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# Effective Modes for Encouraging Faculty Involvement in Interdisciplinary Curriculum Development

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### EFFECTIVE MODES FOR ENCOURAGING FACULTY INVOLVEMENT IN INTERDISCIPLINARY CURRICULUM DEVELOPMENT

by

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A curriculum project submitted to the Division of Curriculum and Instruction in partial fulfillment of the requirements for the degree of Master of Education

UNIVERSITY OF NORTH FLORIDA

**COLLEGE OF EDUCATION AND HUMAN SERVICES** 

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#### Abstract

The integration of vocational and academic classes is often recognized as an effective method to motivate students and involve them in career preparation. This is also a goal of the dropout prevention efforts of many school districts. In Baker County, Florida, as in other districts, teacher participation in integrative efforts is recognized as a crucial factor. This project examines curricula and instructional and leadership practices that led to the successful implementation of academic and vocational integration in a Florida middle school. The resultant success and modus operandi may be used as a model for *encouraging faculty involvement in interdisciplinary curriculum development*.

### Table of Contents

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		Page
Chapter One	Introduction	2
Chapter Two	Review of Literature	7
Chapter Three	Procedures	14
Chapter Four	Program Development	16
Chapter Five	Summary	22
Appendix		24
Bibliography		34

### Chapter One

The call for educational reform in American schools has been clearly and constantly reported by the media and experts. Beginning with the publication of <u>A Nation at Risk</u> by the National Commission on Excellence in 1983, educators have been challenged to include more substance and structure in coursework required for graduation from high school. The resulting increase in academic requirements affected vocational programs severely, as students often had no room in their schedules for what had traditionally been considered job training classes. Mark and Gayle Cetron (1991) predict a renaissance of job training in the 1990's. The health of the economy and the survival of businesses and industries will depend upon a work force that demonstrates flexibility, strong basic skills, and broad technical knowledge. In Training America: Learning to work for the twenty-first century (1989), the American Society for Training and Development reports the need for workers who can learn quickly and keep pace with the tremendous growth of technology. The shrinking labor pool, reflecting a decline in the number of eighteen to twentyfive year olds in the population, requires that vocational education play a greater role in educating American students than it has done in past years.

Since its establishment in 1917, vocational education has provided training to those students not considered college bound. That group, according to Patricia Galagn (1989), constitutes more than half of high school students today. The change in the workplace from one requiring physical skills to one

requiring intellectual and interpersonal skills alters the focus of vocational programs from that of teaching how to perform a particular job to that of producing graduates with technological literacy and adaptive ability. The Southern Regional Education Board (<u>Goals for Education, Challenge 2000</u>,1988) projects that the economies of the fifteen member states will crea te ten million new jobs in the 1990's. Since more than sixty percent of these will require training and education beyond high school, vocational programs need to collaborate with academic programs to prepare students for employment and further education or training.

Adelman (1989) criticizes secondary educational programs for making little connection between schooling and the world of work. Educational institutions emphasize individual learning via symbolic modes, with little use for tools other than texts. Real work experience, on the other hand, encourages cooperation in addressing concrete problems and often requires the use of tools. Schools appear to assume that students will transfer knowledge and skills to the workplace, but, in fact, often they do not.

The goals of both academic and vocational programs can be met through a change in the relationship between the two programs. All students need to be able to interpret what they read, solve work-related problems, and make clear-cut decisions. Since business and industry demand that graduates applying for employment have a literacy level equal to the core content of traditional college preparatory curricula, vocational classes are challenged to increase the academic content of their programs. A study by the Educational Testing Service (1989) reports a need to change the goals of instruction to provide more correlation between the acquisition of skills and their use. A joint effort of academic and vocational instructors may improve the educational experience of all students, and, at the same time, meet the needs of the real-world job market.

Integrating vocational and academic classes provides many benefits to the student. The groundwork for understanding and applying skills often is considered to be contained in the academic content of the traditional high school offerings. The vocational classes then can provide an opportunity to apply theoretical knowledge to practical use which will provide the student with a purpose for learning beyond the love of learning. Unmotivated students will be encouraged to master content and college-bound students will benefit from their exposure to technological knowledge and skills.

As in any other innovation, teachers will participate more fully in a curriculum revision if they have ownership in the planning and implementation. It is essential that involvement of teachers be a major priority in the establishment of an integrated curriculum. One way to do this is to provide opportunities for teachers to meet and to discuss options and ideas, even if that requires arranging released time from the classroom. In addition, schools need to develop a means of communication between programs so that, when direct contact among teachers is not possible, integrated learning activities still can take place.

This project will investigate and develop procedures and instruments for planning and implementing an integrated program in a middle school setting. Baker County Middle School already is organized into instructional teams, which provide numerous opportunities for cooperative learning. With a successful history of teaching interdisciplinary units within grade level teams of academic teachers, the atmosphere is conducive to extending this cooperation to include vocational programs of all types. The purpose of this project is to investigate and implement procedures which will encourage teacher involvement in an integrated instructional program and to construct an instrument which will facilitate communication between teachers at Baker County Middle School in Macclenny, Florida. Procedures will be described in such a way that they may be adapted for use in other settings.

## Definitions

Academic curriculum -- College preparatory courses, usually containing general or liberal studies content. Curriculum integration -- The restructuring of academic and vocational courses resulting in a single system responsive to the educational needs of all students. Usually this includes alignment of course content so that content taught in math, science, or English classes is applied in vocational shops or labs (Adelman, 1989).

Interdisciplinary unit -- An arrangement whereby teachers from different disciplines systematically plan curricular experiences for a common group of students.

Vocational-academic integration -- Linking academic skills instruction to vocational applications to enhance student learning (Pritz and Davis, 1990).

Vocational curriculum -- Courses which address job preparation skills.

### Chapter Two

In response to the need for graduates with a more balanced educational background, the Carl D. Perkins Vocational and Applied Technology Act of 1990 requires that federal money be spent to integrate academic and vocational disciplines. Rosenstock (1991) reports that the average worker changes jobs four to six times in his or her lifetime; therefore, students need to be trained to learn in order to adjust to the technological advances that they will confront. Transferable skills and an understanding of all facets of an industry increase the competency of graduates. Policymakers, vocational educators, and business people all agree that an integrated approach is a positive step in preparing students for employment or for further training (Grubb, 1991).

Dr. Charles Benson, director of the National Center for Research in Vocational Education, in testimony before the Senate Subcommittee on Education, Arts, and Humanities (1989), supported the need for change in both vocational and academic curricula, and considered integration to be one of the best approaches available. Students in general or vocational programs tend to select the least demanding classes and often graduate unprepared either for work or for further education. College preparatory students, on the other hand, typically show little interest or familiarity with technological processes.

The Commission on Workforce Quality and Labor Market Efficiency (1989) considers an integrated curriculum important to drop-out prevention and at-risk students who are not aided by the traditional course offerings.

Bottoms and Korchek (1989) agree that students master thinking and problem-solving skills at a higher level if they understand how they can apply these skills. Owens and McClure (1989) propose that this real-world application of concepts could provide necessary motivation to students who otherwise see little point in learning unrelated concepts. Adelman (1989) agrees that some students will learn better with an applied or integrated approach.

One important outcome of integrating vocational and academic classes is a new respect for vocational education (Adelman, 1989). When separated from academic programs, vocational classes are often considered unchallenging. Early results of a study by the National Center for Research in Vocational Education show that the curriculum of an integrated progrom is more coherent and content-rich, and that academic teaching improves with its orientation to application and problem-solving. In addition, both teachers and students are more motivated and find school more enjoyable (Owens and McClure, 1989). Advanced classes also benefit with the elimination of general course offerings and the encouragement of vocational students to enroll in classes exhibiting high levels of difficulty (Cetron, 1991).

Thr transfer of learning from one discipline to another makes school a less fragmented experience for students (Antonellis and James, 1973).

8

While leadership in developing integrated plans is usually provided by the vocational teachers, academic instructors often respond enthusiastically to the idea. In a traditional situation there is little or no professional communication between vocational and academic teachers, but when both groups see benefits from an integrated program, they work together to insure its success (Adelman, 1989). Each group must be aware of the objectives of the separate disciplines for teachers to work together to make connections (Antonellis and James, 1973). Since many academic skills are fundamental to vocational tasks, academic and vocational teachers are both able to present challenging material in an applied manner, thereby upgrading the vocational component and providing a realistic use for the academic element (Welty, 1990).

The National Center for Research in Vocational Education (1989) has identified five approaches to integration. These range from simply requiring more academic coursework of vocational students to the integration of the entire curriculum within specialized career-oriented high schools. Upgrading the academic content of courses required of vocational students insures that those graduates will be better prepared for success in the job market or for further educational efforts The specialization of career-oriented high schools may focus on industry, such as agriculture, finance, or health professions, or subjects, like math or scientific disciplines. Students in these schools usually complete a college-preparatory program while acquiring job skills, and they often are required to attend longer-than-average days and summer sessions. Some programs structure coursework so that reinforcement of academic skills

occurs in the vocational setting. The addition of academic material results in an upgraded vocational curriculum which improves students' competencies in problem-solving, comprehension, science, and math. Applied academic programs in such a model closely integrate curricula so that the distinctions between the two areas disappear, with active and project-oriented methods used in all learning situations. Students apply concepts and skills to meaningful real-life problems and uses. The National Center for Research in Vocational Education recommends an "applied academic" curricula developed by the Center for Occupational Reseach and Development and the Alliance for Instructional Technology (1989). Locally designed curricula adapt the parts of these approaches that best fit the needs of the student populations. In all successful programs the skills expected as outcomes include: learning to learn, speaking, listening, problem-solving, creative thinking, career development, self-esteem, goal-setting, teamwork, and organization.

Studies have reported successes throughout the United States. Pritz and Davis (1990) attribute the success of the integrated curriculum developed in New Bern, North Carolina, in 1987, to the support of the administration and instructional staff. The Maryland Vocational-Technical Education Coommission (1989) recommends integration as the means to reach its goals of reducing the drop-out rate, graduating every student with a marketable skill, and requiring students to be technologically literate, to be able to communicate, to work cooperatively, and to learn to apply new information.

Junior high and middle school teachers in Illinois, who worked together to create interdisciplinary

units which allow students to apply academic skills and concepts to nonacademic problems, found that students responded with enthusiasm, creativity, involvement, and without disruptive behavior. Even students with a history of poor academic performance experienced success in this experiment (Welty, 1990).

"It's the Real Thing", an applied communication course integrating English and vocational education at the senior high school level, uses real-life, work-related assignments to teach academic skills to vocationally directed students (Walker, 1990). Bill and Michelle Walker found that their students increased in self-confidence, communicated more effectively, and increased their scores on the Stanford Test of Academic Skills nearly three times the expected yearly growth. The class included students with previous histories of failure, poor motivation, and alcohol and drug abuse. Other successful integrated programs are found in Pennsylvania, Ohio, New York, California, and Florida (Adelman, 1989).

Ellen Summerfield, principal of the Chicago High School for Agricultural Sciences, found that students strived to meet higher expectations when enrolled in her school's college preparatory vocational program. Her school reported a higher rate of attendance and a lower failure rate than any other school in the city and she credits the success to an integrated academic and vocational program (Summerfield, 1987).

The above programs are designed for middle school or senior high school students. However, the North Dakota Council of Vocational Education (1989) recommends that vocational and academic

educators work together beginning with kindergarten and coninuing through the twelfth grade. Through a cooperative effort, teachers at all grade levels will place greater emphasis on the application of academic skills and knowledge.

Several elements have been identified that assist schools in integrating vocational and academic programs. The National Assessment of Vocational Education (1989) recognized that a strong and committed leadership is needed to overcome the social, intellectual, and occasional physical barriers and to sustain interest through the implementation phase.

One of the weakest areas of an integrated program is evaluation, since appropriate instruments and methods still need to be found to measure results (Adelman, 1989). Several authors (Adelman, 1989, Antonellis and James, 1973) stress the importance of allowing five years as a realistic minimum period for the program to evolve and to experience success. Adelman (1989) notes that while a standard three-year funding cycle may be adequate to develop and implement a program, results based on student data from a traditional four year high school program cannot be obtained in that time span.

Researchers agree that early involvement of vocational and academic instructors is basic to the success of integrated programs (Adelman, Grubb, Owens and McClure, and Pritz and Davis). Teachers often have to change their attitudes and adapt their methods in order to integrate their courses successfully with other disciplines (Adelman, 1989). Too often teachers greet innovation with dismay, since it puts demands on an already overburdened schedule. Cross-disciplinary planning does not always

mean more planning, but rather, planning of a different type, for integration and reinforcement to occur. Organized planning is preferable to less formal methods (Antonellis and James, 1973).

Adelman (1989) emphasizes that curriculum and professional development require funding support. Owens and McClure (1989) further contend that teacher preparation programs should be revised to reflect the trend toward curricular integration. They also recommend training for administrators, through educational leadership courses, to prepare them to assist vocational and academic teachers make the transition.

Educators may respond to the demands of the business community for workers who are prepared to enter the job market able to adapt to a technological workplace by integrating vocational and academic classes. The coordination of the skills needed to perform at a job and the critical thinking skills necessary for training create a more valued employee. If America's schools do not prepare students both academically and vocationally, they fail not only the students, but society.

### **Chapter Three**

Through the review of related literature it was found that early involvement of teachers is crucial to the success of an integrated program. Teachers will enthusiastically support and actively participate in an integrated program if methods and instruments are available to facilitate the process. Communication between disciplines seems to be the area where there is the greatest need for additional procedures.

This project describes methods and procedures intended to encourage the planning and implementation of integration which involves vocational and academic programs at a particular Florida middle school. Baker County Middle School is the only middle school serving sixth, seventh, and eighth grades in a rural county in Northeast Florida. The school is organized into two academic instructional teams at each grade level. Seventh grade students are enrolled in an occupational wheel of courses which introduces them to careers in business, technology, home economics, and agriculture. Eighth grade students may enroll in semester length courses offering further exploration of these subjects. Academic teams at Baker County Middle School have successfully developed and conducted interdisciplinary units at all grade levels.

State funded programs in career development encourage the administration and faculty to attempt further integration of academic and vocational coursework; therefore, methods and instruments that

facilitate such integration are needed. This development of an integration model proposes modes for encouraging faculty involvement in interdisciplinary curriculum development and assesses the effectiveness of each procedure. Faculty opinion gathered through surveys and interviews is included in the assessment.

The model described in Chapter Four includes a review of procedures and activities that administrators and faculty at Baker County Middle School have planned and implemented during the 1990-1991 and 1991-1992 school years. A projected extension of planned activities for the following school years is included, as well as an evaluation and assessment of completed procedures. Instruments designed to facilitate communication between teachers are integral components of the model.

The model is intended for use by middle or high schools as they plan and implement an integrated academic and vocational program. This study does not attempt to present all possible strategies that could encourage integration, nor does it claim to be the correct approach for all school situations. Rather, it describes a model that might be adapted for use in schools with similar structures and needs. It is designed to be completed in five years, although it may be extended beyond that limit.

Chapter Five contains conclusions and recommendations. A bibliography of resources is appended as Appendix C.

### Chapter Four

Baker County Middle School became involved in career and vocational planning and preparation through participation in Florida's <u>Blueprint for Career Preparation</u> program. The <u>Blueprint</u> outlines a series of changes including career development planning, enhanced self knowledge and self esteem, active learning, postsecondary preparation and career preparation. One of the elements encouraged by<u>Blueprint</u> is the integration of vocational and academic classes.

Six academic and vocational classroom teachers from Baker County Middle School attended a workshop in Citrus County in the fall of 1990 where they met with middle school faculty and staff members from two other counties. The purpose of the workshop was to inform and involve these teachers in the design of interdisciplinary units of instruction which could be used to integrate academic and vocational instruction. Speakers presented techniques and learning strategies which teachers could employ in the unit design; teachers from each school then gathered to plan units of instruction which would use these strategies to integrate the disciplines. Groups brainstormed ideas and organized them into curriculum units which they later shared with the other groups of instructors. Before adjourning the workshop, organizers allowed time for teachers of similar disciplines to meet and to share successful techniques and lessons which might, when appropriate, further integrate academic and vocational disciplines.

The workshop participants returned to their respective schools to implement the interdisciplinary units designed at the meeting. The business, technology, and four academic teachers who attended from Baker County returned enthusiastic and anxious to initiate the project. Several small integrated lessons involving two or three disciplines were conducted in the short time before these same instructors attended the <u>Blueprint</u> fall regional conference the following month. There the teachers from all of the involved counties reported successes with the procedures and were encouraged to work toward integration at a more comprehensive level.

The teachers who had designed the units experienced tremendous success when they implemented an organized unit of integrated instruction in the spring of 1991. The unit presented a manufacturing concept which integrated business, language arts, math, science, social studies, and technology classes at the eighth grade level. The main focus was on producing an article or product which the students could market at Baker County Middle School. Math students surveyed the students to determine the most salable product and they graphed the results showing a demand existed for tee shirts. The same students worked in their math and technology classes to design the tee shirt logo and to determine a price that would be both marketable and profitable. At the same time, students in their language arts classes were studying advertising techniques which they employed to write copy and to design and produce posters and fliers advertising the product. The business students produced a video promotion which advertised the tee shirts on the morning news program seen by all students each day. The sales then were conducted through math classes and the product was printed in the technology class. Instructors had hoped that the students would display increased motivation, but they had not anticipated that the students themselves would suggest additional ways to integrate lessons. When the technology instructor required his students to submit resumes to apply for particular jobs in the production of the tee shirts, those students asked their language arts teachers to teach them how to write resumes. The attention and responses shown by all of the students were gratifying to the teachers. Students were motivated and involved in the learning process and were able to discern a purpose to classwork and assignments. When the involved teachers attended a follow-up meeting in Citrus County, they heard similar success stories from the other groups. Teachers returned to Baker County convinced of the value of integrating vocational and academic classes and enthusiastic about working toward more integration opportunities.

In the fall of 1991, representatives of this initial group of involved teachers attended the fall <u>Blueprint</u> conference in Orlando where, again, they found other schools were reporting success in the use of integrative units. The presentation of successful integrative techniques to other conference participants reinforced the enthusiasm felt for the integrative approach.

The group became interested in fostering the positive attitude and enthusiasm among other Baker County Middle School faculty members and did this through the presentation of another workshop for invited teachers from each grade level and subject area during school hours. In a day-long meeting, teachers worked together to share ideas and to work out other ways to integrate vocational and academic subjects through interdisciplinary units. They also created two forms which could be used by all faculty members to communicate skills and subjects taught in each discipline. This information can be used to recognize other areas for interdisciplinary instruction. Some of the ideas and the forms created are included in Appendix A. When the participants adjourned for the day, many were interested and anxious to employ integrative techniques and began to seek ways to implement integration. Comments given by these teachers through an informal survey included:

The most valuable component of the workshop was open discussion about real problems and sharing ideas.

Interaction with other teachers from different disciplines was valuable.

Communicating with other teachers to become aware that other subjects teach similar concepts and that disciplines could reinforce each other was helpful.

On the following faculty planning day, the principal set aside time for academic and vocational teams to work together to share knowledge and expand the use of interdisciplinary units. Since that time, informal efforts have been initiated for continued expansion of integrative efforts, but no formal activities have been held.

After nearly two years of involvement in the integration of academic and vocational programs, Baker County Middle School has made an impressive beginning. However, momentum appears to be lagging, perhaps because time has not been available for planning and stronger leadership is needed. Communication between disciplines is still a problem. Overall attempts to integrate disciplines seem to be increasing although they do not always involve vocational and academic cooperation. A survey of the faculty attitudes taken in February, to which twenty-eight of forty-one teachers responded, is included in Appendix B and provides the following information:

87% have been involved in interdisciplinary instruction,

57% have experienced a change in attitude toward interdisciplinary instruction,

62% have worked with teachers outside their instructional team on lessons,

60% have increased use of interdisciplinary instruction,

26% have decreased use of interdisciplinary instruction,

57% have attempted to integrate with vocational classes,

52% consider that they have been successful in integrating vocational and academic classes,

70% would like to do more integration with vocational classes,

70% cited lack of time to plan units as the reason most preventing further integration,

40% considered time-consuming curriculum demand as a preventative,

22% experienced difficulty communicating with other disciplines, and

09% did not consider their subject related to vocational disciplines.

The survey reinforces opinions expressed by educators who recognize the value of integration but find time constraints often govern the extent of their participation in cooperative activities. Through further

investigation, causes of expressed attitudes and opinions might be identified and the information would be of greater value. In general, teachers seem to respond favorably to integration. It is encouraging that a high percentage of faculty members have been involved in interdisciplinary instruction and that more than half of the teachers who responded have increased their involvement in integration. The percentage who consider that they have been successful loosely correlates to the number who have attempted academic-vocational integration, but it has not been established that the positive responses to the two areas were given by the same teachers. Probably the most enlightening information is the predominance that is given to lack of time as the reason preventing more integration.

The small portion of faculty members who felt that their subjects did not relate to vocational disciplines might be indicative of an awareness by teachers of the role played by all disciplines in career education.

### **Chapter Five**

This project has investigated effective modes for encouraging faculty involvement in interdisciplinary curriculum development. The review of related literature identified several elements that assisted integration: a strong and committed leadership, early involvement of vocational and academic instructors, evaluation, and funding.

The elements necessary for successful integration can also be regarded as barriers, where they do not exist. Information is sometimes unavailable or poorly communicated between disciplines. Teachers do not always have common preparation time or schedules which may be arranged to allow them to work together. Academic teachers need to become more aware of the world of occupations and vocational teachers may need to be retrained in academic concepts. Support of integration on the school, district, and state levels needs to be consistent even though integrative programs may sometimes conflict with present standards. Appropriate research and assessment instruments need to be developed in order to substantiate the value of integration to a school program.

Assessments made in the form of surveys completed by faculty members at Baker County Middle School demonstrate that teachers at this school are receptive to involvement in integrative efforts. When given opportunities to plan together and encouragement to proceed, faculty members have experienced success. Without a strong leadership, however, it appears momentum may be lost, and, while not avoiding integration, teachers do not seek opportunities to initiate cooperative activities. Even the original group of instructors have not been as active recently as they were when they were involved in encouraging activities.

As with many other educational programs, lack of time seems to effect integration success. Sixty-five percent of those who responded to the survey considered lack of time to plan units as the major cause of their not increasing integrative activities. With so many demands on educators' time under present schedules and no indication of change in the future, innovative solutions will be required. Many teachers also feel that the school's curriculum is overcrowded with content making it difficult to schedule lessons. Imagination and planning will be required to discover a means to coordinate disciplines. Too many teachers still fail to recognize that integration does not require additional lessons, but just more structured scheduling and planning.

With a strong leadership at the local level and support from district and state personnel, teachers will be encouraged to continue integration efforts. However, when leadership or support is not provided, faculty members too easily revert to traditional methods of teaching material and may not continue integration efforts. Experience with success in integration can be the most effective method of encouraging integrative efforts. Providing time and opportunities for contact with successful programs may require funding. With budget problems already threatening, the funding might not be feasible in the future.



# Curriculum Information Sheet

Subject area	Name	_ Grade
Concepts taught	Approximate time order	could be taught out-of-sequence yes or no

# Curriculum Information Sheet

Subject area		Name	Grade
Unit	Main Idea	Key Words	Time Frame

# Appendix B

Please complete the following survey and return it to Carol Lund. Circle the appropriate response.

I have been involved in interdisciplinary instruction this year.

Agree Disagree

My attitude toward the use of interdisciplinary techniques has changed this year.

Agree Disagree

I have worked with teachers outside my team on lessons.

Agree Disagree

I have increased my use of interdisciplinary lessons this year.

Agree Disagree

I have done less interdisciplinary instruction this year.

Agree Disagree

I have attempted to integrate my subject with vocational classes.

Agree Disagree

I have been successful in integrating academic and vocational instruction.

Agree Disagree

I would like to do more integration with vocational classes.

# Agree Disagree

Please mark the reason that you feel most prevents you from integrating vocational and academic instruction.

Difficulty of communicating with other disciplines

Lack of time to plan units

Curriculum content demands too time-consuming

Subject does not relate to vocational disciplines

Please indicate the grade which you teach.

678

# Appendix C

Please evaluate the teacher/workday interdisciplinary workshop that you attended. Feel free to express

your opinion. This information will be used to plan future activities.

Indicate the grade level that you teach. 6th 7th 8th

Circle the number that best fits your opinion

strongly agree=4 agree=3 disagree=2 strongly disagree=

Before the meeting I

knew nothing about integrating vocational and academic subjects

4321

was enthusiastic about interdisciplinary units

4321

resisted attempts to get involved with integrating vocational and

academics 4321

## 2. The workshop

presented new information 4 3 2 1

gave clear explanations 4 3 2 1

allowed ample time for questions 4 3 2 1

was valuable to me 4 3 2 1

3. As a result of this workshop, I will

change nothing in my planning 4 3 2 1

be receptive to integrating vocational and academic classes

4321

actively seek opportunities to integrate vocational

and academic classes 4 3 2 1

4. I think other teachers would benefit from attendance at a similar workday

# 4321

5. The most valuable part of the day was

Please make any suggestions that you might consider helpful or necessary. Continue on another sheet if necessary.

## Appendix D

# Additional information may be found in the following sources:

Bottoms, J.E. (1989) Closing the gap between vocational and academic education. Washington, D.C.:
National Assessment of Vocational Education. (ERIC Document Reproduction Service No. ED 315 516)
Consortium for the Development of Professional Materials for Vocational Education. (1987) Integration of
academic and vocational-technical education: An administrator's guide. (ERIC Document Reproduction
Service No. ED 276 873)

Curriculum Development Unit, Office of Vocational Education. (1984) Mathematics. Joint academic vocational approach (Phase II) Frankfort, Kentucky.

- Curriculum Development Unit, Office of Vocational Education. (1983) Mathematics. Joint academic vocational approach (Phase I) Frankfort, Kentucky.
- Curriculum Development Unit, Office of Vocational Education. (1984) English. Joint academic vocational approach (Phase II) Frankfort, Kentucky.

Curriculum Develoment Unit, Office of Vocational Education. (1983) English. Joint academic vocational

approach (Phase II) Frankfort, Kentucky.

Halasz, I.M., & Desy, J. (1987). Technique for management: Time for learning. Washington, D.C.: Office of Vocational and Adult Education. (ERIC Document Reproduction Service No. ED 288 961)

Korcheck, S. A. (1987) Strengthening the basic competencies of students enrolled in vocational education. (ERIC Document Reproduction Service No. ED 279 896)

- Ladewig, B. H. (1987). The effective integration of basic competencies into an applied discipline. Journal of Vocational Education Research .12, 11-1
- Ladewig, B. H. (1987). The effective integration of basic competencies into an applied discipline. Journal of Vocational Education. (ERIC Document Reproduction Service No. ED 232 015).
- Maryland Vocational-Technical Education Commission. (1989) Integration of academic and vocationaltechnical education. Vocational Technical News (ERIC Document Reproduction Service No. ED 318 859)
- Michigan Career Education and Vocational Education Resource Center.(nd) Project ACTIVE-Academic competency taught in vocational education. East Lansing, MI: Michigan State University.

implementation guide. (ERIC Document Reproduction Service No. ED 326 692)

- Sechler, J.A. & Crowe, M.R. (1987) Roadsigns from research. Washington, D.C.: Office of Vocational and Adult Education. (ERIC Document Reproduction Service No. ED 288 957).
- Stricht, T.G. & Mikulecky, L. (1984) Job-related basic skills: Cases and conclusions. Washington, D.C.: National Institute of Education. (ERIC Document Reproduction Service No. ED 246 312)
- Thrane, L. & Douthitt, F. (1987) Strengthening academics in vocational-technical education in Ohio. ERIC Document Reproduction Service No. ED 286 078)
- Veach, J. P. (1987) Supplemental instructional resources. Washington, D.C.: Office of Vocational and Adult Education. (ERIC Document Reproduction Service No. ED 288 959)
- Veach, J.P. & Crowe, M.R. (1987) Primer of exemplary strategies. Washington, D.C.: Office of Vocational and Adult Education. (ERIC Document Reproduction Service No. ED 288 956)
- Wade, B!K. (1989) Interpreting vocationalism as applied academics. (ERIC Document Reproduction Service No. ED 296 132)
- Watkins, L. (1990, November) Applied academic skills in vocational and nonvocational classrooms: A

classroom observation and focus group study. Paper presented at the annual meeting of the Rocky Mountain Educational Research Association, Tempe, AZ. (ERIC Document Reproduction Service No. ED 325 720)

### Bibliography

Adelman, N. E. (1989). The case for integrating academic and vocational education. Washington, D.C.

National Assessment of Vocational Education. (ERIC Document Reproduction Service No. ED 315 513)

Antonellis, G. P., & James, G. B. (1973). Cross discipline planning. Salt Lake City: Olympus.

Cetron, M. & G. M. (1991). Educational renaissance. New York: St. Martin's Press.

- Galagan, Patricia (1989). <u>Training America: Learning to\_work for the twenty-first century</u>. Alexandria, VA American Society for Training and Development.(ERIC Document Reproduction Service NO. ED 318 840)
- Grubb, W. N. (1991). Challenge to change: Models for successfully integrating vocational and academic education. <u>Vocational Education Journal.</u> 66 (2). 22-26.
- Owens, T. & McClure, L. (1989). <u>New developments in improving the integration of academic and</u> <u>vocational education.</u> Washington, D.C. Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 314 841)

Pritz, S. G., & Davis, L. D. (1990). Getting down to basics. <u>Vocational Education Journal.</u> 65 (7). 38-39.
Rosenstock, L. (1991). Reunifying academics and vocational education. <u>Phi Delta Kappan.</u> 72. 434-36.
Summerfield, E. (1987).<u>Comments on academic skills and occupational training</u>. Washington, D.C. National Assessment of Vocational Education. (ERIC Document Reproduction Service No. ED 283 020)

- Walker, B. & M. (1990). Turning on to learning; the power of applied communication. <u>Vocational Education</u> <u>Journal.</u> 65 (6). 30-31.
- Welty, K. (1990). Making it relevant: Exploring the worldof work can enhance students' academic and technological knowledge. <u>Vocational Education Journal.</u> 65 (7). 30-31.