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ABSTRACT

A survey was conducted to determine the status of career-oriented education programs at the middle-grade level and perceptions of state education agency officials with responsibilities in the program areas. Mailed questionnaires were returned by 43 (86 percent) state directors of education and 290 (82 percent) supervisors in 8 career-oriented program areas. Findings indicated most states offered career-oriented programs at the middle-grade level, but very little enrollment data were available. The programs were aimed primarily at career exploration and development of practical skills. Teachers in any of the program areas were rarely required to be certified specifically in middle-grade education, although many states required certification in a vocational education area. Local and state funding sources were used more than federal sources. Most directors and supervisors believed that career-oriented programs should provide students opportunities to explore careers and personal interests, assess occupational aptitudes, and apply knowledge through hands-on activities; they felt that middle-grade vocational student organizations (VSOs) should develop students' leadership and social skills. Respondents were not fully supportive of competition in middle-grade VSOs. Implications were drawn for future research, teacher preparation, certification requirements, and material development. (Contains 15 references.) (YLB)

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Summary of Research

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STATE-LEVEL VOCATIONAL ADMINISTRATOR PERCEPTIONS RELEVANT TO CAREER-ORIENTED EDUCATION IN THE MIDDLE GRADES

R. Kirby Barrick and Matthew Hughes

Early adolescence is the life stage from about 10 to 14 years of age, and is characterized by many physical, psychological, social, cognitive, and vocational developmental changes. Because of these changes, the early adolescent has unique educational needs for which middle-grade (grades six through eight) schools were established. To be most effective, these schools should be staffed with faculty who are experts at teaching early adolescents and who understand the developmental changes associated with this stage of life. This expertise should be promoted through in-service and pre-service programs designed specifically for teachers at the middle-grade level (Sale, 1979; Carnegie Council on Adolescent Development, 1989).

Middle-grade curricula and student activities should be based on the needs and characteristics of early adolescents. An important task of the curriculum is to help students develop social skills (Lipsitz, 1984). The curriculum should also provide early adolescents an understanding of various career roles in society (Carnegie Council on Adolescent Development, 1989); however, Sale (1979) emphasized that job training is not an appropriate function of the middle grades. Through the curriculum, early adolescents need opportunities to learn through hands-on experiences, acquire commonly-used practical skills, and develop personal values (Kindred, Wolotkiewicz, Mickelson, Copenlin, & Dyson, 1976; Curtiss & Bidwell, 1977; Greenberg & Hunter, 1982).

Student organizations play important roles in early adolescent education. The organizations provide means of extending the curriculum, exploring personal and career interests, and developing

social and leadership skills (Kindred et al., 1976; Miller, 1988). Because of wide variations in the developmental levels among early adolescents, it has been recommended that participation take precedence over competition in the middle grades (Brazeo & Smalley, 1982). Rossetti, Padilla, and McCaslin (1992) recommended that the National FFA Organization not develop competitive activities at the national level for middle-grade members. However, George (1988) pointed out that there are benefits of competition among students in the middle grades.

Career-oriented programs have been developed at the middle-grade level to promote early adolescents' understanding of the world of work, and the number of these programs has increased in recent years (Alexander & McEwin, 1989). However, career-oriented curricula have been criticized for not meeting the educational needs of early adolescents (Beane, 1990; Harrington-Lueker, 1990). Continued development and improvement of middle-grade career-oriented programs depend greatly upon program effectiveness and the support of state-level education agency officials.

Career-oriented education was defined for this study as planned course work and activities designed to provide students one or more of the following attributes: (a) ability to assess occupational aptitude, (b) entry-level job skills, (c) practical skills (e.g., basic home repairs, "life skills"), (d) career awareness, (e) knowledge needed to select future course work based on career interests, and (f) ability to relate education to career roles. Program areas in career-oriented education include agriculture, business, general career education,

health occupations, home economics, marketing and distribution, technology, and trade and industrial (T&I). Although career-oriented concepts are often taught in specific courses, recent recommendations emphasize the need for incorporating the concepts throughout the curriculum as a means of strengthening the connection between education and work (Secretary's Commission on Achieving Necessary Skills, 1991).

Because beliefs and perceptions of administrators within an educational organization influence decisions related to the programs and philosophy of that organization (Boyle, 1981), it is necessary that individuals charged with developing and implementing middle-grade educational programs understand state-level administrators' beliefs and perceptions pertinent to those programs. Information was needed relative to the current status of middle-grade career-oriented programs and how those programs are perceived and supported by state education agency officials. However, this information was not available from states.

Purpose and Objectives

The purpose of this study was to determine the status of career-oriented education programs at the middle-grade level and relevant perceptions of state education agency officials who have responsibilities in the program areas. The objectives pertain to career-oriented education programs and vocational student organizations (VSOs) at the middle-grade level. Objectives were:

1. to describe the programs in terms of: (a) prevalence, (b) courses offered, (c) nature of the courses, (d) enrollment, and (e) teacher certification requirements; and
2. to determine the perceptions of state vocational directors and supervisors regarding: (a) vocational education agency support for middle-grade programs; (b) past and future growth of the programs; (c) sources of program funding; (d) role of the career-oriented education; (e) role of VSOs; (f) degree to which career-oriented education can contribute to the vocational, values, intellectual, and social development of early adolescents; (g) appropriate courses for delivering career-oriented concepts; and (h) competition within VSOs.

Procedures

Current directories from the U.S. Department of Education and vocational education professional

organizations were used to identify state directors of vocational education (N=50) and state supervisors in eight career-oriented program areas (N=352). Not all states reported a supervisor for each program area.

Descriptive-survey research was used to accomplish the objectives. Through mailed questionnaires specific to the two populations, the directors and supervisors described policies of their states relative to middle-grade program funding and teacher certification. The respondents also indicated their perceptions and opinions regarding various aspects of career-oriented education at the middle-grade level. The questionnaires consisted of close-ended and partially close-ended items. Nine items were measured on a six-point Likert-type scale (1=strongly disagree to 6=strongly agree). Study participants could provide more than one response on several close-ended and partially close-ended items.

Instrument validity was assured through a review and revision process involving graduate students in agricultural education and in the comprehensive vocational education programs at The Ohio State University. Reliability was determined by a test/retest procedure involving teacher educators in vocational education and current and former administrators in the Ohio Department of Education. The overall percentage of agreement from the test/retest was .93 and ranged from .66 to 1.00 on individual items.

After two follow-up mailings to non-respondents, 43 (86%) directors and 290 (82%) supervisors returned their questionnaires. Response rate ranged from 71% for general career education supervisors to 88% for agriculture supervisors. To account for response error, 10 (14%) nonrespondents were contacted by phone and asked selected questionnaire items. Their answers were compared to those of the respondents with a t-test, and no statistically significant differences were found at alpha .05. Therefore, the responses received were generalized to the populations.

Results

For clarity, state directors of vocational education are referred to as directors, and state supervisors in the eight program areas are referred to as supervisors. Unless otherwise noted in the tables, individuals who did not provide a response to a particular questionnaire item are not considered in the calculations pertinent to that item.

Over 80% of the directors indicated that middle-grade students were enrolled in career-oriented programs in their states. A majority of the directors reported that middle-grade students were enrolled in home economics and agricultural education; almost one-half reported that middle-grade students were enrolled in business and in general career education (Table 1).

One hundred sixty-four (58%) supervisors indicated that middle-grade students were enrolled in program areas for which they had responsibility. A majority of the home economics, technology, general career education, agriculture, and business supervisors reported that middle-grade students were enrolled in their program areas (Table 2). Less than one-half of the 164 supervisors provided enrollment data for the middle-grade programs.

Of the supervisors who reported that middle-grade students were enrolled in their program areas, most indicated that the courses were aimed primarily at career exploration; nine percent reported that the courses provided job training. One-half of the health occupations supervisors and 84% of the home economics supervisors indicated that courses in their program areas were designed to develop practical skills.

Almost one-half of the supervisors who reported that middle-grade students were enrolled indicated that a requirement of the middle-grade teachers in their program areas was certification (non-grade specific) in vocational education. Less than 20% indicated that the teachers were required to hold certification specific to the middle grades.

Most directors indicated that their state vocational education agencies encourage career-oriented courses at the middle-grade level. No directors reported that the courses were discouraged.

Almost one-half of the directors who reported that middle-grade students were enrolled in career-oriented programs indicated that the number of programs increased in their states over the past 10 years; 18% indicated that the number had decreased. Most directors indicated that the number will increase over the next 10 years; 10% indicated that the number will decrease.

Most supervisors who reported that middle-grade students were enrolled in their program areas indicated that the number of middle-grade programs increased over the past 10 years; however, less than one-half of the health occupations, T&I, technology, and general career education supervisors indicated an increase. A majority of all supervisors except those in the T&I and marketing/distribution program areas indicated that the number will increase over the next 10 years; nine percent indicated that the number will decrease.

Of the directors who indicated that middle-grade students were enrolled in career-oriented programs in their states, over 90% reported that local and state sources were used to fund the programs; almost one-half reported that federal funds were used. Over three-fourths of all the directors reported that local and state sources can be used to fund the programs in their states; almost one-half reported that federal sources can be used.

Table 1
NUMBER AND PERCENTAGE OF DIRECTORS INDICATING MIDDLE-GRADE STUDENTS ENROLLED IN
CAREER-ORIENTED EDUCATION PROGRAMS IN THEIR STATES (N=42)

| Program | Responses | |
|--------------------------|-----------|----|
| | f | % |
| Home Economics | 30 | 70 |
| Agriculture | 25 | 58 |
| Business | 21 | 49 |
| General Career Education | 20 | 47 |
| Technology Education | 16 | 37 |
| Trade & Industrial | 12 | 28 |
| Health Occupations | 7 | 16 |
| Marketing/Distribution | 6 | 14 |
| Other | 1 | 3 |

Over three-fourths of both the directors and supervisors believed that local and state sources should be used to fund the programs at the middle-grade level; over one-half believed that federal sources should be used.

Most directors and supervisors believed that the role of middle-grade career-oriented education should include providing students opportunities for: (a) exploring careers, (b) assessing occupational aptitudes, (c) exploring personal interests, and (d) applying knowledge through hands-on activities. One-half of the supervisors believed that the role should include practical skills development. Most agriculture and T&I supervisors indicated that the role should include guiding students into a high school vocational curriculum.

Most directors and supervisors believed that the role of middle-grade VSOs should include developing students' leadership and social skills as well as providing opportunities for exploring personal interests. Most supervisors indicated that the role should include providing instruction to students beyond that which is received in the classroom. Most T&I supervisors and 49% of the agriculture supervisors believed that the role should include recruiting students into a high school vocational education program.

Results from the Likert-type scale segment of the questionnaire are presented in Table 3. The data indicated that the directors and supervisors tended to agree (indicated by mean ratings of 4.50 to 5.49) that career-oriented courses can help

middle-grade students: (a) understand the world of work, (b) develop personal values, and (c) develop intellectually, vocationally, and socially. The directors and supervisors also tended to agree that the concepts of career-oriented education should be incorporated into middle-grade core courses (language arts, history, social studies, science, mathematics). The directors and supervisors tended to somewhat agree (indicated by mean ratings of 3.50 to 4.49) that: (a) the concepts of career-oriented education should be taught in specific career-oriented courses, and (b) team competition should be an important part of middle-grade VSOs. The directors and supervisors tended to somewhat disagree (indicated by mean ratings of 2.50 to 3.49) that individual student competition should be an important part of middle-grade VSOs. However, the mean ratings assigned by the agriculture, home economics, T&I, and technology supervisors regarding individual competition fell within the "somewhat agree" range.

Conclusions

Although most states offer career-oriented programs at the middle-grade level, very little enrollment data are available on the programs. The programs are aimed primarily at career exploration and the development of practical skills. The most commonly offered programs are home economics, technology, general career education, agriculture, and business. Rarely are teachers in any of the program areas required to be certified specifically in middle-grade education, although many states require certification in a vocational education area.

Table 2
SUPERVISORS INDICATING MIDDLE-GRADE STUDENTS ENROLLED IN PROGRAM AREA

| Supervisor Program Area | N | Responses | | | | | |
|-------------------------|-----|-----------|----|-----|----|-------------|---|
| | | Yes | % | No | % | No response | % |
| Home Economics | 40 | 38 | 94 | 1 | 3 | 1 | 3 |
| Technology | 32 | 27 | 84 | 4 | 13 | 1 | 3 |
| General Career Educ. | 35 | 26 | 74 | 7 | 20 | 2 | 6 |
| Agriculture | 45 | 31 | 69 | 14 | 31 | 0 | 0 |
| Business | 24 | 14 | 58 | 8 | 33 | 2 | 9 |
| Marketing/Distribution | 39 | 10 | 26 | 29 | 74 | 0 | 0 |
| T&I | 34 | 12 | 35 | 21 | 62 | 1 | 3 |
| Health Occupations | 31 | 6 | 19 | 24 | 77 | 1 | 4 |
| Total | 280 | 164 | 58 | 108 | 38 | 8 | 4 |

Table 3
DIRECTOR AND SUPERVISOR PERCEPTIONS REGARDING ASPECTS OF CAREER-ORIENTED EDUCATION IN THE MIDDLE GRADES

| Group | Statement ^a | | | | | | | | |
|----------------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Supervisors: | | | | | | | | | |
| Agriculture | 5.27 (.75) | 5.16 (.74) | 4.91 (.87) | 5.00 (.95) | 5.00 (.81) | 4.98 (1.03) | 4.35 (1.36) | 4.16 (1.59) | 3.53 (1.46) |
| Business | 5.27 (.94) | 5.09 (.92) | 5.05 (.95) | 4.68 (1.17) | 5.09 (.97) | 4.68 (1.39) | 4.32 (1.64) | 3.62 (1.69) | 2.32 (1.13) |
| General Career Educ. | 5.53 (1.02) | 5.26 (.99) | 5.33 (1.05) | 5.24 (1.05) | 5.26 (1.02) | 5.38 (1.07) | 4.15 (1.45) | 4.33 (1.43) | 3.21 (1.58) |
| Health Occupations | 5.39 (.92) | 5.16 (1.00) | 5.10 (1.01) | 5.23 (.99) | 5.03 (1.20) | 5.06 (1.31) | 4.35 (1.60) | 3.77 (1.54) | 3.13 (1.78) |
| Home Economics | 5.46 (.69) | 5.27 (.84) | 5.43 (.77) | 5.41 (.72) | 5.08 (.95) | 4.64 (1.31) | 4.27 (1.48) | 4.59 (1.24) | 3.57 (1.44) |
| Mkt./Distribution | 5.38 (.63) | 5.03 (.67) | 5.08 (.74) | 5.13 (.70) | 5.00 (.73) | 5.23 (.78) | 4.23 (1.18) | 3.95 (1.30) | 3.28 (1.26) |
| Technology | 5.10 (1.08) | 5.29 (.94) | 4.87 (1.12) | 4.90 (1.04) | 5.00 (1.10) | 5.10 (1.19) | 4.13 (1.57) | 4.66 (1.34) | 3.83 (1.56) |
| T&I | 5.19 (1.06) | 4.78 (1.18) | 4.91 (1.06) | 4.78 (1.18) | 4.87 (1.07) | 4.97 (1.09) | 4.39 (1.45) | 4.38 (1.13) | 3.50 (1.37) |
| Total | | | | | | | | | |
| Supervisors | 5.32 (.90) | 5.11 (.96) | 5.07 (1.00) | 5.05 (1.03) | 5.03 (.98) | 5.00 (1.19) | 4.26 (1.46) | 4.20 (1.42) | 3.33 (1.50) |
| Directors | 5.31 (1.15) | 5.00 (1.12) | 5.03 (.93) | 4.95 (1.12) | 5.00 (.95) | 4.74 (1.25) | 4.41 (1.42) | 4.05 (1.54) | 2.90 (1.50) |

Note: Standard deviation is in parentheses below corresponding mean.

scale:
1=strongly disagree; 2=disagree; 3=somewhat disagree; 4=somewhat agree; 5=agree; 6=strongly agree

^aStatements:

- 1 = Career-oriented courses can help middle-grade students understand the world of work.
- 2 = Career-oriented courses can contribute to the intellectual development of middle-grade students.
- 3 = Career-oriented courses can help middle-grade students develop their personal values.
- 4 = Career-oriented courses can contribute to the vocational development of middle-grade students.
- 5 = Career-oriented courses can contribute to the social development of middle-grade students.
- 6 = The concepts of career-oriented education should be incorporated into middle-grade core courses.
- 7 = The concepts of career-oriented education should be taught in career-oriented courses.
- 8 = Team competition should be an important part of middle-grade vocational student organizations.
- 9 = Individual competition should be an important part of middle-grade vocational student organizations.

Career-oriented programs are encouraged and supported by state-level administrators in most states. Directors and supervisors believe that the number of programs has remained the same or increased over the past 10 years, and this number will increase over the next 10 years.

Local and state sources are used more than are federal sources to fund career-oriented programs at the middle-grade level. Most directors and supervisors believe that all three sources should be used to fund the programs, although there is more support for the use of state and local sources than for federal sources.

Most directors and supervisors believe that middle-grade career-oriented programs should provide students opportunities to: (a) explore careers and personal interests, (b) assess occupational aptitudes, and (c) apply knowledge through hands-on activities. Most agriculture and T&I supervisors believe that the programs should also guide students toward a vocational curriculum.

Most directors and supervisors believe that middle-grade VSOs should develop students' leadership and social skills and should provide them opportunities to explore personal interests. Agriculture and T&I supervisors are more supportive than are the other supervisors of VSOs being used to recruit students into high school vocational education programs.

Most directors and supervisors believe that career-oriented education programs can help early adolescents develop vocationally, intellectually, and socially. Most also believe that the programs can help early adolescents develop a personal values system.

Directors and supervisors are supportive of career-oriented concepts being incorporated into middle-grade core courses, as well as being taught in specific career-oriented courses. While not fully supportive of either type of competition in middle-grade VSOs, the directors and supervisors are more favorable toward team competition than individual competition.

Implications and Recommendations

The likely continued increase in the number of career-oriented programs at the middle-grade level indicates the need for increased emphasis on developing curriculum materials and student activities based on the needs and characteristics of

early adolescents. On-going research efforts are needed to provide the knowledge necessary for continuous improvement of middle-grade career-oriented programs. Therefore, it is recommended that university-level researchers pursue lines of inquiry aimed at increasing the understanding of early adolescents and effective means of meeting their educational needs.

The results of this study support the findings of Alexander and McEwin (1989) that the number of career-oriented programs has increased at the middle-grade level in recent years. A continued increase in the number of programs indicates that more current and prospective teachers need to be prepared to teach at the middle-grade level. Vocational teacher educators should be knowledgeable of practices and philosophies which guide early adolescent education and incorporate related instruction into existing courses. Teacher educators, state supervisors, and other individuals who have responsibilities for professional development activities should provide in-service programs related to early adolescent education to practicing middle-grade teachers and to those who may assume the role of teaching at that level. Through in-service and supervisory activities, state supervisors should ensure that middle-grade programs are effectively meeting the needs of early adolescents and are congruent with goals and philosophies of middle-grade education.

The early adolescent period has been recognized as a distinct life stage characterized by unique educational needs and developmental characteristics inherent with the onset of puberty. Therefore, the middle grades should be recognized as an educational phase requiring specific and unique qualities and competencies of teachers. These qualities and competencies should be ensured through pre-service and in-service programs and teacher certification in middle-grade education as recommended by Sale (1979) and the Carnegie Council on Adolescent Development (1989). However, based on the results of this study, required middle-grade certification for career-oriented teachers is uncommon. States should consider establishing certification requirements for teachers in middle-grade career-oriented program areas.

The apparent lack of middle-grade career-oriented program enrollment data available to supervisors indicates a need for improving (or in many cases implementing) data collection procedures for the programs. State education agency personnel should encourage establishment of such procedures through policy actions.

Sources available for funding career-oriented programs at the middle-grade level are apparently being utilized in most states. Teachers and administrators of the programs should encourage adequate funding from local, state, federal, and other appropriate sources. Professional associations such as the American Vocational Association should firmly state their support for funding middle-grade programs. However, in order to garner this support, middle-grade teachers and administrators must be proactive participants in the associations.

Based on the perceptions of the directors and supervisors, career-oriented education can help meet many of the educational and developmental needs of early adolescents that have been described in the literature. Beliefs expressed by the directors and supervisors regarding the roles of career-oriented programs and VSOs are generally in agreement with the philosophy expressed in the literature; however, the view expressed that the roles should include guiding or recruiting students into a particular high school curriculum is not supported in the literature and has been criticized as a goal of middle-grade education. Career-oriented programs should expose middle-grade students to realistic program options based on interests, aptitudes, abilities, and aspirations. The programs should be supported for the benefits provided early adolescents, not for the potential the programs have for recruiting students into vocational education at the high school level.

Congruent with recommendations of the Secretary's Commission on Achieving Necessary Skills (1991), directors and supervisors support incorporating career-oriented concepts into middle-grade core courses. Support for incorporating the concepts into core courses and for teaching the concepts in specific courses indicate a need for curriculum materials that can be utilized by core teachers and for materials specific to career-oriented courses.

Views expressed by the directors and supervisors and in the related literature (Brazee & Smalley, 1982; Rossetti et al., 1992) regarding competitive activities at the middle-grade level should guide educators and student organization leaders as they plan programs for early adolescents. Based on the literature and on the opinions of the respondents, competition should not be a primary focus of middle-grade VSOs. However, competitive activities that are part of the organizations should primarily involve team activities with opportunities for as many students as possible to participate. If

competition is included in middle-grade VSOs, state supervisors and leaders of student organizations should develop activities and reward systems that are appropriate for early adolescents.

Directors and supervisors are generally in agreement on issues related to career-oriented programs at the middle-grade level. In order to continue the development of programs that are effective and appropriate for early adolescents, state-level vocational education administrators must be unified in their efforts. The base of these efforts is apparently in place as indicated by the similar perceptions and opinions expressed by the respondent groups.

The support of state vocational education agencies, directors, and supervisors for middle-grade career-oriented programs bodes well for the future of the programs. Educators should use the information provided by this study as evidence of support for the programs at the state level and as a means of securing support at the local level.

Because career-oriented education at the middle-grade level is still a relatively new concept, much research and philosophical thought are needed to guide the development of programs. Educators need sound information on which to make decisions regarding middle-grade educational practices. Continued research efforts in this area are essential to providing career-oriented programs that effectively meet the needs of early adolescents.

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Summary of Research Series

Career-oriented programs have been developed at the middle-grade level to promote early adolescents' understanding of the world of work. Because beliefs and perceptions of administrators within an educational organization influence decisions related to the programs and philosophy of that organization, it is necessary that individuals charged with developing and implementing middle-grade educational programs understand state-level administrators' beliefs and perceptions pertinent to those programs. This study reports research that examines the status of career-oriented education programs at the middle-grade level and the perceptions of state education agency officials who have responsibilities in the program areas. It should be of interest to vocational education teachers, local administrators, state supervisory staff, and teacher educators.

This summary is based on a dissertation by Matthew Hughes under the direction of R. Kirby Barrick. Matthew Hughes was a graduate student in the Agricultural Education Department at The Ohio State University. Dr. Barrick is Professor and Chair, Department of Agricultural Education, The Ohio State University and Matthew Hughes is now a Vocational Education Planning District Liaison with the Ohio Department of Education. Special appreciation is due to Curtis Borne, Fort Valley State College; Alfred J. Mannebach, University of Connecticut; M. Susie Whittington, University of Idaho; and J. Robert Warmbrod, The Ohio State University for their critical review of the manuscript prior to publication.

Research has been an important function of the Department of Agricultural Education since it was established in 1917. Research conducted by the Department has generally been in the form of graduate theses, staff studies, and funded research. It is the purpose of this series to make useful knowledge from such research available to practitioners in the profession. Individuals desiring additional information on this topic should examine the references cited.

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