom organization	1	2	3	4	5	U
8.	Time management	1	2	3	4	5	U
9.	Management of paperwork	1	2	3	4	5	U
10.	Daily lesson planning	1	2	3	4	5	U
11.	Long-term instructional planning	1	2	3	4	5	U
12.	Communication skills	1	2	3	4	5	U
13.	Management of student conduct	1	2	3	4	5	U
14.	Motivation of students	1	2	3	4	5	U
15.	Expectations for student work and behavior	1	2	3	4	5	U
16.	Relationships with parents	1	2	3	4	5	U
17.	Relationships with other teachers	1	2	3	4	5	U
18.	Relationships with administrators	1	2	3	4	5	U

19.	Ability to meet individual needs	1	2	3	4	5	U
20.	Knowledge of school and district policies and procedures	1	2	3	4	5	U
21.	Integration of content across curriculum	1	2	3	4	5	U
22.	Knowledge of portfolio development	1	2	3	4	5	U
23.	Development of authentic performance tasks	1	2	3	4	5	U
24.	Reflection and evaluation of teaching and learning	1	2	3	4	5	U

25. The educational context of the classroom and school in which I teach is (please circle the number of the more appropriate response):

- 1 an unusually demanding classroom and/or school in which to work
- 2 more demanding than most teaching situations in schools of this size and location
- 3 about like most schools of this size and location
- 4 less demanding than most teaching situations in schools of this size and location
- 5 an easy classroom and school in which to teach

26. Race/ethnicity:

- 1 African American
- 2 Asian American
- 3 Hispanic
- 4 White
- 5 Other

27. Gender:

- 1 Male
- 2 Female

28. Age (please indicate in years): _____

29. Grade level(s) currently teaching: _____

30. Subject area(s) currently teaching: _____

31. Semester and year graduated or completed program: _____

32. Degree and/or certification program completed: _____

33. Academic program/major: _____

34. Grade level(s) taught during student teaching: _____

35. Subject area(s) taught during student teaching: _____

36. What were the strengths of your preparation program at the College of Education?

37. What recommendations or suggestions do you have for improving the program in which you were enrolled?

References

- Applegate, J. H., Flora, V. R., Johnston, J. M., Lasley, T. J., Mager, G. M., Newman, K. K., & Ryan, K. (1977). The first year teacher study. Columbus: Ohio State University. (ERIC Document Reproduction Service No. ED 135 766)
- National Council for Accreditation of Teacher Education. (1992). Standards, procedures, and policies for the accreditation of professional education units. Washington, DC: Author.
- Sandidge, R. (1989). Perceptions of beginning teacher concerns, problems, and support within the context of the Kentucky Beginning Teacher Internship Program. Doctoral dissertation, University of Kentucky, Lexington.
- Shelley, K. C. (1979). Crying time: A study of the first three months of teaching (Doctoral dissertation, University of Oregon, 1978). Dissertation Abstracts International, 39, 7293A-7294A. (University Microfilms No. 79-12, 586)
- Sweeney, J. (1984). Perceived adequacy of new teachers in Iowa. Oakdale: University of Iowa, Institute of Urban and Regional Research. (ERIC Document Reproduction Service No. ED 267 013)
- Veenman, S. (1984). Perceived problems of beginning teachers. Review of Educational Research, 54(2), 143-178.