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School-to-work Programs in High School and the Effect on Students With Disabilities Transition Skill Development

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SCHOOL-TO-WORK PROGRAMS IN HIGH SCHOOL AND THE EFFECT ON STUDENTS WITH DISABILITIES TRANSITION SKILL DEVELOPMENT

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Abstract

This literature review examined the transition skill development of students with disabilities through high school, school-to-work experiences. Students are graduating from high school at ever-increasing levels of under-preparedness for the world they are entering, whether it is employment or postsecondary education. School-to-work programs are one way to support youth in their preparation toward leaving school and transitioning into adulthood. In addition, students with a disability have higher rates of unemployment than their non-disabled peers, indicating that they are leaving school less employable. Phillips, et al. (2002) identified four characteristics of students that are prepared to transition out of high school: 1) clear and realistic plans, 2) generalizable work skills, 3) optimism about plans, and 4) resilience in the face of obstacles. The conclusion is that work based learning experiences do help high school students, both with disabilities and without, develop transition skills.

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CHAPTER I: INTRODUCTION

Work readiness has been defined and shaped by the work of the 1991 report What Work Requires of Schools: A SCANS Report for America 2000. This seminal report shaped how educators viewed students and employers viewed employees for years to come. In the report, the commission reported that, "more than half of our young people leave school without the knowledge or foundation required to find and hold a good job" (What work requires of schools: A SCANS Report America 2000, 1992, p. 16). This report offered suggestions, in the form of competencies and foundational skills, that schools could build upon to better prepare students for this transition. However, they did not provide specifics about how to teach these competencies or foundational skills.

Preparing students for life in the world beyond the walls of the school building is a task all teachers are tasked with and is not something that should be taken lightly. Since the SCANS report, the United States government has passed legislation to support students in this transition and continue to ensure that students are as prepared as possible to make the transition to either work or postsecondary education. The first legislation to do so was the School-to-Work Opportunities Act of 1994 that required school-to-work opportunities that integrated work-based and school-based learning as well as academic and occupational learning.

The Carl D. Perkins Vocational and Technical Education Act of 1998 followed this act and was reauthorized as The Carl D. Perkins Career and Technical Education Act of 2006. The 2006 act created a new objective for career and technical education (CTE) to increase student achievement through the integration of CTE and traditional academic content. The act was expanded with the reauthorization in 2018 into the Strengthening Career and Technical Education for the 21st Century (Perkins V) Act and shall remain effective until 2024. The focus

of the act remains similar to the 2006 version, “The purpose of this Act is to develop more fully the academic knowledge and technical and employability skills of secondary education students and postsecondary education students who elect to enroll in CTE programs and programs of study” (Strengthening Career and Technical Education for the 21st Century Act, 2016, p. 3) Both acts allow states and school districts freedom in how they will create the programs in their school buildings. The new Perkins V act has built-in requirements for programs of study that require schools to link academic and technical content.

One way that schools can begin creating connections between what is learned at school and how it can be applied in life outside of school is through school-to-work experiences. The SCANS report even went so far as to recommend that learning skills in context was the most effective way to do so. When schools implement school-to-work, students are given an opportunity to learn skills in the school setting and then go into the workplace to practice those skills in a structured setting; developing relationships between what they study in school and the real-world applications of those studies. These experiences, when organized effectively, are an optimal way for students to gain real-world life experiences while also meeting the expectations of federal mandates, such as the Perkins V act, because students need these real-world experiences to expand their skill development and be better prepared for the transition into life after high school.

In addition to more opportunities for students to enter the workplace, many students are choosing to skip postsecondary education altogether in an effort to begin working immediately. Using data from the US Bureau of Labor and Statistics, about 42.9% of all youth in the 16-24 age group were not enrolled in school as of October of 2019. This means that the education students receive in high school is, for some, the only opportunity to provide direct instruction in

work-related skills. Many students, upon high school graduation, are lacking the requisite skills to be successful in either the world of work or postsecondary education, thus making laws as the Perkins V Act necessary.

Of particular concern is the lack of preparation students in special education seem to receive as these youth enter the workforce at much lower rates than their non-disabled peers. One study, conducted by Wagner, et al. (2006) found that about 70% of youth with disabilities who were out of school had worked for pay at some point since leaving school but during the study, only 40% of participants were employed. That rate is substantially lower than the average employment rate of 63% for the same-age out of school youth without disabilities. These students are also less likely to work in jobs with benefits. Based on data from 2003, only about one-third of students with disabilities worked in jobs where they received benefits. This data suggests that students with disabilities, even more than those without disabilities, are leaving high school underprepared for the world of work.

Rationale

Prior to March 2020, when the COVID-19 pandemic began to affect the US economy, unemployment rates had been at record lows, 3.5% in February of 2020 (US Bureau of Labor and Statistics, 2020), requiring businesses to get creative in their recruitment techniques. Recruiting new employees is not the only struggle these low unemployment rates were causing, however. With so many job options, retention of employees was also becoming an issue for businesses. To help accomplish this goal, many businesses are looking to school-to-work programs as a way to get more workers in their doors.

Programs such as internships, high school cooperatives, work-based learning, and job shadowing are being utilized more and more often in an effort to meet this need. Mühlemann

(2016) suggested that participation in programs such as apprenticeships can actually have cost-saving properties for businesses. While the programs require an investment of capital on the front end, in the long run, it could save money by allowing the business to retain apprentices rather than paying to recruit new employees. Additionally, this study reported another benefit to businesses is the quality of individuals hired as skilled workers. Businesses can thus spend less on training employees because they have already put that money into their training through the apprenticeship program.

While these programs may offer cost-saving benefits to businesses, it is important to consider the impact on the student participants. Through school-to-work programs students are given hands-on opportunities to learn the content taught in the school setting; these experiences provide a bridge between the classroom and the real-world. School-to-work programs may be a way to provide students with the skills they need to be ready to enter the workforce while meeting the needs businesses have in the current economy.

Guiding Question

While considering the effectiveness of school-to-work programs in the effort to support students in the transition from high school to the workforce, the sub-group of students with special needs will be considered through the following guiding question: Do school-to-work programs in high school help students with disabilities develop transition skills?

Definitions of Terms

Important terminology, used throughout this paper, is defined as follows:

Apprenticeship: Luecking (2009) states that, “Apprenticeships are formal, sanctioned work experiences of extended duration in which an apprentice learns specific occupational skills related to a standardized trade, such as carpentry, plumbing, and drafting” (p. 7). Apprenticeships

often have a paid element included in them and include supervised on-the-job training as well as outside of work, classroom-based instruction. These experiences lead to not only a diploma but a trade certificate as well.

Cooperative Education/Learning: Luecking (2009) defined cooperative education as occurring when, "education institutions help organize these experiences with local companies as adjuncts to specific degree programs and are alternatively called cooperative education experience, cooperative work, or simply co-ops" (p.7). These experiences are similar to internships except they have a direct connection to a requirement in the curriculum.

Internship: Luecking (2009) defines this as, "Internships are formal arrangements whereby a youth is assigned specific tasks in a workplace over a predetermined period of time" (p. 7). Internship experiences can be a paid experience or unpaid experience depending on the arrangement made between the youth and the company they are working for. Internships can be stand-alone experiences or experiences that are paired with specific curriculum requirements and are then called cooperative learning/education programs.

Job Shadowing: Luecking (2009) defines job shadowing as, "Job shadowing is extended time, often a full workday or several workdays, spent by a youth in a workplace accompanying an employee in the performance of his or her daily duties" (p. 7). These experiences can be designed as simply as 'take your child to work' days or as elaborately as company created days where youth are invited to shadow employees and learn about employment opportunities in the company.

Programs of Study (POS): According to the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV), programs of study "(i) incorporate secondary education and postsecondary education elements; (ii) include coherent and rigorous content aligned with

challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; (iii) may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and (iv) lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree;" (p. 35)

School-to-Work: Guest (2000) uses the School-to-Work Opportunities Act to define School-to-Work as an educational experience that provides students with, "(a) a relevant education allowing for the exploration of careers and work environments, (b) skills from work-based learning geared toward a specific career, and (c) valued credentials" (p. 615). School-to-work programs are required to include three core elements: school-based learning, work-based learning, and connecting activities.

Work-based learning: Kenny (2013) defined work-based learning as, "educational experiences embedded in a work environment, school-based learning focusing on careers, and connecting activities" (p. 7). These experiences can include: job shadowing, internships, cooperative education, and youth apprenticeship programs.

Chapter Summary

This chapter has introduced the topic of school-to-work programs including the rise of popularity of its usage in American high schools. The need for school-to-work programs in high school, a guiding question, and definitions of important terms were also introduced. In Chapter II, a review of literature will attempt to provide answers to the guiding question. This will lead to

Chapter III, which will present a discussion, conclusions, and recommendations for future research.

CHAPTER II: LITERATURE REVIEW

To locate literature for this thesis, searches of EBSCO Mega File, ERIC, JSOTR, PsychINFO, and Business Source Premier were conducted for publications from 1992 to 2020. This list was narrowed by only reviewing published articles from peer-reviewed journals that focused on the guiding question. The key words that were used in these searches were "school-to-work," "work based learning," "high school," "internship," and "apprenticeship." The structure of this chapter is to review the literature on school-to-work transition skill development in eight sections based on the work of Phillips, et al. (2002). In their study, researchers identified the four characteristics students who are prepared to make the transition from secondary education to postsecondary or to the world of work possess; 1) clear and realistic plans, 2) generalizable work skills, 3) optimism about plans, and 4) resilience in the face of obstacles. These characteristics will be used to support the guiding question of if school-to-work programs help students with disabilities develop transition skills.

Literature will first be presented on clear and realistic career plans, followed by clear and realistic personalized educational plans. Next, literature on generalizable career skill development will be reviewed followed by generalizable personal skill development. Optimism about plans by increasing confidence in career opportunities will be reviewed next followed by optimism about plans by increasing confidence in personal skills. The chapter will end by reviewing literature on resilience in the face of obstacles and the career benefits and resilience in the face of obstacles and the personal benefits.

Clear and Realistic Career Plans

One study gave students opportunities to reflect on their career goals and aspirations while also increasing their navigational and social capital. Murillo, et al. (2017) developed a

study utilizing surveys, field observations, and questionnaires of students, teachers, and site supervisors over a four year period. Through this study, Murillo measured students' development in five different forms of capital: aspirational, resistant, social, navigational, and linguistic.

Through interviews conducted with students during and following the internship experiences, Murillo noted that many students gave advice to future interns suggesting that they choose a worksite based on personal interests and passion; these suggestions support the idea that students developed aspirational capital through these experiences. After completing their internship experience, 31% of students surveyed reported that they wanted to pursue a job in the career field in which they had completed their internship. Even though most of the participants did not know the line of work they wanted to pursue in the future, they did feel that the internship experience encouraged them to reflect on their career goals and aspirations. This reflection opportunity gave students experiences that they did not have in the traditional school setting to think about their futures in ways they had not done before.

Students also developed navigational and social capital by creating partnerships with professional adults who not only modeled working in their community, often in jobs they would like to have, but also supported students' efforts in applying to college. The students were surveyed following their internship and results showed that almost half of the mentors provided youth with help on their college applications and nearly one third wrote their interns letters of recommendation. These connections helped students learn the importance of networking, not only at work but also in the school setting. Findings showed that the internship experience encouraged participants to begin thinking of themselves as part of a larger group and to consider how they could contribute to the organization as a whole. These experiences, including the

guided support from the teachers in the school setting, help students to develop personal capital that they can apply to future work and academic settings.

Like in any setting, the quality of the program has an impact on those involved. Gamboa, et al. (2013) studied the effects of internship quality on career exploration of high school students. This study was created as a longitudinal panel study examining the relationship between the perceived qualities of training experience and the career exploration process using a sample of 346 Portuguese vocational education student interns. Using multiple measures to assess different components, the researchers worked with students following a fourteen-week internship to understand their perceptions of their experiences.

The results showed that there was an increase in career exploration, particularly related to the individual student's career of interest, while they were participating in their internship. The results showed that female participants reported higher levels of exploration, as did older students, while taking part in the internship process. These results indicated that the female participants were better prepared for the transition out of school than the males. As related to internship quality and its relation to career exploration, the study indicated that the quality of the internship was a significant predictor of career exploration over the duration of the experience. When students felt that they received social and supervisor support in their internship setting, they were more likely to have high career exploration beliefs, behaviors, and reactions. Similarly, students who felt supported in the workplace experienced an increase in not only career exploration activities but also decreased decisional stress. Students also showed a connection between feelings of autonomy and learning opportunities in their internship setting and career exploration activities. As students felt more connected to their work experiences and

those they worked with they were more likely to explore career options and make stronger plans for their future careers.

The researchers found that when students felt autonomous in the work setting, they exhibited an increase in environmental career exploration. Internship learning opportunities resulted in increased self and systematic exploration in addition to increased decisional stress. This may be caused by students re-evaluating their own skills and interests based on their experiences in their internships. WBL experiences, such as the internship experience in this study, are one way to provide youth the opportunity to develop realistic plans for their futures through career exploration opportunities.

Creating clear plans in high school begins with understanding the education required for the job of interest. Education-jobs mismatch is a concern in many fields and was addressed by Taylor and Servage (2012). In this study, the researchers conducted 48 face-to-face or telephone interviews with students, workplace mentors, and teachers to evaluate the health internship programs offered through the Canadian group Transitions Org. Thirty-three students participated in the interview process, three were postsecondary students, three had completed Grade 12, and the remaining twenty-seven were in Grade 12 when they were interviewed. All students were interviewed in a focus group format. The ten mentors or managers involved with placing students in their internship locations and the nine workplace mentors were all interviewed individually.

The highly competitive nature of the program resulted in the opposite of the desired result. The Canadian school-to-work transition system is described as a “laissez-faire” approach and is dependent upon each employer being willing to provide high quality learning experiences for the youth participants. With this type of system, the study found that most participants were

those who already desired a career in medicine rather than youth who were looking to explore their career options. This study also found the socio-economic background of students played a role not only in their participation in the program but also the learning experiences garnered from the program. Students with parents at home to push them to apply and participate in the program were more likely to gain more from the experience than those without that push from home. These students came into the program with clear plans for their future and utilized the experience to gain an understanding of the medical field to better allow them to pursue that field in the future. While the researchers noted that this was not the intended purpose of the internship, the students were using it to the best advantage possible.

Additionally, the role of the at-work mentor also played a role in what students took away from their work experience. Study findings showed, "some mentors saw interns as workers who could meet immediate organisational needs, while others emphasised the experiential learning aspects of placements with a focus on career development activities for youth" (Taylor & Servage, 2012, p. 180). The more effective mentors took the time to learn about their students and used that information to create learning experiences that suited the needs and desires of the students. These mentors encouraged self-reflection and talked with students to help them understand what they were learning. These are the mentors that allowed students to gain the most from their internship experience, both from a decisional perspective and from a skill-building one.

Students in high school often experience a variety of outcomes from scientific focused work experiences. For many they are a way to solidify future plans while for others they are seen as a way to explore career options. Burgin, et al. (2012) studied student experiences and outcomes in relation to participation in a science research apprenticeship. The researchers

wanted to find out how student experiences and outcomes varied and how those variations affected students the outcomes of a desire to pursue science-related careers and Nature of Science (NOS) understandings. The study utilized interviews of 18 students over two years, as well as four mentors during the second year of the study. Also, during the second year, the researchers had the students create a concept map to illustrate the science concept they were researching at the beginning of the apprenticeship and revise the concept map at the end.

From the interviews, the study found that all students felt that they increased scientific knowledge through the apprenticeship experience. Students were also able to discuss the final projects with increased complexity and detail. Some students developed higher levels of NOS than others with all students exhibiting high NOS also expressing high levels of collaboration and interest. On the other hand, the one student with low NOS also had a low level of collaboration and a medium level of interest in their research topic. In addition to interview data, the final students created concept maps to show their knowledge acquisition, with five of the seven becoming more complex for the final analysis. Both data types point to a development of scientific knowledge for students through their apprenticeship experiences.

Coming into the experience, 12 students identified plans to pursue careers in the science field. Of those, only two were looking at the area of research science while five focused on applied science and five had a general interest in the science field. After their apprenticeships, six students were interested in pursuing careers in research science, three were still looking at applied science, and three still had a general interest in science as a career. The same four students who began the program with no science plans ended the program that way. Research apprenticeships may provide an opportunity for students who already have an interest in science

to enrich their interests or clarify their future plans. This apprenticeship experience in the science field is one way that students can begin to explore and solidify their future plans.

For some youth, high school experiences not only play a role in career exploration but also in the likelihood of enrolling in advanced schooling. Tai, et al. (2017) conducted a study to determine if there was a correlation between high school summer laboratory apprenticeship (HSSLRA) experiences and later enrollment in MD/PhD programs. Using information from the Association of American Medical Colleges Pre-Medical College Admission Test Questionnaire and the Student Record System, they were able to identify 236,432 individuals to include in their study. Of these individuals, 3,056 were enrolled in MD/PhD programs and of those, 580 (19%) had participated in HSSLRA programs. The remaining 233,376 were not enrolled in MD/PhD programs but of those, 20,151 (8.6%) had participated in the same type of apprenticeship program. The researchers also considered whether students had participated in college laboratory research apprenticeship (CLRA) programs, MCAT scores, gender, and race when reviewing the data for all study participants.

Findings showed that participation in high school summer laboratory research apprenticeships did not play a statistically significant role in students enrolling in MD/PhD programs. However, when they combined both high school and college programs, that did have a significant impact, “respondents with both HSSLRA and CLRA experiences have 4.50 times greater odds of matriculating into an MD/PhD program than respondents not reporting an LRA experience” (Tai, et al., 2017, p. 6). These numbers are particularly impressive when researchers broke down the data into different ethnic groups and found that Hispanic/Latino/a students in both HSSLRA and CLRA groups had 5.37 times greater odds of joining an MD/PhD program

than those with no LRA experience. This number was much higher than the 2.55 times chance they had if they only reported CLRA experiences.

This does not mean that the high school experience serves no purpose for the students. Researchers surmise that these types of experiences in the high school level help students to solidify their future career plans. Experience in a high school summer laboratory research apprenticeship could reinforce a student's desire to pursue a science research career path or give them more information about this career path, allowing them to make a more informed decision about their college education plans. The experiences also help students to bolster their college applications, an aspect that is especially helpful to minority or underprivileged youth who may lack the support and mentoring that would ease their dream of a career in a STEM-related field. Work-based learning experiences, such as those experienced through their HSSLRA participation, are ways that students who come from underprivileged experiences gain opportunities to identify not only what they would like to do after high school but to also build resume experiences that will help them actually achieve those goals.

While internship and other work-based learning opportunities support students to develop clear plans for postsecondary life, offering varied programs, as well as maintaining high academic expectations can be a challenge for some schools. Educators in rural settings face struggles to support students through school-to-work programs due to lack of program resources and workplace partnerships while also dealing with low socioeconomic status in some settings. Hutchins and Akos (2012) studied students from rural schools and their access to and use of these programs. The research used data from the Educational Longitudinal Study of 2002 (ELS:2002). The ELS:2002 was conducted as a random sampling of more than 15,000 sophomore high school students from 750 public schools chosen at random. In the study, the

researchers accounted for three variables: program availability by asking school administrators questions about programs and services, students' use of programs by interviewing them to determine if they participated in various career preparation programs, and control variables which included both school level and student-level variables.

Based on these variables, results showed that rural schools were more likely to have vocational-tech programs compared with urban and suburban schools. When compared with urban schools, rural schools were more likely to have job shadowing programs. When they controlled for program availability, students in rural schools were less likely to participate in job shadowing programs than students in both urban and suburban settings, however. Rural schools were less likely, on the other hand, to have school-based enterprise programs than suburban schools. With this understanding, it is important to note only a fourth of the schools in the study offered opportunities for WBL experiences that included internships, mentorships, or school-based enterprise and only one half offered job shadowing and community service opportunities for students. They also noted that most schools in the study required students to complete a career plan or career major, which the researchers found encouraging, but numbers this low may be a reflection of the school's lack of resources to effectively support school-to-work programs. While the school incorporated an element of creating clear plans for the future, the numbers were low which made it difficult to identify how effective the program was in supporting and measuring those plans.

In addition to changing how work-based learning looked, as some school districts tried to comply with the Perkins IV Act, one solution they began implementing were programs of study (POS) focused schools. Castellano, et al. (2017) studied one school district on the west coast that had created five POS schools, although the study only included three schools as two of the

buildings were brand new and they did not want to add to the stress of opening a new building. Researchers found that in all three POS high schools, students had opportunities to participate in WBL experiences including creating resumes, participating in mock interviews with business partners, and job shadowing at a workplace of interest. Internships were also encouraged at all three locations, but were not required at any of the schools. These experiences contributed to the students' abilities to create realistic plans about their future by allowing them to participate in experiences that prepare them for postsecondary life in the "real-world."

The researchers studied the effect of enrollment and participation in CTE courses on academic achievement (GPA) and high school completion (graduation). The study began in 2009 with 1175 ninth graders enrolled in POS schools and 829 students enrolled in one of the 25 remaining high schools in the district. The study found that simply by enrolling in a POS high school, a student's likelihood of graduating increased by an average of 11.31%. Results also indicated that for each CTE credit a student took, the probability that they would graduate increased by an additional 4%. This indicated that students in POS schools were more likely to graduate and those who participated in CTE courses gained skills to better prepare them to reach that goal as well.

While POS enrollment and participation had a positive impact on graduation rates, it did not have any significant impact on student achievement, as student GPA's for those enrolled in the POS schools were similar to those of students enrolled at other schools in the district. Researchers summarized that while students did have equivalent GPAs, POS students gained more from their experiences through the career themed sequence of courses taken, staying together with a group of peers throughout high school, having the opportunity to build personal identity around a career theme, having exposure to work experiences, and opportunities to take

college classes in high school. Through their study, these researchers reported that these experiences could help students make more informed decisions about college and career goals, with no negative effect on their GPA and a positive effect on their likelihood to graduate.

Clear and Realistic Personalized Educational Plans

High schools are beginning to look at other options to support students in creating plans for their postsecondary transition. One of those options is transforming the work-based learning system to combine instruction and hands-on learning experience into a cooperative learning model. Cooperative learning programs have not been used frequently by schools in the past, but according to Gemici and Rojewski (2010) are a way that at-risk students (students with excessive school absences, in-school suspension, probation, and disciplinary transfer) could gain valuable work exposure while maintaining the support they need in the school setting. The effect of these learning experiences, especially for at-risk students, on postsecondary transition preparedness was the focus of this study, with a primary focus on student's development of postsecondary education plans and the importance placed on work.

The researchers used data from the Educational Longitudinal Study of 2002 given to students while they were in 10th grade and again when they were seniors in high school. Students who did not participate in the study both years were eliminated from the data pool. The sample size was 1,752, and 264 of these reported having participated in cooperative education. After propensity score matching methods were implemented to help eliminate selection bias, results indicated that at-risk youth who had participated in co-ops during high school had more ambitious postsecondary education plans than their peers who did not participate in co-ops but were also considered at-risk. These results suggest that exposure to work can support a student's value of training beyond a high school diploma. In this study there was no statistically significant

difference between groups when researchers looked at the importance they placed on work. There are multiple reasons why this could have been; such as the amount of time spent in the program or quality of work experience. While creating a positive feeling toward the world of work should be a focus of all work-based learning programs, that does not seem to always be the outcome.

High school students spend a large portion of their time in school discussing and planning for life after high school. Many schools actually require students to decide on an educational track early in their high school careers. Fletcher (2012) noted that these tracks include: college preparatory, CTE, and general curriculums. These programs show support for students in varying degrees but the implementation of tracking systems does not result in the same level of support for students in the CTE track. This research study focused on the employment status of individuals based on their high school curriculum track.

Using the 1997 NLSY data, the study found that students from the CTE track had the lowest employment rates (69.3%), thus the highest unemployment rates (13.8%). Students who graduated from a college preparatory track had the highest employment rate, 79.1%, with students from the general and dual tracks just below this level (74.9% and 74.5% respectively). CTE track students also had the highest rate of graduates not in the workforce (16%) while students in a dual track program had the lowest rate of graduates not in the workforce (11.8%). Results indicate that students who graduate from a general track education program are 1.8 times more likely to be employed after high school than CTE graduates. This leads to the idea that in conjunction with school-to-work programs, students also need to experience high academic expectations while in high school.

Fletcher and Zirkle (2009) researched high school curriculum tracks, degree attainment, and occupational earnings after leaving high school. In 1990, Congress reauthorized the Carl D. Perkins Vocational and Applied Technology Act (Perkins II) with a new focus on coupling CTE and traditional academic content to increase student achievement. This study added to the research by determining if the requirements of this component of the law were being met. They used survey data from the 1997 NLSY consisting of 8,984 participants. Of those participants, 58.3% were enrolled in general track courses, 30.4% were enrolled in college preparatory courses, 6% were taking CTE classes, and 5.3% were in the dual track.

Students enrolled in the dual track program were most likely to graduate with a high school diploma, 66.5%, followed closely by those enrolled in the CTE track, 63.1%. Students in the CTE track were the least likely to obtain a bachelor's degree with only 5% of the population earning one at the time of the final survey's completion. Based on this data, the researchers concluded that the dual track is an auspicious alternative for students not suited for the college preparatory track but who still want to pursue postsecondary degrees. Students who completed the CTE track were earning the highest average income as of 2006, while students from the general track were earning the lowest income at that time.

Findings from the study showed that racial demographics also impacted students' enrollment in various tracks. The study found that black students had the highest participation in CTE track courses (9.8%) and in the dual enrollment track (8.3%). Findings also showed that Hispanic students had the highest enrollment in the general track courses, 69.2%, while White students had the highest enrollment in the college preparatory track, 34.3%. "Thus, if minorities such as Blacks are overrepresented in CTE tracks and Hispanics are more likely to be in the general track, this suggests an area of concern" (Fletcher & Zirkle, 2009, p. 93). This is

especially concerning when the results indicate that enrollment in the general track has the least benefit for students as they are the least likely to graduate from high school and earn the lowest income after graduation. Therefore, researchers concluded that it may be more beneficial for students to participate in any of the tracks other than the general track. As students participate in dual, college preparatory, or CTE tracks they are creating plans to reach goals they have set for their futures that students in the general track are not doing.

The researchers also suggested that academic focused legislation (such as No Child Left Behind) be reformed to include provisions requiring students to take classes that meet four year university requirements, earn credit in CTE, or a combination of the two. The skills that students can develop from these tracks; college preparatory, CTE, or dual also support students as they begin to consider the transition into the workplace. Many of the skills students learn in the dual and CTE tracks, in particular, will allow transition directly into the workplace when students leave the school setting and enter the workforce.

Generalizable Career Skill Development

High school experiences play an impact on employment long after high school has ended, especially when students engage in work-based learning experiences that provide them with opportunities to develop generalizable skills that they can transfer to future careers. Kim and Passmore (2016) conducted a study using secondary data from the NLSY97 study on the effect of student participation in school-to-work programs, high school courses of study, and participant obtainment of a training certificate on work level six or more years after high school graduation. The study included 935 participants, 552 males and 383 females, none of whom went on to enroll in additional education during the time data was collected. All participants graduated between the years of 1999 and 2003.

Through their work, the researchers utilized five job zones categorized by the National Center for O*NET Development. These zones are based on the amount of work-related skills and knowledge, the amount of training, and the education level necessary for positions in each level. Jobs in zone 1 require the least amount of skills, training, and education (less than six months) while those in zone 5 require the most extensive preparation (over 10 years). The study showed that, over the five years of their study, seven percent more participants were employed in job zone 2-5 careers at the end of the study than at the beginning. Through their research, the study found that, "Respondents therefore can be shown to have a 15% probability of holding jobs in Job Zone 3, a 66% probability of holding jobs in Job Zone 2, and a 19% probability of holding jobs in Job Zone 1" (p. 127).

When workers obtained a training certificate, they were more likely to move to higher level jobs more quickly. Family background also played a role in work levels. Those with parents who did not have a high school diploma were less likely to hold jobs in zone 3 (requiring medium preparation of 2-4 years) right out of high school compared to workers with parents who were high school graduates. Male workers were more likely to hold jobs in zone 3 than females, and unless the females obtained a training certificate, they were 3% more likely to hold a zone 3 job. The researchers noted that the rate of incline for higher level jobs did plateau at a certain point though.

High school involvement in certain school-to-work programs also had a slightly positive effect on growth rates with participation in a cooperative program showing a 1% growth rate and participation in a mentor program showing a 3% higher probability of holding a job in zone 3 over those who did not participate in those programs. However, the study found that the mentorship impact drops off when the person obtains a training certificate. Both programs allow

students to take what they are learning in school and apply them to a work setting, however. This allows students to enhance skills, knowledge, and behavior that they use to become productive employees in the future. Participation in work experiences while in high school equated to not only higher paying jobs but also to increased growth rates.

The work of Kim and Passmore (2016) was supported by Gold, et al. (2013) who studied the Building Bridges program and its effect on student's employment participation over a multi-year timeframe. Using data reported by Building Bridges, participants were interviewed as they enrolled in the program. The researchers then pared down the data in an attempt to identify the predictive nature of participants' disability categories, special education status, work history experiences, household income, program site participation, program site, and year of participation in obtaining a competitive job and job placement rates.

After reviewing the interview data, researchers found that most participants in the program were male and ethnically diverse. Students in all areas had a job placement rate of 77.2%, aggregated over the seven sites and six years, a rate 9.2% higher than the five years before this study was conducted. Participants worked an average of 19.1 hours per week and earned an average of $8.29 per hour as a starting wage. Female participants were also found to be almost universally disadvantaged when compared with their male peers, with almost a 4.6% lower job placement rate over their male counterparts. These results indicated that youth, in the Bridges Program, experienced higher employment rates during the period of 2006-2011 than in years prior, even females who were employed at lower rates, and were employed half-time in competitive jobs while in school.

The Building Bridges program creates a unique opportunity for students with disabilities to receive structured support through career counseling and job placement, paid work secured

through the program, and follow-up support all while still in school to support their skill development and transition into the world. Job rates across disability categories were similar, when aggregated across all sites, with participants identified as having a learning disability had a higher rate (78.4%) than those identified with intellectual disabilities (74.3%) and serious emotional and behavioral disorders (73.4%). While job placement rates among disabilities categories were fairly consistent, they varied greatly among the different site locations.

Prior work experience also impacts the skill development of students, especially those with disabilities. The study looked at previous work experience of Bridges participants and found that participants who had any paid work experience had a placement rate of 80.7% compared to a placement rate of 76.0% for those with no paid work experience. Then, when comparing those with paid work experience in the past six months to those with no paid work experience, findings showed that there was little difference between the two rates, 82.5% and 78.1%, respectively. The researchers summarized by stating, “The experience of the Bridges program offers evidence that career preparation and transition services for youth with disabilities can start with the presumption that all youth have the potential to succeed in employment” (Gold, et al., 2013, p. 43). Again, research supports the notion that when students experience work during high school, they are gaining valuable skills that translate to future employability.

In addition, students can also develop specialized skills through work-based learning programs such as apprenticeships. Apprenticeship programs have been seen as a way to help smooth the school to work transition in Canada, by improving high school graduation rates while also helping to address the countries' labor shortages. Ontario created a program, The Ontario Youth Apprenticeship Program (OYAP), in the late 1990s to allow high school students opportunities to participate in apprenticeship programs while still enrolled in high school. Taylor

and Freeman (2011) interviewed former apprenticeship participants from the carpentry and automotive programs to identify their attitudes toward their apprenticeship training and how their experiences in school and the workplace and their families' backgrounds affected their likelihood to complete their training.

Through their initial surveys, the researchers found that approximately 23% of respondents, aged 21-28, had completed their trade certificate while almost two-thirds had worked in the OYAP trade at some point within the past two years. After conducting follow-up interviews two to three years later, with 19 youth, the study noted that 11 participated in the carpentry apprenticeship and eight in automotive. Two to three years following their apprenticeship experiences, eight of the 11 carpentry apprentices were still working in the trade, two had moved to the trade of gas fitting and had at least one level of certification in that trade, and the last person was working two part-time retail jobs while doing carpentry 'on the side.'

The automotive apprenticeship program differs from the carpentry program because certification is required to do certain types of jobs, while carpentry certification is completely voluntary. Of the eight automotive apprentices in the study, only two had completed the automotive certificate requirements. Additionally, three others had completed the third level of their apprenticeship training and seemed ready to become licensed. Another automotive apprentice had switched from automotive to 'truck and coach' and was working on a one year certificate program at a college. Of the two remaining youth, one had a physical disability and had left the field and the other had completed over half the training but was planning to leave the trade.

In this study, 'non-traditional' apprentices had very different experiences than their more 'traditional' counterparts in the trade environment. The study reported that "black and female

youth (also working-class backgrounds) seemed more dependent on employers. They had fewer job moves, expressed stronger loyalty to their employer, and seemed more reliant on the goodwill and encouragement of employers to complete their training" (Tayor & Freeman, 2011, p. 358). The study also showed that apprentices needed to take ownership of learning opportunities as not all co-workers were willing to share their knowledge and not all in-school learning was applicable to the day-to-day work they were doing. Considering the majority of the student participants were still working in the field of study, even though few had completed the certification process, this indicates that students are learning skills that they can apply to their work setting. The students in the study had very different experiences in the workplace, often due to the relationships created with workplace mentors.

While participation in school-to-work programs shows benefits for many youth, both with disabilities and without, there are still questions about the benefits of school-related and unrelated jobs. Hamilton and Sumner (2017) used the 2010 *High School's That Work* assessment data to determine the effects of school-related and unrelated job experiences on self-perception. Twenty-one percent of the 44,824 participants reported having jobs that were school-related. Boys were more likely to have a school-related job (25% compared to 17% of females) and black youth were more likely to have a school-related job (32% compared to 27% of white students). The study found that students with school-related jobs anticipated gaining less education than those with jobs unrelated to school and were less likely to meet the math, science, and reading readiness goals set by the Southern Regional Education Board.

Respondents in this study were asked to report on their perceptions of the quality of their job. Researchers reported that female students self-reported no difference in quality between school-related and unrelated jobs while males reported higher job quality for unrelated jobs.

White students reported higher job quality for school-related jobs but non-white students reported higher job quality for unrelated jobs. While all differences are possibly only statistically significant due to the large sample size, this information is worth noting. This is particularly important due to the relationship between the higher number of black students being engaged in school-based work experiences and their feelings of lower job quality in these positions.

This study also found that school-related job opportunities allowed students to gain work experience, but that the experiences were in lower quality jobs than those that students could find on their own. Even when students felt that the jobs they experienced were of lower quality, they still gained experience that could be transitioned into future work experiences. It is also important to note that the relationship between job type and job quality varies by school and likely had an impact on the student perception ratings. This study did not look into the relationship between students and their workplace or school mentors, a critical element in developing connections in the work environment.

Generalizable Personal Skill Development

Providing students with authentic learning experiences, whether through an automotive or carpentry apprenticeship or a scientific research apprenticeship, is an effective way to develop the interest and skills in students, especially those in groups that are often under-represented in the sciences. Often, apprenticeship programs for high-school students charge high participation fees though and may not attract students from diverse backgrounds or lower socioeconomic populations. One apprenticeship program was created and studied by Burgin, et al. (2015) for high school students from these populations who were interested in STEM careers. The researchers designed the program to allow students to participate in a two-week apprenticeship on a nearby research college campus.

The students were recruited through the district-wide science coordinator and required to complete several essay questions and submit their transcript and a letter of recommendation from a math or science teacher. In the end, eight students were chosen for the study, one participant was a Black/African American male, three were Black/African American females, and four were White/Non-Hispanic females. All participants were assigned a research group, either engineering or chemistry, a student partner, and each partnership was assigned a mentor. The researchers were working to learn if students, in such a short amount of time, could develop personal understanding in the areas of: nature of science and inquiry, STEM-related plans, and personal identity.

The students built relationships with mentors and engaged in different activities in their apprenticeship opportunities. All students were engaged in real-life science laboratory experiences, but some experiences were more engaging than others. Overall, the study reported that students felt they were contributing to the work of the laboratory group they worked with. This led to increased feelings of self-worth and belonging in the laboratory environment, "They felt that their work was at least to a certain extent valued by their mentors and important to the group as a whole and therefore expressed a confidence in their abilities to make meaningful contributions" (Burgin, et al., 2015, p. 432).

Students were able to develop their nature of science understandings in 59% of opportunities, with 34% resulting in an informed perspective. The researchers concluded that the changes in these understandings, not only the nature of science understandings but also the STEM-related plans and personal identity understandings, were caused by the hands-on learning opportunities in the laboratory. For students interested in a career in the sciences, this is

knowledge that will be generalizable to future careers and should support students to develop along their career paths.

While some experiences allow students to learn more about who they are as a person, others give students opportunities to develop social skills while job searching at the same time. Benz, et al. (1997) researched the effects of school-to-work programs for both students with disabilities and students without disabilities. In the interview-based study, the researchers explored the competitive employment and productive engagement status of individuals one year after leaving high school. In this study, the researchers found that students who had experience in two or more work settings in their last two years of school left high school with high social skills and high job search skills. Students who had no continuing vocational instruction needs were two to three times more likely to be competitively employed one year post-high school. Youth were 1.5 times more likely to be productively engaged in work activities if they left high school with no continuing instructional needs in vocational and social skills.

The study also provides insight for teachers of special education. Female students with disabilities were five times less likely than all others to be competitively employed. In addition, the study also showed that students with disabilities who possessed strong reading, writing, and math skills were two times more likely to be competitively employed than were students with low skills and were more likely to be productively engaged during their first year out of high school. Work-based learning experiences provided students opportunities to develop both social and job search skills that would last throughout their working lives and support them in both finding and maintaining employment.

Peer mediated interventions (PMI) are another way that professionals have found to support students with disabilities to develop skills in a structured, supported system. Athamanah

and Cushing (2019) used this approach to train and study students without disabilities to implement research-based academic and social interventions to students with Autism Spectrum Disorders (ASD) in a structured work-based learning program within the school setting. The researchers stated that, "implementing PMI in WBL settings can offer integrated opportunities to build these skills alongside peers of the same age in a setting that mimics real-life post school employment" (Athamanah & Cushing, 2019, p. 198). This approach provides students an opportunity to develop interaction skills alongside a peer, rather than becoming dependent on an adult to guide skills development. The results of the study, according to the researchers, are consistent with other research findings that show improvements both in the quality and the frequency of social interactions between peers when adults are removed from the equation. These results are also supported by the work of Benz, et al. (1997) indicating that students develop social skills through WBL experiences. This indicates that the utilization of PMI strategies could be a way for schools to consider supporting students on the Autism spectrum as they work toward independence in academic and vocational settings.

The results of the study showed that the PMI strategies increased independent vocational tasks, social interactions, and improved the quality of the social interactions among the students in each partnership. While this is true, the vocational tasks measured through this study were only those targeted tasks in the work-based learning experience. There is no data to show if the independent vocational skills transferred to any other areas of work for the student with ASD. Also, while the quality of social interactions improved for all dyads, the quality of improvement was minimal. These results are still promising and support the use of peer mediated interventions in a work-based learning setting for students with Autism Spectrum Disorders and with non-disabled peers to develop social and vocational skills.

High school is often a time of discovery for students but according to one study, work experiences during this time do not promote development of career decision skills, even though areas of intrinsic work motivation are impacted. Skorikov and Vondracek (1997) studied 282 junior and senior high school students over two years to determine if work experiences increased their work values and reduced career indecision. The study was conducted using two surveys; one was considered the pre-test and the second, given a year later, was considered the post-test. The assessments included the Work Aspect Preference Scale and the Career Decision Scale. The students also self-reported the numbers of hours they worked each week in order to indicate if the student had a job between the two assessment periods.

The researchers hypothesized that part-time work experiences would not affect career indecision in students but work values would be affected. They also believed that gender would have an effect on work values, with a more profound effect on males than females. Finally, the researchers felt that while age would play a role in career indecision, the role of work would not have an impact on that.

The study reported that students working part-time compared to non-working students showed significant differences in the specific work values of: co-workers, altruism, and surroundings but no other work values were affected simply by work experiences. Students made no changes in career indecision that were considered statistically significant over the one-year time period of the study. Findings also showed that working boys valued management and prestige less than non-working boys over time, while both working and non-working girls valued these aspects less over time. Boys also tend to be interested in work as a form of physical activity but after working they valued this less while girls valued this less whether they had worked or not.

The changes found in the study showed that, working negatively affected extrinsic work motivation for both sexes in the areas of relationships with others, status and power related to holding a job, and working conditions. However, these experiences do not help students identify a career path or plan for their future. “To make part-time work meaningful in terms of career exploration, it would need to include opportunities for trying out more challenging work roles that offer variety, autonomy, and responsibility on the job” (Skorikov & Vondracek, 1997, p. 231). While working did not increase the students’ understanding of what they wanted to do in the future, it did increase their internal motivation to work; the more students worked the more intrinsically motivated they were to continue working. Because work is something that people will spend decades doing, becoming more intrinsically motivated to perform at higher levels is a skill that will benefit these students for years to come.

Preparing high-risk students for the transition from high school to the workplace is a daunting task that many educators are faced with each year. West, et al. (2018) performed a study to identify modifiable factors related to competitive employment of students at high risk for poor school-to-work transitions. Using data from the National Longitudinal Transition Study-2 (NLTS-2), the researchers reviewed data from 580 youth, all identified with disabilities. Students in all three categories were classified as ‘high-risk’ for exhibiting poor school-to-work transitions due to a disability. The students were put into three groups. Group 1 had 120 students who struggled to understand what was said; group 2 had of 210 students who understood what was said, came from households with an annual income of less than $50,000, and had a cognitive or emotional disability; and group 3 consisted of youth with no trouble understanding what was said, came from a household with an annual income of more than $50,000, and had a sensory or physical disability.

Based on the studies' results, three themes emerged as areas to develop: raising parental expectations, developing postsecondary education and training opportunities, and increasing student self-advocacy. From their study, the researchers reported that the expectations of parents had the strongest predictive quality for competitive post-high school employment for youth in all three disability groups. Many times, parents of youth with disabilities, especially those with significant disabilities, have low expectations for their children's ability to work productively. Schools can play a factor in helping parents to increase these expectations. These experiences not only increase parents' expectations for their children in regards to them becoming gainfully employed, but also increase the confidence, work skills, and employability of the youth participants. Schools can work to provide vocational experiences for students with disabilities, which did show marginal support for competitive employment in two out of the three groups.

Postsecondary participation is a factor that was also a significant predictor of competitive employment (West, et al. 2018). Participation does not mean completion, the students simply had to participate in some form of training or schooling beyond high school; these could even include short-term training programs such as paid or unpaid internships or certificate programs. The researchers advise high school educators to take this information to heart when creating transition plans for students, ensuring that they have educated themselves on the training options available to students after high school. Finally, increasing self-advocacy skills was also linked to higher levels of competitive employment, and it was also linked to a greater likelihood of post-school employment for two of the three high-risk groups. The development of self-advocacy skills is a life-long task that many individuals, including those without disabilities, struggle with. The researchers advise that students should be able to advocate for their own employment goals

while participating in the transition planning process, a skill that they can develop through WBL experiences.

Optimism About Plans by Increasing Confidence in Career Opportunities

Students also can develop optimism through increased confidence in their career opportunities. When students participate in WBL experiences, they gain insight into opportunities they did not know about or learn more about known opportunities. Burgstahler and Bellman (2009) conducted a survey analysis of student intern participants of the DO-IT (Disabilities, Opportunities, Internetworking, and Technology) program to determine how students felt they benefited from their WBL experience. The program allowed students to participate to varying degrees in different forms of work-based learning experiences; job shadows and informational interviews, career panels of professionals with disabilities, student workshops and academies, mentor and peer support, product development, student competitions, student professional development, student leadership development, and internships. The analysis required students who completed the internship process to complete a survey identifying how they felt they benefited from that experience.

All of the students reported increased motivation to pursue a career, increase their career option knowledge, develop their job-related skills, and increase their ability to work with others. Some groups experienced higher levels of perceived benefit, however. Female respondents reported statistically significant higher responses to developing skills needed to work effectively with a supervisor when compared to male respondents. The study reported that high school students were more positive in their responses that their internship experiences helped them develop the skills needed to be successful with job-specific tasks than college students.

Although, according to the study, Caucasion respondents felt that their career knowledge had been more advanced due to their internship experience than non-Caucasion respondents.

When considering how disability impacted self-perception of their work-based learning experiences and skills gained, there was no statistically significant difference between responses from students in the visible disability subgroup when compared to students in the invisible disabilities subgroup. When the researchers broke down the visible subgroup by disability, however, the disability category of hearing impairment presented three areas of significantly more positive responses; learning the skills needed to effectively work with supervisors, learning the skills needed to effectively work with co-workers, and learning the skills needed to succeed in specific job tasks. As can be seen, students with disabilities, much like their non-disabled peers, are highly impacted by school-to-work programs, especially highly structured and supportive programs such as the internship opportunities provided in the DO-IT program. Again, findings showed that, following an internship experience, the students were more excited about their job possibilities and their personal abilities to work in a career of their choosing in the future.

Being able to work successfully also requires that students enter employment with a positive attitude. Creed and Patton (2003) studied a large sampling of Australian high school students to determine if paid work experiences affected their career attitudes or their career knowledge. In addition, they also looked at age and gender differences in career maturity development. The researchers gave all students a survey consisting of the Australian version of the Career Development Inventory (CDI-A). The CDI-A is broken into two composites; “the Career Development Attitude (CDA; which is the summation of the Career Planning and Career Exploration subscales) and Career Development Knowledge (CDK; which is the summation of

the World of Work and Decision-Making subscales)" (Creed & Patton, 2003, p. 26). The internal reliability coefficients for the CDI-A are also similar to those reported for the American inventory.

From the survey, the researchers found that youth with paid work experience consistently scored higher in CDA than youth who had not had paid work experience. This difference became even more pronounced as students became older, with students with paid work experience at ages 14, 16, and 17 all having significantly higher CDA scores than those without paid work experience. Career Development Attitude (CDA) development was also more pronounced for both males and females with paid work experience than those without the experience.

Paid work experiences did have an impact on career knowledge as well, as youth with these experiences exhibited higher levels of CDK than their peers both immediately and over time. While the effects of paid work were not as great on career knowledge as career attitude development, there was an impact in both areas. CDK showed no difference for males with paid work experience versus those who had no experience, while females showed a difference but only at age 17. While career knowledge is increased, the main support for paid work experience comes from the development of personal attitudes related to work for students in the study. Going into the work setting with a positive attitude will help young people get a job, although it is not always enough to keep a job.

Work-based learning experiences have many effects for students, including an increased sense of self-confidence that helps them feel more excited about their future lives and work prospects. This excitement was exemplified in the study conducted by Gallagher and Bennett (2013) in which they reviewed a program that had been providing community job placement opportunities for students with intellectual disabilities for over twenty years, giving youth

opportunities to develop self-advocacy skills while working in structured work settings. The premise of the program was to provide students with a meaningful work placement that included support to perform their jobs and guidance for future vocational goals. Through this experience, the school district partnered with community employers to place students in job settings and provide job coaches (seven paraprofessionals who worked in this role for half a day, five times per week) who would provide scaffolded support to students in their work assignments allowing them to develop not only self-advocacy but also independent work skills. The researchers found that finding the balance between independence and support is the critical element for a successful work based learning experience for students with disabilities. This balance is the key to building generalizable work skills that students can take with them to work experiences in other settings beyond their current employment experience.

The researchers interviewed students and the program administrator (special education director) and gave surveys to the job coaches (paraprofessionals) and employers to identify principles they could suggest to principals as they create or enhance school supported work programs for students with intellectual disabilities in their schools. After reviewing the results, the researchers identified four themes: attitudes and beliefs about inclusion, supporting placements/fostering independence, workplace competence, and workplace dynamics. Job coaches reported positive feelings about inclusion in the school district and through the job placement process. Employers also expressed positive attitudes about having the students in their workplaces stating that as they got to know them better, they began to see only the person and not their disability. Students expressed satisfaction with their job placements identifying feelings of belonging. The program administrator commented that establishing a culture of inclusion started with the school board and was embraced by all school principals.

Both job coaches and employers felt they had the necessary training to support students with intellectual disabilities in the work setting. “In their interviews, students with intellectual disabilities expressed confidence in their abilities and recognized that they received appropriate support from their job coaches as well as their employers” (Gallagher & Bennett, 2013, p. 13). Job coaches and employers noted that students had the skills needed to perform the tasks required at their jobs, with employers identifying the necessity of the job coach to help students establish skills at the beginning of the placement. Students rated their work-related skills highly while the principal of the program noted the necessity of the scaffolded support provided by the job coaches. The principals believed that this support was a main factor in the success the students felt on the job.

Job coaches identified the benefits of diversity in the workplace through this program but were not sure of the impact students with intellectual disabilities had on their co-workers. Employers expressed to the researchers that they increased their own confidence in interacting with individuals with disabilities and the students found that people in their work settings were nice to them and helpful. The students in this program developed skills beyond simple work tasks, they became more confident, competent, and felt accepted in their work settings, which allowed them to be more excited about their lives and work prospects after high school.

Optimism About Plans by Increasing Confidence in Personal Skills

Students often lack academic motivation because they do not see how school can benefit them and their futures. One program, The Cristo Rey Network has been working with students from low-income neighborhoods to help address this issue with a hands-on approach. The Cristo Rey program is structured so that four students, one from each grade level, can share one entry-level job while being closely supervised by a workplace mentor. Through this approach, students

were able to gain experience in a professional setting while being supported both by on-site mentors and teachers back at school.

Bempechat, et al. (2014) conducted this study over three years by interviewing current students, alumni, workplace mentors, and teachers and by administering surveys to students on topics including teacher and mentor support, school engagement, academic motivation, and career development. The study participants reflected the school's population with approximately 40% of the participants reporting their race as Black/African American, 40% Hispanic/Latino, 5% White, 3% Asian/Asian American, and 12% Other.

Through this study, researchers concluded that, "care and warmth, in conjunction with high standards for learning, were the hallmarks of students' experiences with their teachers and workplace mentors" (Bempechat, et al., 2014, p. 240). In addition, students, alumni, and teachers all reported that the program helped students develop psychosocial growth and well-being, including increased maturity and responsibility. While teachers did report that they felt challenged by trying to provide a college preparatory curriculum to students with uneven skills over a shortened week, they could see the benefits of not only the work experience but the workplace mentors. Some of the common themes reported by students included increased perceptions of: personal responsibility, maturity, and ability to communicate professionally with adults combined with an increase in thought about their future plans. Alumni also reported that the experience helped them to develop skills to adapt to new stages in their lives. The students reported that they believed the experience helped them gain an awareness of appropriate professional behavior, including how to interact with adults and how to manage their own behavior.

Teachers in the study agreed with the students and felt that participation helped students to develop their maturity levels as well. They also noted that the WBL experience appeared to increase student motivation by encouraging them to focus more on their future goals. Based on the results of this study, the researchers suggested that others begin to consider ways to introduce work-based learning experiences that provide students with opportunities to develop strong relationships with others, offer rigorous intellectual opportunities, and are cohesive as a way of helping youth internalize the connections between school and career. Providing students with opportunities to experience real-world work environments allows students to focus on their goals and become more motivated to achieve the goals they have set for themselves.

Apprenticeships also allow students to develop confidence in personal skills by giving youth opportunities to enhance their future plans based on the skills they develop. Taylor, et al. (2015) studied a group of former apprentice participants between four to nine years after high school graduation. The 25 participants were all enrolled in an apprenticeship program while in high school but did not complete the program after graduation. All of the study participants had been high school students in either Ontario or Alberta, Canada; 15 were male and 10 were female. The study consisted of a survey followed by interviews. Each participant was specifically chosen because they did not complete their apprenticeship program. The authors chose to focus on non-completers because it allowed them to identify areas of improvement to work-based learning programs for those students who did not experience success in the current format and to highlight the complexities in the transition process as a whole.

The results from the survey indicated that one-third of all respondents wanted a trade certification as their highest level of education, one-fifth of respondents were hoping for a college degree, and almost one-quarter were striving for a university degree. For all students who

participated in the apprenticeship program, many were looking to use the program as a jumping-off point toward higher educational programming. The students felt more optimistic about the future due to the skills they gained through the apprenticeship experiences and planned to utilize those skills in future educational experiences. Of the students who chose not to complete the apprenticeship program; three went on to take classes in college, two were currently enrolled in college, six were currently enrolled in a university program, and two had earned a degree. Thirteen of the twenty-five participants went on to gain some additional education or training beyond high school following an apprenticeship experience while in high school. Fifty-two percent were able to gain skills through their apprenticeship experience that they transferred to the postsecondary setting, and these skills allowed them to further their education or training beyond that of their high school apprenticeship experience.

While there were many reasons that the non-completers did not finish their apprenticeship programs, the study noted that the youth were motivated to participate in the apprenticeship program because they felt they lacked postsecondary options due to a lack of success in high school. Respondents also reported that they enjoyed working with their hands, saw a career in the trades as a backup plan or stepping stone to another career, and/or they felt a trades career was a 'natural choice' for them given their ethnicity, gender, and/or social class. Many of the respondents commented that they lacked proper understanding and knowledge when choosing their apprenticeship area during high school as a factor.

Even though all study participants did not end up in their apprenticeship career area, as of the time of the survey and interview, several commented that the skills they gained from their apprenticeship were useful in the work they were performing in their current work. One participant, "reflected that his apprenticeship training was helpful for his later work: How you

plan your day and how you… approach problems is very much the same" (Tayor et al., 2015, p. 667). Many of the skills students are gaining through apprenticeship programs, while specific to one job, are still transferable to other careers, such as being assertive and persistent. Another apprenticeship participant stated that she wished she had used more of both skills during her apprenticeship in hairstyling because if she had she might have completed her program. While the students in this study did not complete their apprenticeship programs, many left feeling that they had gained skills they could use in the future, even if they pursued other career areas.

Resilience in the Face of Obstacles and the Career Benefits

School-to-work programs have proven to be a way for students with disabilities to not only be engaged in more stable work experiences while gaining skills that can be utilized throughout their working lives but to also work in jobs that offer fringe benefits. Shandra and Hogan (2008) used the National Longitudinal Survey of Youth 1997 (NLSY97) to determine if participation in school-to-work programs affect a young adult's employment over time, the type of employment and type of benefits offered from the employment, and which types of programs are most effective in supporting the transition from school to work. The NLSY97 documented the transition from school to work for a group of 8,894 children between the ages of 12 and 16, in the initial wave, over an eight-year time period. Because the researchers chose to focus on the transition of youth with disabilities, the sample size for their purposes was limited to the 2,254 students who reported having a disability in the initial survey wave.

Data was collected in each survey wave on participation in both school-based (career major, cooperative education, school-sponsored enterprise, or technical preparation) and work-based (job shadowing, mentoring, internship, or apprenticeship) school-to-work programs. In this study, the researchers found that 52% of youth with disabilities participated in a school-based

school-to-work program with almost 17% participating in cooperative education programs, 13.1% in school-sponsored enterprises, and 15.5% in technical education. Participation in work-based programs was lower, 35%, and divided among mentoring (10.5%), job shadowing (24%), and internship or apprenticeship (12%). Based on these numbers and the employment status of students at the end of the NLSY97 data collection process, participation in school-based school-to-work programs increased the likelihood that individuals with disabilities would be stably employed in a full-time position.

On the other hand, results showed that, for students with disabilities, participation in work-based programs seemed to be the best way to increase the chance of being employed in a position that provides fringe benefits like health insurance and paid sick days. While students with disabilities work to increase their job employment rates, especially in positions that offer fringe benefits, they need to consider which of these types of employment will benefit them most to accomplish their future goals.

While the work students engage in during school-to-work experiences plays a critical role in their development, supervisors also have an extensive influence on the success and growth students experience during these opportunities. Kenny, et al. (2015) conducted a study trying to understand the roles, responsibilities, and relationships of the WBL supervisor by interviewing experienced supervisors. The interviews were conducted with 12 successful WBL supervisors from 9 different worksites, nine of whom had been recommended by the collaborating school principal as successful supervisors for two or more years. The remaining supervisors were recommendations of three of the participating supervisors. The researchers interviewed each supervisor, sometimes in partners, for about one hour each. From those interviews, a team coded

the transcriptions to create common domains and categories of topics discussed by the supervisors.

Study results showed six common domains and 14 categories within those domains as topics that were mentioned by at least two or more supervisors during their interviews. The identified domains included: workplace communication, developmental process, investment of time and process, relationship quality, managing the work environment, and recognition of background. Within these domains, many skills were identified that helped to support student growth through their WBL experiences. In the communication domain, supervisors indicated that they communicated with youth daily through informal interactions or formal conversations, including discussions and quarterly reviews, regarding workplace expectations and behaviors. This communication was not only limited to students, however. Supervisors also communicated with their employees about working with and supporting the students so they could grow and develop as well.

This was also shown in the investment of time and effort domain when one supervisor reported, “You first look at it and you’re like, ‘I could do this myself in two seconds and it is going to take me an hour to explain it.’ You have to stop that and you need to remember the investment you make in the beginning is going to outweigh itself in the end” (Kenny, et al., 2015, p. 123). This investment of time and effort is something that WBL supervisors need to keep in mind as they support students through their experiences, while it may take longer to teach and support the students initially, they will learn how to perform the tasks and be a support to the business in the future. When mentors focus on this, they allow both their student employees and themselves to develop resilience and to face challenges and obstacles in new ways.

The study also found that relationship building was a key to success for both students and supervisors. When supervisors showed students that they cared about them not only as workers but as individuals, they performed better in their jobs. Hopefully, this will be the next step for all WBL mentors as they continue to support students in their growth and development.

Resilience in the Face of Obstacles and the Personal Benefits

One group, students with disabilities, has been shown to benefit from school-to-work type programs in various ways including through attending postsecondary education and training, more stable employment, and development of personal attributes. Lindstrom, et al. (2011) studied the career development and long-term employment outcomes for young adults with disabilities through case study research methods. The students selected for this study came from a larger case study and included a purposeful selection of individuals who had a documented disability, participated in school-to-work programs for a minimum of one year, and left high school between 1996 and 2001. Considering these criteria, eight of the original 33 participants were selected as the sample group for this research. All of the students selected for this study worked multiple paid jobs or engaged in structured work experience placements during high school, with participants holding an average of four jobs and working between six and 30 hours per week.

All of the students entered the workforce immediately after high school either full or part-time with five of the participants also concurrently enrolled in postsecondary schooling. All of the participants began working in entry-level positions. At seven to ten years out of school, all participants had enrolled in some form of additional training or education and six of the eight had earned either a degree or certificate. So, while the majority of these students struggled to meet the academic demands of high school, the study noted that most of them learned skills through

their work experiences that allowed them to be more successful in the post-school education and work setting.

These students also benefited from transition services and supports in their career development process. The participants in the study noted that transition specialists and teachers offered a variety of career-related activities and served as mentors and role models. These intentionally planned, transition supports built into school-to-work programs are crucial for students with disabilities and their future success, providing students with the support and training they need to gain the skills necessary to face the challenges of both postsecondary education and the workplace.

Internship experiences are another WBL opportunity that have proven beneficial for students of various academic backgrounds as a way for students to grow as independent workers and thinkers. Hsu and Espinoza (2018) performed a study designed to create a constructivist learning environment for high school students using science internships. The study included 27 high school students engaging in college campus-based science internships as the experimental group and 16 students taking Advanced Placement Physics in the high school setting as the control group. Participation in the study was voluntary, but all students were from Title 1 schools and all were considered economically disadvantaged. To collect and analyze data, the researchers used a combination of survey, interview, and journal entries.

Participants were given the Constructivist Learning Environment Survey (CLES) both before and after the seven month internship or the completion of the AP course. The results of the survey indicated that students significantly increased their ability to develop their own knowledge and understanding by learning science through the internship experience more than the students who learned science in the classroom. The main area of growth impacting this

development is in autonomy. Findings showed that the autonomy portion of the survey measured the students' perception of their own ability to exert control over their own learning activities in meaningful ways and to think independently of the teacher and other students. Working through the internship experience allowed students to become more independent thinkers, which in turn allowed them to face challenges more readily and be more prepared for life after high school. Like in the Gamboa, et al (2013) study, when students develop feelings of autonomy, they increase their employment skills whether that be in career exploration or independent thinking.

Participation in work-based learning experiences while in high school has shown to benefit students in developing cognitive skills, but Bolli and Hof (2018) investigated if these experiences helped students develop non-cognitive skills as well. The researchers used data from the TREE (Transition to Education and Employment) survey which was conducted as a follow-up to the 2000 PISA (Programme for International Student Assessment) by surveying students each year between 2001 and 2007 and again in 2010. In all, the data set included 2,950 participants from both full-time school attendees and those enrolled in apprenticeships during high school.

The researchers used the survey data to study three types of non-cognitive skill development; “(1) problem centered (focused) coping with attempts to regulate the situation, (2) emotion-centered coping with attempts to regulate the emotion and (3) avoidance-centered coping which aims at avoiding the stressful situation” (p. 47). Due to the variation in interactions apprentices face in their work environment, as compared to students enrolled in school full-time and higher levels of responsibility placed on apprentices, the researchers believed that apprentices would develop higher non-cognitive skills than those in the school setting.

After controlling for socioeconomic status, parental education, region, family structure, origin, the study found that students in both groups increased their task-centered coping over time, following an initial decrease, with a higher rate of growth for those in the school system. Students enrolled in the work-based education program decreased avoidance-centered coping as time went on. The results suggest that students in the work-based education program decreased their dependence on emotion-centered coping strategies through their work experiences. Findings showed that, after controlling for gender work-based education programs decreased emotion centered coping strategies but had no effect on either task- or avoidance-centered coping as these statistics were unstable across different testing methods. The researchers also used the survey data to look at long-term effects of high school work-based learning experiences and found that the impact on emotion-centered coping continued into the future. This supports the development of non-cognitive skills during adolescence when skill development is more malleable. The development of emotion-centered coping, a skill that supports people in all settings of life, allows youth to be more resilient when faced with emotional challenges.

The research completed by Kenny et al. (2016) consisted of interviews about their experiences transitioning into the work/school setting after high school with eighteen urban, lower socioeconomic status students one year after high school graduation. The alumni reflected on the school's work-based learning program and the effects of the program on their transition. All the alumni in the study described an increased desire to pursue some type of education after high school, and they felt their high school helped prepare them for life after high school. The students interviewed identified plans to pursue future education, whether right away or in the future.

In addition to this academic focus, twelve of the eighteen respondents described having a clear goal for their future with an understanding of the educational requirements for that goal. The alumni in this study also commented on several non-cognitive skills that they felt had been developed through the work-based learning program. These skills include: an increased sense of self-control and self-regulation, self-awareness, social skills, communication skills, and professionalism. The researchers also noted that the youth in this study fit the description of 'gritty' youth, those who are able to manage their time, attention, emotions, and social interactions in spite of challenges they may be facing in their lives.

An additional point of interest from this study is the generalizability of the program to other students from disadvantaged backgrounds. The study also found that WBL programs may be utilized by schools as a tool to prepare low-income youth academically, socially, and motivationally for the challenges they will face in their lives. The work students do in work-based learning programs is not only focused on skill development. Results showed that students were more prepared not only academically but also socially and motivationally for the post-high school challenges that they would face. These are all areas that are not easily addressed in the traditional classroom setting, making work-based learning experiences even more valuable.

Chapter Summary

As students participate in work-based learning experiences, they are not only beginning to create more realistic plans for the future and becoming more optimistic about their futures, they are also gaining work skills that they can transfer into future work environments and increasing their ability to face any challenges that may occur in their future jobs. These experiences allow students to gain real-world, hands-on experiences that they would not have in the traditional classroom setting. Whether student participants enter the experience with an idea

of what they want to do in the future like the participants in the Taylor and Servage (2012) study, or not, they leave the experience with a better sense of future goals, increased ability to interact with others, whether that be peers or adults, and an increased sense of personal responsibility as reported by the students in the Bempechat, et al. (2014) study.

With schools being required to prepare students to be college and career ready, implementing work-based learning seems to be a natural fit for such federal requirements. As educators, we owe it to our students to delve into the world of work-based learning to find ways that we can bring these opportunities into our school buildings to support this initiative. Every student deserves the chance to either confirm or develop a plan for their lives after high school or simply to learn skills that they can utilize in life beyond the walls of the school building, as reported by Taylor and Freeman (2011) regarding skill development of students through apprenticeship experiences. WBL experiences give students those opportunities while also helping students learn to become more resilient when they are faced with challenges and optimistic about their futures because they have had little experience with the world of work.

CHAPTER III: DISCUSSION AND CONCLUSION

This chapter will provide a summary of the literature reviewed in this thesis. The summary will focus on the guiding question of if school-to-work programs in high school help students with disabilities develop transition skills. The chapter will then address professional applications and limitations of the literature review. It will conclude with recommendations for future research.

Summary of Literature Review

School-to-work opportunities are one method schools are using to better prepare students for the transition into postsecondary life. These hands-on, experiential learning opportunities can give students opportunities to develop realistic goals for their futures. The youth in the Murillo, et al. (2017) study exemplified this goal setting process while also developing work skills that can translate to a variety of settings, developing more optimistic feelings about their futures, and becoming more able to deal with challenges that they will face in the work setting.

Creating more defined career plans for the future is the focus of several work-based learning experiences. Through these experiences, students gain opportunities to reflect on their career goals and aspirations, such as in the study conducted by Fletcher and Zirkle (2009). The Gamboa, et al. (2013) study explored how students design plans for the futures that are clear and realistic. School-to-work experiences can also benefit students who have made career plans. In these cases, school-to-work experiences can help students solidify their future career plans as exemplified by the students in the Taylor and Servage (2012) study or expand their career interest into a similar field of study as shown by the students in the Burgin, et al. (2012) study. School-to-work experiences have also been shown to benefit students through the

development of educational plans. In a study conducted by Kenny, et al. (2016), the students felt that their school-to-work experiences had helped them create plans to pursue education after high school.

School-to-work experiences have also been shown to help students develop generalizable work skills in preparation for life after high school. Gold, et al. (2013) noted that students with disabilities gain skills from their school-to-work experiences because, "The experience of the Bridges program offers evidence that career preparation and transition services for youth with disabilities can start with the presumption that all youth have the potential to succeed in employment" (p. 43). Taylor and Freeman (2011) studied participants in Ontario's Youth Apprenticeship Program (OYAP) and found that most of the former apprentices were still working in their field of apprenticeship even if they had not completed their certification process. The job skills they gained during the apprenticeship experience were being used every day on the job site.

Students also benefit from school-to-work experiences by developing personal skills such as those in the research conducted by Benz, et al. (1997). This research focused on students with disabilities and found that when students with disabilities engaged in school-to-work experiences, they developed both social and job search skills that would last through their working lives and support them in both finding and maintaining employment. Athamanah and Cushing (2019) implemented peer mediated interventions in the work-based learning setting and found that these interventions increased vocational task production, social interactions, and improved the quality of social interactions for work partners. Skorikov and Vondracek (1997) also studied high school students who had participated in school-to-work experiences and

found that their experiences increased levels of internal motivation to work; meaning the more students worked the more intrinsically motivated they were to continue working.

While skill development through work-based learning may seem obvious, it has also been identified that students develop more optimism about their future when participating in school-to-work experiences. One way this occurs is when students become more confident in their personal skills. This can happen as Bempechat, et al. (2014) discovered through the development of personal maturity and responsibility, an enhanced ability to communicate with adults in a professional manner, and increased motivation to focus on future goals. Confidence development can also occur through skill development, such as in the research of Taylor, et al. (2015) when students feel optimistic about the skills that they can transfer to other careers, even if they have not completed their initial apprenticeship program.

Beyond developing confidence in personal skills, school-to-work also gives students increased confidence in their future career opportunities. Burgstahler and Bellman (2009) surveyed students who had participated to varying degrees in school-to-work experiences. All respondents reported increased motivation to "work toward a career, knowledge of career options, job skills, ability to work with supervisors and co-workers, and knowledge of accommodation strategies" (Burgstahler & Bellman, 2009, p. 163). Creed and Patton (2003) studied students who had participated in paid work experiences and the results of their study indicated that these students consistently showed higher levels of career development attitudes and high levels of career development knowledge.

As students begin to prepare for the transition beyond high school, being able to face obstacles with resiliency is a skill that many lack. Experience with work-based learning has shown to develop these resiliency skills as in the students studied by Shandra and Hogan

(2008). In this study, the researchers reviewed school-to-work participation of students with disabilities and found that even in the face of the challenges presented by their disabilities, participation in the school-to-work experience increased the likelihood that the students would be stably employed in full-time positions after high school and employed in positions that provided fringe benefits such as health insurance and paid sick days. Lindstrom, et al. (2011) also studied youth with disabilities. Their research had similar results, finding that while many of the students struggled to meet the academic demands of the high school, most of them learned skills through their work experience that allowed them to be more successful in postsecondary education and work settings.

Students also develop personal resiliency skills such as those studied by Hsu and Espinoza (2018), who created a study that allowed students to become more independent thinkers, which in turn allowed them to face challenges more readily. Bolli and Hof (2018) also found the development of personal resiliency skills when they studied high school students participating in a school-to-work program. In this study, students in the school-to-work program decreased avoidance-centered coping and emotion-centered coping as time went on, suggesting that students are developing non-cognitive skills when their brains are more malleable and this change lasts over time.

Professional Application

With the passing of the Strengthening Career and Technical Education for the 21st Century (Perkins V) Act, schools are being tasked with, “promoting the development of services and activities that integrate rigorous and challenging academic and career and technical instruction” (p. 3). Utilizing approaches such as those found in work-based learning programs is one way that schools can begin to address this legislation. As school administration looks to

create school-to-work programs, research such as this is a solid starting point for them to begin their work. The studies presented in this literature review offer evidence of methods and approaches that have been successful in other settings, whether similar or different from their current setting, that they can learn from in their planning process. Understanding that Ontario's Youth Apprenticeship Program (OYAP) suffers from a lack of participant completion and student dependence on their employers to support their training completion (Tayor & Freeman, 2011) would only benefit administrators as they are creating their own programs. When creating school-to-work programs, administrators need to ensure that interventions are based on information relating to students interests, future plans, career goals, and self-efficacy needs as well as the learning environment. By implementing these elements into their programs, administrators can be sure that they are meeting the expectations of the Perkins V legislation while also meeting the needs of students.

School administrators may be tasked with overseeing the entire program of study, but educators are responsible for the actual implementation of the program. The research presented in this thesis is also applicable to teachers as they begin to design how they will create the units of study that will fulfill the elements of each district's program. First, having a clear understanding of the skills that students will develop through school-to-work experiences is important to all teachers at this age level. This is modeled in the Athamanah and Cushing (2019) study whose results support the use of peer mediated interventions in a work-based learning setting with students with Autism Spectrum Disorders and with non-disabled peers to develop social and vocational skills.

While work-based learning programs are applicable to all students, teachers working with students with disabilities are highly encouraged to pay particular attention to this information.

The evidence is clear that school-to-work experiences are an effective tool to help combat the negative consequences students face from their disabilities, i.e. being less employed as adults, less likely to attend college, and so forth. Creating programs for students, not only students with disabilities, is one way to help students who experience various other disadvantages, such as low socioeconomic status.

This supports the idea that students, particularly those with disabilities, need access to both work-based and school-based school-to-work programs that are intentionally planned and connected to the learning being done in the general education setting. We can no longer afford to push students through class after class or force them into a tracked education system. Students today need opportunities to develop not only their academic skills but also their non-cognitive abilities and school-to-work programs are a valid option that more schools need to investigate.

Limitations of the Research

There are few limitations in this literature review, but limitations do exist. One limitation was the age criteria and experience criteria. All research studies must have had participants that engaged in a high school-aged work-based learning experience. The focus of this review was on the effects of work-based learning experiences; thus, all research participants must have participated in such experiences while in high school. The study participants were not required to be in high school while participating in the actual study, however, as they may have been reviewing the effects of the experience as in the Kim and Passmore (2016) study. Additionally, every effort was made to include the most recent research on the topic, however, there is a limited supply of relevant research on this topic. Some research then had to be utilized from longer time periods to fit into the parameters of the focus of the study.

Implications for Future Research

Research has been conducted on the effect mentors and site supervisors have on students during their WBL experiences, but there is little research available discussing the training available to these individuals. Additional research into the amount of training provided to site mentors and its impact on student perception of experience benefits and skill attainment would be one topic to delve into deeper. Additionally, how schools work with site supervisors to engage students in critical discussion about college and the world of work is an area of needed research. Another area to look into more thoroughly could include the ways supervisors manage their roles and responsibilities and establish relationships related to student learning at the workplace, in school, and in their school and work futures. Finally, research is warranted in the post-high school employment status of student participants based on-site supervisor quality and relationship building opportunities during WBL experiences.

Beyond site supervisors' training and roles, additional research is also recommended in the area of work-based learning experience settings. Each study in this thesis reviewed one type of work-based learning experience, while research into multiple settings would be warranted to identify the type or types of settings that could be most beneficial to students in skill development. Within the study, even if researchers wanted to focus on one type of WBL program, they could also dig deeper into multiple placements within that model. Such as in the Taylor and Freeman (2011) study when they studied participants in both automotive and carpentry apprenticeships.

Conclusion

Do school-to-work programs in high school help students with disabilities develop transition skills? For some youth, school is simply a challenging place to be day in and day out; sometimes they lack the requisite skills to meet the basic requirements or sometimes they just

do not see the value in being there. In either case, schools need to find a way to support these students to develop their academic knowledge and technical and employability skills in ways that work for them. School-to-work programs have been found to work for struggling students in a variety of settings from urban to rural, from low socioeconomic to special education and many others. These programs provide students opportunities to increase responsibility while engaging in the community with adults, often in career areas of interest.

When students are allowed to engage in careers of interest, they are able to increase their career awareness. For many, this confirms future plans while for others it moves their plans in a new direction. Either way, the work-based learning experience allows students, both with and without disabilities, to create more clear and realistic future plans than before participation in the experience. Students are also able to develop skills that they will be able to use in future work and school settings. Even if the student does not complete their training program, like the participants in the Taylor, et al. (2015) study, or transitions to a new career, the skills they learn on the job, such as self-advocacy, responsibility, and communication, can be transferred to any job in the future. Students also develop high levels of optimism about their future. Following participation in school-to-work experiences, students feel more confident about their future plans and their ability to achieve success in the future because of the skills they have learned in their work experiences.

The experiences also teach youth how to be more resilient in the face of challenges. The youth are faced with real-world challenges on a daily basis and are tasked with solving those problems with decreasing adult support. Students learn to become more independent, as described by Gallagher and Bennett (2013), and work through problems as they occur.

All of these skills are the skills that Phillips, et al. (2002) identified as those that youth need to not only be ready to transition out of the school setting but to be successful in that transition. If using the Phillips, et al. (2002) classification of transition skills, it is clear that school-to-work experiences do help high school students, both with and without disabilities, develop transition skills.

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