Abstract
Low employment and underemployment rates for students with disabilities have drawn national attention resulting in federal legislation. The research literature indicates a strong relationship between job success and interpersonal factors, especially for employees with disabilities. This study investigated social skills and problem behaviors of general and special education career and technical education students using the Social Skills Rating System instrument. Findings indicated that social skills and problem behaviors were not addressed in the individual transition plans, a statistically significant difference was found between general and special education students on empathy, and employers rated special education employees higher on cooperation.

Introduction
The number of youth who are becoming unemployed or underemployed has been a concern for educators for much of the 20th century (Oakland, 1992). Estimates of unemployment rates for persons with disabilities vary between 50 to 75%, as compared to a 7.5% rate for persons without disabilities (Digest of Education Statistics, 2000). Statistics such as those mentioned above have led teachers, counselors, families, and other personnel to push for legislation to ensure the educational rights of individuals from special populations. Individual planning for employment for individuals with disabilities as prescribed in the legislation and accompanying regulations developed into transition services programs. (Binkley & Patton, 1996).

The Vocational Education Act (P.L. 88-210; 1963) was the capstone for a career and technical education movement. This act recognized that persons with special needs required help in order to reach success in regular technical education programs. In 1968, The Vocational Education Amendments (P.L. 90-576; 1968) were passed. This placed further emphasis on the need to provide technical education experience for students with special needs. The next major vocational act was the Carl D. Perkins Vocational Education Act (P.L. 98-524; 1984). This Act had two broad themes: to make career and technical education programs available to students; and improve the quality of technical education programs to give the nation’s workforce the skills needed to increase productivity and promote economic growth.

In 1990, The Carl D. Perkins Vocational and Applied Technology Education Act (P.L. 101-392; 1990) amended the Carl D. Perkins Vocational Act and emphasized the development of programs to better prepare public school students for work; covering services for individuals from special populations. This act defined special populations as individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for nontraditional training and employment; single parents, including single pregnant women; displaced homemakers; and individuals with other barriers to educational achievement, including individuals with limited English proficiency. States were required to ensure equal access and provide supplementary services for these students. Also in 1990, Congress amended the Education of All Handicapped Children Act (P.L. 94-142; 1975). This new law, renamed the Individuals With Disabilities Education Act (IDEA) (P.L. 101-476; 1990) expanded the definition of special education to include instruction in the workplace and training sites. Consequently, schools had to assume a leadership role in the development of transition plans for students. These plans are implemented through the Individual Education Plan (IEP) process, and place greater emphasis on career development instead of remedial education (Binkley, 1998).

In 1991, the U.S. Department of Labor published What Work Requires of Schools: A SCANS Report for America 2000, the Secretary’s Commission on
Achieving Necessary Skills (SCANS) identified the skills needed for productive and meaningful employment. The report stated that all students going directly to work after high school and those planning further education needed preparation in areas of foundation skills, personal qualities and competencies. Not only do students need basic skills such as reading, writing, mathematics, speaking and listening, but the report listed seven other skills and competencies identified by SCANS. One of these competencies was interpersonal skills. Interpersonal skills includes the ability to work on teams, to teach others, to serve customers, to negotiate, and to work well with people from culturally diverse backgrounds.

In 1994, The School to Work Opportunities Act (STWOA) (P.L. 103-239; 1994) was passed. The STWOA provided states and local school systems incentives to build systems that would help all students prepare for, and make, the transition from school to work, postsecondary education, or advanced training. The STWOA called for partnerships between secondary schools, colleges, employers and the community. By working together, partnership bridges were to be built between the classroom and the workplace, academic and vocational learning, and the high school and post secondary training. Moreover, students were to be coupled with community services to ensure that a successful transition from school to work took place (Krieg, Brown, & Ballard, 1995).

The STWOA made specific reference to students with disabilities, recognizing the importance of including these individuals in school to work initiatives. Students with disabilities and their parents consider career and technical education an important part of the preparation for an independent life. The career and technical education programs help to identify those skills needed to be successful in the world of work. Sitlington (1996) has shown a strong relationship between job success and interpersonal factors for students with disabilities. Conversely, it is well documented that there is a strong relationship between a lack of social skills and unsuccessful employment for persons with disabilities (Black, 1996; Chadsey-Rusch, 1992; Elksnin, Elksnin, & Sabornie, 1994). A growing body of research supports the assertion that students with disabilities are not as advanced as their nondisabled peers in many interpersonal skills including the interpretation of social situations (Sabornie & Beard, 1990).

In 1997, the Individuals with Disabilities Education Act Amendments of 1997 (P.L. 105-17; 1997) were passed, strengthening the academic expectations and accountability for the nation’s 5.8 million children with disabilities. The Act helped bridge the gap that had existed between what youth with disabilities learn and what is required in the regular curriculum (Yell & Shriner, 1997). The legislation broadened the concept of transition to include community experiences, development of employment and other postschool adult living objectives, and acquisition of daily living skills and functional career evaluation when appropriate (Frank & Sitlington, 1997; IDEA, 1997; Yell & Shriner, 1997).

Binkley (1998) surveyed 29 employers to find out which social skills are important to obtain and retain employment. This study found two social skills were consistently rated in the top five most important social skills to obtain and retain employment; (a) attends to instruction and (b) complies with directions. Forness & Kavale (1996) suggest students with learning disabilities have problems following instructions and directions due to the students’ own perception of their abilities. The students often are not accepted by their peers, which can lead to having fewer chances of interaction with them.

Most recently, the federal government authorized and funded a National Longitudinal Transition Study (NLTS) to provide a methodologically sound benchmark for evaluating the postschool outcomes of special education programs. From this study, Wagner, Blackorby, Cameto, and Newman (1993) reported that recent special education graduates had poor job reten- tion rates with several employment positions of short duration). In another recent study, Blackorby and Wagner (1996) reported the percentage of competitively employed youth categorized by disability characteristics. They found 70% of youth with learning disabilities, 47% of youth with serious emotional disturbance, and 37% of youth with mental retardation, who were out of school 3 to 5 years, were competitively employed. Wagner, Blackorby, Cameto, Hebbeler, and Newman (1993) found that 54% of students with disabilities were out of school for up to two years and unemployed, while 43% of those out of school up to 5 years were not employed.

Research has documented individuals with mental retardation lack social competence, which poses a major obstacle to successful employment (Chadsey-Rusch, 1992). In addition, research has shown co-workers’ perceptions of a workers’ competence does include nontask related social skills for persons with mental retardation (Butterworth & Strauch,
1994). Also the students’ inappropriate social behavior is the major factor of job loss for students with disabilities (Elksnin, Elksnin, & Sabornie, 1994). Therefore, social skills and problem behavior related to employment of students with disabilities needs to be further researched and understood.

The present study performed a content analysis of students with disabilities’ individual transition plans to see what types of specific social skills and/or problem behavior goals had been delineated for the students. The study also compared the self-reported social skill ratings of career and technical education students with and without disabilities, and compared the teachers and employers’ ratings of career and technical education students’ social skills and problem behaviors.

Methodology

Participants

Forty-eight (48) career and technical education students participated in this study. The participants were in grades nine through twelve from two high schools in Denton County, Texas. Twenty-four (24) students without disabilities were from the general education career and technical education program, and twenty-four (24) students were from the special education career and technical education program. The special education career and technical education students were characterized as learning disabled. The author met with the general education students and the special education students as two separate groups in their classrooms at two different high schools. Career and technical education teachers from the participating schools met with the author in the faculty conference rooms at the high schools, while the author met with the individual student employers from the Denton County area at their place of work.

Instrumentation

The author recorded any social skill and problem behavior of students noted on their individual transition plans (ITPs). In addition, the Social Skills Rating System (SSRS) instrument was used to collect data on the social skill and problem behaviors of participants (Gresham & Elliot, 1990). The SSRS is a standardized, norm-referenced instrument designed to provide professionals with a means to screen and classify student social behavior. Gresham and Elliot reported internal consistency and test-retest reliability coefficients for scores obtained from the SSRS. Coefficient alpha for all forms ranged from .83 to .94, test-retest coefficients for teacher ratings were .85, and student self-ratings were .68.

In regard to validity, the authors addressed content, criterion, and construct validity in the SSRS manual. Content validity was demonstrated by indicating that the SSRS items were developed based on extensive research and supported by standardization analyses. Criterion validity was established by showing how the SSRS correlated significantly with other similar measures. Finally, the results of construct validity studies and the consistent findings of the SSRS suggest strong evidence in support of construct validity.

The Social Skills Rating System-Student (Gresham & Elliot, 1990), a secondary level student version, was used to obtain self-report social skill measures from students on four subscales, i.e., cooperation, assertion, self-control, empathy, which combine to yield a total social skill score from 39 items. Social skill scores can range from 0 to 78. Separate standardized tables are provided for interpreting elementary and secondary females and males’ social skill scores. A higher score reflects above average social skills, while a lower score indicates below average social skills.

The Social Skills Rating System-Teacher (Gresham & Elliott, 1990), a secondary level teacher version, was used to obtain teacher and employer ratings of the career and technical education student’s social skills and problem behaviors. The social skills score was obtained by combining three subscales, i.e., cooperation, assertion, and self-control, for a total of 30 items. The social skills score can range from 0 to 60. A higher score reflects above average social skills, while a lower score indicates below average social skills. The problem behavior score is obtained by combining two subscales, i.e., external and internal, for a total of 12 items. The problem behavior score can range from 0 to 24. A higher score indicates problem behavior proneness, while a lower score indicates acceptable behavior. Given the opposite scaling for social skill scores and problem behavior scores on the SSRS-T, one should expect a negative correlation between the two sets of scores. This would imply that acceptable behavior correlates with above average social skills.

Research Questions

Four research questions directed the study of social skills and problem behaviors of general and special education career and technical education students. The research questions were:

- Does a content analysis of the special education students’ ITP reveal social skills and problem behaviors?
- Is the mean social skill score for the general education students significantly higher than the mean social skill score for the special education students?

- Do employers and teachers in career and technical education differ significantly in their social skills and problem behavior ratings of general education students?

- Do employers and teachers in career and technical education differ significantly in their social skills and problem behavior ratings of special education students?

**Procedures**

Approval for conducting the study was obtained from the school districts in which both high schools were located. Teacher and employer approvals were obtained for the study. A list of career and technical education students was obtained from the main office of each high school where confidentiality was maintained. Students were mailed an informed consent letter, a parent permission form, and a student permission form. Students were given a two-dollar monetary incentive if they returned both the parent and student permission forms within a week. The author met with the general education students as two separate groups in their respective classrooms at each high school to administer the SSRS-S. The SSRS-S took approximately 30 minutes to complete. When the general education career and technical education students finished, the forms were collected and scored by hand. The names, locations, and contact persons for each of the student’s employers were obtained. The general education students indicated employment at a total of 25 businesses.

The author administered the SSRS-S to the special education career and technical education students as two separate groups in their classrooms at the high schools. The SSRS-S forms (Gresham & Elliott, 1990) were read to the special education students by the author to allow the students to ask questions concerning unfamiliar words. When the special education career and technical education students finished, the forms were collected and scored by hand. The names, locations, and contact persons for each of the student’s employers were obtained. The special education students indicated employment at a total of 25 businesses.

Career and technical education teachers who participated in the study were given the SSRS-T to complete for each student in their classes who had participated in the study. The teacher assessed the student on 30 social skills and 12 problem behavior items. Career and technical education teachers received five dollars for each completed SSRS-T (Gresham & Elliott, 1990). Teachers were given one week to complete the student assessments.

Each student informed his or her respective employer that they were participating in a research study. The author visited the students’ place of employment and had the employer/supervisor read and sign an informed consent letter. The employer/supervisor was then given a copy of the SSRS-T and asked to assess the 30 social skills and 12 problem behavior items based upon their observance of the student employee. Although the instrument was designed for teachers, each employer was informed that they would need to view the form as if it were based on employment factors, e.g., coworker equals peer and classroom equals workplace. Each employer received five dollars for completing the SSRS-T instrument.

**Table 1**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Cooperation</th>
<th>Assertion</th>
<th>Self-Control</th>
<th>Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Students</td>
<td>.70</td>
<td>.69</td>
<td>.70</td>
<td>.79</td>
</tr>
<tr>
<td>Special Education Students</td>
<td>.86</td>
<td>.74</td>
<td>.61</td>
<td>.72</td>
</tr>
<tr>
<td>Teachers</td>
<td>.92</td>
<td>.84</td>
<td>.92</td>
<td>n/a</td>
</tr>
<tr>
<td>Employers</td>
<td>.90</td>
<td>.79</td>
<td>.83</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Findings
The internal consistency reliability coefficients (Cronbach Alpha) for the SSRS-S and SSRS-T by participants are presented in Table 1. The reliability coefficients are consistent with those reported in the inventory manuals and related research literature.

The internal consistency reliability coefficients (Cronbach Alpha) for the SSRS-T problem behavior subscales by participant are presented in Table 2. These reliability coefficients are consistent with those reported in the inventory manuals and related research literature.

A content analysis of individual transition plans (ITP) for the special education career and technical education students revealed none of the transition plans indicated any social skills or problem behaviors that needed to be addressed. This finding implies a lack of awareness and concern for placing social skills and problem behaviors in transition plans of special education students.

An independent t-test of the mean differences between general and special education students on the SSRS-S indicated no statistically significant difference (t = 1.17, df = 46, p = .27). A Levene’s test of equal variances (F = 1.25, p = .27) was nonsignificant, so equal group variances were assumed.

An independent t-test of the mean differences between general and special education students on problem behaviors indicated no statistically significant difference (t = 1.79, df = 44, p = .08). A Levene’s test of equal variances (F = .01, p = .98) was nonsignificant, so equal group variances were assumed.

A two-group multivariate analysis of variance for mean differences between general and special education students on SSRS-S subscales (assertion, cooperation, empathy, and self-control) was statistically significant (F = 2.52, df = 4,42, p = .05) indicating at least one of the subscale mean differences was significant. The SSRS-S subscale means, standard deviations, and univariate F-tests are reported in Table 3. The general education students reported a higher mean empathy score than the special education students (F = 7.08, df = 1,45, p = .01, h² = .14). The Levene tests were nonsignificant, so equal variances between the groups were assumed for all univariate F-tests.

An independent t-test of the mean differences between teachers and employers of general education students on the SSRS-T indicated no statistically significant difference (t = -1.36, df = 44, p = .18). A Levene’s test of equal variances (F = .02, p = .90) was nonsignificant, so equal group variances were assumed.

A two-group multivariate analysis of variance for mean differences between teachers and employers of general education students on SSRS-T subscales (assertion, cooperation, and self-control) was not statistically significant (F = .76, df = 3,42, p = .53). The SSRS-T subscale means, standard deviations, and univariate F-tests are reported in Table 4. The Levene tests were nonsignificant, so equal variances between the groups were assumed for all univariate F-tests.

A two-group multivariate analysis of variance for mean differences between teachers and employers of general education students on problem behavior subscales (external, internal) was not statistically sig-

### Table 1
**Problem Behavior Subscale Score Reliability**

<table>
<thead>
<tr>
<th>Participant</th>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>.89</td>
<td>.80</td>
</tr>
<tr>
<td>Employers</td>
<td>.81</td>
<td>.74</td>
</tr>
</tbody>
</table>

### Table 2
**SSRS-S Subscale Means, Standards Deviations, and Univariate F-tests**

<table>
<thead>
<tr>
<th>Social Skills Subscales</th>
<th>General M</th>
<th>Special M</th>
<th>Univariate F</th>
<th>p</th>
<th>n²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertion</td>
<td>13</td>
<td>12</td>
<td>1.25</td>
<td>.27</td>
<td>.03</td>
</tr>
<tr>
<td>Cooperation</td>
<td>15</td>
<td>12</td>
<td>.17</td>
<td>.68</td>
<td>.01</td>
</tr>
<tr>
<td>Empathy</td>
<td>17</td>
<td>14</td>
<td>7.08</td>
<td>.27</td>
<td>.01</td>
</tr>
<tr>
<td>Self-Control</td>
<td>11</td>
<td>11</td>
<td>.01</td>
<td>.98</td>
<td>.001</td>
</tr>
</tbody>
</table>

### Table 3
**SSRS-S Subscale Means, Standards Deviations, and Univariate F-tests**

<table>
<thead>
<tr>
<th>Social Skills Subscales</th>
<th>General M</th>
<th>Special M</th>
<th>Univariate F</th>
<th>p</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>15</td>
<td>12</td>
<td>.17</td>
<td>.68</td>
<td>.01</td>
</tr>
<tr>
<td>Empathy</td>
<td>17</td>
<td>14</td>
<td>7.08</td>
<td>.27</td>
<td>.01</td>
</tr>
<tr>
<td>Self-Control</td>
<td>11</td>
<td>11</td>
<td>.01</td>
<td>.98</td>
<td>.001</td>
</tr>
</tbody>
</table>

The Journal for Vocational Special Needs Education
significant (F = 1.79, df = 2.43, p = .18). The subscale means, standard deviations, and univariate F-tests are reported in Table 5. The Levene tests were nonsignificant, so equal variances between the groups were assumed for all univariate F-tests.

A two-group multivariate analysis of variance for mean differences between teachers and employers of special education students on SSRS-T subscales (assertion, cooperation, and self-control) was statistically significant (F = 2.59, df = 2.42, p = .05) indicating that at least one of the subscale mean differences was statistically significant. The SSRS-T subscale means, standard deviations, and univariate F-tests are reported in Table 6. The Levene tests were nonsignificant, so equal variances between the groups were assumed for all univariate F-tests. Findings indicated that employers rated special education vocational students higher on average in cooperation than teachers (F = 4.57, p = .04, h² = .09).

An independent t-test of the mean differences between teachers and employers of special education students on problem behaviors indicated no statistically significant difference (t = 1.50, df = 46, p = .14). A Levene’s test of equal variances (F = .01, p = .92) was nonsignificant, so equal group variances were assumed.

A two-group multivariate analysis of variance for mean differences between teachers and employers of special education students on problem behavior subscales (external, internal) was not statistically significant (F = 1.32, df = 2.45, p = .28). The subscale means, standard deviations, and univariate F-tests are reported in Table 7. The Levene tests were nonsignificant, so equal variances between the groups were assumed for all univariate F-tests.

Conclusions
This study was conducted to analyze special education students’ specific ITP-related social skills and problem behaviors,
Teachers and employers rated special education career and technical education students on assertion, cooperation, and self-control subscales of the SSRS-T. Employers rated special education students significantly higher than the teachers on the cooperation subscale. This finding pointed to an important distinction related to special education students desire to be more cooperative and not disruptive in the workplace than general education students.

In the review of literature, the connection between social skills and vocational education has been clearly established. In transitioning students from school-to-work, it is important that social skill, problem behaviors, and vocational education be addressed. Research indicates that youth with disabilities have difficulty finding and keeping a job.

To this end, transitional planning must be implemented in order to overcome these obstacles. The author further suggests that additional research is needed to establish the link between better social skills and job success. Follow-up studies could ascertain job longevity or retention, promotion, dismissal, and/or job transition related issues to determine if social skills training transfers to the employment setting. Finally, an evaluation of career and technical education programs that prepare students for the workplace could be conducted to determine whether these issues are being assessed.

**References**


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**Table 7**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Teacher M</th>
<th>Teacher S</th>
<th>Employer M</th>
<th>Employer S</th>
<th>Univariate F</th>
<th>p</th>
<th>n²</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>3.25</td>
<td>3.29</td>
<td>2.08</td>
<td>2.80</td>
<td>1.75</td>
<td>.19</td>
<td>.04</td>
</tr>
<tr>
<td>Internal</td>
<td>3.79</td>
<td>2.48</td>
<td>2.83</td>
<td>2.30</td>
<td>1.93</td>
<td>.17</td>
<td>.04</td>
</tr>
</tbody>
</table>


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