

Vocational Preparatory Instruction

Staff Self-Training Program

Integration of Academics And Vocational Education Module

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PRE-TEST

TRUE OR FALSE

- _____1. The criteria for the use of Carl Perkins money has remained relatively unchanged since 1997.
- _____2. Today's educational reform strategy is an attempt to separate the academic courses from vocational skills.
- _____3. It is the VPI instructor who leads the attempts to tie the academic curriculum with the vocational interests of the students.
- _____4. The integrated curriculum allows for flexibility.
- _____5. This integration refers to the connection of the vocational and academic curriculum but not to the connection of the instructors.
- _____6. The vocational instructors must take the lead in this integration.
- _____7. Academic instructors never initiate integration of academic and vocational instruction.
- _____8. Once academic and vocational integration is achieved, it is completed, and there is no need to change the instruction.
- _____9. It is advisable to include representatives of business in the planning for the integration of academic and vocational instruction.
- _____10. The goal of this integration is a vocational initiative only.
- _____11. The team develops a set of integrated materials to be used by all VPI students.
- _____12. It is appropriate to first integrate one or two program areas.
- _____13. Assessment of the integration is not necessary.
- _____14. This integrated instruction will occur in a VPI center.
- _____15. Student assignments should be short and clear.
- _____16. Be sure to develop the integrated instruction before recruiting the assistance of vocational instructors.

For questions 17 and 18, mark each correct response with a check.

17. Which of the following is the result of an integrated curriculum?

- a. Increased student motivation
- b. Enhanced career/educational opportunities
- c. Increased mastery of technical skills
- d. Enriched critical thinking skills
- e. Decreased dropout rates

18. The integration of academic and vocational education requires which of the following:

- a. Communication with employees
- b. Studying vocational textbooks
- c. Departmental approach
- d. Marketing the concept
- e. Total commitment and dedication from VPI managers, vocational instructors, academic instructors and business representative.

19. List the six strategies, or steps, to integrating VPI and vocational instruction:

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____
- (6) _____

EFFECTIVE TEACHING STRATEGIES

FOR INTEGRATING VPI AND VOCATIONAL INSTRUCTION

INTRODUCTION

The Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998 require the integration of academic and vocational education. In the past, the typical educational system disconnected academic learning from practical application of that learning. It promoted different levels of expectation from different students at the same school. Perkins III emphasizes equal academic standards for all students.

The goal of integration is much more than a vocational initiative. It is part of a larger educational reform strategy to change instruction throughout the secondary school curriculum and raise expectations about what students learn. The Tech Prep and School-to-Work initiatives are good examples. Dale Parnell, in *Tech Prep Associate Degree, A Win/Win Experience*, states:

Today, the advent of rapidly changing technologies, both at home and abroad, clearly signals the need for an educational system that combines the best in vocational and academic learning – that is, teaching academic foundation courses in a vocational setting. Such a strategy is generally referred to as applied academics.

Integration is an attempt to make the more rigorous parts of the academic curriculum more accessible to a greater number of secondary and postsecondary students. This process allows students to see the connections between much of symbolic academic learning and its use in the fields of work in which they envision themselves. In general, the process attempts to answer two questions: “Why do I need to know this?” and “How will I ever use this?”

VOCATIONAL PREP INSTRUCTOR'S GUIDE

VPI Instructors' Goal

Our goal as VPI instructors is to provide students with opportunities to increase their academic skills by providing a flexible, motivating, integrated approach to academics through the students' vocational interests. Our goal is to teach applied academics - academic foundation courses in a vocational setting.

We hope to reach a greater number of secondary and postsecondary students by allowing students to see the connections between the more rigorous academic curriculum and its use in the actual fields of work to which the students aspire. This process will give relevance to the academic instruction. An integrated curriculum format should accomplish the following:

- Increase student motivation and learning
- Decrease the student dropout rate
- Enrich students' critical thinking skills
- Promote mastery of technical skills
- Enhance career and/or educational opportunities.

Process and Strategies

Develop a team approach to integrate academic and vocational education. There must be a total commitment and dedication from the entire team of school supporters involved in the integration process. The team would consist of VPI managers and vocational instructors, as well as curriculum builders, academic instructors, and representatives of business.

This team identifies areas as well as activities that integrate academic and vocational instruction. The team also identifies methods of delivery.

This team develops the topics to be taught during a grading period, compares the topics to the math, reading, and language competencies required, and creates infusion of the vocational and academic instruction.

STRATEGIES

The following guide to integrating vocational and academic instruction provides the basic steps for success:

Strategy One – Sell Goals

1. Communicate the goal of integration to your vocational instructors, employers of your vocational students, and curriculum builders.
 - Personally visit the instructors during department meetings or one-on-one during non-class hours.
 - Meet with each of these instructors and business people for lunch to share the goals.
2. Ask for suggestions from these instructors and business people regarding areas, activities, and methods of delivery for integration.
3. Approach the goals with a team concept.
4. Share your excitement about the relevance of academic instruction when integrated with vocational interests.
5. Inform the vocational instructors of the increased retention and completion rates resulting from this integration.
6. Inform the employers of the increased abilities of their future employees.

Strategy Two – Gather Information

1. Follow your personal meetings with a brief note of appreciation and an invitation to a brainstorming session.
2. Plan the brainstorming session to include one or two program areas. After one or two program areas have been integrated, excitement and motivation can be shared with other program areas.
3. This group compares the weekly lesson plans for a grading period with the math, reading, and language competencies that need to be studied to determine how both can be infused into the VPI program.

4. Vocational instructors provide vocabulary lists and reading material that VPI instructors incorporate into their instruction.

Vocational instructors provide math problems that are specific to their vocational field that VPI instructors incorporate into their instruction.

Employers specify academic skills they are seeking in employees.

5. VPI instructors incorporate these vocabulary words, math terms, etc. into their instructional modules.

Strategy Three – Create Learning Modules

1. Academic and vocational integration requires training and concentrated time for planning. Concentrating on one or two program areas allows planners to focus.
2. Using suggestions from the group above, create learning modules in math, reading and language that are vocationally specific for each program. Use the vocational vocabulary, the math used on the job, and the reading material from that area in the modules. Keep assignments short and clear. Use an assortment of examples.
3. Provide lessons that can be taken into the vocational classroom for large group instruction, presented in small groups, or used individually.
4. Care must be taken to provide instruction for students of varying learning styles.
5. Allow team members to review and reflect on the integrated plans.
6. Adjust VPI learning modules according to team reactions.

Strategy Four – Implement Plan

1. Use the modules with the students from that area.
2. Go to the vocational classroom with the integrated lessons.
3. Promote academic work as an essential part of learning the vocational skills.

4. Make notes of comments, observations.

Strategy Five – Assess Plan

1. Meet with the original group periodically to share notes and observations, to assess progress, identify problems or gaps, and recommend solutions.

Plan luncheon meetings or soft drink meetings at end of day. Greater sharing takes place at these more casual settings. Invite enthusiasm!

2. Continue to modify and adjust modules and entire approach as needed.
3. Track retention rates in the selected area(s); track completion rates in the selected area(s).

These numbers can be used in selling the goal to other areas.

4. Track career and/or employment opportunities.

This information can be used also in selling the goal to other areas.

Strategy Six – Sell Plan

1. Spread your success with other areas!
2. Sell the fact that students have a more successful learning experience when vocational and academic teachers share common goals and coordinate their instructional activities.
3. Share observations of students' increased motivation.
4. Share the statistics on student retention and student completion rates since integration of academics and vocational skills.

VPI READING, MATH, LANGUAGE SKILLS AND VOCATIONAL INSTRUCTION

VPI Reading and Vocational Instruction

Using reading material from the vocational textbooks, create learning modules following the procedure suggested in Developing Learning Modules for the Integration of Academics and Vocational Education, 1992.

(ECI order # SA 931)

VPI Mathematics and Vocational Instruction

Using math terms and problems from the vocational textbooks, create math learning modules, both computational and applied, following the procedure suggested in Developing Learning Modules for the Integration of Academics and Vocational Education, 1992.

(ECI order # SA 931)

VPI Language and Vocational Instruction

Using material from the vocational textbooks, create learning modules teaching the language skills. A guide to develop these modules can be found in Developing Learning Modules for the Integration of Academics and Vocational Education, 1992.

(ECI order # SA 931)

SCANS COMPETENCIES

Vocational Prep Instruction should follow the guidelines of Secretary's Commission on Achieving Necessary Skills (SCANS). Based on these requirements, VPI students are required to be competent in the following skills:

- Identify, organize, and use resources appropriately
- Work cooperatively and productively as a part of a team
- Gather and use information
- Understand social, organizational and technological systems
- Work with a variety of tools and equipment

Identify, Organize, and Use Resources Appropriately

In the VPI Lab, students have access to and are encouraged to use a wide variety of resources: computers and software, textbooks, workbooks, booklets, videos, cassette players, and other people. Using these resources, students learn the skills to enable them to become successful workers.

Please refer to SCANS Student Activities Module: [Resource Planning and Management](#).

Be a Part of a Cooperative and Productive Team

The teamwork approach to which businesses and agencies are shifting makes these certain skills necessary: sharing, problem solving, and decision-making. These require strong communication skills.

The VPI Lab should provide for cooperative learning, allowing for interaction between two or more students, and developing and sharing ideas.

Please refer to SCANS Student Activities Modules: [Interpersonal Communication Skills and Teaming/Group Problem Solving](#).

Gather and Use Information

VPI students learn the needed skills by using a variety of sources of information: media center, computer, Internet, texts, and indexed booklets.

Please refer to SCANS Student Activities Module: [Using Information](#).

Understand Social, Organizational, and Technological System

Because employers expect employees from varied and diverse cultures and backgrounds to work together productively and to be able to face changes in systems, methods, and technology, employees must be trained to work as team members in a changing environment. Many VPI students are already engaged in retraining; all employees will encounter retraining as a requirement to employment.

VPI students should be encouraged to work together using a wide variety of technological systems as possible.

Please refer to SCANS Student Activities Modules: [Cultural Diversity](#) and [Understanding and Using Systems](#).

Work with a Variety of Tools and Equipment

Each VPI student is working in a vocational program where tools and equipment of a specific type are used and where the student will acquire the necessary skills for the work environment.

TIPS FOR INTEGRATING VPI AND VOCATIONAL INSTRUCTION

- Keep academic assignments clear and short
- Use assorted examples
- Recruit the assistance of the vocational instructor as soon as possible in the planning process
- Continually sell the academic work to the students as a vital part of learning the vocational skills
- Be available and willing to go to the vocational classroom to work with groups of students

For additional tips see:

Applied Basic Skills Series: Language Arts, Science, and Mathematics; University of Texas at Austin, 1988.

Tech Prep Associate Degree, A Win/Win Experience; Dan Hull and Dale Parnell, CORD, 1991.

Who Are You Calling Stupid? The Revolution That's Changing Education; Dan Hull, CORD Communications, 1995.

Developing Learning Guides for the Integration of Academics and Vocational Education; FL Department of Education, 1991.

POST-TEST

TRUE OR FALSE

- _____1. Since 1998 the criteria for the use of Carl Perkins money requires the integration of academic and vocational education.
- _____2. The goal of this integration is a vocational initiative only.
- _____3. The team develops a set of integrated materials to be used by all VPI students.
- _____4. It is appropriate to first integrate one or two program areas.
- _____5. Assessment of the integration is not necessary.
- _____6. This integrated instruction will occur in a VPI center.
- _____7. Student assignments should be short and clear.
- _____8. Be sure to develop the integrated instruction before recruiting the assistance of vocational instructors.

CHECK THE ANSWERS THAT APPLY

- 9. The integration of academic and vocational education requires which of the following:
 - ____a. Communication with employees
 - ____b. Studying vocational textbooks
 - ____c. Departmental approach
 - ____d. Marketing the concept
 - ____e. Total commitment and dedication from VPI managers, vocational instructors, academic instructors and business representative.

10. List the six strategies, or steps, to integrating VPI and vocational instruction.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

REFERENCES

VPI Program Planning Guide. Integration of Vocational and Academics, DOE, Draft September, 1999.

The Florida GED Teachers' Handbook. Section 4, FAU, 2000.

SCANS Competency Development Activities for Students. Resource Planning and Management, Interpersonal Communication Skills, Teaming and Group Problem Solving, Celebrating Cultural Diversity, Using Information, and Understanding and Using Systems. Florida Department of Education. Blueprint 2000.

APPENDIX A (PRE-TEST ANSWER KEY)

1. FALSE
2. FALSE
3. FALSE
4. TRUE
5. FALSE
6. FALSE
7. FALSE
8. FALSE
9. TRUE
10. FALSE
11. FALSE
12. TRUE
13. FALSE
14. FALSE
15. TRUE
16. FALSE
17. Responses a, b, c, d, and e should be checked.
18. Responses a, b, d, and e should be checked, not c.
19. (1) SELL GOALS
(2) GATHER INFORMATION
(3) CREATE LEARNING MODULES
(4) IMPLEMENT PLAN
(5) ASSESS PLAN
(6) SELL PLAN

APPENDIX B (POST-TEST ANSWER KEY)

1. TRUE
2. FALSE
3. FALSE
4. TRUE
5. FALSE
6. FALSE
7. TRUE
8. FALSE
9. RESPONSES A, B, D, AND E SHOULD BE CHECKED, NOT C.
10. (1) SELL GOALS
 - (2) GATHER INFORMATION
 - (3) CREATE LEARNING MODULES
 - (4) IMPLEMENT PLAN
 - (5) ASSESS PLAN
 - (6) SELL PLAN