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Improving Basic Skills of Vocational Education Students. ERIC Digest No. 69.

The educational excellence movement has made an academic curriculum a high priority for all students in many states and local districts. Because at least 40 percent of high school graduates do not go on to attend college, the development of good basic skills should not be the sole responsibility of the academic curriculum. A previous ERIC Digest reviewed the reasons why the basics are an important part of vocational education and examined three models--the nonintegrated, integrated, and combination models--for infusing basic skills training into vocational programs (Imel 1984). This Digest examines the philosophy underlying the joint efforts approach to incorporating basic skills instruction into the vocational curriculum and describes selected joint efforts techniques that may be used in vocational programs based on either the integrated, nonintegrated, or combination model of providing basic skills instruction.

THE PHILOSOPHY UNDERLYING THE JOINT EFFORTS APPROACH

The joint efforts approach is based on the following widely held assumptions: o Academic skills are embedded in vocational education. o Vocational tasks provide for realistic use of academic basic skills; connecting academic learning with application strengthens students' basic skills. o Neither academic basic skills nor vocational skills should be taught in isolation from each other; teachers need to make students aware of the bonding between academic basic skills and vocational tasks. (Pritz and Crowe 1987a, p. 16)

Several strategies for combining the expertise of subject matter specialists and vocational instructors are possible, depending on whether an integrated, nonintegrated, or combination model of infusing basic skills instruction into the vocational curriculum has been selected.

POSSIBLE JOINT EFFORT STRATEGIES

Vocational and academic teachers who desire to develop an integrated and articulated program in which vocational students can receive instruction in the basic skills have three main options (Pritz and Crowe 1987c): sharing, teaming, or crossing over. Sharing is the most basic form of joint efforts on the part of vocational and academic teachers. It is differentiated from teaming in that sharing refers to sharing concerns, strategies, and resource materials about teaching whereas teaming refers to sharing actual teaching responsibilities.

Sharing can occur during the program-planning process (to decide who will teach which skills and coordinate the types and sizes of assignments made in each course); the instructional materials selection and development process (to ensure that the academic course is made relevant to the vocational course and that the vocational course

reinforces the basic skill concepts introduced in the academic course); the teacher preparation process (to allow academic and vocational teachers to gain some expertise in each other's area of specialization); and the program implementation process (to iron out concern over the effect of program modification on such things as job security, teacher autonomy, and the effect of additional amounts of work on students and teachers alike).

Like sharing, teaming can occur at any stage throughout the program design-development-evaluation cycle. Academic and vocational teachers can team up to develop instructional materials, design courses, grade assignments, and present instructional materials. The teaming arrangement can assume many forms. In a regular or periodic team teaching arrangement, for example, an academic teacher could work in the vocational classroom to teach or reinforce a particular academic concept that will be applied in a vocational task and the vocational teacher could take over to present the application part of the lesson. Another possibility would be to have the academic and vocational teachers teaching concurrently in the same classroom. The two teachers could each work with different groups, thereby allowing the academic teacher to provide extra help to students in need of additional or even remedial instruction.

Staff crossover involves teachers actually exchanging roles with each other. Pritz and Crowe (1987c) describe the following ways in which teachers can take advantage of the crossover strategy: using consultants from other departments, making assignments in another teacher's course (for example, a shop teacher suggesting topics for papers to be written in a communications class), setting up a review of student papers in which each teacher performs a different function (the shop teacher can review for content while the communications teacher reviews writing and format), attending classes in each other's course in an auditing capacity, and analyzing time use in each other's classes.

PROGRAM TYPES AND INSTRUCTIONAL METHODS

Sharing, teaming, and crossing over can be used in all types of programs, including traditional vocational programs, compensatory and support-oriented programs (the former being programs intended to remediate or compensate for basic skills deficiencies and the latter being programs that are designed to reinforce or maintain proficiencies in basic skills), and alternative programs such as those based on learning centers and laboratories (Norton, King-Fitch, and Harrington 1986). Student learning contracts, visiting consultants or specialists, cooperative programs, competency-based education (CBE), applied learning in a problem-solving mode, and Academic Development Plans (ADPs) are all effective in programs infusing academic instruction into the vocational curriculum. The latter three will be examined briefly.

COMPETENCY-BASED EDUCATION

Because CBE is based on the principle of analyzing complex skills, breaking them down into their component tasks, and then teaching them in a logically designed series of performance objectives, it is particularly well suited to joint teaching efforts, whether such efforts are based on sharing, teaming, crossing over, or a combination of the three approaches.

APPLIED LEARNING IN A PROBLEM-SOLVING MODE

The technique of applying academic concepts in learning activities that require students to solve a problem related to their vocational program is another effective way of combining basic skills and vocational instruction. The approach is based on the following principles: o Problem-solving and decision-making processes and competencies are embedded in the activities. o Activities are participatory in nature and related to the real world and real consequences. o Reinforcement of basic skills information needed in the situation is provided along with a suitable degree of guidance on how to proceed. (Pritz and Crowe 1987a, p. 47)

Because such instructional materials help students develop strong problem-solving skills (skills that employers find very important in workers) and present material in a context whose relevance is readily apparent to students (which has been shown to increase students' motivation to learn), they are doubly effective in preparing vocational students for eventual employment.

ACADEMIC DEVELOPMENT PLANS

An Academic Development Plan (ADP) is similar to an Individualized Education Plan (IEP) in that both are individualized plans for students' progress that are worked out cooperatively by students and any of a number of key individuals involved in helping them learn. The main thrust of the ADP concept is to address the need to help students develop basic academic skills and improve their academic achievement. Possible members of the ADP planning team include the student, a parent or guardian, the vocational teacher, the academic teacher, special services personnel, an employer, a guidance counselor, a community agency representative, and an adult friend. Like IEPs, ADPs can be particularly effective in developing individualized programs to respond to students' special needs. ADPs can thus be very effective in ensuring sex equity, drawing on community resources, and meeting the needs of such special clients as migrant, minority, disabled, and gifted and talented youth. Other advantages of ADPs are that they serve as a motivational device, encourage students to assume responsibility for their own learning, provide a vehicle for periodic evaluations, and treat students as responsible individuals.

The basic components of the ADP are as follows: o A statement of the present levels of the student's educational performance o A statement of annual goals, including short-term instructional objectives for each student o Appropriate objective criteria and evaluation procedures and schedules for determining, at least on an annual basis,

whether instructional objectives are being achieved (Pritz and Crowe 1987b, pp. 2-3)

Veach and Crowe (1987) collected 47 exemplary basic skills techniques and 24 exemplary joint efforts techniques that have proven effective in the various arrangements (sharing, teaming, and crossing over) of helping vocational students develop and reinforce basic academic skills. Many are geared toward one or more vocational service areas and/or special student populations.

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All of these materials, with the exception of ERIC Digest No. 35, are part of a package entitled BASICS: BRIDGING

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