

RESEARCH ARTICLE

Survey of New Jersey K-12 Professionals on Work-Based Learning During COVID-19: A Preliminary Study and Future Implications

MARYANNE L. CAMPBELL, BS Research Teaching Specialist^a  DEREK G. SHENDELL DEnv, MPH Professor and Director^b

ABSTRACT

BACKGROUND: The New Jersey Safe Schools Program (NJSS) offers an online professional development certification course, titled “Designing and Implementing Student Training Plans,” for NJ high school (HS) teachers developing secondary school student work-based learning (WBL) programs. WBL provides students opportunities to engage in career-related field tasks, aligned to curricular instruction.

METHODS: In January-July 2021, during 7 cohorts of trainings, questions in the training’s assignment gauged teacher and student concerns regarding worksite placements during the COVID-19 pandemic, learning delivery format preferences, and alternative activities for WBL credit.

RESULTS: In January-July 2021, 68 of 134 HS teachers (51%) were concerned placing students in WBL and indicated “no” and “I don’t know” (37% and 31%, respectively) about employer willingness to offer virtual mentorship during the pandemic.

CONCLUSIONS: This preliminary study presents insights of newly credentialed WBL supervisory HS teachers regarding impacts of COVID-19 on student health and workplace safety, preferred WBL formats, and potential implementation of COVID-19 safety trainings.

Keywords: adolescents; occupational safety; school health; teacher training; young workers.

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The New Jersey Safe Schools Program (NJSS) provides safety and health trainings plus resources to NJ secondary schools for use by students and educational professionals. NJSS leads the required trainings for work-based learning (WBL), permitting certified teachers to supervise students in school-sponsored work placements.¹ These opportunities provide students with valuable experiences to allow them to apply and develop academic, technical, and career skills essential for future employment.² WBL opportunities are aligned to curricular instruction.

Youth employment has fluctuated during the past few years due to the COVID-19 pandemic. In July

2019, 56.2% of young people (persons ages 16-24) were employed in the United States. In July 2020, youth employment dropped to 46.7%, which was unusually low due to the pandemic. In July 2021, 54.4% of young people were employed, still almost 2 percentage points lower than before the pandemic in 2019.³ Fluctuation in youth employment is one of the immediate direct impacts the COVID-19 pandemic has had in the United States.

It has also been reported that young workers experience more injuries during early work experiences. In 2019, the incidence rate for nonfatal injuries for young workers ages 16-19 was 108.2 per 10,000

^aResearch Teaching Specialist, (mlf159@sph.rutgers.edu), New Jersey Safe Schools Program, Rutgers School of Public Health, 683 Hoes Lane West, 3rd Floor SPH Building, Suite 399, Piscataway, NJ 08854-8020.

^bProfessor and Director, (shendedg@sph.rutgers.edu, derek.g.shendell.96@alum.dartmouth.org), Department of Environmental and Occupational Health and Justice, and New Jersey Safe Schools Program, Rutgers School of Public Health, 683 Hoes Lane West, 3rd Floor SPH Building, Suite 399, Office 384, Field Lab 381, Piscataway, NJ 08854-8020.

Address correspondence to: Maryanne L. Campbell, Research Teaching Specialist, (mlf159@sph.rutgers.edu), New Jersey Safe Schools Program, Rutgers School of Public Health, 683 Hoes Lane West, 3rd Floor SPH Building, Suite 399, Piscataway, NJ 08854-8020.

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full-time employees (FTE). However, for older workers ages 20-24, the incidence rate for nonfatal injuries was lower at 96.2 per 10,000 FTE. Regarding the rate of work-related injuries treated in emergency departments for workers ages 15-19, it was 2.2 times greater than the rate for workers 25 years of age and older in 2018.⁴ These reported statistics support the importance of student WBL and the provision of practical hands-on work experience and on-the-job safety and health trainings to young workers.

Participation in WBL programs at the high school level prepares students for proper occupational safety and health principles to ensure safe, rewarding experiences for minors in classrooms and workplaces. This includes the identification and management of potential hazards young workers may encounter at the workplace, including biological, chemical, ergonomic, physical, and radiological hazards.¹

Although some believe students have fallen “behind” academically and socioemotionally during the COVID-19 pandemic, it is important to recognize the pandemic has changed the academic and developmental landscape for students of all ages.⁵ One goal of WBL is to provide students opportunities to gain important hands-on work experience in fields of interest.^{1,6-9} COVID-19 essentially required transitioning these experiences from being typically in-person to online/virtual formats, and thus potentially altering opportunities to explore, consider and learn about different post-secondary careers. When COVID-19-related restrictions were lifted, businesses reopened, and discussions of in-person versus online/virtual formats for WBL resumed. This preliminary study presents the insights of newly credentialed WBL supervisory teachers in January-July 2021 regarding the impact of COVID-19 on student WBL, including health and workplace safety, preferred formats for offering WBL, and potential implementation of COVID-19 safety trainings.

METHODS

Participants

Data from 134 NJ educational professionals (course participants) were collected during 7 cohorts of course training conducted January-July 2021. The study sample was statewide across 16 career clusters (~80 program pathways).

Instrumentation

One NJSS training assignment asked about WBL program development and student worksite placements. Building on the NJSS statewide fall 2020 needs assessment,¹⁰ this study’s data about WBL during pandemic-affected school years inform guidance to schools and employers to better address

identified needs as COVID-19 continues affecting communities.¹¹

Responses were collected through assignment questions asked during 7 cohorts (average ~20 educational professionals per cohort) of WBL trainings titled “Designing and Implementing Student Training Plans,” hosted on the Rutgers Canvas learning management system (LMS), in winter-summer 2021.

Procedure

Multiple choice questions assessed teacher concerns about student WBL placements during COVID-19, and perceptions regarding in-person versus online/virtual WBL experiences during and after COVID-19. Responses and data collected were de-identified.

Data Analysis

Data were first exported from the Rutgers Canvas LMS and then managed in Microsoft Excel. Summary descriptive statistics were computed and analyzed.

RESULTS

Participants were asked, “Do you have more concerns now about placing students in WBL during the COVID-19 pandemic?” Overall, responses across the 7 cohorts were evenly split between “yes” and “no.” For this question only, results were stratified by pre- vs post-adult educator free vaccine eligibility in NJ (March 8, 2021),¹² which occurred towards the end of cohort 2 trainings. When stratified by pre- vs post-adult educator free vaccine eligibility, there was an 11 percentage points decrease in concern and a 13 percentage points increase in lack of concern. Similarly, when results were stratified by pre- vs post-free vaccine availability for NJ citizens age ≥ 16 (April 19, 2021),¹³ which occurred at the end of cohort 3 trainings, there was a 12 percentage points decrease in concern and a 10 percentage points increase in lack of concern (Table 1).

Participants were also asked about student levels of concern regarding working in-person/on-site for WBL experiences versus in online/virtual formats. Overall, results across all 7 cohorts January-July 2021 for the combination of “very concerned” and “somewhat concerned,” that is, concerned, were 42 of 134 (32%) educational professionals noted their students were concerned about participating in in-person/on-site WBL during COVID-19, and similarly 43 of 134 (32%) were concerned with respect to online WBL. Also, 67 of 134, or half noted students should strive to complete WBL in-person during the 2020-2021 school year and/or summer 2021; however, about 14 of 134 (10%) preferred online WBL and 46 of 134 (34%) preferred a hybrid format. In addition, 116 of 134 (87%) educational professionals noted their students

Table 1. Participants Perceptions About Placing Students in Work-Based Learning During the COVID-19 Pandemic, Overall and by Vaccine Eligibility

| Do You Have More Concerns Now About Placing Students (In Work-Based Learning) During the COVID-19 Pandemic? | Yes | No | I Do Not Know |
|--|----------|----------|---------------|
| School year 2020-2021 Cohorts 1-7 (January-July 2021) Overall (N = 134) | 68 (51%) | 61 (46%) | 5 (4%) |
| Pre-adult educator free vaccine eligibility Cohorts 1-2 (January-early March 2021) (n = 23) | 14 (61%) | 8 (35%) | 1 (4%) |
| Post-adult educator free vaccine eligibility (start March 8, 2021)* Cohorts 3-7 (Mid-March to late July 2021) (n = 111) | 54 (49%) | 53 (48%) | 4 (4%) |
| Pre-NJ citizens age 16+ free vaccine eligibility Cohorts 1-3 (January-mid-April 2021) (n = 37) | 22 (59%) | 14 (38%) | 1 (3%) |
| Post-NJ citizens age 16+ free vaccine eligibility (start April 19, 2021)† Cohorts 4-7 (late April-late July 2021) (n = 97) | 46 (47%) | 47 (48%) | 4 (4%) |

Overall (N = 134, 2020-2021 school year including summer 2021) and stratified by pre- vs post-adult educator free vaccine eligibility (March 8, 2021) as well as NJ citizens age 16+ (April 19, 2021) free vaccine eligibility, that is, cohorts 1-2 (n = 23) vs cohorts 3-7 (n = 111), and cohorts 1-3 (n = 37) vs 4-7 (n = 97), respectively.

* <https://www.nj.com/coronavirus/2021/03/nj-teachers-day-care-workers-can-get-covid-vaccine-immediately-not-on-date-previously-announced.html>

† <https://www.nj.com/coronavirus/2021/04/all-nj-residents-age-16-and-over-will-be-eligible-for-covid-vaccine-beginning-april-19-murphy-announces.html>

Table 2. New Jersey Teacher Perceptions on Alternative Work-Based Learning Activities for Students During the COVID-19 Pandemic, 2020-2021 School Year and Summer 2021 (N = 134)

| Proposed Activity | Teacher Would Consider, n (%) | |
|--|-------------------------------|-----|
| If Only Virtual Work-Based Learning (WBL) Experiences are Permitted to Take Place at Your School, Which of the Following Alternative Activities Would You Consider Implementing with Your Students? (Select All That Apply). | | |
| WBL projects that can be completed in a work-from-home setting (eg, research projects, social media management, or business correspondence) | 98 | 73% |
| Related industry recognized credentials students can pursue online (eg, certifications, or trainings) | 82 | 61% |
| Opportunities to continue networking with employer partners virtually | 88 | 66% |
| Career development activities (eg, virtual industry tours, online postsecondary planning activities, online employability skill development activities, and free online suite of NJ Safe Schools Program topical WBL/occupational safety and health courses) | 117 | 87% |
| Other | 21 | 16% |
| No answer | 1 | 1% |

should complete a COVID-19 safety training prior to beginning WBL in the 2020-2021 and/or 2021-2022 school year.

Due to concerns regarding in-person placements during COVID-19, online/virtual WBL options were considered by schools and employers. Participating educational professionals had mixed opinions about potential virtual mentorship capabilities of host employers contacted for WBL (32% “yes,” 37% “no,” 31% “do not know/not sure”).

Participants also selected options from a list of alternative virtual WBL experiences they would consider implementing with their students. Most (87%) chose “career development activities” (eg, virtual industry tours, online postsecondary planning activities, online employability skill development activities, free online suite of NJSS topical WBL/occupational safety and health courses) (Table 2).

DISCUSSION

This preliminary study provides insight on perspectives of educational professionals about student WBL opportunities during the COVID-19 pandemic, with implications for the future of WBL even as the pandemic continued to affect the 2021-2022 school

year. Previous research has documented how WBL experiences can help students achieve high academic, personal, and occupational achievement with opportunities for real-world application of classroom knowledge.^{1,6-9} Thus, even during an ongoing pandemic, it is critical for these WBL opportunities to remain open to students for educational and occupational development.

To accommodate work and learn from home requirements or hybrid alternatives in NJ for the 2020-2021 school year, and in fall 2021 for the 2021-2022 school year, NJSS developed a suite of 6 free online courses incorporated into school WBL programs statewide during the COVID-19 pandemic. This opportunity satisfied certain requirements towards career exploration for student approved WBL programs and allowed teachers to have data/documentation to enter in the “NJ SMART” system, which is the comprehensive state data warehouse for student level data reporting. These courses introduced students to topics pertaining to new and young workers as well as safety and health, including wage and hour and child labor laws, quantitative risk assessment, personal protective equipment, cyber security and cyber safety, and apprenticeships.^{14,15} While this is 1 example of WBL career exploration offered in an online capacity, other

aspects of the WBL continuum such as career preparation and career training could be provided to students via an online opportunity. For future WBL, online internships and opportunities could expand to more school districts and students, statewide and nationally.

This preliminary study focused on the multiple-choice question responses of participants enrolled in the Designing and Implementing Student Training Plans course. The assignment also included open-response questions pertaining to student WBL during the COVID-19 pandemic. Future studies may consider conducting a qualitative analysis across school years for 2020-2021, 2021-2022, and fall 2022.

IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY

In keeping with student learning standards and education agency commitments to preparing students for careers, professional opportunities, comprehensive life literacies, and key skills, this study's findings are critical in considering the future implications of WBL programs. In NJ and in other states with, or considering, WBL programs, this study can shape how future WBL programs are structured regarding the training of students, teachers, and employers to ensure safe student placements complying with existing federal and state laws plus ongoing COVID-19 guidelines and policies as schools and businesses continue to operate in-person in 2021 and into 2022. US vaccine uptake continues to rise, but variations by state and within states exist and will likely persist depending on perceptions and hesitancy,¹⁶ which influences WBL. In NJ, a progression of vaccine availability and eligibility occurred, first for adults including teachers/administrators/staff in March 2021, then for adolescents ages 16 and older in April 2021, and most recently, those 12 years of age and older became eligible in May 2021.^{12,13,17} Thus, while NJ continues to make progress in vaccine uptake, plans to implement in-person student WBL programs continue to develop.

Strengths

This preliminary study had known strengths. The assignment questions collected primary data on perceptions and concerns directly from a statewide sample of NJ education professionals who supervise students in WBL opportunities. Data and studies regarding teacher perceptions of school sponsored worksite placements for students are limited. This preliminary study thus helps address an important research gap in examining the safety and well-being of secondary school populations regarding WBL and worksite placements. This preliminary study used a methodology and assignment questions potentially replicable elsewhere.

Limitations

This preliminary study also had known limitations. There was a known sampling limitation. In this preliminary study, the 7 training cohorts were January-July 2021 when NJ adult educators and citizens aged 16 and up became eligible to receive the COVID-19 vaccine. Thus, while training assignment questions gauged concern in placing students in WBL pre- and post-vaccination eligibility, participants were not in the same cohort and thus did not answer the question within the same time/interval relative to eligibility dates. Therefore, the increase/decrease in concern regarding placing students in WBL as outlined in the results reflect the overall general findings of our school year sample; cohort-specific analyses were precluded by small sample sizes. In addition, teachers and administrators were also sometimes asked to answer survey questions on behalf of their students, without a student survey conducted to gain their personal responses and perceptions. Future research could focus on student perceptions.

Conclusions

This preliminary study presents the insights of newly credentialed supervisory-level WBL teachers regarding the impact of COVID-19 on student health and workplace safety, preferred formats for offering student WBL, and potential implementation of COVID-19 safety trainings. This preliminary study recognizes teacher concerns and can provide guidance to schools and employers for how to better address identified needs, including employee wellness and community involvement. Future studies across the United States should also further examine teacher and student perceptions about options for offering online WBL opportunities and ensuring WBL programs continue to be offered during and after a pandemic.

Human Subjects Approval Statement

IRB approval covers NJSS State of NJ law-based incident surveillance system, quizzes in educational settings on educational practices, training evaluations, and secondary analyses of NJ school data. The NJSS protocol number is 021997W0383.

Conflict of Interest

The authors declare no conflict of interest.

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