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ABSTRACT

Strategies for integrating academic and vocational skill have been the focus of increasing attention in recent years. The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 mandates that state and local education agencies integrate these programs so students achieve both academic and vocational competencies. Implementation of this mandate presents major challenges. One such challenge is the development of curricula that acknowledge program goals and the environment in which they are implemented. Eight models have been identified for integrating academic and vocational programs: (1) incorporate academic competencies into vocational courses; (2) combine the efforts of academic and vocational teachers to incorporate academic competencies into vocational courses; (3) make academic curricula more vocationally relevant; (4) modify both academic and vocational curricula to be more compatible with each other; (5) use academies--schools within schools; (6) develop departments organized around occupational clusters; (7) encourage single-occupation institutions to focus integration efforts; and (8) maintain conventional departments. Through maximizing success, implementing integration efforts, using an accommodation team, more effective accommodation outcomes and strategies designed to help a wide array of learners can be achieved. (NLA)

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TECHNICAL ASSISTANCE FOR SPECIAL POPULATIONS PROGRAM

Integrating Academic Skills into Postsecondary Vocational Education Programs Through Accommodation Teams

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Successful strategies for integrating academic and vocational skills have been the focus of increasing attention in recent years (Brown, Bohns, & Gardner, 1990). The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 mandates state and local education agencies across the nation to "integrate academic and vocational education in such programs through coherent sequences of courses, so that students achieve both academic and occupational competencies." Implementation of this mandate presents major challenges that must be addressed by state and local education agencies. One such challenge is the development of curricula that acknowledges program goals and the environment in which they are implemented.

Models for Integrating Vocational and Academic Education

A variety of approaches to this task have been developed. Based on their school visits, Grubb, Davis, Lum, Plihal, and Morgaine (1990) have identified eight models for integrating academic and vocational programs. Brown, Bohns, and Gardner (1990) provided the following summaries of the models:

1. Incorporate academic competencies into vocational courses. This is the simplest approach but it has not yet been proven to be effective.
2. Combine the efforts of academic and

vocational teachers to incorporate academic competencies into vocational courses. The crucial element of this approach is that academic and vocational teachers work jointly to modify vocational programs. These ongoing interactions tend to be very beneficial for both groups.

3. Make academic curricula more vocationally relevant (modify academic curricula, instead of vocational courses, by using vocationally oriented examples and designing academic courses to be more relevant to vocational students). This approach can be implemented in a wide variety of ways. The effectiveness of such approaches is likely to be dependent on how such efforts are used and by whom.
4. Modify both academic and vocational curricula to be more compatible with one another. This approach can create sequences of both types of courses that reinforce each other. This form of integration considers entire programs rather than individual courses. Such efforts tend to offer greater flexibility than other models.
5. Use "academies" (schools-within-schools) that combine teachers of math, English, and science with vocational instructors in subjects such as health occupations, electronics, or business. The teachers participating in this model stay with a group of students for these courses for the duration of the students' programs. Although this model is rarely used and is very expensive, it can reduce dropout rates and increase enrollment levels. Thus, this model could be very useful for learners with special needs who are more likely to drop out of traditional programs.

6. Develop departments organized around occupational clusters that replace conventional academic and vocational departments. This approach can facilitate cooperation among teachers and can encourage academic teachers to incorporate vocational emphases into their classes.
7. Encourage single-occupation institutions to focus efforts on integrating academic and vocational education. Although examples of such models are relatively rare, their positive impact on the occupational content of courses should not be ignored.
8. Maintain conventional academic and vocational departments, which organize students and teachers into career paths. Although this model is not yet well developed, it could potentially: (a) pull teachers out of isolation, (b) create meaningful ties with employers, and (c) produce organized clusters of interdepartmental courses which represent conceptually sound sequences of courses and career development paths. This model seems to be especially well suited for use in comprehensive high schools.

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Maximizing Success

Although these models have been proven innovative and successful in a variety of settings, Grubb, et al. (1990) suggested that the following program traits are needed to maximize the successful integration of academic and vocational programs:

- vision and commitment
- consistent support from administrators and agency officials
- new resources and materials, staff development, improved counseling, smaller classes, and rich variety of vocational courses
- sustained efforts
- integration-oriented teacher training
- improved assistance for students' vocationally-oriented decisions
- elimination of student's tendencies to take unrelated course sequences
- reduced isolation of all teachers
- reduced segregation between vocational and academic students
- increased emphasis on vocational programs fostering interest in broad occupational areas
- improved strategies for businesses' participation in school programs to help students better identify and attain their career development goals (pp. iii-iv)

Implementing Integration Efforts

A wide variety of postsecondary vocational education students with unique learning needs will continue to require special accommodations to facilitate the integration of academic skills into their vocational programs. These accommodations can be implemented more effectively after learners with special needs have been identified and assessed to determine which support services are needed and who can best provide those services (Brown & Kayser, 1985; Brown, Bohns, & Gardner, 1990).

Some vocational educators believe that all students (regardless of the nature of their special learning needs) who fail to score at, or above, specified levels on standardized tests should be prohibited from entering training programs that have math and/or reading components considered "highly academic." Others believe that students with low standardized test scores should complete remedial courses before entering regular vocational programs. Both approaches can prevent many learners with special needs from entering vocational training programs. In contrast, accommodation

strategies which facilitate the integration of academic skills into vocational programs could help students at risk of failing and underachieving attain their training and career goals. Therefore, strategies which successfully fuse the attainment of academic skills with the career development aspects of vocational programs are appropriate and should be encouraged.

Accommodation Team: A Strategy

Many postsecondary institutions have spent the past decade expanding and improving their programs' abilities to train a wider range of students (Retish, 1979). Others have focused on helping instructors raise their expectations for learners with special needs and on helping them adapt curricula to the unique learning needs of such students (Brolin, 1982; Rusch & Mithaug, 1980).

In 1989, Northeast Metropolitan Technical College (Northeast Metro) in White Bear Lake, Minnesota, re-examined its accommodation practices for students with special needs. From this self-examination, Northeast Metro staff were able to identify key issues in facilitating the integration of academic skills by means of staff teams. Those issues were the instructors':

- abilities to teach academic skills,
- knowledge of and sensitivity to differences unique to individuals with special needs, and
- understanding of multi-dimensional student needs.

Staff development efforts were directed toward providing staff with skills necessary in addressing the above issues. One-third of Northeast Metro's staff, including instructors, support services staff, and administrators, received training consisting of a series of specially designed courses provided by the University of Minnesota. The courses provided participants with a common overview regarding:

1. Learners with special needs and the nature of their learning deficits and strengths.
2. Legal, ethical, and societal issues impacting learners with special needs and postsecondary vocational educators seeking to train such students.
3. Specific teaching strategies that can enhance instructional accommodations for learners with special needs.

The training included an intensive emphasis on students with learning disabilities

and learners who are disadvantaged. In addition, methods on how accommodation strategies for students with special needs could be adapted specifically to training programs at Northeast Metro were included.

Since funding and logistical limitations eliminated the participation of all Northeast Metro's staff members in these training activities, a train-the-trainer approach seemed appropriate. Formation of the accommodation teams (ATs) provided an outreach mechanism which could eventually share these concepts with all staff and their students.

The ATs were formed by selecting participants in the training activities offered on site at Northeast Metro. Each team included a vocational counselor, a vocational instructor, and a special needs support services specialist. ATs were charged with developing solutions to specific student problems. Using a team approach that brought together specialists with differing points of view, insights and skills, the team formulated accommodation strategies for individual students that integrated needed academic skills into instructional activities and/or materials specifically related to training program curricula. For example, a student who was interested in entering the Horticulture program was assessed as having low reading comprehension. The accommodation team developed for this student brief, easy-to-read assignments which included vocational content and were in multi-media format. In developing specific instructional materials and activities, the team also took care to preserve the integrity of courses while addressing the unique learner traits of each learner with special needs.

Accommodation Outcomes

By identifying and focusing efforts on individual students with special learning needs, Northeast Metro's Accommodation Teams developed more effective strategies designed to help a wide array of learners. The teams developed materials that integrated academic skills into instructional activities, making them more interesting, relevant, and meaningful to the students.

Accommodation teams can be formed and used in almost any program format. Through the combined expertise of team members, ATs can provide accommodations that match the range of services needed.

(Continued on next page)

Once students' problems have been identified, monitoring processes should be ongoing. This process should continue as long as students and/or instructors feel the need. One goal of the AT concept is a smooth transition from training to employment. In reality, transition begins with the identification of students with special needs and continues until their needs are accommodated and/or their training objectives are achieved.

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