



NTACT

National Technical Assistance Center on Transition

Educators in Career and Technical Education Annotated Bibliography

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Who are Educators in Career and Technical Education?

The term educator is defined as, “one skilled in teaching (Merriam-Webster)”. In this annotated bibliography, the term educators includes special education teachers, general education teachers, career and technical educators, and any other educators that would be involved in teaching CTE skills to students with disabilities.

Merriam-Webster. (n.d.). Educator. In *Merriam-Webster.com dictionary*. Retrieved March 10, 2020, from <https://www.merriam-webster.com/dictionary/educator>

Why are Educators in Transition Planning Important?

The topic of educators is important in transition planning because the Individuals with Disabilities Education Act (IDEA, 2004) suggests that teachers involved in the education of individuals with disabilities should be involved in the Individual Education Plan (IEP) process. Once a student reaches 16, the IEP process also includes transition planning. If a student is participating in CTE classes then CTE educators should be involved in the IEP process to help ensure that they are aware of the accommodations, modifications, and supports and services the student is entitled to, as well as to provide some insight on the transition planning process.

Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004).

What Does the Literature Say About Educators in Career and Technical Education in Transition Planning?

The literature states that there is often a disconnect between special education teachers and CTE teachers. This affects educator perceptions and CTE teachers’ ability to

provide a free, appropriate, public education for students with disabilities in their classrooms. The literature states that it is imperative that CTE educators be involved in the IEP process and should receive training and/or professional development regarding evidence-based practices for teaching CTE skills to individuals with disabilities and how best to involve them into the CTE curriculum.

Brown, J. M. (1992). Professional Attitudes: Group Differences among vocational and special educators towards the employability of persons with severe disabilities. *Career Development for Exceptional Individuals, 15(1), 13-22.*

- Examined the attitudes of vocational and special educators regarding employability of individuals with severe disabilities.
- Results indicated that there were no significant differences between vocational and special educators attitudes towards the employability of individuals with severe disabilities, and that both had positive attitudes towards competitive employment for individuals with severe disabilities.
- Recommendations include future research in whether instructor attitudes directly affect the services provided to individuals with severe disabilities in regard to special and vocational education.
- Implications include better preparing students with severe disabilities for the workplace by providing work-based learning and school-based work learning opportunities.

Brown, J., Ernst, J., Clark, A., DTE, DeLuca, V.W. & Kelly, D. (2018). Working with special populations. *Technology and Engineering Teacher, May/June, 10-13.*

- Described members of a special population, as defined by the Carl D. Perkins Career Technical Education Improvement Act of 2006 (Perkins IV).
- Suggested classroom Career Technical educators should collaborate with special education educators in their school to gain an understanding of individual student disabilities and to successfully implement modifications and adaptations to help students succeed in the classroom.
- Provided specific suggestions regarding needed support and specific accommodations to help students in poverty succeed in the classroom.
- Recommendations were outlined to encourage females to participate and succeed since research indicates that female students do not enter technical, mathematical and scientific careers as frequently as their male counterparts.
- Recommendations included teachers' adaption of their instruction to accommodate special population students and analyzing their course design based on the seven building blocks for differentiated instruction.

Fletcher, E. C., Djajalaksana, Y., & Eison, J. (2012). Instructional strategy use of faculty in career and technical education. *Journal of Career and Technical Education*, 27, 69-83.

- Examined instructional strategies used by Career and Technical Education (CTE) faculty in higher education to determine most and least frequently used instructional strategies and the signature pedagogies in CTE.
- Results indicated that the six most used instructional strategies included:
 - Questioning
 - Whole Group Discussion
 - Guided Practice
 - Interactive Lecture
 - Self-Directed Learning
 - Problem-Based Learning
- Results indicated that the six least used instructional strategies included:
 - Question and Answer Clickers
 - Synchronous Online Classes
 - Video Creation
 - Student-Generated Exams and Questions
 - Reflective Blogs
 - Lecture Note Comparison
- Results indicated that the three signature pedagogies included:
 - Interactive Lecture
 - Questioning
 - Whole Group Discussion
- Recommendations include for researchers to watch CTE instruction to examine instructional strategies and note any differences between teacher survey and observation data.
- Implications for practice include for CTE faculty and teachers to integrate technology into the curriculum perhaps by incorporating question and answer clickers, online classes, video creation, reflective blogs, and lecture note comparison.

Harvey, M.W. (2000). How do vocational educators fare in working with students with special needs: Perceptions from the field. *The Journal for Vocational Special Needs Education*. 22(3).

- Examined the confidence and effectiveness level of vocational educators working in vocational education settings and as perceived by their administrators and guidance counselors in working with students with disabilities.
- Results suggested that Vocational Educators had low levels of confidence and effectiveness in working with students with special needs as compared to working with disadvantaged students.

- Findings indicated that Vocational Educators felt less confident and less effective than their administrators and guidance counselors perceived them to be.
- Recommendations included continued professional development for Vocational Educators, including attending professional conferences and taking continuing education coursework that focuses on students with special learning needs.

Harvey, M. W., & Pellock, C. (2003). Influences of student educational labels, behaviors, and learning characteristics as perceived by Pennsylvania's secondary career and technical educators. *Journal for Vocational Special Needs Education, 25, 30-41.*

- Examined differences between CTE educators' perceptions of program expectations, program modifications/accommodations, and youth outcomes of students in secondary CTE by disability label.
- Results indicated that CTE educators' attitudes and perceptions of students are a contributing factor in students' success.
- Results indicate that CTE educators perceived that program modifications and accommodations were needed by all students with disabilities in order to fully participate in CTE, regardless of disability type. However, participants reported they needed more support for students with physical disabilities (PD), intellectual disabilities (ID), behavioral disabilities (BD), and visual impairments(VI).
- Results indicated that there were differences in CTE educators' perceptions of youth outcomes based on disability when compared to students without disabilities. When compared to their nondisabled peers: the student with ID was perceived as more limited in post-school options, the student with VI was perceived to have limitations in attending technical schools, the student with BD was perceived as having challenges in attending 4 or 2-year colleges, the student with a learning disability (LD) was perceived as less likely to attend a 4-year college or university, and the student with PD was perceived to have more challenges accessing employment in the occupational trade area.
- Recommendations include future research assessing if CTE education for individuals with disabilities is meeting the requirements of IDEA and the Carl D. Perkins Act.
- Implications include that CTE instructors should take full advantage of training opportunities available concerning the education of students with disabilities.

Harvey, M. W., & Pellock, C. (2004). The Relationship between Pennsylvania career and technical instructors' demographic characteristics and program expectations for students with and without disabilities. *Journal for Vocational Special Needs Education, 26(3), 4-22.*

- Examined the relationship between demographic characteristics of Pennsylvania career and technical (CTE) instructors and program expectations for secondary

- students with and without disabilities.
- Results indicated that demographic characteristics of the instructor had significant effects on student rating and perceptions of students without disabilities and student perceptions of students with disabilities regarding their CTE program expectations and outcomes.
 - Results indicate that significance was found for age in the areas of concerning social fit in CTE, gaining occupational skill competencies, and post-school employability.
 - Recommendations include repeating the study to see if the same results are found, as many of the results in this study contradicted results from previous literature.
 - Implications for practice include giving every student the same education in CTE, especially when concerning students with disabilities. This can be done through teaching instructors, through training and professional development, best practices of special education to use in their CTE instruction for students with disabilities.

Harvey, M. W., Cotton, S. E., & Koch, K. R. (2007). Indiana secondary CTE instructors' perceptions of program expectations, modifications, accommodations, and postsecondary outcomes for students with disabilities. *Journal for Vocational Special Needs Education, 29(2), 16-32*

- Examined potential influences that students' educational label, behavior, and learning characteristics have on program expectations, modifications, accommodations, and postsecondary outcomes as perceived by Indiana career and technical education (CTE) instructors.
- Replicated the Harvey et al (2004), "The Relationship between Pennsylvania career and technical instructors' demographic characteristics and program expectations for students with and without disabilities" study.
- Results indicated that CTE instructors felt that students with disabilities were more likely to perform occupational skills at half or less when compared to students without disabilities.
- Results indicated that CTE instructors perceived that students with physical disabilities, learning disabilities, behavioral disabilities, cognitive disabilities, and visual impairments would be more likely to need modifications and/or accommodations in order to fully participate in CTE compared to students without disabilities.
- Recommendations include to continue research efforts on CTE instructors' perceptions of students with special needs enrolled in secondary programming, their training needs, instructional concerns, and evidence-based practices in CTE.
- Implications for practice include referencing IDEA and Carl D. Perkins Career and Technical Education Improvement Act of 2006 to enhance and improve CTE for students with disabilities.

Hughey, J. K. (1989). Counseling to facilitate transition. The crucial role of guidance counselors. *Journal for Vocational Special Needs Education*,11(3), 10-13.

- Described survey results regarding the Missouri Comprehensive Guidance Program and how it could be used to help implement the Carl D. Perkins Act.
- Described counselors' ranking of the categories of the Missouri Comprehensive guide from most important to least important as outlined below, and described activities and instructional guides for each category:
 - Understanding and getting along with others
 - Planning and developing careers
 - Understanding and self acceptance
 - Preparation for finding jobs
 - Planning high school classes
 - Making decisions
 - Finding jobs
 - Vocational selection and training
 - Knowing effects of drugs and alcohol
 - Improving basic and study learning skills
 - Learning about marriage and families
 - Learning about consumer and homeowner skills
 - Making decisions about college
 - Learning from friends that have graduated
 - Understanding how gender related to jobs
 - Learning how to use leisure time
- Recommendations included for guidance counselors to use this article and the activities within as a guide for fulfilling the mandates of the Missouri Comprehensive Guidance Program and the Carl D. Perkins Act.

Kamens, M. W., Dolyniuk, C. A., & Dinardo, P. (2003). Preparing teachers for the transition of students with disabilities through community-based instruction. *Career Development for Exceptional Individuals*, 26(1), 99-118.

- Describes the implementation of an off-campus transition project for students with disabilities and its impact on future teachers who participated as job-sampling mentors.
- Describes the objectives of the project as:
 - Students with developmental disabilities will learn skills that will help them to be successful in the workplace
 - Students with developmental disabilities will learn skills that will help them to be successful members of a community of their same-age peers
 - The university students will become used to interacting with their peers with disabilities

- The university students enrolled in psychology and education courses will have the opportunity to link theory and practice by applying knowledge taught in class to this hands-on experience.
- Recommendations include integrating this experience into a teacher preparation course to enhance reflection and the construction of knowledge in future educators.

Lombard, R. C., Miller, R. J., & Hazelkorn, M. N. (1998). School-to-work and technical preparation: Teacher attitudes and practices regarding the inclusion of students with disabilities. *Career Development for Exceptional Individuals*, 21, 161.

- Examined secondary school-to-work teacher attitudes towards inclusion, practices and procedures promoting inclusion in the school-to-work program, in-service training for school-to-work teachers regarding teaching students with disabilities, and post-school outcomes for students with disabilities in the school-to-work program as perceived by its instructors.
- Results indicated that 58% of participants stated that skills needed to teach students with disabilities the school-to-work curriculum were not the same skills used to teach their nondisabled peers, but 54% of participants agreed that given additional training, they would be able to meet the needs of students with disabilities in their class.
- Results indicated the following:
 - 58% of participants stated that no support was provided by special education staff to make modifications to the course, but that 53% indicated that with the help of special education staff, the education needs of students with disabilities could be met within the class.
 - 62% of participants had not participated in the development of an IEP for the students in their classes.
 - 53% of participants stated that their school-to-work or tech prep model did not advocate for the inclusion of students with disabilities.
 - 49% of participants received no training regarding the inclusion of students with disabilities within their classroom.
 - 65% of participants thought that post-school outcomes for students with disabilities in their class included employment, while 55% indicated apprenticeships, 53% indicated vocational/technical schools, and 40% indicated community colleges (2-year).
- Implications include supporting school-to-work instructors in modifying curriculum to meet the needs of students with disabilities through professional development and/or assistance from special education staff.

Lynch, P. S., & Reimer, J. (1997). Meeting the needs of special populations in the 21st Century: The role of vocational special needs personnel. *Journal for Vocational Special Needs Education*, 19(3), 99-102.

- Described trends and issues in career and technical education (CTE) as including the increase of special populations, the changing workforce, legislative and policy issues, and standards and outcome-based learning.
- Described the implications for special needs personnel in CTE as collaboration, advocacy for students, professional development, and research and dissemination.
- Recommended that CTE programs for special populations include the following:
 - a collaborative team
 - frequent school-to-work training and other relevant professional development
 - full access and connections with all personnel, services, and activities for all teachers and students
 - administrators, counselors, and assessment personnel available to provide needed assistance and support
 - an advisory committee representing a diverse cross-section of community, business and industry, administration, parents, educators, and student leaders who are willing to participate in the program
 - a transition-specific and competency-based curriculum which integrates technology with all concepts and topics
 - academic instruction and learning strategies presented through workplace contexts
 - student competencies demonstrated through activity-based, applied learning activities, with teachers as facilitators
 - dynamic partnerships between education and business industry
 - high expectations for students
 - a large proportion of community-based learning opportunities
 - student mastery of curriculum objectives demonstrated through performance-based authentic assessments

Razeghi, J. A. (1981). Training advisory councils about vocational education for handicapped persons. *Career Development for Exceptional Individuals*, 4(1), 25-34.

- Describes the problem as a lack of career and vocational education and skills for students with disabilities to compete for jobs.
- Describes the issue of career and vocational education for students with disabilities as being the lack of special educator's knowledge of vocational skills, and the lack of vocational educator's knowledge of educating students with disabilities.

- Describes the need for special educators and vocational educators to work together to teach vocational skills to students with disabilities.
- Describes the advisory committees mandated by the Individuals with Disabilities Education Act (IDEA: P.L. 94-142; Section 121a.651) and the Vocational Education Act (P.L. 94-482; Section 104.95) and identifies the following similarities:
 - Advising the program administrators on the students' needs
 - Advising on policies and programs being developed to meet the students' needs
 - Assisting in developing and reporting on evaluations conducted to determine the effectiveness of programs, services, and activities in meeting program goals
- Describes the intersection of IEPs and vocational education regulations, and how they should be appropriately included within the IEP.

Rehm, M. L. (2008). Career and technical education teachers' perceptions of culturally diverse classes: Rewards, difficulties, and useful teaching strategies. *Career and Technical Education Research, 33, 45-64.*

- Examined the disposition of high school career and technical education (CTE) teachers regarding linguistically and culturally diverse students in the classroom, especially in the areas of challenges, rewards, difficulties, and teaching strategies.
- Results indicated that participants found it somewhat difficult to accommodate cultural and language differences, but that these challenges were also viewed as rewarding.
- Results indicated that participants felt maintaining high standards and expectations was more difficult than building community with linguistically and culturally diverse students.
- Results indicated that participants felt that diverse classes led to more creativity and learning success, but they could also be more stressful and frustrating.
- Results indicated that the following are useful strategies for easing the language barrier: visual aids, extra handouts, repetition with technical concepts, demonstrations, hands-on projects instead of oral presentations with written papers, practice of new skills, inclusion of examples from representative cultures, dividing processes into smaller segments, graphic organizers, and concept maps.
- Results included the following strategies to help build a sense of community and uphold high standards: cooperative strategies, small group tasks, laboratory projects, and teamwork.
- Recommendations include for more studies to be conducted regarding diversity in CTE due to the small response size for this study.

- Implications include for school administration and others to support teachers in linguistically and culturally diverse classrooms.

Sitlington, P. L., & Okolo, C. M. (1987). Statewide survey of vocational educators: Attitudes, training, and involvement with handicapped learners. *Journal of Career Development*, 13(4), 21-29.

- Examined vocational educators throughout the state of Indian on the following matters educational and experiential background, involvement with learners with disabilities, and attitudes regarding learners with disabilities.
- Results found the following:
 - The educators in this sample were veteran teachers who had been teaching for an average of 15 years (10 in their current school), had a teaching license and a Master’s Degree.
 - 38% of participants received no training in working with students with disabilities.
 - Participants indicated high positive attitudes toward including students with disabilities in their vocational program.
 - Average enrollment of students with disabilities within vocational education was very low, with 26% saying they had not taught a student with a disability in the last three years.
 - Participants indicated that they rarely consulted with others about the education of students with disabilities within their program. However, when they did consult with others it was most often a special education teacher.
 - Participants indicated that they had little to no control over the placement of students with disabilities within their program.
- Recommendations include further research on why vocational education is not being more utilized for educating students with disabilities.
- Implications suggest for more inclusion of students with disabilities in vocational education programs.

Stasz, C. (1997, November). Designing classrooms that work: Conception and pilot study. Berkeley, CA: National Center for Research in Vocational Education

- Described a six-week “mini-sabbatical” for high school teachers and teacher-trainers that promotes the teaching of “generic skills” in “real-world” applications by answering the following questions:
 - What to teach?
 - How to teach it?
 - How to assess what students learn?
- Described the goals for teachers after attending the mini-sabbatical as:
 - Increase teacher knowledge of work practices and the authentic application of domain knowledge in work

- Create high-quality, integrated curricula that incorporates domain-specific and generic skills
- Adopt teaching roles to support authentic learning
- Develop alternative assessments that provide meaningful feedback to students and the teacher
- Described the mini-sabbatical as having three phases. These phases include connecting teachers to the workplace, classroom design (i.e. developing assessments and curriculum), and teachers teaching their created curriculum to a small group of students.
- Examined the feasibility of implementing the above described six-week mini-sabbatical and to determine if the curriculum and process would achieve the goals listed above.
- Results indicated that the mini-sabbatical is feasible to implement, time consuming, and allowed teachers to learn key concepts and implement them into curriculum design and delivery.
- Recommendations for improvement of the mini-sabbatical include:
 - Teachers need more assistance in developing assessments
 - Teachers had difficulty relinquishing control over learning
 - Teacher collaboration is an important catalyst for learning
 - Staff developers should support the reflective practice
 - Industry experience is not sufficient for developing work-related criteria
 - Work-Based learning requires different teacher planning
- Implications include using the outlined mini- sabbatical in schools to help teach generic skills in-real life applications.

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