Vocational teachers for industrial and health occupations programs are usually recruited and selected directly from industry based upon their work experience, craft skills, and other technical criteria. This procedure provides schools with technically competent instructors who have little idea of how to teach. The certification requirements of most states permit training to take place after the teacher is put into the shop or classroom, almost assuring a poor start, teacher frustration, and the possible development of negative teacher behaviors. The new non-degree vocational teacher also faces inflexible university course schedules and rigid enrollment policies. To remedy this problem, Dade County Public Schools in Florida, the Florida State Department of Education, and Florida International University developed and implemented a Performance Based Vocational Teacher Education Program as an alternative to the traditional method of training and providing teacher certification for non-degree vocational teachers. The needs, purpose, and objectives of the program are discussed. Components of the program, including field experience, instruction, evaluation, on-the-job supervision, and certification, are described. Appended are charts that match course content with Dade County program competencies and with Florida Essential Generic Competencies. (MT)
A MODEL UNIVERSITY-SCHOOL DISTRICT-TEACHER
EDUCATION CENTER ALTERNATIVE TEACHER TRAINING
PROGRAM FOR PREPARING AND CERTIFYING
NON-DEGREE VOCATIONAL TEACHERS

** A COLLABORATIVE DESIGN **

Submitted to
The International Council on Education
for Teaching
Washington, D. C.

Mary Ellen Bouchie, MS Ed.
Curriculum Development Coordinator

Robert Vos, Ed.D.
Educational Policy and Human Resource Development
College of Education
Florida International University

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INTRODUCTION

The process of becoming a competent professional teacher is a long and arduous one. Those who enter the ranks of vocational teaching directly from business and industry without the benefit of professional preparation for teaching face a particularly formidable task. These workers—recently-turned-teachers are required to learn a host of new skills and procedures while simultaneously use these same, as yet undeveloped, skills and procedures in an actual vocational lab/shop situation. The worker-turned-teacher is a neophyte teacher, a student him/herself, yet given the same responsibilities as experienced fully trained teachers. For most of these new vocational teachers, who have little or no professional preparation for teaching, survival in their newly chosen profession becomes a "sink or swim" proposition.

Help for these new teachers comes from several directions: leadership personnel in the school in which the new teacher is employed, school district supervisory personnel, teacher education center personnel and university faculty. To the new
teacher, however, these sources are all too often viewed as different masters to serve and, unfortunately, appear at times to be working at cross purposes to one another. Under these circumstances college and university courses required for state teacher certification, rather than being viewed as sources of help, are perceived as one more obstacle for the new teacher to overcome if he or she is to remain employed as a vocational teacher.

NEED

In Florida most industrial education and health occupations teachers are recruited from business, industry and the health fields without prior teacher education training. To achieve teacher certification and learn pedagogical skills these new teachers are required to enroll in college credit courses while teaching.

In many cases, the teacher will take whatever college courses are offered in the geographical area, regardless of his/her immediate needs. For example, a beginning teacher may have a need for immediate help in developing a lesson or with student behavior, yet may be enrolled in an Administration of Vocational Education course. This situation results in frustration for the teacher, a poorly prepared teacher for the district, and serves as a contributing factor to the high turnover rate among new vocational teachers. It may also contribute to a negative attitude toward teacher education programs by those who remain.
A planned program with built-in flexibility in terms of acquiring essential teaching skills was needed. The Florida International University and Dade County Public Schools Alternative Vocational Teacher Education Program (TEC/DCPS/FIU Program) is offered as an alternative track within the existing state approved teacher education program at Florida International University to meet these needs.

PURPOSE
The purpose of the TEC/DCPS/FIU Program is to provide a coordinated program of teacher preparation that facilitates a successful transition from industry, business or health agencies to education for the non-degree vocational teacher. This program integrates the efforts of the local school leadership personnel, the Dade-Monroe Teacher Education Center (state mandated to provide inservice teacher training), school district supervisory staff development personnel and university faculty to provide immediate relevant teacher skill training in a manner that has not been possible through traditional approaches of preparing new teachers.

OBJECTIVES OF THE PROGRAM
The objectives of the TEC/DCPS/FIU Program are as follows:

1. To provide a competency, field-based vocational teacher training program leading to the State of Florida Regular Vocational Teaching Certificate for approximately twenty
(20) new non-degree Vocational Industrial and Health Occupations teachers in Dade County using:

a. Florida International University's vocational teacher education competencies, instructional resources and materials,

b. Dade County performance-based vocational teacher education competencies, program modules and instructional materials,

c. statewide vocational (vocational industrial) education teacher competencies and training materials and

d. Florida essential generic competencies, and

e. other instructional resources and materials when available and deemed appropriate.

2. To continually evaluate this training alternative program for training new non-degree vocational education teachers as specified under the Florida State Board of Education Regulations.

PROGRAM

The unique components and characteristics of this program are:

1. Competency Based

Dade County competencies, Florida essential generic competencies and FIU competencies are integrated and adopted into the program.

2. Field Experiences

The competencies are developed primarily in off-campus settings utilizing the new teacher's assigned school and other Dade County and FIU facilities and resources. Course work is offered on weekends when day and night teachers are
able to attend.

3. **Formal and Self Instruction**

The Program utilizes both formal group instruction and self-instructional materials which allow the new teacher to learn a teaching skill, practice the skill and apply the skill in a real classroom/laboratory situation in their assigned schools.

The educational areas of instruction include: Shop Safety and Management, Vocational Course Planning, Tests and Measurements, Instructional Strategies and Methods, Human Growth and Development and the Foundations of Vocational Education.

4. **Criterion-Referenced Evaluation**

Instructional modules state the performance criteria by which competency achievement is determined. The new teacher must meet these criteria at an acceptable level in the actual teaching environment. Each participant may be recycled to additional learning experiences when it is determined by consensus that the participants' level of competency does not meet the standard.

5. **Mediated Instruction**

Learning activities available to participants vary. Films, video tapes, printed materials, master teacher, clinical supervisor, university faculty, school district
administrators and bi-weekly group meetings throughout the year are utilized.

6. **Self Evaluation**
   The participating new teacher is video-taped while developing and mastering many of the competencies as a means of self evaluation.

7. **Peer Evaluation**
   The participating new teacher also has the opportunity of using the video-taped lessons for feedback from other participating teachers, master teachers, university faculty and school district personnel.

8. **Program Evaluation**
   The program is evaluated by the participants, cooperating staff and the state Department of Education. Program participants are requested to provide input into program improvement on an annual basis. The program staff also meets on a regular basis to recommend changes.

9. **On-the-job Supervision**
   The participating new teachers are supervised and evaluated in actual classroom situations on a regular basis by University faculty, school district personnel, and clinical supervisors. This personal contact provides direction, assistance and support to the new vocational teacher.

   Clinical supervisors conduct twelve visits to each of the twenty participants during the year. A competency based criteria list is used to observe and assess teacher
performance. Direction and assistance in all matters of concern to the new teacher is provided. The clinical supervisor makes recommendations to the University faculty in order to reinforce participants' skills and provide input on observed areas that need to be strengthened.

As a rule, clinical supervisors are master teachers who have worked in the school system for a number of years. The clinical supervisor is able to bridge the gap between the school and the university, between theory and practice and between the non-degree vocational teacher and confidence.

10. **Teacher Certification**

The course completion and mastery of competencies are achieved within one calendar year (rather than the allotted three years). Participants who successfully complete the Program receive a Regular Vocational Teacher Certificate from the State of Florida and a certificate of completion from Florida International University and the Dade County Vocational Association.

**CONCLUSIONS**

Response to the TEC/DCPS/FIU Program has been enthusiastic. Since its inception in 1978 over 200 new vocational teachers have received their initial Florida Teaching Certificate by completing this Alternative Program. New teachers enrolled in
the Program, as well as the experienced clinical supervisors who help them, state that this teacher education program provides meaningful help to new teachers when help is most needed. University faculty members find the opportunity to provide such help professionally rewarding as well as providing a meaningful base upon which to help new teachers build understanding and application of sound pedagogical concepts and principles. Many new teachers continue their coursework toward Advanced Vocational Certification and a baccalaureate degree. Dade County Administrative, Supervisory and Staff Development personnel have welcomed the opportunity for greater input into the teacher education process.

Modifications of the program have taken place and are taking place on an on-going basis. As long as this program, or any other systematic approach to teacher education, is in operation, modification will be necessary and desirable to assure constant movement of the program toward the goal of providing the most immediate relevant help possible to beginning vocational teachers.
APPENDIX

The Identification of FIU Course and DCPS Program Competencies and Integrating Them To Match Florida Essential Generic Competencies

Note: These materials will be shared but not reported orally in session.
## COURSE AND PROGRAM MODULES WITH COMPETENCIES USED IN PROGRAM

### SECTION I

<table>
<thead>
<tr>
<th>FIU COURSE NO. AND TITLE</th>
<th>COMPETENCIES</th>
</tr>
</thead>
</table>
| **EVT 3065 - Foundations of Vocational Education** | 1. Identify program objectives, write goal statements.  
2. Describe the state educational system and organizational structure.  
3. State goals, forces, and issues influencing contemporary education and Vocational-Industrial Education.  
4. Cite school policies and regulations and understand the administration and supervision of Vocational Education.  
5. Describe and analyze major innovative curricular programs and major issues and trends in Vocational-Industrial Education.  
6. Identify and analyze the principal contemporary factors and issues affecting teachers as professionals. |
| **EVT 3165 - Course Planning** | 1. Identify program objectives, write goal statements.  
2. Conceptualize behavioral functions, habits, skills, attitudes and concepts.  
3. Write behavioral objectives in each area of Bloom's taxonomy.  
4. Organize behaviors, content, and sequence to accomplish objectives.  
5. Specify appropriate learning strategies.  
6. Specify appropriate teaching strategies.  
7. Develop lesson plans that reflect concepts, habits, skills, and attitudes according to Bloom's taxonomy.  
8. Identify assessment criteria and develop assessment instruments.  
9. Selects and orders laboratory equipment and supplies.  
10. Identify appropriate instructional resources.  
11. State goals, forces, and issues influencing contemporary education and Vocational-Industrial Education.  
FIU COURSE NO. AND TITLE

EVT 3367 - Test and Measurements in Vocational and Technical Educational

EVT 3815C - Vocational Education Lab Management & Safety

EVT 4365 - Instructional Strategies and Evaluation in Vocational and Technical Education

1. Evaluate according to specified courses, teaching and learning.
2. Demonstrate the skill to design and use evaluation techniques.
3. Construct written and performance tests.
4. Conduct tests in classrooms and laboratories.
5. Evaluate teaching performance and objectives.

1. Identify program objectives, write goal statements.
2. Translate objectives into laboratory criteria.
3. Design laboratory layouts for safe operation.
4. Develop organizational charts, schedules, and records.
5. Maintain clean and safe laboratory conditions, manage accident preventing programs.
6. Maintain inventory records.
7. Order equipment and supplies.
8. Complete school reports.
9. Select and order laboratory equipment and supplies.

1. Prepare lesson plans.
2. Organize class for individual and group work.
3. Motivate students; use appropriate set.
4. Give oral presentations and clear directions using appropriate language.
5. Give organized demonstrations.
6. Prepare and use visual aids and other instructional devices.
7. Lead discussions; use probing and higher order questions, use verbal and non-verbal questions to stimulate participation.
8. Interact with students of different cultural backgrounds; demonstrate use and acceptance of student ideas objectively.
9. Provide positive feedback and reinforcement.
10. Objectively assess student progress; course and self.
## COURSE AND PROGRAM MODULES WITH COMPETENCIES USED IN PROGRAM

### SECTION II

<table>
<thead>
<tr>
<th>DCP5 MODULES</th>
<th>COMPETENCIES</th>
</tr>
</thead>
</table>
| **PB1** - Orientation in Vocational Education | 1. Identify and describe the organization of vocational education in Dade County.  
2. Describe the administrative organization of the vocational division.  
3. Identify and describe program areas in vocational education in the Dade County schools.  
4. Describe the levels of the vocational education offerings in Dade County schools. |
| **PB2** - Psychology of Learning | 1. Utilize basic laws of learning in presenting instruction.  
2. Utilize basic principles of learning in presenting instruction.  
4. Provide a learning environment which recognized the basic human needs of various individuals.  
5. Use instructional strategies appropriate to the learner's age group.  
6. Interpret information found in a student's cumulative record as a means of identifying specific needs of the student.  
7. Use the cumulative record to record student growth and development. |
| **PB3** - Effective Teaching Factors | 1. Utilize motivational techniques and devices to stimulate student interest.  
2. Provide appropriate types of reinforcement to:  
   1) Discourage undesirable behavior,  
   2) Encourage desirable behavior.  
3. Plan and implement a schedule of reinforcement to reverse negative behavior and sustain the positive results.  
4. Assist students in retaining factual information presented during manipulative and related lessons. |
| **PB4** - Shop, Lab and Classroom Procedures for Vocational Teachers | 1. Display teacher characteristics which provide a positive effect toward learning.  
2. Formulate and utilize effective shop and classroom management procedures.  
3. Provide sufficient and diverse learning activities to maintain student interest and minimize boredom and unrest. |
DCPS MODULES

COMPETENCIES

PB4A - Instructional Methods and Techniques

1. Select the appropriate teaching method for a specific teaching situation.
2. Utilize various methods and techniques in presenting vocational instruction.
3. Present instruction in a clear and logical sequence.

PB5 - Effective Teaching Procedures in the Vocational Lab

1. Prepare and maintain facilities which provide a physical environment conducive to learning.
2. Utilizes the four step technique in presenting related and manipulative instruction.

PB6 - Curriculum Development for Vocational Teachers

1. Revise and update the course of study.
2. Develop and write instructional objectives.
3. Develop and write manipulative and related lesson plans.
4. Develop and write instructional sheets.

PB7 - Instructional Planning for Vocational Teachers

1. Identify and select correctly stated educational objectives.
2. Employ effective procedures in planning instruction.
3. Identify desirable characteristics and content of good lesson plan.

PB8 - Communication Skills

1. Utilize techniques in communication that will build positive and rewarding interpersonal relationships.

PB9 - Human Relations

1. Work cooperatively with members of the school faculty and staff.
2. Interact effectively with students.
3. Be able to handle discipline problems.
4. Follow through with suggestions and advise from supervisory personnel.

PB10 - Effective Use of Instructional Media in the Vocational Shop

1. Identify the appropriate and most effective instructional aids for presenting instruction.
2. Develop and prepare instructional aid materials.
3. Operate various types of audiovisual equipment.
Tests and Test Construction

PB11 -
1. Explain the instructional and administrative purposes of tests.
2. List the various objectives for testing.
3. Identify and select the type of test most appropriate for the particular testing application.
4. Differentiate between a norm-referenced test and a criterion-referenced test.
5. Identify and explain five basic qualities of an effective test.
6. Write effective test items in constructing various types of written tests.

Lab Organization, Management & Safety

PB12 -
1. Organize and maintain a system of good shop, classroom and laboratory management.
2. Organize a system of effective supervision of shop, classroom and lab activities.
3. Maintain a current inventory and production records, and follow proper procedures for purchasing equipment and supplies.
4. Maintain a safe working environment in the shop or lab, and implement an ongoing safety program.

Principles & Philosophy of Vocational Education

PB13 -
1. Identify early philosophies and history of vocational education.
2. Prepare in outline form the principles of vocational education, namely its organization, administration and instruction.
3. Identify factors which led to the federal support of vocational education.
4. Describe specific vocational legislative acts from 1917 to present.

Methods of Presenting Competency-Based Vocational Education

PB15 -
1. Employ effective instructional methods, strategies, evaluative procedures and specific individualized curriculum materials and aids in conducting a competency-based vocational education program.
2. Analyze the job tasks of his/her specific occupation, identifying the specific narrow competencies which comprise a broad job duty.
3. Develop valid performance objectives and criterion-referenced measures which relate to specific job competencies.

4. Describe the specific learning characteristics of adult learners adolescents, and list those characteristics shared by both age groups.

5. Diagnose and identify specific learning characteristics, general abilities and trade competency levels of various students.

6. Diagnose present reading level of student and provide appropriate reading materials.

7. Prescribe and assign specific learning activities, materials and aids to effectively facilitate student learning.

Matching the FIU and DCPS Specific Competencies to the Florida Essential Generic Competencies

The numbering of the courses (EVT) and modules (PB) and their competencies in the preceding two tables provided a simple code which was used in developing the matrix to match the specific competencies to the Florida Essential Generic Competencies. The Florida Essential Generic Competencies were written out but the specific competencies were matched by code number. This provides for a simple matrix, the results of which are revealed in the Table on the following pages.
### Integrated FIU, DCPS, and Florida Essential Generic Competencies

#### Section III

<table>
<thead>
<tr>
<th>FIU COURSE AND COMPETENCY NUMBERS</th>
<th>GENERIC TEACHING COMPETENCIES</th>
<th>DCPS MODULE AND COMPETENCY NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVT 4365 - 4,5,7</td>
<td>1. Orally communicate information on a given topic in a coherent and logical manner.</td>
<td>PB2 - 1,2,5.</td>
</tr>
<tr>
<td>EVT 3165 - 3,7</td>
<td>2. Write in a logical, easily understood style with appropriate grammar and sentence structure.</td>
<td>PB4A - 1,2,3.</td>
</tr>
<tr>
<td>EVT 4365 - 1.</td>
<td>3. Comprehend and interpret a message after listening.</td>
<td>PB5 - 2.</td>
</tr>
<tr>
<td>EVT 3367 - 3.</td>
<td>4. Read, comprehend, and interpret orally and in writing, professional material.</td>
<td>PB6 - 1,2,3,4.</td>
</tr>
<tr>
<td>EVT 4365 - 4,7,9</td>
<td>5. Be able to comprehend and work with fundamental mathematical concepts.</td>
<td>PB7 - 6.</td>
</tr>
<tr>
<td>EVT 3065 - 1.</td>
<td>6. Be aware of patterns of physical and social development in students, and to counsel students concerning their needs in these areas.</td>
<td>PB7 - 1,3.</td>
</tr>
<tr>
<td>EVT 3165 - 4.</td>
<td>7. Diagnose the entry knowledge and/or skill of students for a given set of instructional objectives using diagnostic tests, teacher observations, and student records.</td>
<td>PB10 - 4.</td>
</tr>
<tr>
<td>EVT 3815C- 2,9</td>
<td>8. Identify long-range goals for a given subject area.</td>
<td>PB12 - 2.</td>
</tr>
<tr>
<td>EVT 3815C- 3,4,6,7</td>
<td>9. Construct and sequence related short-range objectives for a given subject area.</td>
<td>PB15 - 5.</td>
</tr>
<tr>
<td>EVT 3165 - 2,5,6,9</td>
<td></td>
<td></td>
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<tr>
<td>EVT 4365 - 2,3,8,9</td>
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</table>

A-7
Select, adapt, and/or develop instructional materials for a given set of instructional objectives and student learning needs.

Select, develop, and sequence related learning activities appropriate for a given set of instructional objectives and student learning needs.

Establish rapport with students in the classroom by using verbal and/or visual motivation devices.

Present directions for carrying out an instructional activity.

Construct or assemble a classroom test to measure student performance according to criteria based upon objectives.

Establish a set of classroom routines and procedures for utilization and care of materials.

Formulate a standard for student behavior in the classroom.

Identify causes of classroom misbehavior and employ a technique(s) for correcting it.

Identify and/or develop a system for keeping records of class and individual student progress.

See competency #6.

Identify and/or demonstrate behaviors which reflect a feeling for the dignity and worth of other ethnic, cultural, linguistic, and economic groups.

Demonstrate instructional and social skills which assist students in developing a positive self concept.
Demonstrate instructional and social skills which assist students in interacting constructively with their peers.

Demonstrate teaching skills which assist students in developing their own values, attitudes, and beliefs.

Recognize and be aware of the instructional exceptional students.

Demonstrate ability to stimulate and direct student thinking and to check student comprehension by questioning techniques.

Demonstrate ability to provide practice to promote learning and retention.

Demonstrate ability to treat student talk in ways that encourage student participation and that maintain academic focus.

Demonstrate ability to use feedback procedures that give information to the student about the appropriateness of his/her response.

Demonstrate ability to conduct review of subject matter.

Demonstrate ability to control the quality of vocal expression.

Demonstrate ability to use body language to express interest, excitement, joy, and positive personal relations.
34. Demonstrate ability to give examinations in a manner to minimize anxiety and cheating and to provide appropriate feedback on test performance.

35. Demonstrate the ability to recognize signs of severe emotional distress in students and the ability to utilize techniques of crisis intervention.

OJT: On-the-Job-Training - Supervised and verified clinical instructor.