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Students with Special Needs and
Career and Technical Education

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Students with Special Needs in Career and Technical Education

Career and technical education (CTE) and students with special needs create meaningful opportunities with ramifications beyond the classroom. CTE provides many benefits for students with special needs. Methods used by CTE teachers to present material, hands on learning, and relevance are a few of the embedded methods used in the CTE classroom which may be useful to CTE students with special needs. CTE has a history of supporting the student with disabilities (National Assessment of Vocational Education: 1994a, 1994b, 1994c). The reports provide evidence that students with special needs postsecondary outcomes were improved by enrollment in vocational education (Schloss & Gunter 2011). Also, students with disabilities receiving vocational education “reported higher wages” (Harvey 2002, p. 473). Finally, students with disabilities receiving vocational training reported the highest rate of employment among students with or without disabilities (Harvey, 2002).

The level of success students with special-needs enjoy in CTE may depend on how the instructor’s challenges are resolved. As with general education teachers, often CTE teachers feel unprepared to serve students with special needs (Hoerst, 2006). Other concerns include resources (Hoerst, 2006), and supervision in an open lab setting. (Casale-Giannola, 2011).

CTE may be measured by how successfully a student with special needs transitions from school to work. The Individual with Disabilities Education Improvement Act of 2006 required transition plans as a part of an IEP (Ofoegbyu, 2010). The transition plan has reported mixed success in working with vocational programs. However, I believe there is much more to transition than hard skills. A student’s self-determination affects a successful transition

(Wehmeyer & Palmer, 2003). Also co-workers and employers' attitudes toward a person with disabilities create challenges. According to Carter and Huges, (2006), "many individuals with disabilities believe that the greatest barrier to full participation in society is not accessibility, but biased attitudes and treatment"(p. 16).

Certainly how career testing is accomplished, and how student's' preferences are used; affect successful transition for CTE students with special needs. The topic of career theories and preferences raise more questions than they answer. I am skeptical about career predictions. Certainly career theories have value, but as expressed by Rojewski and Gregg (2011), the theories might apply, they might apply with modification, or they might not apply. However, regardless of the theory tested, it appears individuals with high-incidence disabilities can "pursue and attain planned, systematic career paths." (Rojewski & Greeg, 2011, p. 585). Again, personally, I am skeptical as to the effectiveness of career theories and their value to predict career patterns.

Transition from high school to a meaningful career or post- secondary education is a topic of concern for many educators. Why do students with disabilities choose certain career paths? Are accurate vocational assessments used to determine a student's true interest or aptitude? What is the students' preference, general academia or vocational? How successfully does vocational education use inclusion to encourage success? How important are social implications to the student with disabilities and transitioning?

The inextricable relationship between students with special needs and CTE form a powerful bond. CTE may be a preference or perhaps one last attempt of public education to

help an individual be a more productive, happier, and contributing member of his or her community. Either way, if executed properly, the student will succeed. It is a topic which should best be addressed, not from a “deficit perspective” (Rojewski & Greeg, 2011, p. 585), but one of practical need for all. I believe our society should move from the current view of students with special needs opting out of general curricula, but opting in to a realistic and practical first choice.

The purpose of this paper is to review the importance of creating a practical pairing of CTE and students with special needs. The combination is not without problems. Proper training to fully implement inclusion for CTE instructors and career counseling may be necessary to make significant improvements for current programs. Regardless of the issues facing CTE and students with special needs, this paper concludes with the undeniable benefits for the students with special needs.

Bibliographic Information

Ofoegbu, N., & Azarmsa, R. (2010). Impact of the special education vocational education program (VEP) on student career success. *International Journal of Special Education*, 25(2). 34-46.

The study sought to analyze the effect of Vocational Education transition plans by measuring graduating students with special-needs ability to secure and keep employment. The author most effectively stated the reason for the study as “research on the generalization of the learned intervention strategies by the students in relation to post high school career outcomes.” (p. 35) Noted by the author, federal legislation requires vocational transition plans according to the Individuals with Disabilities Education Improvement Act of 2004. Beyond

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legislation, the expectation is for students with special needs to achieve some level of success in their careers.

The qualitative study followed 81 students with special needs (serious emotional disability and learning disability) after graduation. The study, conducted in 2007, used three consecutive graduating years (2005,2006, 2007), from the same high school in California. All three groups received vocational transition assistance. A total of five questions were asked, and the students responded with yes or no or not applicable. The questions or statements were: Do you have a job now, “I have kept a job since high school graduation, I lost my first job, and do not have a job now, Vocational Education Program helped me get a job.” (p. 40). One open-ended question at the end of the survey asked, “if you would like to change something in the program, what would that be?” (p. 44) In addition to the student survey, four supervisors in the school division involved with Special Education and Career and Technical Education were interviewed. Information concerning names, address, and confidentiality requirements was produced.

Three years after graduation, 67% of the surveyed group acquired and retained employment, two years after graduation the group had identical (67%) employment and retention rates, and one year after graduation 53% acquired and retained employment. The lower percentage of the current graduates in the study was attributed to some of students who were still enrolled in school. Seventy-seven percent of the students reported that VEP helped them get a job (the percentage was given as a composite of three years, not individual years.)

Although the research question was quite clear, “to make a clear connection between the students’ career outcomes and participation in the transition program” (p.38), the research design was limited. A small sample was taken, involving only 81 students over a three year period. Only five questions were asked and the survey produced limited and not generalizable data. The severity of the disabilities was not a consideration or factored in the study. The significance of the study is without question. The study answered fundamental questions, and provided a basis for future study.

The final report on the state of transition planning and execution was mixed. The job placement and retention percentages were low; however, overall satisfaction with the program was high. Again, this report created more questions than answers. For example, specifically why did the students feel the program was helpful, did the students find the jobs satisfying, what type of employment (industry) did the students find jobs, why did students lose jobs, and what was the average length of employment. I believe the opportunity was available to find out more specific and useful information to improve the transition program? Perhaps, it is useful to have the basic information as a starting point (the study noted this as a recommendation for further study).

Bibliographic Information

Wehmeyer, M., & Palmer, S. (2003). Adult outcomes for students with cognitive disabilities three-years after high school: the impact of self-determination. *Education and Training in Developmental Disabilities*, 38(2), 131-144.

Basing the study on the acceptance that “people with disabilities experience limited self-determination” (p. 131), the research purpose was to understand the transitional consequences of self-determination. Self-determination affects many areas of an individual’s life. Independent living, employment history, and financial independence were indicators used in this study to evaluate individuals with special needs and their level of self-determination. The multi-year study hypothesized that students with special needs who demonstrated self-determination would “fare better across multiple life categories” (p. 131).

The many positive outcomes from self-determination have prompted regulations and requirements when working with students with special needs. Federal government regulations require that self-determination be an aspect of the transition plan for students with disabilities. The virtues of self-determination are analyzed and encouraged. This study seeks to identify the outcomes of individuals who display self-determination or who do not exhibit self-determination, and speculate on how their lives were affected by self-determination (Wehmeyer & Palmer, 2003).

The study surveyed a total of 94 students staggered over multiple years, to capture data concerning their lifestyle. The study included 49 males and 45 females. For three years, the participants were tracked. The students were surveyed at three points; graduation, 1 and 3-year. (p. 133). The self-reported survey instrument, The Arc’s Self-Determination Scale, was used. The survey instrument grouped individuals into high self-determination groups and low self-determination groups. Individuals with high scores were considered to have strong self-determination. The four areas of self-determination used to score the instrument were

autonomy, self-regulation, perceived control and self-realization. The subjects in the high self-determination group, as would be expected, reported “statistically significant advances in obtaining jobs” and reported “greater independence in living arrangements.” (p.141) “In general, trends showed that students in the high self-determination groups were achieving more successful outcomes” (p. 141).

The quantitative study statistically analyzed information reported by the students on the Arch’s Self-Determination Scale. Comparisons were made and conclusions drawn from the analysis. Age and IQ score differences were not statistically significant. However, as discussed earlier, other differences were significant. The results corroborated findings from earlier studies, strengthening the belief that self-determination does make a difference in lives of students with special needs (Wehmeyer & Schwartz, 1997). The reported noted its limitations regarding self-reporting. Also, the study provided a strong foundation, based on empirical evidence, that self-determination does affect the quality of life for individuals with disabilities.

Developing a student’s self-determination was recommended by the study. Educators may see positive outcome if a student with special needs was provided strategies and methods to enhance this skill. The study revealed that regardless of the intellectual ability, all students could learn self-determination.

The study provided evidence that the critical component, self-determination, is needed to live a more productive and independent life. I also agree that intelligence level is not an indicator of self-determination, as I have witnessed many very bright but unproductive individuals. However, I am skeptical about the ability to teach an inherent trait. Much like

leadership, I believe self-determination is a skill that can be enhanced and developed. With careful planning and enough research, I believe educators can provide strategies and methods to build on basic self-determination skills.

Bibliographic Information

Hoerst, C., & Whittington, M. (2006). The current status of classroom inclusion activities of secondary agriculture teachers. *Journal of Agricultural Education*, 47(4), 39-52.

The purpose of the descriptive study was to provide a current perspective on inclusion from career and technical education secondary teachers (agriculture). The study revealed what was needed by CTE instructors to provide better and more effective instruction for students with special needs. The CTE teachers offered their understanding of inclusion, and the physical needs to be more effective. The CTE teachers were to provide an educational experience “that was not only mandated by law but also was a civic and moral duty for teachers” (p. 40).

The study involved 184 randomly selected agriculture teachers in Ohio. A questionnaire containing six sections was used. The survey sections ranged from the teacher’s perceived knowledge of inclusion, availability of resources, and methods of teaching. The survey included six sections, with an average of nine categories per section. The survey was analyzed and qualitative and quantitative data were produced. The online survey was tested for validity and reliability by a panel of agriculture teachers. The researchers made efforts to ensure the integrity of their data.

The surveys were thorough and addressed many specific concerns as expressed by agriculture educators. In general, the CTE teachers stated a need for further training in the area

of inclusion. Specifically their deficiencies were in the area of writing technical objectives for special education documentation. The CTE educators reported that more pre-service training in collaborative teaching was needed. Candidly reported, the educators stated they were not provided mandated resources, and school administration was not supportive.

Interestingly, the agricultural teachers reported using demonstration techniques and active learning strategies which were inherent to methods used in the traditional agriculture classrooms. Transition and adaptation to inclusive learning styles were relatively simple, and the CTE teachers reported being comfortable with the processes. The author concluded the report by noting the importance of offering students with special needs an alternative to experience success.

The research design was adequate for the scope of the study. Agriculture teachers were surveyed to provide insight concerning inclusion in the agriculture classroom. Questions, data collection method, the large sample and a variety of data analyses procedures provided substantial evidence that the findings were generalizable to other agriculture teachers.

The research was supported by an extensive survey and involved a large number of educators. The findings were predictable, and confirmed many of my beliefs about the pairing of students with special needs and CTE. The number of categories and specific questions in each category provided a clear description of the CTE teacher's position. The report was comprehensive, and provided evidence of the current state of inclusion and CTE.

All the concerns expressed were student-centered, and were directly related to improving the student's learning and experiences. In the introduction, a detailed outline of the

legislative mandates addressing CTE were provided; however, in the end, the report emphasized the importance of agricultural education in taking a leadership role in serving all students.

Bibliographic Information

Dupoux, E. (2008). General or vocational curriculum: LD preference, *The International Journal of Special Education*, 23(3). 39-46.

This study was conducted to determine if students with special needs prefer an academic curriculum or a vocational curriculum. The premise of the study was based on the assumption that students with special needs choose vocational education as a default to traditional academic education, due to prior unsuccessful performance. The researcher sought to provide evidence that students with special needs do, in fact, have a preference for one method. Regardless of prior accomplishments, the student's preference was to choose the general, academic track. The author cites an important point: "low performing students do not choose vocational education in order to prepare for a specific career; rather, they have internalized self-perception that remove college degree as an option based on poor educational experiences" (Lewis, 2000, p. 41).

Tenth-grade students from three southeastern Florida summer schools were invited to participate. All students participating had failed the 10th grade Florida Comprehensive Assessment Test, but had different levels of success in passing coursework. A total of 104 students with learning disabilities participated. The majority of the students were male (76%), and ethnic minorities (96%), and had a 2.0 GPA or lower (64%). The Vocational Academic

Choice Survey was used as an instrument to measure the students' perception. Special education teachers assisted the students in the completion of the survey.

The results of the survey indicated a preference for an academic program. The students were categorized into groups of those who had failed a course and those who had not passed those who had failed a course did not score as strongly on the preference for academic programs. The author concluded that students should not be tacked into vocational programs, as they may have a preference for the academic program. As educators, preconceived assumptions of vocational preference may inhibit the students, and limit their learning. Also, she questioned the obvious: why is such a choice required? Educators may need to "bridge" (p. 44) the two areas to be more effective in meeting the needs of all students.

The quantitative research method used by Dupoux (2008) attempted to statistically analyze results from a preference test. Three independent samples were conducted. Confounding variable was not discussed. Future research opportunities were not discussed. The scope of the study was much too large. The generalizability of preference for academic or vocational curriculum is too broad. In addition, neither academic nor vocational was defined.

Several inconsistencies were clear: however; the report did not address the inconsistencies. If students prefer an academic setting, why have they not been successful, and why would they prefer to return to an environment which has proven to be unsuccessful? Further, what could be done to achieve success in their preferred venue of learning? Also, why is vocational education portrayed as inferior or less academically challenging? I challenge the inferences of the study and the logic of the participants. While answering a basic question of

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preference, many more questions were raised. I believe students in the 10th grade do have a preference, and we should honor their preference. However, in honoring their choice, accountability should also be imposed. I do not believe that “sentencing” a student to a vocational program against their aspirations is prudent. This is not a solution, and results in “dumping students” in vocational programs, which has proven to be unsuccessful for all parties involved. Placing any student in a program as a default is not in the best interest of the child.

Bibliographic Information:

Casale-Giannola, D (2011). Inclusion in CTE –what works and what needs fixing’. *Tech Directions*, 70(10), 21-23.

The purpose of the study was to evaluate inclusion in CTE programs and identify successful strategies and potential problems. CTE programs provide natural opportunities for inclusion and with the proper administration, students may be successful. The qualitative study involved 20 instructors. The lessons (30 observed) included web design, cosmetology, business technology, public safety, horticulture, and a variety of other technical programs. The participant observer also interviewed those involved with the CTE programs including the CTE teachers, supervisors and consultants. Also, the CTE teachers were surveyed. No analysis of data was presented or survey questions revealed. The author noted the many benefits, challenges, and solutions for improvement when working with students in CTE and inclusion. The author defined the specific reasons why CTE is good for students with special needs. The author was generic in her description of special needs. The special needs were described as “special academic, behavioral, and communication needs” (p. 21).

CTE was described as a natural solution to many challenges presented by students with special needs. CTE is differentiated by student selection. The CTE program enjoys an initial advantage compared to other courses because the student chooses the program; it is not required. Another benefit of CTE to the student is the program has realistic applications. The CTE classroom provides a setting for active learning. The typically passive learner is actively engaged. Other advantages to the special needs learner in CTE programs are the repetition required in CTE courses, “meaningful teacher-student relations,” and working in groups (p. 22).

One of the challenges of CTE and the student with special needs include building specialized skills on weak foundational skills. A solution offered was co-teaching. Another issue observed weakness was the knowledge of special education laws and support.

The design of the study was well intentioned. As the participant observer, the author/researcher asked relevant questions in her interviews. The sample size was adequate. The possibility for future study was not offered. As mentioned earlier, no analysis of the data was provided.

Based only on my personal experience, I found the article’s findings accurate. Having been a business education teacher and a vocational director in the public schools, I have years of experience in the CTE environment. The pairing of CTE with inclusion is a logical and reasonable association. For all the reasons listed by the author, inclusion often works well with CTE. The CTE classroom provides many of the components of instruction that a students with an IEP need. Relevance, active learning, repetition and coach-style teaching are all typical in a CTE classroom.

The challenges were also realistic and often seen in a CTE classroom. Students do come with weaker academic foundations, and supervising students in a lab setting can produce anxiety for the instructor. The author noted concerns that are frequently expressed by CTE teachers.

I agree with much of the study/article because of my experience. However, the author offered little evidence of the accuracy of her findings. The information provided was not supported by data. The author did accumulate information through surveys and interviews, but did not substantiate the findings.

Dissertation Review

Roberts, J. A. (2004). *Teacher Attitude Toward Inclusion of Special Needs Students in Career – Technical Education Programs in Rural Mississippi* (Doctoral Dissertation). Retrieved from ProQuest Information and Learning Company (Order no. 3150649)

The focus of the study was to determine if there was a difference in the attitudes of CTE teachers toward the inclusion of students with special needs. Two primary categories were studied: the years of teaching experience in years and subject area of the faculty member. The author believed this to be an important issue for delivering quality CTE. Also, she noted it was an area that was not well-researched. Limitations of the study revealed the disproportionate number of 46 females compared to 5 males.

Legislative information was presented. Carl Perkins' legislation of 1998 stated the importance of students' developing skills and innovation. Sections 504 along with Carl Perkins protect students with disabilities against discrimination in the CTE classroom. Other historical information was clearly outlined and easy to follow, an extensive literature review was

provided, pointing out the many differences in research on the subject and value of inclusion and CTE.

The results reported several concerns by CTE teachers, which are consistent with other reports. The concerns expressed were: CTE teachers do not feel prepared to work with the wide diversity of students' disabilities and the severity of the students' disabilities. Other concerns noted were large class size and not receiving appropriate support from the special education teacher. Based on the CTE teachers' concerns, a number of recommendations resulted, including CTE teachers' working collaboratively with other teachers. Also, CTE teachers' need more administrative support.

The results revealed that 95% of the CTE teachers had a favorable view of inclusion and CTE. Each of the 32 questions on the survey was analyzed and correlated. In the end, a positive conclusion revealed that CTE teachers supported inclusion.

The research design used a two-part survey. The surveys measured demographics and attitudes. The response rate was 84%, which included 51 participants. Many comparisons were made between demographics and attitudes. The findings provided potential for future research studies. The basic research questions were logical and clearly addressed in narrative and statistical formats.

Overall Findings

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Career and Technical Education is useful to students with disabilities. Reports and literature reviews frequently chronicle the value of CTE for students with special needs. Legally, students with disabilities are entitled to enroll in CTE programs, regardless of their disability. CTE's success is likely to be measured by of a student's successful transition from school to work. Transition plans are a legal requirement of the student's Individualize Educational Plan. The facts are clear and the value is clear.

One of the current issues in CTE and inclusion is the assumption that CTE teachers are adequately trained. An expectation gap exists. Continually CTE teachers report their lack of training to work with students with special needs (Hoerst, 2006). Unique to vocational programs, teachers can secure their license by industry certifications and fast track teaching programs. Frequently these CTE teachers come indirectly to education and are surprised at the overwhelming number and needs of the students; and thus they feel ill prepared to address their many needs. Planning and training need to be addressed (Haber & Sutherland, 2008).

Many factors affect transition from school to work. The positive effects of CTE on students as they transition from school to work have been consistently reported. CTE is not the only factor that affects transition. A student's self-determination is one essential component to their successful transition. Also, as a part of the IEP, students should have input from the CTE teacher to promote a realistic and more effective plan.

There is concern that the disproportionate number of students with special needs in CTE courses coupled with the limited teacher preparation may diminish the value of CTE to students

(Haber & Sutherland, 2008). Levesque (2003) reported that 37.5% of CTE students are students with special needs.

The predominant issue in the literature is the appropriate placement of students with special needs in CTE courses. CTE can work for many students with special needs. Transition reports provide evidence to support the claim. However, the problem remains that CTE teachers are not adequately trained, and are often over-burdened. Whether students self-select the program, indicate an aptitude for the career, or exhibit self-determination, if a CTE instructor feels compromised, effective instruction suffers.

Better management of CTE programs may be the answer. Advocates for both students and teachers may relieve some stress. As recommended by Haber and Sutherland (2008), a systematic evaluation may strategically improve the system. Teacher- training programs may assist future teachers, while employers provide training for those who seek assistance. CTE teachers should assist in student placement in the programs. CTE teachers should be active in the IEP evaluation.

Leadership Responsibilities

The role of the CTE director is that of an advocate for both the student and the CTE teacher. Before students can thrive, the instructional program must be solid. If the teacher does not feel supported, the program will suffer. Supporting the teachers could take many forms. Appropriate training should be made available. Careful evaluation of program enrollment, as well as promoting healthy and collaborative teaching partnerships should be the

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practice. Careful planning in the selection method of students entering CTE programs may prove successful for the student and the program.

I believe the CTE stigma should be addressed on a district-wide basis. Although this is not a special education issue, the students with disabilities are indirectly affected. Integrity is the issue. For students to engage actively in learning, it must be valued. If programs are devalued by the school community, why would a student want to participate? A vicious circle is created.

Leaders in CTE programs should promote students' successes, and expose the school community to the accomplishments of students. Higher standards should be established and monitored. I believe the students with special needs have the ability to be successful in CTE programs. Self-determination may be the by-product of motivating and challenging students.

Leaders must earn the trust of the CTE teachers, the special education teachers and the students is necessary. Creating a change in the support and delivery of CTE programs to students with special needs may benefit the school and its community. To make changes, leaders must manage and motivate. Management of specific details involving training, enrollment practices and documentation procedures, if implemented properly, may ease concerns for the CTE teachers and the special education teacher. Motivating students to improve their efforts, and creating an environment of high expectations may have lasting effects for the student and the school.

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