Comparing Inclusion in the Secondary Vocational and Academic Classrooms: Strengths, Needs, and Recommendations

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Abstract

Secondary schools continue to face significant challenges as they work to support increasing numbers of students in inclusion settings. Career and Technical Education (CTE) high schools have typically offered students with special needs valuable learning opportunities. Nevertheless, little research has been done to identify the strengths and needs of inclusive instruction in these vocational settings. In a qualitative study, three data sources—observation, consultation, and surveys—were used to compare the strengths and weaknesses of inclusion in academic classrooms and CTE/vocational classrooms. Based on findings, recommendations to support inclusion in the CTE/vocational secondary school include: (a) increasing active learning in traditional academic classrooms; (b) providing basic skills support in all content areas; (c) increasing teachers' repertoire of strategies and modifications that support the performance of students with disabilities; (d) understanding special education laws, issues, and students; (e) enhancing co-teaching and collaboration among teachers; and (f) improving behavior management and community building.

Career and Technical Education (CTE) at the secondary level has always been an effective means for serving students with special education classifications. The success of these students has been determined by application and performance in an occupational skill (Fuertes, 1999). No Child Left Behind (NCLB, 2004) and the Individuals with Disabilities Education Act

(IDEA, 1997) have not eliminated occupational performance objectives but have added new requirements such as increased academic expectations and high-stakes testing (Fuertes, 1999; Gaona, 2004). These new expectations pose significant challenges for students with disabilities in vocational settings and for the teachers who serve them.

In the past, student achievement in the career and vocational setting was based on students' success in finding jobs they were trained for. This is no longer the case (Chadd & Drage, 2006; Gaona, 2004). If a student with disabilities participates in a vocational school program, he or she must be able to succeed simultaneously in both the academic and vocational aspects of the program. If the student is not successful in the academic portion of the school program, he or she might be sent back to community school, losing the opportunity to participate in vocation education offered in a CTE setting (Bisol, 2002; Gaona, 2004).

Although a host of literature identifies the challenges of secondary school inclusion, very little is reported specifically about inclusion in career and technical classrooms in a vocational high school setting. Career and technical high schools, sometimes referred to as votech or vocational schools, provide opportunities for students to study and work on careers related to technology or vocational skills as they pursue an academic high school diploma. In such schools, students simultaneously meet requirements for both career study and rigorous academic programs. Unlike comprehensive secondary schools, which offer a host of academic choices with college prep or other career prep opportunities, CTE/vocational high schools require students to study one vocational career path while meeting academic high school graduation requirements.

In order to support students with disabilities in CTE/vocational programs, it is important to examine inclusive instruction in these settings. I conducted a qualitative comparative study to identify the strengths and weaknesses of both academic and vocational inclusive classrooms. In this study, academic requirements were math, science, social studies, English, health, and foreign language. The research questions for this study were:

1. What are the strengths and weaknesses of inclusion academic classes in the vocational secondary school?
2. What are the strengths and weeknesses of the inclusion vocational classes in the vocational secondary school?
3. What are the unique elements of the vocational secondary community that support or hinder success of special education students in the inclusive setting?

Review of the Literature
Inclusion Challenges in Secondary Schools

No Child Left Behind (NCLB) and the Individuals with Disabilities Education Act (IDEA) increased the number of students with special education classifications in general education curriculum. Such legislation makes general education teachers accountable for the performance of students with special needs in their classrooms. General education teachers are expected to participate in Individual Education Program (IEP) meetings, planning, instruction, and evaluation of inclusion students (Chadd & Drage, 2006; Fuertes, 1999; Gaona, 2004; Kamens, Loprete, & Slostad, 2003). With the increasing numbers of students in special education participating in the general education curriculum, educators have worked to create effective means to educate diverse students in the inclusive classroom (Green & Giannola, 2011; Tomlinson, 1999).

Greater inclusion success has been reported at the elementary level because inclusion at the secondary level poses significant challenges. These challenges are: (a) high-level pace and content, (b) high expectations and weak student study skills, (c) increased content area instruction, and (d) increased demands for high-stakes testing and scheduling (Kozik, Cooney, Vinciguerra, Gradel, & Black, 2009; Mastropieri & Scruggs, 2001).

Other barriers for secondary school inclusion success have been identified as: (a) negative teacher attitudes, (b) lack of knowledge of special education issues and laws, (c) poor collaboration, (d) limited instructional repertoire, (e) poor assessments, (f) lack of administrative support, and (g) scheduling and planning time (Worrell, 2008). Often, teacher education programs have not prepared teacher candidates for the personal and professional challenges of secondary inclusion instruction (Dieker, 2007).

Adolescent Learner Needs in the Inclusion Classroom

The adolescent student learns best with active learning strategies that involve movement and other multi-modality instructional design (Bender, 2008). Teachers need to create multiple means of engagement to enhance learning in the inclusion classroom (Gore, 2010). Students with academic, behavioral, and communication needs often struggle to achieve cognitive acumen and peer acceptance in the general education classroom (Karten, 2009). Common characteristics of adolescents with disabilities placed in general education are: (a) poor academic achievements, (b) a passive approach to learning, (c) organizational and study skill deficits, and (d) motivational concerns (Hallahan & Kauffman, 2006; Sabornie & deBettencourt, 2009). Meeting the needs of adolescents in the classroom is not an easy task, and

meeting the needs of adolescents with disabilities in the inclusion classroom creates challenges for academic and technical secondary school programs.

Supporting Inclusion in CTE/Vocational Schools

Suggestions to support inclusion in secondary career and technical education include: creating a flexible curriculum and lesson plans integrating academics and CTE content areas; making real-world connections; and training and hiring teachers with knowledge of the vocational skills and special education (Bisol, 2002). Secondary education teachers should be able to identify and support individual student needs by understanding IEP information. Administrative support is also necessary to create a healthy climate for positive secondary school inclusion communities (Bolger, 2008; Chadd & Drage, 2006).

Other recommendations to support inclusion at the secondary level often relate to co-teaching and collaboration. Suggestions to improve performance in these areas are: (a) identifying student needs and support strategies by creating profiles; (b) ensuring teachers have shared communication, responsibility, and accountability; and (c) keeping class sizes manageable, with scheduled planning time (Carpenter & Dyal, 2007).

Methodology

Setting

This qualitative study was conducted over a 6-month period at two different vocational/technical high schools. Both schools accepted students from different surrounding areas based on acceptance to their specific career and technical education programs. One school was located in a suburban setting and had a population of 350 students. The other school was located in an urban inner-city location and had a population of more than 600 students. Sixty-seven classes were observed in the two schools. Thirty-seven academic classes and 30 CTE/vocational classes were observed. Academic inclusion classes observed included math, science, English, social studies, and health in both schools. One foreign-language class was observed in one of the schools. There were 14 co-teaching teams as well as one special education and one content area teacher in these classroom. Five health classes were observed—three in the urban school and two in the suburban school. These classes had only one instructor. CTE/vocational inclusion observations included lessons in: (a) web design, (b) horticulture/floriculture, (c) cosmetology, (d) business technology, (e) electronics, (f) carpentry, (g) public safety, (h) performing arts, (i) geographic information systems, (j) information technology, and (k) supermarket careers.

Participants

There were 55 participants in this study. Between the two schools, there were 15 content area teachers: five English teachers, four math teachers, three science teachers, two social studies teachers and one foreign language teacher. There were 11 special education teachers who supported content area teachers as co-teachers. Some special educators were paired with more than one teacher. There were 20 vocational teachers who participated as well as one learning consultant from each school, five district supervisors (four academic and one vocational), one child study team member. I acted as the inclusion consultant, and so I also participated in the study.

Procedures

Qualitative research methods were used in this research project. Participant observation was used as a framework for the study. I am a secondary and inclusion specialist who served as a consultant for the schools to observe, coach, and model effective inclusive strategies in two vocational/technical high schools. In order to explore and describe the instructional environment from the perspectives of multiple stakeholders, I assumed the role of participant observer. As a participant observer, I provided support and explored the context in both academic and vocational inclusive classrooms.

Educational research emphasizes the context within which the activities occur and the meanings participants bring to them (Maxwell, 1996). In this study, the varied participants bring meaning and perspective to inclusive instruction. This methodology helped me to identify "mutually understood sets of expectations and explanations that enable us to interpret what is occurring and what meanings are probably attributed by others present" (Wolcott, as cited in Jaeger, 1988, p. 193).

An open-ended survey asking teachers from two different high schools to identify the strengths and needs in the inclusive classroom was distributed and analyzed. Survey results reflected perspectives of multiple stakeholders: special education teachers, general education academic teachers, and general education vocational teachers. All of the teachers surveyed were teaching in inclusive settings. Data collection included survey data as well as field notes of observations and consultation meetings with the educators. Data were analyzed within individual schools, across stakeholder groups, and collectively.

Data Collection and Analysis

Data were collected and triangulated from these multiple sources to ensure trustworthiness of the data (Creswell, 2007; Denzin & Lincoln, 1994; Miles & Huberman, 1994). First, observation notes were taken in 67 inclusive

classes, with both academic and vocational content. Second, 50 consultation meetings were held with instructors, learning disability teacher consultants (LDTCs), and supervisors. In these meetings, the researcher, acting as the inclusion consultant, met with teachers, learning consultants and/or district supervisors to discuss needs and recommendations to support inclusion in particular classrooms or areas of study, both academic and vocational.

An open-ended survey was given at the beginning of the experience. The survey included four open-ended questions. In these surveys, teachers were asked to identify their own strengths as instructors, describe the positive outcomes in their classrooms, and share instructional (academic or social) needs they would like to address. In the last question, participants were asked to identify and explain any goals they would like to achieve related to instruction and student performance.

Data from these sources were reviewed and initial codes were determined. Data displays were created based on these initial codes (Miles & Huberman, 1994). Analysis indicated clear, consistent patterns and themes in the participant responses and observation notes. Analysis was conducted within data sources, within schools, and within participant roles. Final analysis was done across all data sources to determine overarching themes and patterns.

Findings

Data analysis from the three data sources helped to create responses to the research questions. The following is a discussion of the findings, organized by these questions.

What are the Strengths of Inclusive Academic Classes in the Vocational Secondary School?

The strengths of academic inclusive classes are discussed below in order of most observed or reported in observation notes, consultation, and surveys:

Meaningful teacher–student relationship and rapport. Students performed well when teachers developed a respectful and positive rapport with them. When teachers shared genuine concern, interest, and respect for students, it had a positive impact on student learning.

Real-life connections to lesson content and intriguing discussion. Teachers typically used lecture and discussion as instructional methods in the academic inclusive classroom. When topics of discussion related to student experience and intrigue, students participated and performed well.

Motivating students through active-learning and multi-learning modalities. Although many of the lessons were lecture and discussion, sometimes teachers were able to accommodate student learning preferences

through auditory, visual, and kinesthetic approaches to learning. They used YouTube, books on tape, and hands-on activities to support lesson objectives and student learning preferences.

Good collaboration between co-teachers. Open communication and respect for teachers and students were examples of good collaboration. Classroom instruction was better when teachers had good collaboration and worked to collectively support students.

What are the Weaknesses of Inclusive Academic Classes in the Vocational Secondary School?

The weaknesses of academic inclusive classes are discussed below in order of most observed or reported in observation notes, consultation, and surveys:

Teachers lack necessary strategies. Both academic and special education teachers lack the repertoire of strategies and resources required to support individuals with disabilities in the inclusive classroom. Although some teachers, especially special educators, served students with individual support and strategies, they wanted and needed more strategies to address student needs. Some teachers may have used graphic organizers and calculators; others did not. In co-teaching situations, special education teachers are expected to provide strategies and accommodations to meet classified student needs. Special education teachers do bring many strategies to the table, nevertheless, they continually need to build a repertoire of strategies and resources to support diverse needs.

Students with disabilities lack necessary skills. Students with disabilities in the inclusion class lack the basic skills, reading, writing, and mathematics, to function in content area instruction. Students required additional basic skill support and remediation to support grade level content instruction.

Lack of co-teaching collaboration and co-teaching models. Most of the co-teaching teams worked well together, however, three teams did not. They lacked communication and respect for one another. In all co-teaching classrooms, teachers needed to learn to utilize the co-teaching service models effectively. The "one-teach, one-assist" model was most commonly used. This model was used in more than two-thirds of lessons (22 out of 32) of the co-teaching observations. In each of these lessons, the special educator had the assist role. Other models, including team teach, alternative teach, station teach, parallel teach, and "one-teach, one-observe," can also be used effectively to maximize instructional leadership.

Teachers lack necessary awareness about special education. Teachers were unaware of special education laws, student classifications, and needs. General education teachers could identify which students were the special

education students in the classroom, but they were unaware of these students' classifications and support strategies. Some content area teachers also stated that they were not responsible for adapting and accommodating these students;

Uneven scheduling of students. There were many complaints that students with special education classifications were unevenly distributed in classes. Sometimes there were too many, and sometimes there wer only one or two. Better distribution of students would create more opportunities for diverse students to be well served in the inclusive classroom. Scheduling too many students with classifications in the inclusion class puts teachers and all students at a disadvantage.

Limited student assessments. Assessments are a critical part of the instructional process. Teachers need to determine which students have and have not mastered concepts and skills in order to make effective instructional decisions and to address student needs appropriately (*see Figure 1*). Academic results: Inclusion strengths and needs provide the highlights of these results.

Figure 1. Academic results: Inclusion strengths and needs
Strengths
1. Positive teacher–student rapport and relationship
2. Real-life connections to and intriguing discussion of lesson objectives
3. Good use of strategies and modifications
4. Motivating students through active-learning and multi-leaning modalities
5. Good teacher collaboration
Needs
1. Teachers (academic and special education) lack repertoire of strategies and resources to support individuals with disabilities in the inclusion classroom
2. Students with disabilities in the inclusion classes lack basic skills to function in content area instruction
3. Lack of co-teaching collaboration and co-teaching models (22 out of 32 used the "one-teach, one-assist" model)
4. Teachers unaware of special education laws and student classifications and needs
5. Uneven scheduling of students puts them at a disadvantage in the inclusion classroom
6. Limited student assessments (emphasize the importance of assessments to discern who is mastering instruction and who needs more help to improve instructional planning and decision making)

What Are the Strengths of the Inclusive Vocational Classes in the Vocational Secondary School?

Good use of differentiated instruction. Teachers utilized student strengths and interests well in different assignments and projects, individually and as part of cooperative learning experiences.

Real-life connections. Students worked on real-life projects such as making floral arrangements for different holidays, catering for luncheons, and making lamps and shelves for the community.

Active-learning opportunities. Active-learning opportunities including creating, discussing, and reflecting on skills and projects in the CTE classroom supported student-centered approaches to learning, making the learning process meaningful and outcomes positive.

Repetition. Repetition is an important part of the learning process. CTE instruction provided longer class periods and more opportunities to work on projects and designs, continually utilizing new skills and concepts effectively. Repetition supports student retention and the ability to utilize and generalize newly learned materials well.

Meaningful teacher–student relationships. These meaningful relationships were found to be critical for student success in the CTE classroom. Students' behavior and performance were often associated with their respect for and relationships with their teachers. When there was a positive, respectful relationship, students took direction well and worked to please the teacher. In classrooms where students felt teachers did not have a positive rapport with them, student behavior and respect were poor. Students shared their sentiments with the researcher-consultant on many occasions. Students will literally choose a vocation based on teacher preference rather than interest, and students do not respect teachers who don't have high expectations and productivity, those "who don't do nothing;"

Teacher passion and expertise. Teacher passion and expertise for their content area was only reported from vocational teachers. They brought a sense of pride and accomplishment from real-world experiences to the CTE classroom, as many of them started their careers in their content area and later became teachers. Their sense of pride, interest, and confidence in their abilities supported instruction. Teachers shared experiences and expertise in class discussion, and it was brought up in consultation meetings and self-reported on surveys.

What were the Weaknesses of the Inclusive Vocational Classes in the Vocational Secondary School?

Weak student basic skills. Basic skills were identified as reading, writing,

math, and basic computer skills. Reading comprehension was critical for licensing exams such as cosmetology. Measurement was critical in carpentry and culinary instruction. Computer skills were important in web design and business technology.

Lack of understanding of special education. Lack of understanding of special education laws, issues, and individual supports. Teachers were sometimes critical of special education students' ability to complete work in the CTE classroom. Many teachers could not identify specific student needs and strategies to support them.

Difficulty supervising the classroom. Difficulty supervising the classroom included both behavior and management needs. Management needs were obvious in vocational classrooms because so many hands-on activities were happening at one time. It was difficult for teachers to supervise and support students in multiple areas. Because teachers couldn't be everywhere at once, students werte sometimes idle or off task during instruction (see Figure 2). CTE/vocational results: Inclusive strengths and needs provide highlights of these results.

Figure 2. CTE/vocational results—Inclusion strengths and needs
Strengths
1. Differentiated instruction
2. Real-life connections
3. Active-learning opportunities
4. Repetition
5. Meaningful teacher–student relationships
6. Teacher passion and expertise
Needs
1. Weak basic skills
2. Lack of understanding of special education laws, issues, and individual supports
3. Difficulty supervising the classroom, both behavior and management needs

What Are the Unique Elements of the Vocational Secondary Community that Support the Success of Special Education Students in the Inclusive Setting?

Differentiated and active-learning experiences in the CTE classrooms. CTE instruction lends itself to skill and craft development and performance, providing increased hands-on multi-modality learning experiences for students. This active engagement in the learning process supports skill and concept

attainment and keeps students motivated and on task.

Real-life career connections. Career and technical education provided students with career opportunities in their reach. Students had a sense of purpose and goal achievement that kept increasing interest, confidence, and performance. When students are working toward a generic high school diploma with college or post-secondary school in mind, they are not connected to career achievement and rewards in the typical secondary setting. CTE/vocational secondary schools offer immediate opportunities for students to explore and participate in career interests and goals. Career education creates a sense of purpose for learning that adolescents appreciate. For individuals with special needs, it provides more opportunities to perform well in an educational setting, especially if their disabilities are academic in nature.

Community building. Career and technical education provides a great sense of community and pride among students. Students share a unique identity together. First, they have all selected to participate in a CTE secondary education. Second, they build relationships with their teachers and peers as they work for multiple years on a specific career interest and goal. Their performance is often supported, displayed, and celebrated by school and local community members.

There is a sense of pride and unity that develops when students and teachers share specific goals, especially when those career goals were connected to student choice and interest. The opportunities to create positive and more meaningful teacher–student relationships are more available in the CTE setting, as students remain with instructors for extended periods of time over multiple years. It is not surprising that students sometimes make educational career choices based on the relationships they have developed with teachers. Students, especially adolescents who are sensitive about relationships, or students with disabilities who may have low self esteem or low confidence in their abilities, would seek out instructors who are supportive and trustworthy.

The unique elements that hinder special education performance in the CTE/vocational setting are increased content area instruction and expectations. Students with disabilities, who need extra support in educational settings, increase content area instruction by completing academic and vocational coursework. Students in vocational high school settings have increased expectations to pass high-stakes testing in academic areas for graduation, and they simultaneously must master licensing exams for different careers, such as cosmetology. Weak skill sets in reading, writing, math, computer, and study and test taking skills will hinder the success of students with special needs in CTE secondary schools. More content and increasing

expectations not only give students greater opportunities to succeed but also to fail.

Recommendations for Supporting Students with Disabilities in CTE Schools.

Both CTE/vocational and academic inclusive classrooms can benefit from many of the same recommendations. These include many strategies and modifications to support students with special needs: increase active learning in traditional academic classrooms; provide basic skills support in all content areas; increase teacher repertoire of strategies and modifications that support performance of students with disabilities; understand special education laws, issues, and students; enhance co-teaching and collaboration among teachers; improve behavior/management and community building.

Active Learning

Almost every academic classroom observed had a typical "chalk and talk" structure. The only specific need of the academic co-teaching classroom is to move away from lecture. Providing opportunities to actively engage students in the learning process will help improve performance and long term retention of information while meeting student learning preferences.

Basic Skills Support

First, there needs to be basic skill instruction across the content area. Strategies to support basic skills included pre-teaching, re-teaching, and reciprocal teaching. In pre-teaching, teachers introduce concepts and skills to students who need extra support before they are introduced to the class as a whole. When re-teaching, students review concepts and skills. Repetition supports learning and using information well. Peer tutors or parents can help to pre-teach and re-teach. Reciprocal teaching occurs when students who are learning teach a peer. A teacher can be sure a student knows a concept or skill if the student can teach it to another. Reciprocal teaching is also a good form of assessment. Schools may also invest in specific literacy remediation programs for secondary schools and keep updated resources available for educators. Continuous professional development is also recommended.

Other strategies to support students with basic skill needs are graphic organizers or different ways for students to organize information in print. Graphic organizers include but are not limited to outlines, templates, webs, and Venn diagrams. Teachers can also use reading strategies such as previewing, predicting, identifying headings and key words, and use of context clues to support reading across the curriculum.

Increasing Teachers' Repertoire of Strategies and Modifications

Lesson and assessment modifications such as oral readings, books on tape, extended time, limited number of questions, compacting, and evaluating specific areas of need can also improve performance of individuals with disabilities. Exit cards are simple ways to assess if students have learned information at the end of a lesson. Students are asked to respond to one or two questions related to the daily learning objective or the learning process. Based on responses, teachers can quickly identify which students have or have not mastered the objective. This information provides important data for instructional decision making. To improve retention and support study skills, students can use active-learning strategies. Ball tosses and classroom competitive games such as Jeopardy and Charades can create engaging opportunities to review and rehearse information. Tiered instruction or providing differentiating learning tasks in the learning process can help meet student preferences and address specific problems.

Understanding Special Education Laws, Issues, and Students

Understanding special education laws, issues, and students is critical to success in the inclusive classroom. Federal law, IDEA and NCLB, continues to increase the number of students with diverse needs in the general education curriculum, making teachers accountable for the instruction and performance of these students. Many teachers believe that students are required to have access to their classroom. Teachers do not have any responsibility to adapt instruction and provide appropriate strategies to support these students, but they do!

Teachers should know who their students are and what their needs are. There is no excuse for a teacher being able to identify which children have special education classifications without knowing what those classifications are and how to specifically support these students. Teachers should work to adapt and modify instruction and assessment to support students. A simple way to inform teachers is to provide them with an "at a glance" student profile of students included in their classrooms. These profiles should identify the students, their classification, and academic and behavioral strengths and needs; it should also list pertinent IEP goals and strategies. This is a good starting point for planning instruction and assessment. As more information is needed, special educators can be contacted and more references can be made.

Enhancing Co-Teaching and Collaboration Among Teachers

Co-teaching and collaboration can also be developed among vocational CTE teachers as well as academic and special educators in the building.

Content area teachers, especially in math and literacy, can support instruction in vocational areas. They can read CTE material and strengthen comprehension and vocabulary in specific areas. Math teachers can provide a problem of the day or a project related to measurement and CTE instruction to support learning in vocational classes. Administrators should also consider placing in-class support or special education co-teachers in the CTE classroom. NCLB requires special educators to work with academic teachers in the classroom in secondary schools, but nothing has been defined specifically for the CTE/vocational secondary classes. Co-teaching special education partners would provide support and strategies to assist instructors and students. Collaboration and consultation skills, such as communication and conflict resolution, would also support teachers working together in these settings.

Improving Behavior and Classroom Management

Behavior/management support can be implemented to keep students on task and engaged productively in the learning process. With so many things going on at once, students should have routines when they enter the classroom, collecting their task assignments for the day. As they complete tasks, they can comment and self evaluate. Cooperative learning roles can provide peer support and supervision for different learning stations. Students can take turns being the "supervisor" or "foreman" for a project. Students can receive rewards and breaks for work completed well. Timed breaks can enhance student attention to task.

Community Building

Finally, community building can also support instruction and performance in the CTE/vocational setting. These are unique schools that have goals and values different from the typical secondary school. Educators should work hard to celebrate student goals and talents. A special identity and sense of pride among teachers and students should be built collectively as students and teachers work toward goals and showcase skills and crafts to school and local communities. A sense of pride and purpose will help motivate teachers and students, supporting team building and character education. These attributes will contribute to the success of individual students and the performance of the school community as a whole. Figure 3 highlights recommendations to support inclusion in CTE/vocational settings.

Figure 3. Recommendations to support inclusion in CTE/vocational settings
1. Implement co-teaching service-learning models in academic co-taught classrooms
2. Increase active-learning opportunities in academic classrooms
3. Provide basic skill support and remediation in all content areas
4. Increase teacher repertoire of learning strategies and modifications to support individuals with disabilities
5. Create multiple and modified assessment opportunities
6. Increase collaboration and co-teaching opportunities with CTE/vocational and academic teachers
7. Implement strategies to support positive behavior and management in CTE/vocational classrooms
8. Increase opportunities for community building

Conclusion

There are many similarities between inclusion in academic and vocational settings. Teachers still require collaboration and consultation support; teachers still need resources and strategies to support diverse learners; and they certainly need to know their students' strengths and needs to make good instructional decisions. Increasing structure and supervision in the CTE/vocational classroom will also improve instruction. The results of many of the CTE/vocational inclusion studies were mirrored in the research and literature supporting secondary education inclusion. Some similarities included the need for: multiple co-teaching service models, consultation and collaboration skills, increased content, high-stakes testing, and poor study and test-taking skills.

Although many similarities exist between vocational and academic inclusion settings, there are many attributes of the CTE/vocational setting that have not been highlighted in the research. CTE/vocational classrooms create vibrant educational experiences for students with disabilities. Such courses of study naturally lend themselves to differentiated instruction, motivating and engaging students, supporting student strengths, and building positive relationships and self confidence. The unique setting of the vocational CTE secondary school provides a sense of purpose and many opportunities to build pride among school community members. Inclusion should be supported at the vocational school by allowing co-teaching teams in the vocational classroom and continuously striving to find the strategies to best support students in the inclusion classroom.

Recommendations from this study can be used to support inclusion in academic and vocational CTE classrooms. Professional development and implementation of these strategies will strengthen inclusion in the vocational CTE setting, supporting teachers and, ultimately, student performance.

With the proper support and development, vocational CTE education can be a model of inclusion instruction.

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