The purpose of this paper is twofold: to describe the revision of an experimental preservice teacher education program at Fordham University (New York) and to report the level of interns' perceived self-efficacy at the end of the summer instructional training laboratory. The method for revising the design of the Internship Fellowship Program using Checkland's "soft" system analysis is discussed. The revised conceptual model incorporates an instructional training laboratory (ITL) during the first summer, a year-long full-time teaching internship, full-time mentors who work with the interns and objective observation instruments to measure teaching competency. Results of levels of perceived self-efficacy for component teaching skills are reported for interns who successfully completed the ITL. Levels of self-efficacy for teaching skills are highest for classroom observations skills and teaching performance skills. Lower levels of perceived self-efficacy are found for record-keeping, standardized test administration skill and classroom management skill. (Contains five figures and three tables.) (AA)
Learning to Teach by Teaching:
The preparation of post-baccalaureate candidates
for elementary teaching through a year-long mentored internship

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ABSTRACT: The purpose of this paper is twofold: to describe the revision of an experimental preservice teacher education program at Fordham University and to report the level of interns' perceived self-efficacy at the end of the summer instructional training laboratory. The method for revising the design of the Internship Fellowship Program using Checkland's "soft" system analysis is discussed. The revised conceptual model incorporates an instructional training laboratory (ITL) during the first summer, a year-long full-time teaching internship, full-time mentors who work with the interns and objective observation instruments to measure teaching competency. Results of levels of perceived self-efficacy for component teaching skills are reported for interns who successfully completed the ITL. Levels of self-efficacy for teaching skills are highest for classroom observation skills and teaching performance skills. Lower levels of perceived self-efficacy are found for record-keeping, standardized test administration skill and classroom management skill.
In his popular book, *Smart Schools, Smart Kids*, Edward Fiske (1991) remarks, "Teacher education is the big black hole in the movement to create smart schools" (p. 256). His charge is based on the observation that schools of education are structured according to the outdated factory model of teacher training. His solution is to create forms of teacher education that regard teachers as competent, effective professionals who are assessed not solely on college credits and time logged in a program but on the "demonstrated ability to function in the classroom" (Fiske, p. 257).

At Fordham University Graduate School of Education we have been experimenting with the challenge of educating teachers to competent classroom teaching through the Internship Fellowship Program.

**Goals of Presentation**

This presentation discusses the Internship Fellowship Program which is an intensive 15-month master's degree program preparing liberal arts graduates as elementary school teachers through a combination of university study and practical experience. It addresses four aspects of the program. First, the overall structure of the program—the year-long full-time teaching internship under the guidance of a mentor-teacher, and the role and preparation of mentor-teachers will be discussed. Second, a conceptual analysis of the program which resulted in the creation of an instructional training laboratory will be explained. Third, the sub-system design will be presented. Fourth, research on interns' self-report of skill mastery at the end of the instructional training laboratory will be reported.
**Program Structure**

**Internship**

The Internship Fellowship Program is an experimental alternative preservice teacher education program. Its distinctive features are 1) a yearlong full-time teaching internship in an elementary school classroom in lieu of student teaching 2) a mentor-teacher whose sole responsibility is to instruct and assist interns in acquiring effective teaching skills and strategies and in learning to make professional teaching decisions. A third feature, the Instructional Training Laboratory, which will be covered in this presentation, was added last summer.

The Program extends over 15 months—May to August of the following year. It requires full-time participation by interns. Upon completion of the program interns are awarded a master of science degree in education and are eligible for New York State provisional teacher certification.

The interns are assigned to inner city elementary schools in the Archdiocese of New York and to the public school districts of Mt. Vernon and Mamaroneck, NY. This assignment is made cooperatively between the university and the school principal.

The Program carries benefits to both the intern and to the school system. The intern, often an adult who has been out of college for several years and who has "real" work experience, has a "real" experience of teaching with the responsibilities of a "real" teacher. At the same time, the school, which frequently must hire inexperienced persons, or which seeks to broaden the ethnic and racial diversity of its teaching staff, has the advantage of engaging a beginning teacher who is directed by a mentor-teacher in the context of a formal teacher education program.

The major limitations of the program are administrative and economic. The selection and placement of interns is a cooperative decision of the university and the host school. The university depends on the school for placements and can only accept interns
according to the placements available. Often the university needs to make admissions
decisions before some of the schools know their placement needs.

This problem is unresolved. At present the university makes its "best guess"
through discussions with the schools. We are currently exploring ways to reduce this
administrative problem. One solution is to adopt a training hospital model where a certain
number of residency placements are allocated each year for a medical school. This
partnership would secure teaching placements in a school for each year thus providing not
only stability for the program but a basis for professional collaboration between the
university and the school.

Mentor-teacher

Nationally the concept of mentor varies widely from school district to school
district. In the Internship Fellowship Program the mentor-teacher is an experienced teacher
from the school or district participating in the program who works with 5 to 7 interns in
their elementary school classrooms. Because the position of mentor-teacher for the
Fellowship Program is full-time, the experience of being torn between attending to teaching
responsibilities and working with the new teacher often evident for mentors in other types of
programs is eliminated.

The selection of mentor-teachers from a pool of experienced teachers and principals
recommended by a school or school district is made by the university. Although the
mentor-teacher is paid by the school or school district, s/he is perceived as working for the
Internship Fellowship Program and is accountable to the program. At this time there is no
limit to the length of service for a mentor-teacher.

The role and responsibilities of the mentor-teacher are regularly examined and
refined. Program policy documents developed in 1987 identify the mentor-teacher's
responsibilities as: administrator/facilitator, role model, instructor, evaluator and
coordinator. McDonald (1989) defined the mentor as "a tutor, counselor, observer,
provider of feedback and modeler of teaching behavior. The Mentor provides formative
feedback evaluation and is the mediator of the formal evaluations of the intern made by the school staff. The Mentor is not an advocate or a supervisor" (p.10). In the last two years, more emphasis has been placed on the mentor as an instructor of the intern, hence the term "mentor-teacher."

The preparation of persons to be mentor-teachers has been the function of the Program staff and university faculty. The form of the preparation has varied from year to year given the needs of the program and the mentor-teachers. The most common model has been biweekly mentor-teacher training sessions.

During the sessions mentor-teachers analyze their own effectiveness as a teachers. They study the underlying cognitive paradigms for teaching and learning and the research base of effective teaching and professional decision-making. They learn to make the change from teaching children to instructing another adult in the skills and strategies of professional teaching. They learn to use the observation instruments in the program. They use these instruments in conjunction with the case study method to identify areas of instruction for interns.

The mentor-teachers also meet with university course instructors to become informed about the focus of the graduate course work and to assist the interns in applying the content of the course work in the classroom.

**Program Funding**

The Internship Fellowship Program is funded by the schools which participate in the program. The cost of an intern to the school is an amount equivalent to the minimum cost of running the classroom. This is usually the salary of a teacher hired at the Step 1 Bachelor's level.

The school pays the university an amount to cover the cost of the intern's tuition for the 30 credit program, a $3000 yearly stipend per intern, and student medical insurance. The remaining funds from the initial amount allocated by the school are put
toward the mentor-teacher's salary. The mentor teacher's salary is thus made of combined resources from several schools participating in the program.

**Program Revision**

**Rationale**

During the last year, the conceptual model for Internship Fellowship Program was examined. From information gathered from interns and mentors, Jablonski (1991) reported,

"While the program's concept of intensive "on-the-job" training is basically sound, a key component, namely, the summer program prior to internship, in its current form limits the training's effectiveness. Until last year [1990] the summer component consisted of four isolated courses which focused on theory and a month long practicum working with children in a semi-structured environment. It has yielded little evidence that the interns have been equipped with basic skills to begin teaching in September. The tasks of learning to teach have been totally designated to occur during the school year. ...the summer component needs revision so that it directly enables interns to acquire teaching skills which they will be able to use in the classroom. The recommendations include: classroom observation, an understanding of curriculum design, instructional planning, teaching strategies, and evaluation, classroom management, opportunity to teach or tutor children, knowledge of child development. Although some of these topics had been addressed in the summer course work, practical applications of the skills have not been satisfactorily acquired (1991, pp.-2).

The program model which placed the total responsibility of acquiring basic skills in teaching on the intern beginning in September was taxing to mentors as well as risky to the university and to the school. Under this program structure, neither the university nor the school had sufficient knowledge before the opening of school of whether an intern would be capable of assuming teaching responsibility for a classroom of children. Also at risk was the possibility of an intern leaving the program during the school year because of poor classroom management or the personal discovery the teaching wasn't the right choice. The university and school had professional as well as a moral obligation to increase the probability that an intern accepted into the program would actually be a competent teacher in
the school. Providing personnel with basic teaching competency for "Day One" of school was a major factor in the decision to analyze the program from a systems perspective.

Systems analysis

A "soft" systems method of analysis (Checkland, 1984) was used to study the program in order to identify and solve the problems described above. This approach conceptualized the existing system and then proposed an alternative system. The steps for both conceptual processes were: 1 identify the specific function of the system; 2. provide the root definition of the system; 3. identify the owners, the actors and customers; 4. identify the environmental constraints.

Function of "Existing" System

The function of the "existing" system was to transform liberal arts graduates unskilled in teaching into effective teachers. Four sub-systems were identified as shown in Figure 1: the knowledge base of the teaching content system; the knowledge base of teaching methodology system; the experience system; and the evaluation system.

Each of the sub-systems was identified according to its function. The function is described by its "root definition" which answers the question "What does the system do?" The "root definitions" for each system are as follows:

--The system of Knowledge Base for Teaching Content delivers information of the curriculum or what the teacher needs to know.

--The system of Knowledge Base for Teaching Methodology provides strategies and techniques for teaching and learning or the "how of teaching."

--The Experience System provides opportunity for carrying out the teaching act.

--The Evaluation system measures and assesses the teacher's achievement and performance.
Figure 1. Systems Model for Existing Programs

INPUT:
- Faculty
- Students
- Mentors

KNOWLEDGE BASE FOR TEACHING SYSTEM:
- Course in educational research
- Course in child development
- Course in special education
- Course in urban education
- Course in classroom management
- Methods courses in reading & math

Evaluation

OUTPUT:
- Elementary School Teachers

EXPERIENCE SYSTEM:
- Summer Practicum
- Year-long teaching internship
- Principal's Observation
- Performance Observation by mentor
- Comprehensive Examination

EVALUATION SYSTEM:
Owners and Actors

The owners of the system are those individuals who have control over the existence of the system. From a systems perspective, the owners of the Fellowship Program are the university administration, the schools participating in the program and the state department of education which regulates teacher education program.

The actors of the system are those individuals who have a part in carrying out the function of the system or who benefit or are victims of the system. The actors in the Fellowship system are the faculty, mentors, program staff, the interns, the teaching profession, and elementary school students.

Environmental constraints

The environmental constraints of the system are the prescriptions of law controlling teacher education and resources available. Other constraints include: dependence on schools for summer placement experience; unidirectional relationships between courses; inadequate means for assessing the intern's teaching competency.

Proposed [Revised] System

The proposed conceptual model for the Internship Fellowship Program includes two sub-systems defined by time periods--summer and school year--and one sub-system which is active throughout the program (Figure 2).

The revised conceptualization retains the original system function: to transform unskilled college graduates into skillful effective teachers.

The owners and actors remain the same as in the prior system. The environmental constraints of the new model include the same legal bonds, but add the constraints of limited budget, lack of summer school setting within which to implement the Instructional Training Laboratory, the need to prepare teacher trainers for work in the laboratory, minimal institutional support for program revision, lack of know-how and fear of using technology on the part of students and faculty.
Figure 2. Revised Systems Model for Internship Fellowship Program

INPUT:
- Faculty
- Mentors
- School
- Children
- Community

OUTPUT:
- Expert Teachers with Masters Degree and Eligibility for State Certification

INSTRUCTIONAL TRAINING LABORATORY SYSTEM
- Structure and content of teaching and learning system
- Structure & performance of teaching strategies system
- Evaluation system

PROFICIENCY TRAINING SYSTEM
- Knowledge base system
- Teaching Learning strategies system
- Professional interaction system
- Evaluation system

EVALUATION SYSTEM
- Data processing System
- Data gathering system
- Decision making system
Root Definitions

The root definitions of each sub-system for the proposed system are as follows:

The Instructional Training Laboratory System teaches and rehearses interns in the cognitive, psychological, research, and methodological structures of the curriculum, instructional strategies, classroom teaching performance.

The Proficiency Training System applies and integrates curriculum, instructional strategies, and classroom teaching performance in 'live' classrooms.

The Evaluation System measures the degree of the intern's teaching competency and determines the intern's qualification for graduation and certification.

Each of the three systems has several sub-systems which also have root definitions - each performs a specific action.

In the Instructional Training Laboratory System, the Structure and Content of Teaching and Learning Sub-system formulates the domains for instruction; the Structure and Methods of Teaching and Learning Sub-system determines or decides the plan or approach of instruction; the Structure and Performance of Teaching Strategies Sub-system applies the integrated domains for instruction with appropriate strategies; and the Evaluation Sub-system measures the skills acquired in each of the sub-systems and processes data regarding the level of intern integration of the skills for the purposes of deciding the intern's competency.

In the Proficiency Training System, the Knowledge Base Sub-System defines the knowledge bases in reading, mathematics, science and social studies; the Teaching /Learning Strategies Sub-System identifies and implements effective instructional techniques in real classroom settings; the Professional Interaction Sub-System develops and refines to expertness the interns' instructional, executive, and organizational skills in school settings; and the Evaluation Sub-System measures the proficiency achieved in each of the sub-systems and processes data regarding the level of intern overall competency as a teaching professional.
In the Evaluation System, the Data Gathering Sub-System collects information from mentors, principals and faculty; the Data Processing Sub-System interprets the data collected to determine standard levels of competency; and the Decision-Making Sub-System assesses the competency of intern's skill and performance based on data collected and approves interns for graduation.

After establishing the abstract systems conceptualization for the program, our next step was to move back into the real world where specific plans could be made to implement the changes for the program. The next section describes the creation of the Instructional Training Laboratory.

**The Instructional Training Laboratory System**

The Instructional Training Laboratory is constructed as a formal learning environment in which the beginning teachers acquire knowledge, understanding skills and strategies required for effective instruction. The three domains are the cognitive structure of teaching and learning, strategies for effective instruction and performance of teaching lessons. For administrative convenience the four courses sequence has been retained and an additional course in classroom management has been added.

University faculty, program instructors and mentors facilitate the interns' learning during this time. The interns also help each other in acquiring skills in problem solving, lesson planning, group work, rehearsal and critique of practice lessons, and videotaping.

The eleven week program extends from mid-May to the beginning of August. Frederick J. McDonald and Ann Jablonski developed the cognitive instructional design for the laboratory. Structural components of the model are shown for making instructional planning decisions in Figure 3 and for acquiring the cognitive teaching/learning paradigms in Figure 4.

The first two weeks are spent in classroom observation during which time the intern's learn systematic observation skills. Data from the observations is used to teach
basic research on effective teaching. The next module addresses instruction in and
demonstration of the cognitive learning paradigms of direct teaching (Teach-Practice-
Feedback-Reteach, [T-P-Fe-RT], concept formation and inquiry learning. The interns
learn to use these paradigms in lesson scenarios across the elementary school curriculum
particularly in language, reading and mathematics. For each scenario interns practice the
technical skills of presenting, feedback, questioning (see Figure 4). Throughout this
period the research base and rationale of effective strategies are explored.

During this time the interns plan and try out their first lessons by teaching a small
group of children. This opportunity is made available by an intern from the previous cohort
who collaborated with the laboratory in generating lesson topics which the interns could
teach to her class. The interns selected a topic, developed the scenario, and rehearsed the
lesson with their peers. The lesson was videotaped and critiqued by the staff. When the
third grade came to Fordham and the interns were able to teach their lessons to these
children. This lesson was videotaped and each intern. The intern then reviewed the tape
with a mentor-teacher. This review gave the interns not only appropriate feedback on their
performance but was their first experience of working with a mentor-teacher.

The second half of the laboratory is spent in a five-week teaching practicum A pair
of interns is assigned to manage and instruct a group of 4 to 6 elementary school children
enrolled in a summer program designed to maintain, reinforce and enhance their reading
and math skills. Mentor-teachers direct the interns in developing, and refining their
lessons. The interns are observed for their competency in teaching lessons using each of
the three learning paradigms to individual student, a small group and a large group.
Formative evaluation of the interns' progress in acquiring specific skills is given according
to the specific criteria for the skill for a minimum of nine lessons. Three of the lessons--
one for each paradigm--were videotaped and reviewed by the mentor-teacher and the intern.
Figure 3. Decision Tree for Cognitivie Learning Paradigms

Planning

Analysis of Instructional Content

Objectives

Learning paradigms

Inquiry

- choice of problem
- inquiry questions

Instructional strategy

T-Pr-Fe-RT

- associated to teaching
- role

- definers
- exemplars

Concept formation

Instructional strategy

Instructional strategy

Evaluation

Scoring

Grading

Feedback

Reteach

Move on

Decision Tree for Instructional Planning

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Best Copy Available
Figure 4. STRUCTURE FOR ACQUIRING COGNITIVE LEARNING PARADIGMS
The Proficiency Training System

Each intern is assigned as teacher for an urban elementary school classroom in greater New York. The intern concurrently takes two courses per term. Each intern has a mentor-teacher who works with her/him on integrating the course work with practice, on refining basic skills, acquiring additional skills such as working with groups in crowded classrooms, collaborative learning, experimenting with whole-language instruction in a midst of a basal reading curriculum, using manipulatives in a city where such things need to be fixed to the floor or wall.

The mentor-teacher observes lessons and provides feedback, and instructs specific skills by modeling lessons. The mentor-teacher directs the intern through the specific requirements of administrative organization for each school. The intern reviews lesson plans and problem solves with the mentor-teacher.

Evaluation System

The formative evaluation takes place throughout the program in the form of feedback on rehearsal of lessons and skill development during the practicum already mentioned. Videotaped lessons provide a record of skill acquisition. The criteria for successful completion of the Instructional Training Laboratory is the ability to teach lessons using the specific teaching/learning skills and strategies.

During the internship period mentor-teachers use a standard observation recording procedure for assessing on-task behavior in a class. Mentor-teachers also use the R.A.M.O.S. (Reading and Mathematics Observation System) developed by Robert Calfee and Katherine Hoover at Stanford for the Beginning Teacher Evaluation Study, Phase II (McDonald and Elias, 1976). This system provides the means of recording all teacher activity during a lesson. A record of several observation helps the mentor-teacher and intern identify patterns of instruction. From this information the intern can modify his/her teaching activity.
Videotaped lessons are part of the data used in formative evaluation. This activity is carried over from the Instructional Training Laboratory. This analysis of videotaped lessons is being conducted during the second term.

The school principals evaluate interns according to the standards set for beginning teachers in the particular school or school district. These data are shared with the university.

The mentor-teachers report their observations and instructional progress for the interns at regular conferences with university staff.

The intern's progress is constantly monitored by the Fellowship Program staff with the help of the mentor-teachers. Evaluations of the intern's level skill are made at strategic points in the program (see Figure 5.) Plans for skill reinforcement and reteaching are made whenever an intern does not meet the specific criteria for the skill.

If the data collected on the intern's performance after reteaching shows serious lack of achievement in instructing or managing the class, the intern is counseled out of the program.

To be eligible for graduation, interns are required to maintain a "B" average for their university course work, and must also receive favorable evaluations from their principals.

The format of comprehensive examinations is currently under study with a view toward developing a more authentic assessment of the intern's teaching effectiveness.

Measuring the Effects of the Instructional Training Laboratory

The question is appropriately raised regarding the effects of this kind of program. In developing competent and effective teachers, we are interested in the effect of the instructional training laboratory on interns' skill development for effective instruction and classroom management. We are also interested in the interns' perception of their skill development, any connection this perception has on their perceived self-efficacy and the changes that occur in the intern's cognitive processing of teaching/learning events.
Figure 5. PROGRAM EVALUATION AND REVIEW TECHNIQUES (PERT)

INSTRUCTIONAL TRAINING LABORATORY SYSTEM

EVAL. 1

Fail

Pass

Fail

Retrain

Repeat Eval.

EVAL. 2

PROFICIENCY TRAINING SYSTEM

Fail

Pass

Hold

Degree Conferred

Provisional Teaching Certification

EVAL. 3

DECISION MAKING SYSTEM

Fail

Pass

Exit

Eval.
Among the different ways to measure the effects of the laboratory experience are program demographic data; direct observation of skill acquisition during the summer; observation and evaluation of the development of the skills and of the change in the level of classroom competence during the internship; review of the mentor's reports on the intern's classroom operation and attempts at new teaching strategies; and intern self-reports.

Measures of the effects reported here are demographic and evaluative data and the interns' perception of skill level.

Currently 16 of the original 24 interns who began the program are full-time elementary teachers. Principals evaluate the interns' overall performance as "good" according to criteria used for evaluating beginning teachers. At least five interns have already been offered teaching positions for the next school year.

Of the eight persons who are not in the program, one person was not able to be placed and opted to wait another year; three were asked to leave the program because they did not meet all the laboratory competency requirements; three left for personal financial reasons and one decided not to become a teacher.

Data on the intern's self-perception of their skill levels were generated from a survey that was administered to 19 interns after their completion of the instructional training laboratory during the summer but prior to their beginning teaching in September.

The survey used was the Professional Competency Review--(Summer 1991) developed for the Internship Fellowship Program. One section of the survey contained items were generated from the specific teaching competencies and concepts on effective teaching addressed in the instructional training laboratory. For each of the 57 skill variables, the respondents were asked to indicate their perceived level of competency as non-mastery, partial mastery or mastery. For example, on Item 54. "I can give clear directions to students," the intern would check mastery if s/he saw him/herself as having mastered the skill. If the intern perceived him/herself as having no mastery of the skill or as having only partial mastery of the skill, s/he would check the column for that level.
All of the data collected was coded to insure the confidentiality of the interns.

The data on interns' perceived levels of mastery specific skills examined here and indicate one effect of the laboratory.

The interns' perceived mastery of skills (see Table 2) ranges from 31.6% to 94.7%. The highest level of mastery was found for the skill of observing off-task behavior (94.7%). Mastery levels below 40% were found on 5 items. On the average the intern responses indicate a moderate level of mastery (60%). There were 15 reports of non-mastery across 9 items which account for approximately 1.3% of the responses. The greatest area non-mastery for an item was reported for the skill of keeping records using a code.

Table 3 shows the skills assigned to 12 clusters of skills. The mean level of mastery for each cluster was calculated. Perceived mastery for clustered items ranges from 42% for record keeping to 75% for observation skills and teaching performance skills. The lowest level of mastery for a cluster is recorded for record keeping skills (42.1%).

These data show the interns' perception of their teaching skill competence during the initial period of training. On the average, the perceived level of mastery for individual skills is reported as moderate (60%). The skill cluster with the greatest skill strength is found in teaching performance (75.3%)--for which interns had a minimum of 80 hours of practice. The lowest areas of mastery (<40%) are found in record keeping, spreadsheet analysis, managing students working in groups--complex organizational and interpretive skills.

These data will be used in conjunction with other data collected throughout the interns' teaching to study the effects of the program.
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### TABLE 3. FREQUENCIES OF MASTERY LEVELS FOR CLUSTERS OF SKILLS VARIABLES

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### Conclusion

This paper has explored several aspects of an alternative graduate level program that prepares liberal arts graduates to enter the teaching profession. The structural components, a conceptual model, the operation of the current program and research are among the areas that have been discussed. Ways to measure the effects of the program are outlined and examples are given.

Last month's *New York Times* reported that scientists were coming to some understanding of the mysterious "black holes" of the universe. The Internship Fellowship Program described in this presentation is an evolving enterprise to prepare college graduates and career changers to become effective elementary teachers. Its structure, cognitive conceptual model, research and goal of teacher competence aim toward greater understanding and application of what competent teachers need to facilitate the teaching/learning process in the 21st century. Its effort will contribute to dispelling Ed Fiske's reference to teacher education as a "black hole" in school reform.
References


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Author(s): Ann M. Jablonski

Corporate Source: Fordham University / Association of Teacher Educators

Publication Date: Feb. 1993

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