CASE REPORT

Case study in New Jersey on perceptions and concerns during COVID-19: Lessons for safety and health during future work-based learning

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ABSTRACT:
Background: The New Jersey Safe Schools Program provides training courses to secondary school educational professionals to supervise students in work-based learning. COVID-19 suspended in-person training courses and work-based learning. As worksites reopened, concerns persisted regarding implementation of work-based learning, and safety and health. After site visits, participants completed reflection assignments.
Methods: We examined statewide data from a three-day training, "Designing and Implementing Student Training Plans," from 61 participants in spring-summer 2020 regarding concerns for work-based learning during COVID-19. Qualitative analysis on open-ended responses determined emerging themes through inductive, qualitative coding in Microsoft Office spreadsheet software, Excel, followed by import of a spreadsheet-based code book to NVivo, a qualitative data analysis software tool.
Results: Data revealed supervisor perspectives pertaining to re-establishing work-based learning programs (33%), COVID-19 safety and reopening measures (24%), student safety and health (17%), obstacles for in-person work-based learning (9%), future work-based learning placements (7%), and online work-based learning opportunities (4%).
Conclusion: Data suggested adaptations for future in-person work-based learning experiences; future online student work placements and safety and health trainings; and insights on improving in-school learning and occupational education for students.
Keywords: Adolescents, Occupational Safety, Skill Development, Training, Work-based Learning, Youth/Young Adult Workers

Introduction

The practice of safety and health (S&H) includes initial and ongoing training of employees (younger and older), conducting worksite walk-throughs by S&H professionals and agency representatives—whether voluntary or required for enforcement—and mentoring workers in shorter-term or longer-term relationships, among other duties. These are relevant to companies of any size employing—in paid hourly positions—or hosting unpaid internships for youth (minors up to age 17) and young adults. This includes work-based learning (WBL), formerly known in the U.S. State of New Jersey (NJ) as school-sponsored structured learning experiences, such as co-op, youth apprenticeships, and pre-apprenticeships, which are considered formal reportable indicators of quality career-technical education programs and recognized in multiple pieces of federal legislation.[1,2,3] WBL enhances career-technical education instructional programs by connecting classroom learning to the workplace, applying academic, technical, and employability skills in a real-world work setting, and providing support from classroom (supervising teachers) and workplace mentors.[1,2]

Despite limited data on the number of WBL programs, certified WBL professionals, and students participating in WBL experiences, it is speculated there are over half a million (530,000 as of 2014) young workers between the ages of 16 and 24 in the U.S. State of NJ who could benefit from WBL opportunities.[4] Furthermore, minors are a vulnerable group of workers; typically, they are unaware of occupational S&H precautions and are new to workplace-specific skills and tasks.[3] Ample research has documented how WBL experiences can help students achieve high academic, personal and occupational goals with opportunities for real-world application of classroom knowledge. However, to date, little published research highlighted supervisor perspectives and concerns regarding providing students with WBL opportunities.[3,5,6,7,8,9]

For more on student learning standards and WBL in the context of the initial years of the COVID-19 pandemic 2020-2021, particularly in the State of NJ and U.S., please see the supplemental material in the appendix. [1,2,3,10,11,12,13,14]

From the limited peer-reviewed literature to date, teachers and school personnel have had positive perspectives of WBL programs, including their role in improving student motivation, engagement and skill development, while increasing opportunities for career exploration and financial earnings after secondary school. [3,5,6,7,9,15] No study, however, assessed educational professional perspectives or observations regarding occupational S&H when considering potential worksites for WBL.

In addition, few studies have examined factors concerning the delivery of WBL opportunities for secondary school students with special health care needs (SHCN) including disability, which can both negatively and positively influence the quality of the program and student access.[16,17,18] Moreover, no study had been conducted during COVID-19.

Current literature suggested providing hands-on experiential learning, engaging learners, and skill development as the biggest challenges in providing high-quality WBL programs, including during the COVID-19 pandemic.[19,20,21] Additionally, the importance of skills such as learning agility (the ability to assimilate information and acquire new skills), communication, problem-solving, and teamwork were highlighted as ways of navigating rapid changes in (at) and outside of the physical workplace.[20] Although the relationship between ideas and actions is critical, due to the COVID-19 pandemic and efforts to preserve student and community S&H, this relationship had been challenged due to limited opportunities for hands-on work and learning experiences.[22]

The purpose of the present study was to examine WBL program supervisor perceptions about placing students at in-person worksites throughout the State of NJ during year one (2020, part of 2019-2021 school years) of the COVID-19 pandemic to inform ongoing and future WBL programs. Specifically, this study's qualitative analysis examined teacher perceptions of potential worksites visited. The goal was to reveal areas of concern and optimism as well as general reflections when visiting candidate worksites for future WBL program placements. To our knowledge, this is the first study examining repercussions of the COVID-19 pandemic on WBL programs through teacher/supervisor perspectives and concerns about placing students in WBL at worksites. This study also can inform enhancements or elaborations of topic areas for future safety trainings; considerations for other WBL professionals when recruiting and selecting worksites; and insights on how to best meet the needs of WBL supervisors to move forward with re-establishing WBL, whether in-person or remote, in our post-COVID-19 society.

Methods

In the State of NJ, WBL trainings provided by NJ Safe Schools Program consisted of four courses.[3,23] These four courses prepare future WBL supervisors with the knowledge, skills and awareness to safely

place and monitor students in WBL experiences. AUTHOR et al.[3] documented how these trainings, initially developed and held starting in 2005, prepared participants to confidently and effectively place students at worksites both on- and off-campus with approved training plans at the district or comprehensive high school (for paid and unpaid work experiences) and working papers filed with NJ Department of Labor and Workforce Development (NJLWD) (for paid work experiences). One course, *Designing and Implementing (D&I) Student Training Plans,* specifically offered participants open-ended assignment questions about their concerns regarding student WBL placements, providing novel insights on perceived challenges and obstacles for future WBL programs in NJ.

In spring-summer 2020, due to the COVID-19 pandemic, NJ Safe Schools Program adapted these training courses for prospective WBL supervisors to be held completely online through the Rutgers Canvas Learning Management System (LMS). One course, as noted above, still offered participants open-ended assignment questions about their concerns regarding student WBL placements during COVID-19, providing novel insights on perceived challenges and obstacles for future WBL.

Specific to this analysis, the three-day in-person professional development certification course NJ Safe Schools Program adapted, titled *Designing and Implementing (D&I) Student Training Plans,* was created and offered in collaboration with NJDOE-Office of Career Readiness. The online course has three components: an asynchronous online Canvas course, which means content is available to the registered users/participants 24 hours per day seven days per week; an individually completed online field experience (with worksite visits or phone calls/videoconferencing) assignment; and a synchronous virtual live session through WebEx with course trainers.

The online field assignment allowed secondary school educational professionals to gain experience in conducting remote site visits via phone, email, or teleconferencing, promoting their school's WBL program, and potentially recruiting local businesses to partake in the WBL program. Participants then completed a reflection assignment, comprised of multiple choice and open-ended questions regarding their experiences. Participants were asked to answer, in 100 words or less, the assignment question, "Do you have more concerns now about placing students in WBL experiences during the COVID-19 pandemic?"

From these open-ended responses, a qualitative analysis was performed. Microsoft Office spreadsheet software, Excel, was used to manage data and to determine emerging themes through inductive, open coding in Excel. Raw text data were exported from the Rutgers Canvas LMS into Microsoft Excel after entry by participating teachers. Then, we imported the resulting spreadsheet-based code book to NVivo, a qualitative data analysis software tool for the thematic analysis.[24] In a thematic analysis, we used an inductive coding approach, which is exploratory and descriptive by nature since data are deidentified in aggregate, to identify themes from raw text data and thus capture potential concepts through a line-by-line coding method. Concepts were summarized as keywords with initial emerging themes and ideas. Keywords were analyzed and categorized into consistent "child" codes. Child code categories were then used to develop a framework of overarching themes or "parent" codes.[25] Parent codes reflect larger themes for analysis: Re-establishing WBL, COVID-19 S&H, Student S&H, Obstacles for In-Person WBL, Future of WBL, Virtual WBL, and Miscellaneous. Child codes were used to support main themes for analysis. Descriptions of main themes/parent codes were added to ensure consistent understanding of codes referenced.

Once codes were finalized in Excel, the closed codebook, code descriptions, and question data were entered in NVivo. NVivo was used for coding process, to aggregate data by designated codes and allowing for visualization of determined codes among individual participants. Entered parent and child codes were used to categorize and code raw data in NVivo. Queries in NVivo were used to search for references of combinations of specific codes to further analyze data. Coded references were summarized based on parent and child codes in Microsoft Word.

We divided the State of NJ into three regions, with seven counties per region. Region designations were as follows: "Northern NJ" included Bergen, Essex, Hudson, Morris, Passaic, Sussex and Warren counties; "Southern NJ" included Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem counties; and "Central NJ" included Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Somerset and Union counties.

Results
For 2020, the first year impacted by COVID-19, after planning and converting synchronous and asynchronous modules and activities from an in-person to online/virtual format (Shendell et al. 2021), sessions for WBL trainings were held in early

June, mid-July, and late October 2020. There were in total 61 open-ended responses received in 2020: seven from June, 47 from July, and seven from October. Overall, this study has statewide representation of secondary school educational professionals from 20 of 21 counties of NJ; no participants were from Warren County.

From the 61 participants in late spring-summer 2020 at the start of the COVID-19 pandemic, 207 references (responses or concerns) were coded from raw textual data. Twenty-four child codes were consolidated and summarized into seven parent codes. Table 1 lists participant references by theme, i.e., by parent code and child code.

RE-ESTABLISHING WORK-BASED LEARNING DURING AND/OR AFTER COVID-19

In 2020, there were 69 responses from 35 participants (57.4%, N=61) about considerations for reopening, business and student preparedness, and factors impacting business ability to reopen.

Personal Safety Measures: The most prevalent theme mentioned was personal safety measures (n=37 references), by 25 participants (41%), which included social or physical distancing (n=12), mask wearing or face coverings (n=12), personal protective equipment (PPE) and PPE shortages (n=7), and hand hygiene (n=6). PPE was not explicitly explained, i.e., we inferred participants referred to face masks, coverings, hand sanitizer, and disposable gloves. Participants were often concerned about how students will adjust to and follow new protocols for personal safety measures in the workplace. One participant noted students with sensory issues might have difficulty keeping their hands away from their face, impacting hygienic protocols. Conversely, there were also concerns over patrons of businesses not wearing PPE.

Business Preparedness: Fifteen participants (24.6%) discussed how prepared businesses were to reopen, whether for WBL or in general, regarding following and implementing new COVID-19 policies and guidelines and their readiness to accept student workers. Participants believed some businesses had adequately implemented new safety protocols and were thus prepared for future WBL, while others thought certain businesses were not ready to host student workers. One participant mentioned the need for worksite inspections once ready for students to ensure safe work environments (Table 2 Quotes A & B). Many WBL opportunities relied on how current and future worksites would implement COVID-19 protocols to ensure student safety.

Student Preparedness: Seven participants (11.5%) reflected on how their students were prepared to return to WBL. Participants believed their students would need to prepare or be trained to practice safety protocols like wearing masks, practicing hand hygiene, and adequately social distancing. There were mixed perceptions among participants, with some who believed their students were prepared to follow new guidelines and expectations, and others who expressed concern over students having difficulties (Table 2 Quote C).

COVID-19 SAFETY AND HEALTH AND REOPENING

There were 50 responses from 32 participants (52.5%) on COVID-19 S&H and reopening.

Compliance, Response, and Testing: Sixteen responses from 14 participants (23%) reflected COVID-19 policies, response efforts, and testing. This theme encapsulates concerns on how worksites will follow COVID-19 policy guidelines issued by NJDOE and/or CDC. Some participants believed COVID-19 compliance safety measures were important and necessary to protect student and staff (Table 2 Quote D).

Human Exposure to the SARS-CoV-2 Virus: Thirteen concerns from 11 participants (18%) mentioned "contracting the disease [COVID-19]," "exposure of student," and "bring virus to their home and school." These are concerns for student and staff health and public health (Table 2 Quotes E & F).

Protocols: Twelve participants (19.7%) responded about new protocols, procedures, guidelines, and requirements in the workplace, relating to COVID-19 safety, like personal protective measures and workplace sanitization. This theme summarizes perceptions in the context of whether supervisors believe workplaces are equipped to bring in students for WBL. Participants noted new guidelines set by NJDOE are either followed or need to be implemented by employers (Table 2 Quote G).

General Safety: Four participants (6.6%) noted general concerns about "safety" related to COVID-19. Participant mentioned infection rates must continue decreasing before placing students in worksites, personally not feeling safe due to COVID-19 (Table 2 Quote H), and worksites following current state and federal safety standards.

Staff Health: Three responses from three participants (4.9%) mentioned concerns regarding protecting the S&H of staff at worksites and job coaches involved in WBL programs during the COVID-19 pandemic (Table 2 Quote I).

High Risk Populations: Two participants (3.3%) identified concerns regarding placing students with high-risk populations, like the elderly in residential living homes, also known as assisted living facilities (Table 2 Quote J).

STUDENT SPECIFIC SAFETY AND HEALTH DURING ONGOING COVID-19

Twenty-six responses from 24 participants (39.3%) discussed aspects of student well-being (safety, health, and stress). Twenty-three participants (37.7%) noted concerns about possibly putting students and their families at risk of contracting the SARS-CoV-2 virus. Three participants (4.9%) reflected on potential stress students may face when taking part in WBL during the COVID-19 pandemic, e.g., due to working during the pandemic, discomfort due to health concerns, or living with people who are at higher risk of poor health outcomes if they become ill after exposure to SARS-CoV-2. One participant mentioned some of their students have children of their own to take care of, so money was also of concern for them (Table 2 Quote K).

Nine participants (14.8%) discussed concerns related to SHCN students with a variety of conditions, and the challenges potentially faced when it comes to re-establishing WBL programs, adapting to COVID-19 protocols, and focused supervision.

Four participants (6.6%) mentioned placing students during the pandemic could become a liability for multiple parties (employers, schools) and about higher risks regarding insurance coverage (Table 2 Quotes L & M). Three participants (4.9%) reflected on discomfort parents may feel about their children potentially being exposed to the SARS-CoV-2 virus at worksites (Table 2 Quote N).

OBSTACLES FOR IN-PERSON WORK-BASED LEARNING DURING ONGOING COVID-19 PANDEMIC

Eighteen participants (29.5%) discussed challenges and obstacles for going back to in-person WBL. First, participants (n=6) noted students who need close supervision would receive it, especially SHCN students in special education programs. Challenges for engaging students was another concern (n=4), mainly because participants wondered how students could continue their skill development at off-campus WBL experiences if schools are not in-person (Table 2 Quote O). Another obstacle was the need for student training (n=3), especially with the new safety protocols students must follow at in-person worksites (Table 2 Quote P). Finally, COVID-19 restrictions would decrease opportunities overall for in-person WBL (n=3) and students could not receive "hands-on" experience during the COVID-19 pandemic (n=2) (Table 2 Quote Q).

FUTURE OF WORK-BASED LEARNING PLACEMENTS

There were 15 reflections from 14 participants (23%) on future WBL including placement uncertainty (n=13) and business relationships (n=2). During 2020, there were many questions left unanswered about reopening schools, reopening worksites, and the future effects of COVID-19. The business-related concerns (n=2) included how to continue to foster positive relationships and communication with businesses and worksites during the COVID-19 pandemic (Table 2 Quote R).

VIRTUAL WORK-BASED LEARNING

Eight participants (13.1%) commented on online/virtual WBL opportunities, online teaching, and remote worksites. Concerns included how WBL programs could work while supervisory WBL teachers must teach online and fulfill other responsibilities (Table 2 Quote S). Some participants believed online programs could be implemented, with one participant mentioning virtual mentorship would be unique and helpful to students (Table 2 Quote T).

Discussion

This study enhances the literature on WBL with data during a pandemic like COVID-19. This study is novel in its research regarding teacher perspectives on providing WBL opportunities during COVID-19. Qualitative data analysis revealed reported thoughts, experiences, and concerns of supervising teachers regarding potential student worksite placements, performances, and S&H practices during the beginning of the COVID-19 pandemic. Participants identified current barriers and benefits of WBL programs like student success, student health, workplace safety, worksite recruitment, and accessibility. They identified ways to foster student learning and success but also revealed concerns and ideas for how to newly develop and improve existing WBL programs e.g., more on social and emotional learning and soft skills.[27-28] They also identified ways to identify and recruit worksites post-COVID-19.

Participants discussed influences of various elements positively or negatively impacting the success of the WBL placement or overall WBL program, as well as the student's ability to engage and participate in the program. On the individual level, participants critically thought about and discussed the job tasks, responsibilities, skills, and potential for growth their

students would experience at the worksite. A recurring theme was the need for worksite skill development, and the necessity of desired social-emotional and soft skills for students to have in the workplace. This suggested how WBL is critical in the development of these sought-after skills. Future in-class learning should help to foster the development of these skills.[1,2,7]

Support systems for students were a factor many participants considered in determining whether they would like to place students at a particular worksite. Whether under the direct supervision of an employer, mentor, or job coach, participants described the importance of having a hands-on and engaged workplace supervisor. Similarly, employers also expressed they wanted to train their student workers to meet company expectations and standards; some would help partner current employees as mentors with new student workers during initial training.

Participants found brochures and pamphlets to be effective tools in explaining the mission of WBL and facilitating conversations. Other aspects considered potentially more effective included hiring specialized teachers, shifting school culture about and awareness of WBL programs, improving teacher professional and psychosocial support systems, and increasing teacher recognition for supervising and teaching students in WBL.[8,29,30] District-led changes would not only improve abilities of supervisory educational professionals to recruit worksites and promote WBL programs, but build school and community awareness of WBL.[8]

In 2020, of 61 participants who submitted open-ended responses about their concerns, or lack thereof, for placing students in WBL programs, 35 of them (57.4%) discussed perceptions about re-establishing WBL programs during COVID-19. There were 37 direct references to personal safety measures out of 207 total references, which was the most prevalent theme. CDC and NJ Department of Health guidelines have set a precedent for expectations regarding COVID-19 compliance in workplaces, and it is reflected in participant concerns for their students and WBL. Participants were also concerned with the S&H implications of reopening businesses and worksites, with 32 participants (52.5%) noting 50 references to themes like compliance, testing, exposure, new protocols, and the general safety of staff and the public. Alongside individual-level protective measures like social distancing, hand hygiene, and mask wearing, participants were aware of and concerned about the implications of placing students in worksites during COVID-19. This spanned into the theme of student-specific S&H, where 24 participants explicitly mentioned the safety, health, and wellbeing of students (40%). These participants felt responsible for their students, and worried about putting them at risk for contracting SARS-CoV-2. These perceptions and the consideration of S&H protocols should be accounted for when re-establishing WBL programs and trainings for students and employers, to ensure supervisors are confident their students are in a safe work environment.[21]

Another important portion of this study was online learning and the future of WBL programs. Despite measures offered by NJDOE to provide teachers and students with guidance and resources for remote instruction during the COVID-19 pandemic through a virtual learning toolkit,[13] educators still felt uneasy about adapting this mode of learning for WBL. Some participants (21.3%) reported concerns regarding student placement-related uncertainty due to COVID-19 restrictions. Mixed concerns regarding online and virtual opportunities, online teaching, and remote worksites were expressed by supervisor sentiments. Some found these impossible to set up due to the nature of some worksites or because their students were in special education; a few reported worksites already moved to an online format. More online work-based career and professional development opportunities may increase accessibility for students and benefit parents not comfortable with allowing their child to work in-person and be at risk for SARS-CoV-2 exposure.

Despite limited data on the number of WBL programs, minors are a vulnerable group of workers; typically, they are unaware of occupational S&H precautions and are new to many workplace-specific skills and tasks.[3] Ample research has documented how WBL experiences can help students achieve high academic, personal and occupational goals with opportunities for real-world application of classroom knowledge.[3,5,6,7,8,9] The Career Readiness, Life Literacies, and Key Skills, formerly known as the 12 Career Ready Practices (within New Jersey Student Learning Standards), encapsulate necessary skills students must develop through career exploration and preparation programs.[1,31] Even during a pandemic, it is critical for opportunities to remain open to students for educational and occupational development.

Finally, it is worth noting providing virtual vocational training and online learning opportunities is viewed as an immediate response and a medium-term goal by international organizations, businesses, and

education authorities to improve the flexibility and continuity of occupational training.[21] For example, beyond the U.S., in the Philippines and member states of the European Commission, stakeholders collect and share free online resources to provide CTE instruction, and international organizations, such as UNESCO and the World Bank, have worked to develop databases and forums geared to improving access and awareness to free online technical and vocational education and training resources.[21]

STRENGTHS

This study presented new primary data with a relatively large, statewide sample and explored complex issues pertaining to concerns regarding placing students in WBL programs during the initial months-- and first of three school years to date--in 2020 impacted by a global pandemic due to the open-ended, qualitative nature of the data, which allowed for personal anecdotes and details to be shared. By using inductive qualitative coding, this study could extrapolate a diverse array of thoughts and concerns considered by participants neither initially expressed nor addressed within trainings or in the development of WBL programs. This can help structure future WBL programs throughout and after the COVID-19 pandemic with teacher perceptions in mind. This study can help address nuanced gaps and issues previously overlooked, identify positive aspects, and encourage further implementation of WBL programs in schools.

LIMITATIONS

Questions analyzed were broadly worded and participants were able to address the question with open-ended responses. Answer themes and topics were not always consistent among participants. Moreover, qualitative data analysis is subjective based on the prior knowledge, experiences and positionality of the researchers.[24] As public health practitioners with research experiences in young worker S&H and the opportunity to have listened to the delivered WBL trainings multiple times, participant questions and concerns were familiar to this study's team. Data were de-identified, and could not be aggregated, stratified or analyzed based on demographic information such as gender identity, school type, region, number of years teaching, or race/ethnicity. Finally, anecdotes were specific to experiences of NJ participants in supervisory WBL trainings. This study's results may not be generalizable to other WBL programs, whether already established or newly established, in other U.S. states. This study should be replicated.

Conclusion

Perceptions and concerns of New Jersey (NJ) supervisory educational professionals in school-sponsored work-based learning (WBL) program development identified in this qualitative study can help inform changes needed to continue to offer safe, successful WBL opportunities to students. This research can assist other states, and nations, in creating or improving their own emerging secondary school-based WBL and other student work opportunities. Moreover, this study reinforces the need for training such as "OSHA 10 Plus General Industry," which is currently offered online as a multi-part course part of the NJ WBL training series to certify teachers to be supervisors of students in WBL. [1,3,11,23,32] The goal in the State of NJ is for teachers to be better equipped, regardless of their own teaching certifications and prior work experience, to understand jurisdictions of and resources available from state and federal agencies and identify potential safety and health (S&H) risks at potential worksites to help ensure the S&H of young workers.[1,3,11,23,32] Overall, WBL supervisors should critically review student skill development, workplace S&H, worksite recruitment practices, and accessibility to ensure program success.

In the State of NJ, and in other states modifying, expanding or newly considering WBL programs, this study can help inform how WBL programs are structured regarding the training of students, teachers and employers,[33,34] to ensure student placements comply with existing federal and state laws plus ongoing COVID-19 guidelines and policies as schools and businesses reopen in 2022 into 2023.[35,36] U.S. vaccines also influences WBL; vaccine uptake continues to rise, but variations by state and within states exist and will likely persist depending on perceptions and hesitancy.[37,38] Future WBL must consider how online internships and other opportunities can become more accessible and reliable to expand WBL programs, especially during unforeseen circumstances like a pandemic. Future studies should further examine WBL supervisor and student perceptions about options offered for online WBL opportunities.

Table 1. Supervisor Concerns for Work-Based Learning During and After COVID-19, 2020

Parent Code or Major Category	Child Code or Sub-Category	n[1]	%
Re-establishing Work-Based Learning (n=69)	Personal Safety Measures	37	18%
	Business Preparedness	15	7%
	Student Preparedness	7	3%
	General Hygiene	5	2%
	Workplace Sanitation	5	2%
	Total	**69**	**33%**
COVID-19 Safety, Health, Reopening (n=50)	COVID-19 Compliance, Response, Testing	16	8%
	Human Exposure/Spreading Virus	13	6%
	COVID-19 Protocols	12	6%
	General Safety	4	2%
	Staff Health	3	1%
	High Risk Population	2	1%
	Total	**50**	**24%**
Student Specific Safety and Health (n=35)	Student Wellbeing: Safety & Health	23	11%
	Student Wellbeing: Student Stress	3	1%
	Special Health Care Needs	9	4%
	Total	**35**	**17%**
Obstacles for In-Person Work-Based Learning (18)	Proper Supervision	6	3%
	Student Engagement	4	2%
	Student Training	3	1%
	Decreased Opportunities	3	1%
	Lacking Hands on Experience	2	1%
	Total	**18**	**9%**
Future of Work-Based Learning Placements (n=15)	Placement Uncertainty	13	6%
	Business Relationships	2	1%
	Total	**15**	**7%**
Miscellaneous (n=12)	General Uncertainty	5	2%
	Liability Concerns	4	2%
	Parent Concerns	3	1%
	Total	**12**	**6%**
Virtual Work-Based Learning (n=8)		**8**	**4%**
	Overall Total	**207**	**100%**

[1]N refers to number of references from data. Participants may have stated/mentioned more than one thing for a given question about the work-site walk-through visits they conducted in-person or virtually (email, phone and/or videoconferencing). Note: Percentages may add up to greater than 100% due to rounding.

Table 2. Quotes from Participants. Please note quotes are labeled A-T to match Results text.

Quote A	"Also, many businesses and industries are struggling keeping current full-time employees employed or engaged. This in turn will force many managers or potential mentors to take on more responsibility in addition to their pre-pandemic duties."
Quote B	"I have more concerns about placing students in SLEs [WBL] during the COVID-19 pandemic because many businesses, including the one that I interviewed, have not yet begun to transition back to their offices."
Quote C	"We could prepare our students to keep immediate area cleaned and always wear a mask."
Quote D	"I feel that the state guidelines being followed provide safety for the students."
Quote E	"From a health standpoint, I'm concerned about putting students at a potential risk for contracting the disease or spreading the disease to others."
Quote F	"I think exposing students to more potential risk than necessary is not what is in their best interest."
Quote G	"Since the pandemic began, they [students] have adapted to the policies and procedures as mandated by the State of NJ and their respective employers."
Quote H	"I am not interested in being in any setting with other people outside of my home at this time."
Quote I	"Many customers/clients/tourists are not heeding warnings/requirements for PPEs, putting students and staff in compromising positions."
Quote J	"The student may not be comfortable reporting to work or school due to health concerns, [or due to] an elderly person in the house."
Quote K	"My concern is that students in an SLE [WBL] program will have to learn these new guidelines under a large amount of stress."
Quote L	""Now is not the time" to take on an inexperienced trainee. Too much of a risk factor (insurance, etc.) during COVID-19."
Quote M	"My concern is because most of our students *need* to be at the site, but our superintendent won't allow our students to work due to potential liability."
Quote O	"First and foremost, parent concerns have to be considered. A parent may not feel comfortable allowing their student to work in a potential unhealthy or unsafe environment due to COVID executive orders."
Quote P	"I absolutely feel that we need to try and move forward in some capacity, as leaving these students unexposed to valuable workplace skills is just as detrimental as the risk of illness."
Quote Q	"I think in the current situation, the SLE [WBL] curriculum could be further complicated by providing training in those specific environments. I contacted the American Red Cross of central New Jersey specifically. They do have a lot of internships and different sorts of volunteer hours that are available to students who are interested in going into the health sciences field. However, with the COVID-19 pandemic still ongoing, a lot of the training opportunities I have stalled, or moved to an online environment."
Quote R	"From an experience standpoint, I'm concerned that students will not get the full experience of the SLE [WBL] that they would have under normal conditions. Yes, they may be able to be placed in a virtual internship setting, but they will not be able to get the hands-on experience that they normally would have received."
Quote S	"We have been struggling to contact all our companies as of late due to the pandemic."
Quote T	"The virtual mentorship would be unique and helpful, but we are still unsure if the employer would be okay with it or not."

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Appendix: Supplemental Background Information

STUDENT LEARNING STANDARDS AND WORK-BASED LEARNING

New Jersey (NJ) Student Learning Standards (NJSLS), renewed by the NJ Department of Education (NJDOE) on June 3, 2020, prepare students for post-secondary school education success by incorporating elements of problem solving, communication, and professional learning into the school curriculum.[1,10] Most recently, Standard 9 (21st Century Life and Careers) includes guidelines for what students should know and be able to do to ensure future occupational success. Elements of Standard 9 include 12 Career Ready Practices, 9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration and Preparation, and 9.3 Career and Technical Education (CTE) programs to foster important career skills.[1,10,11] NJSLS aim to educate students on potential career opportunities and prepare them for future employment. NJSLS 9.3 CTE originates from the Carl D. Perkins Career and Technical Education Act of 2006, to create CTE coursework to help students attain postsecondary degrees or industry credentials and to aid professional development. NJ CTE programs must include opportunities for students to participate in WBL, formerly known in NJ as school-sponsored structured learning experiences. Specifically, in NJ, WBL opportunities are experiential, supervised learning experiences designed to provide students with opportunities to explore career interests within NJSLS Career Clusters and are integrated into school curriculums to develop academic and technical skills while incorporating Career Readiness, Life Literacies, and Key Skills (formerly known as the 12 Career Ready Practices).[1,10,11]

GOVERNMENT AGENCIES AND COVID-19 AND WORK-BASED LEARNING

In response to the COVID-19 pandemic caused by exposure to the SARS-CoV-2 virus, State of NJ Governor Phil Murphy declared a public health state of emergency on March 9th, 2020 (Executive Order No 103, 2020). Subsequent executive orders were signed to implement new safety guidelines and gathering restrictions due to increasing rates of infection across NJ (Executive Orders No. 104, 107, 110, 2020). Non-essential businesses and industries were temporarily closed (Executive Order No. 107, 2020). Schools were required to move to remote instruction for student learning in spring 2020. Essential businesses were allowed to remain open (Executive Order No. 107, 2020).

Due to this pandemic, school derived in-person programs and training courses, like WBL experiences, were also placed on hold. WBL allows secondary school students to apply and develop academic, technical, and career skills for future employment.[1,2,10,11] These opportunities provide students with valuable supervised and monitored preparatory work experience and training. An integral part of WBL includes WBL supervisors finding and establishing meaningful and relevant placements for their students. In NJ, secondary school educational professionals must complete a series of training courses through NJDOE and the NJ Safe Schools Program with partner federal and state agencies to be a certified supervisor of WBL experiences.[1,3]

During spring-summer 2020, as some restrictions were lifted, businesses reopened, and discussions of in-person versus online/virtual WBL resumed. Secondary school educational professionals expressed concerns during trainings and seminars regarding students returning in-person to school and WBL experiences.

The NJDOE released a "Statement of Assurance for Reopening Schools" to certify local educational agencies to reopen for the 2020-2021 school year. Schools were required to implement the necessary policies and procedures to ensure S&H. These regulations had to be in line with Governor Murphy's executive order 175 (Executive Order No 175, 2020), which stated public and private schools, including elementary and secondary schools, could reopen for full or part-time in-person instruction, if S&H standards guided by both the NJDOE "Checklist for Reopening of School 2020-2021" and the "The Road Back: Restart and Recovery Plan for Education" were met.[12] NJDOE guidelines concurred with published U.S. Centers for Disease Control and Prevention (CDC) guidelines (Executive Order No 175, 2020).

In "The Road Back," NJDOE included guidance for CTE and WBL to ensure programs were offered safely during the pandemic. Specifically, guidelines outlined transitioning to in-person WBL with collaboration among state, regional, and local partners to provide students with critical opportunities, whether in-person, else remotely online/virtual. Some considerations included: limiting in-person participation in WBL and allowing WBL (in general but particularly in-person) to take place gradually by following NJDOH and U.S. CDC COVID-19 guidance; integrating innovative WBL experiences by collaborating with WBL coordinators; ensuring WBL coordinators, students, and parents/guardians referred to the most up-to-date guidelines about workplace S&H; communicating with businesses about liability concerns and safety trainings for

students; and leveraging virtual employability skills and resources via Career and Technical Student Organizations.[12]

Additionally, the U.S. Department of Education's Office of Educational Technology provided teachers and students with guidance and resources for remote instruction during the COVID-19 pandemic in a virtual learning toolkit.[13] The "Teacher's Guide" provided insights on how to meet student needs through educational technology, personalizing learning for students, and embracing professional development opportunities while collaborating with parents and families to support the social and emotional needs of students.[14]

LITERATURE REVIEW: SELECTED DETAILS OF STUDIES CITED

A study in South Carolina examining teacher perspectives on WBL experiences reported students with special health care needs (SHCN), including one or more various disabilities, had access to school-based work experiences, CTE courses, career information, and job shadowing opportunities, but still fewer than half of those students were able to experience community-supported or community-led employment and/or internship opportunities.[16] Kim and Dymond[17] surveyed special education teachers in Illinois about their perceptions regarding benefits and barriers to the implementation of structured work experiences and revealed community-based employment experiences were most effective in preparing students with SHCN to transition from secondary to postsecondary education, as opposed to school-based work opportunities, job shadowing, etc. Furthermore, Collet-Klingenberg and Kolb[18] surveyed special education teachers in rural Wisconsin communities about their perceptions on WBL program components and identified three main barriers: limited transportation, lack of funding, and limited options available for students in rural areas.