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MIDDLE SCHOOL VOCATIONAL TEACHERS' KNOWLEDGE OF THE CHARACTERISTICS OF AT-RISK LEARNERS

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Abstract

The purpose of this study was to determine middle grade vocational teachers' knowledge of the characteristics of at-risk learners; whether groups of teachers (business education, family and consumer science education, technology education) differ significantly on the variables studied. The sample included 392 middle grades (5 - 8) vocational teachers in the state of Georgia. A two-page questionnaire consisting of 19 items was mailed to the participants. Data analysis involved the use of descriptive and inferential statistics. The findings revealed that overall the middle grades teachers had considerable knowledge of the characteristics of at-risk learners. Respondents were able to identify the characteristics of the at-risk learners as reading below grade level, being older than their peers, excessive absenteeism, and lack of involvement in extracurricular activities. The areas where the teachers displayed the least knowledge were grade level attained by most dropouts, when the highest incidence of dropping out occurs, number of grades failed by dropouts, range of dropout IQ, and teachers' success rate for convincing dropouts to return to school. There was no difference in teachers' overall knowledge of the

characteristics of at-risk learners based on subject matter taught.

At-risk is a term of American education attached to several groups of students who have experienced difficulty or failure in their careers as learners (Presseisen, 1991). At-risk youth have been defined as children and adolescents who are not able to acquire and/or use skills necessary to develop their potential and become productive members of society (Redick & Vail, 1991). According to Kleese and D'Onofrio (1994), youth at risk could mean a young person who is chemically dependent, a runaway, suicidal, pregnant, economically disadvantaged, a minority, or a school dropout.

Practically every attempt to define or describe *at-risk* youth includes the term *dropout*, and the problem of the school dropout is not a new one. According to Walters and Kranzler (1970), a report on dropouts was presented at the first national guidance convention in Grand Rapids, Michigan, as early as 1913. Today, dropouts, students who leave school as early as the law permits and without benefits of diploma or graduation, remain the most visible at-risk population (Presseisen, 1991). National Education Goal 2 is to increase the high school graduation rate to at least 90 percent. There are high costs of dropping out both to individuals and society. According to recent estimates, each dropout represents an average loss of \$58,930 in federal and state income taxes during the course of a lifetime@ (Imel, 1993, p. 1). Weber suggested (as cited in Imel, 1993) that many of the characteristics of instruction in vocational education such as its hands-on, performance-oriented approach; its connection to the workplace; and its emphasis on individual and small-group activities make it an effective mechanism for increasing high school graduation rates. However, is vocational education being used as such a mechanism?

Middle school is a critical time for at-risk learners in terms of whether they stay in school or drop out at a later date. Most authors have agreed that early identification of at-risk students is a necessary component of any dropout prevention program (Trusty & Dooley-Dickey, 1991). Many educators have adapted a proven program from the business world for use with students known as Student Assistance Program (SAP). Although SAPs were designed to intervene with chemically dependent high school students, school districts have been recently expanding SAPs services to the middle school and elementary school levels (Dykeman, 1994). Seven services are offered by SAPs, the first one being identification of at-risk students (Cooley, Emert as cited in Dykeman, 1994). During middle school, students are forming opinions and making decisions that can greatly affect their futures. Educators have a responsibility to learn more about at-risk youth (Brooks & Coll, 1994). Educators must first understand the family systems and dynamics that produce at-risk children. Educators must also be able to identify and understand the characteristics of at-risk children. With this knowledge, educators can begin to understand and develop possible intervention and helping strategies and, therefore, make a difference in the lives of their students (Brooks & Coll, 1994). Early identification of at-risk learners provides educators an opportunity to make a significant difference for those at the greatest risk (Kraizer, Witte, Fryer, & Miyoshi, 1993) such as those who drop out of school. Once identified, these students can receive special help that will encourage them to remain in school. For example, effective intervention programs for at-risk students indicate that such students respond positively to an environment that combines a caring relationship and personalized teaching with a high degree of program structure characterized by clear, demanding, but attainable expectations (Wehlage & Rutter, 1986).

Purpose and Objectives

The purpose of this study was to determine middle school vocational teachers' knowledge of the characteristics of at-risk learners. The study was designed to assess middle school vocational teachers' ability to identify the characteristics most commonly held by students who are at risk for dropping out of school. Objectives of the study were to (a) identify middle school vocational teachers' knowledge of the characteristics of at-risk learners and (b) determine whether groups of middle school vocational teachers (*business education, family and consumer sciences, technology education*) differ significantly on the variables studied.

Review of Related Literature

In the late 1980s the reform movement in American education began to place greater emphasis on schools assisting youth in moving successfully from high school into the labor force. Accordingly, educators are confronted by a major challenge--how to appropriately address the needs of at-risk youth, especially potential dropouts. Brooks and Coll (1994) suggested that interventions consist of first identifying the at-risk youth. Identification methods the researchers suggested were record keeping of problematic behavior in school, teacher observations and referrals, friend and student referrals, parents, and the legal system. Much of the literature suggests that early identification of at-risk youth is a necessary component of any dropout prevention program, and a variety of identification methods have been used.

Most educators would agree that teachers' expectations of students affect student performance (Robinson, 1992). Similarly, the knowledge that a student is considered "at-risk" can cause negative behaviors by teachers, such as sitting farther away from at-risk students, asking them to do less work, and rewarding them for inappropriate behavior (Lehr & Harris, 1988). At-risk students often do not learn because they have little hope for success. Therefore, teachers need to restructure the way they teach at-risk students and focus more on changing their own attitudes than on covering material the students are not learning anyway (Curwin, 1994). Curwin offered ten suggestions for teachers to help at-risk students develop positive attitudes about learning. Of the ten suggestions, three are particularly relevant: (1) provide learning tasks that are not too easy, (2) make students feel welcome in school and in classrooms, and feel they belong in school, and (3) make a personal connection to a student. However, none of these strategies are useful to a teacher who is unable to identify students at-risk. Davidow (1994) suggested that school psychologists need to understand their own biases and how those biases might limit their choices of interventions. This suggestion may also be of value to teachers when working with at-risk students.

Vocational educators must recognize that there are effective programs focusing on the needs of at-risk youth, and that a primary responsibility is to be able to recognize a student at-risk. However, once at-risk students are identified early interventions must occur. Project ACHIEVE is one such intervention program. Project ACHIEVE has six primary goals, several of which specifically address the role and function of the teacher. Of particular interest is the project's first goal, "to enhance the problem-solving skills of teachers such that effective interventions for social and academic difficulties of at-risk students were developed and implemented" (Knoff & Batsche, 1994). Needs assessments to determine local needs and priorities, retrospective identification methods involving analysis of local or national data, computer databases for tracking students, and instruments such as the Dropout Alert Scale are among the methods used to identify at-risk students (Trusty & Dooley-Dickey, 1991).

In 1987 Mizell offered a guide for identification of students meriting dropout prevention initiatives. Age in comparison to grade, standardized test performance, retention history, subject failure, tardiness, truancy, and excessive absences history are among a checklist of 21 criteria provided in Mizell's risk assessment instrument. Similar identification criteria were determined by the Virginia State Department of Education (1993) including standardized test scores, overall poor academic performance, frequent absences, and a history of delinquency.

A document developed to assist Rhode Island schools in dealing with youth at risk of school failure identifies characteristics of at-risk students in four categories--academic, school/social, home/social, and personal/social (Phlegar & Rose, 1988). Low basic skills test performance was determined as an academic characteristic of at-risk youth. The age of at-risk students, one or more years older than other students in the same grade, was the most significant school/social predictor. Home/social characteristics included families in lower economic levels and unstable homes. Students employed in a job that interferes with school was identified as a personal/social characteristic of at-risk students.

The recent national attention on at-risk youth and school reform has led to extensive efforts to identify characteristics of at-risk learners. With this information available, educators should be better able to identify at-risk youth and engage in intervention strategies. Soderberg (1988) conducted a study to determine educators' knowledge of the characteristics of high school dropouts. Regular and special education teachers and administrators from San Diego-area elementary, junior high, middle, and high schools were queried.

Findings suggested that overall, teachers and administrators have the knowledge necessary to effectively identify potential dropouts before they leave school. However, are vocational teachers knowledgeable about the characteristics most commonly held by students who are at risk of dropping out of school?

Procedures

An instrument was adapted from Soderberg (1988) and was used to assess middle school vocational teachers' knowledge concerning characteristics of at-risk learners. The instrument contained 19 items which were identified as characteristics of at risk learners and 3 items related to demographic information. A list of 600 middle school vocational teachers (business = 137, family and consumer science = 246, and technology education = 217) was obtained from the State Department of Education and served as the convenience sample for the study. The teachers were considered middle school teachers if they taught any students in grades five through eight. Each middle school teacher was sent a copy of the instrument and a self-addressed, stamped envelope. A follow-up mailing including another copy of the instrument was sent to nonrespondents after three weeks. Three hundred ninety-two participants responded with useable instruments for a final response rate of 65.3%. The respondents had a range of teaching experience from 1 to 36 years with a mean of 12.5 years.

Analysis of Data/Results

Data analysis involved the use of descriptive and inferential statistics. Using a review of the literature, the correct answer was determined for each item. To identify middle school vocational teachers' knowledge of the characteristics of at-risk learners, instruments were scored using the answer key, and the percentage of correct responses for each item was calculated (Table 1). Overall, the middle school vocational teachers had considerable knowledge of the characteristics of at-risk learners. Fifty percent or more of the sample indicated correct responses on 13 of 19 of the items, and the average for all items was approximately 66% correct. The teachers demonstrated considerable knowledge, i.e., correct responses by 90% or more of the respondents, on 4 items related to dropout characteristics that they read below grade level (92%), are usually older than their peers (94%), usually have more absenteeism (98%), and participate in no extracurricular activities (96%). The areas where the teachers displayed the least knowledge were grade level attained by most dropouts (36%), when the highest incidence of dropping out occurs (29%), grades failed by dropout (25%), range of dropout IQ (42%), and teachers' chances to encourage dropouts to stay in school (19%).

Insert Table 1 about here

Thirty-six percent ($N = 143$) of the respondents correctly identified the 10th grade as the grade level when the majority of students drop out; 40% ($N = 157$) indicated the 9th grade, 6% ($N = 25$) indicated the 8th grade, and 7% ($N = 28$) indicated the 11th grade (see Table 2). Thirty-nine (10 %) did not answer the item. Only 29% ($N = 114$) of the respondents correctly identified the summer vacation as the period when the highest incidents of dropping out occur. The second most frequent times for students to drop out are after Christmas vacation (identified by 12%) and after the first report card (identified by 42%), 8% ($N = 30$) indicated during spring break, and 9% ($N = 34$) did not respond. Twenty-five percent ($N = 98$) of the respondents indicated correctly that before dropping out, a student will usually have failed one grade. The majority 73% ($N = 286$) chose failed more than one grade, 1% ($N = 4$) chose at grade level, and 1% ($N = 3$) did not respond to this item. The final item of the instrument which was answered incorrectly by a majority of the respondents was, "If you personally contacted a dropout what chance would you have of encouraging them to return to school?" Seventy percent ($N = 273$) said a 15% - 30% chance; yet research has demonstrated that teachers actually have a 40% - 60% chance (identified by only 19% of this sample).

Insert Table 2 about here

Analysis of Variance (ANOVA) was used to determine whether groups of middle school vocational teachers (business, family and consumer science, and technology) differed significantly on overall knowledge of characteristics of at-risk learners. Results indicated that there was no significant difference ($F = .304, p < .05$) in teachers' overall knowledge of at-risk learners based on subject matter taught. Chi Square analysis of

individuals items revealed no significant difference in knowledge for 18 of the 19 items. However, family and consumer science teachers were significantly different from the other two groups on the characteristic--the number one reason that girls drop out is pregnancy (Table 3). Family and consumer science teachers were more likely to know that correct answer.

Insert Table 3 about here

Conclusions and Recommendations

The results indicated that this group of middle school vocational teachers had a good foundation of knowledge of the characteristics of students at risk of dropping out of school. This knowledge can help them identify and assist potential high-risk students. Respondents were able to identify the characteristics of the at-risk learners as reading below grade level, being older than their peers, excessive absenteeism, and lack of involvement in extracurricular activities. Data indicated that the teachers had a negative or pessimistic view of their ability to encourage a dropout to return to school.

When considering current education reform measures and higher standards in public schools, the need for educators to be able to identify at-risk students becomes paramount. Effective programs that will retain and prevent failure of at-risk youth must be developed. In order to develop effective programs and strategies, vocational teachers must be able to identify at-risk youth. Results of this study suggest that, in general, these educators have the knowledge necessary to effectively identify potential dropouts. However, areas where a lack of knowledge was identified suggest a need for continued development of teacher knowledge of at-risk learners. Based on the findings of this study, areas to be targeted for professional development should include grade level attained by most dropouts, when the highest incidence of dropping out occurs, number of grades failed by dropouts, range of dropout IQ, and teachers success rate for convincing dropouts to return to school.

The teachers belief that they would have little effect on encouraging a dropout to return to school was consistent with findings reported by Soderberg (1988). As she suggested, "If teachers . . . do not believe that they can be successful, it is likely that they will not attempt to assist these students" (p. 114). The literature suggests knowledge that a student is considered "At-risk" can cause negative behaviors by teachers, such as asking them to do less work (Lehr & Harris, 1988). Perhaps the teachers belief that they would have little effect on encouraging a dropout to return to school should be included among the negative behaviors by teachers toward at-risk youth.

Vocational teacher education programs need to prepare middle school teachers to be able to identify students at risk of dropping out and to equip them with the knowledge and attitudes which will help them to be successful with this particular group of learners. Toward this end, it is recommended that middle school vocational teachers receive instruction necessary to help them understand that it does make a difference for a significant number of students when their teachers ask them to return to school. Middle school vocational teachers should also receive instruction about the methods considered most effective in contacting dropouts and encouraging them to return to school.

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Table 1
Overall Percent of Correct Responses to Individual Items

Item	Overall Correct	
	%	N
Dropout at age 16	72	(284)
Dropout in the 10th grade	36	(143)
Dropout during the summer	29	(114)
Dropouts usually have failed one grade	25	(98)
Dropout IQ range--80-110	42	(165)
Dropouts read below grade level	92	(361)
Dropouts are usually older than their peers	94	(367)
Dropouts usually have more absenteeism	98	(385)
Dropouts participate in no extracurricular activity	96	(378)
Dropouts tend to have more discipline problems	82	(323)
Disproportionate number of dropouts are male	76	(298)
Disproportionate number of dropouts belong to a racial or ethnic minority group	60	(234)
Disproportionate number of dropouts attend public school	82	(323)
Girls dropout because of pregnancy	74	(290)
Significant factor--over age for grade level	49	(193)
Significant factor--low reading skills	65	(256)
Parents of dropouts--lower socioeconomic class	88	(346)
Parents of dropouts--low educational expectations for their children	86	(336)
Teachers chances to personally encourage a dropout to return to school	19	(76)

Note: $N = 392$.

Table 2
Assessment of Teachers' Knowledge About the Characteristics of At-Risk Learners

Item	Choices	N	%
2. At what grade level do the majority of students dropout?	8th	25	6
	9th		
	10th *	157	40
	11th	143	36
	no response	28	7
		39	10
3. The highest incidence of dropouts will occur. . .	• during Christmas break	48	12
	• during summer vacation *	114	29
	• after the first report card	166	42
	• during spring break	30	8
	• no response	34	9
4. Before dropping out, a student will usually . . .	• be at grade level	4	1
	• have failed more than 1 grade	286	73
	• have failed one grade *	98	25
	• no response	3	1
17. If you were to personally encourage a dropout to return to school, what chances would you have of success?	• No chance	26	6
	• 15-30%		
	• 40-60% *	273	70
	• 70-90%	76	19
	• no response	10	3
		7	2

Note: * Indicates correct answer.

Table 3
Teachers Knowledge of the Reason Girls Drop Out of School

	<i>Technology Education</i>	<i>Business Education</i>	<i>Family & Consumer Sciences</i>
<i>Incorrect</i>	<i>N = 35</i>	<i>N = 33</i>	<i>N = 32</i>
<i>Correct</i>	<i>N = 89</i>	<i>N = 61</i>	<i>N = 142</i>
	124	94	174

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