

IMPROVING WORK PERFORMANCE FOR ADOLESCENTS WITH EMOTIONAL DISTURBANCE: A COMPARISON OF TWO WORK-BASED LEARNING INTERVENTIONS

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Abstract

The primary purpose of this study was to investigate whether a particular work-based learning component of community service learning, when compared to paid work experience, was significantly different across group and time in relation to the overall work performance, social competence, and academic achievement, as well as the various subscales of each dependent variable, for high school students with emotional disturbance (N = 57). Primary results found a significant interaction effect for group and time, favoring community service learning, on several dimensions of work performance and social competence.

Introduction

Adolescents with emotional disturbance (ED) have difficulties in school related to inappropriate behaviors and poor interpersonal relationships. Adolescents with ED also have considerable difficulties maintaining effective interpersonal relationships after their high school years, especially in the workplace. According to Wagner & Cameto (2004), adolescents with ED have the most difficulty obtaining and maintaining post-secondary employment when compared to other disability groups.

Many ED adolescents lack actual job experience while in high school and as a result experience high rates of unemployment or low-paying and unsatisfying jobs. Research has shown that these adolescents' interpersonal skills are poor, anti-social, and problematic on the job (Jolivet, Stichter, Nelson, Scott, & Liaupsin, 2000); and that many are terminated from employment because of their poor job-related social skills (Bullis & Cheney, 1999).

There is no question that adequate preparation for employment is an important component in programming for adolescents with ED. The development of work-based learning programs to improve the work performance of these adolescents should include interpersonal and experiential components that improve their ability to handle the demands of the work setting, build positive relationships with co-workers and supervisors, and successfully manage the common social problems that occur in the workplace.

Community service learning and paid work experience are two work-based learning interventions that can help adolescents with ED improve their ability to maintain employment. Community service learning is the preferred choice of treatment and the focus of this study.

Community service learning is an experiential approach to job development that provides community-based work experiences, job coaching, and career awareness. Community service learning is different from paid work experience as it includes reflection activities, mentoring, and empathic learning. Overall, community service learning has been receiving attention in the literature as a promising intervention for regular education students.

In contrast, paid work experience is the more commonly used work-based learning intervention that has been shown to be predictive of post-secondary employment success. Paid work experience differs from community service learning in that it provides adolescents with monetary incentives. Paid work experience focuses more on the occupational task and less on the interpersonal job requirements.

Methodology

This study used a 2 x 2 repeated measures quasi-experimental design that compared two work-based learning interventions (CSL and PWE) over a period of 13 weeks and the measurement of: (1) six dimensions of work performance; (2) five dimensions of social competence; and (3) three dimensions of academic achievement, at two points in time which represent pre- and post-scores.

Sample

This study was comprised of ED adolescents who were 11th and 12th graders from level V special education programs for students who have been primarily coded as ED. The researcher used purposive sampling based on the transitional needs and interests of each student according to their school. Participating students came from 11 different level V non-public special education schools from Maryland. A total of 82 students were recruited for this study. The final number of students consenting to participate was 57, a rate of 69.5 percent. A total of 30 were part of the PWE group and 27 were part of the CSL group.

Independent variables

In this research study, the independent variables were the particular work-based learning interventions; that is, community service learning and paid work experience. All subjects were placed on a job site that was consistent with their interests and their transition objectives.

Job placements for the treatment group (CSL) included non-profit and/or charitable organizations. Job placements for the comparison group (PWE) included typical paid competitive employment sites.

Dependent variables

The dependent variables included the overall scores and subscale scores on the Work Personality Profile (WPP), The Walker-McConnell Scale of Social Competence and School Adjustment (WSSC), and The Nelson-Denny Test of Reading (NDRT).¹

The WPP measures overall work performance as well as five subscales, which are task orientation, social skills, work motivation, work conformance, and personal presentation. The WPP uses mean scores based on a five-point Likert scale, with a range from *employability problem* to *employability asset*.

The WSSC measures overall social competence in addition to its four subscales of self-control, peer relations, school adjustment, and empathy. The WSSC uses mean scores based on a five-point Likert scale with a range from *never* to *frequently*.

The NDRT measures overall reading achievement, vocabulary, and reading comprehension. Scoring for the Nelson Denny Reading Test (NDRT) uses raw scores for vocabulary and reading comprehension to come up with a total reading achievement score.

¹ The WPP has an internal reliability of 0.89 (median); the WSSC has an internal reliability of 0.95 (mean); and the NDRT has an internal reliability of 0.90 (total).

Statistical Analyses

The researcher used MANCOVA procedures to compare the differences between the two work-based learning groups in terms of their post-test scores for the dependent variables. The researcher used pre-test scores as covariates to control for differences that may have existed between the two groups.

The researcher also used a repeated measures MANOVA to compare the differences over time for each work-based learning group and to analyze the interaction effect for group and time on the dependent variables.

Multivariate tests (Hotelling's trace) were conducted in order to detect whether any main effects occurred for group, time, and the interaction for group and time on the dependent variables. Post hoc analyses were performed using Least Significant Differences (LSD). A partial eta squared was calculated for each of the dependent variables, representing the proportion of the total variability accounted for by the test.

For this study, the level of significance was set at $p < 0.05$. The statistical program used to analyze the data was SPSS 12.0 for Windows 2003.

Findings

Descriptive Results²

For overall work performance, the entire sample increased their total WPP mean scores from 2.81 (SD = 0.37) to 3.00 (SD = 0.54) over the thirteen week intervention. The CSL group improved to above three (M = 3.11; SD = 0.57) while the PWE group improved to just below three (M = 2.91; SD = 0.51).

For the WPP subscales, the CSL group increased their mean scores for all five subscales, while the PWE group improved their mean scores for three (task orientation, social skills, and work conformance). The PWE group scored slightly below their pre-test mean for work motivation and personal presentation.

In terms of social competence, the entire sample increased their pre-test score from a mean of 3.25 (SD = 0.58) to 3.39 (SD = 0.53) over the thirteen week intervention. The PWE group had a higher mean pre-test score (3.40; SD = 0.57) than the CSL group (3.08; SD = 0.54). However, the mean post-test score stayed the same for the PWE group (3.40; SD = 0.53) and improved for the CSL group (3.38; SD = 0.54).

For the WSSC subscales of self-control, peer relations, school adjustment, and empathy, the PWE group had mean post-test scores that were higher than the CSL group for all four factors. The CSL group improved their mean score for every factor, while the PWE group improved their mean scores for self-control and empathy. In the end, both groups had adequate scores, even though it shows that the CSL group made more improvements over time.

For overall reading achievement, neither group made any notable improvements for total reading, vocabulary, and reading comprehension.

² MANCOVA was used to compare groups for any pre-test differences. The "F statistic" is similar to the "t value." The F statistic is the total variance between groups divided by the total variance within groups. Partial eta squared [η_p^2] is the correlation between an effect and the dependent variable. This coefficient emphasizes the important of the independent variable (e.g., CSL). For partial eta squared, a small effect is 0.01 to 0.06, medium effect is 0.06 to 0.14, and a large effect is 0.14 and higher.

Hypotheses Testing³

Hypothesis One

There will be significant differences between community service learning and paid work experience in the overall work performance, social competence, and academic achievement of ED adolescents, as measured by total scores on the WPP, WSSC, and NDRT.

Multivariate tests did not detect a significant main effect for group on the dependent variables of overall work performance, social competence, and academic achievement, although a medium effect was obtained. In terms of differences between the two groups, none of the F values attained the .05 significance level and effect sizes were small.

Hypothesis Two

There will be significant differences between community service learning and paid work experience across the five subscales of task orientation, social skills, work motivation, work conformance, and personal presentation of ED adolescents, as measured by the WPP.

Multivariate tests did not detect a significant main effect for work based learning on the work performance factors, and the obtained effect size was medium. In terms of differences between the two groups, none of the F values attained the .05 significance level, and effect sizes were small.

Hypothesis Three

There will be significant differences between community service learning and paid work experience across the four subscales of self-control, peer relations, school adjustment, and empathy of ED adolescents, as measured by the WSSC.

Multivariate tests showed that work-based learning did not have a significant main effect on the four dependent variables for social competence ($F = 2.05$; $p = 0.103$). However, a large effect size was detected.

Pairwise testing was used and detected significant differences between the two groups. Specifically, the CSL group scored significantly higher for self-control ($F = 5.04$; $p = 0.029$), peer relations ($F = 4.31$; $p = 0.043$), school adjustment ($F = 5.96$; $p = 0.018$), and empathy ($F = 6.67$; $p = 0.013$). Medium effect sizes for all four dependent variables were obtained.

Hypothesis Four

There will be significant differences between community service learning and paid work experience across the subscales of vocabulary and reading comprehension of ED adolescents, as measured by the NDRT.

Multivariate tests did not detect a significant main effect for group on reading achievement ($F = 0.154$; $p = 0.858$). As far as differences between the two groups, none of the F values attained the .05 significance level, and effect sizes were small.

Hypothesis Five

There will be a significant difference between the pre-test and post-test scores of community service learning

³ The author tested a total of 12 hypotheses in three sets of four. The first four hypotheses compare the two groups along the various dependent variables; the next four compare the differences within each group across time for the various dependent variables; the final four – the heart of the study – compare the interaction for group and time, that is, which group was significantly better over the time of the intervention.

and paid work experience for overall work performance, social competence, and academic achievement of ED adolescents as measured by the WPP, WSSC, and NDRT.

Multivariate tests showed that a significant main effect was obtained for time on work performance ($F = 10.483$; $p = 0.002$) and social competence ($F = 7.798$; $p = 0.007$). This produced a large effect for work performance and a medium effect for social competence.

The CSL group significantly improved their work performance over time ($F = 10.028$, $p = 0.004$), and obtained a large effect size. The PWE group did not significantly improve their work performance over time ($F = 1.112$; $p = 0.300$) and obtained a small effect size.

For the measure of social competence, the CSL group significantly improved in this area ($F = 13.730$; $p = 0.001$) and produced a large effect size. While the PWE group's post-test scores were comparable to the CSL group, they actually performed slightly lower on the post-test for social competence. Thus, PWE did not significantly improve for this variable ($F = 0.001$; $p = 0.970$).

Finally, for the area of reading achievement, neither group made significant changes over time as measured by the NDRT. Obtained effect sizes for both the CSL and PWE groups were small.

Hypothesis Six

There will be a significant difference between the pre-test and post-test scores of community service learning and paid work experience across the five subscales of task orientation, social skills, work motivation, work conformance, and personal presentation of ED adolescents as measured by the WPP.

Multivariate tests showed a significant main effect was obtained for time on social skills ($F = 14.149$; $p = 0.000$), work conformance ($F = 14.407$; $p = 0.000$), and personal presentation ($F = 8.212$; $p = 0.006$). This produced large effects for social skills and work conformance and a medium effect for personal presentation.

The CSL group significantly improved in all five areas, including task orientation ($F = 6.844$; $p = 0.015$); social skills ($F = 7.50$; $p = 0.011$); work motivation ($F = 5.99$; $p = 0.021$); work conformance ($F = 9.967$; $p = 0.004$); and personal presentation ($F = 13.237$; $p = 0.001$). The CSL intervention produced large effects for all five work performance categories.

The PWE group did better over time in two of the categories of work performance, including a significant improvement in social skills ($F = 6.46$; $p = 0.017$) and near significance in the area of work conformance ($F = 4.057$; $p = 0.053$). PWE produced a large effect for social skills and a medium effect for work conformance.

Hypothesis Seven

There will be a significant difference between the pre-test and post-test scores of community service learning and paid work experience across the four subscales of self-control, peer relations, school adjustment, and empathy of ED adolescents as measured by the WSSC.

Multivariate tests first showed that time was a significant main effect for self control ($F = 18.894$; $p = 0.000$) and empathy ($F = 5.482$; $p = 0.023$) and produced large and medium effect sizes, respectively.

The CSL group improved significantly in all four areas at the .05 level, that is, self-control ($F = 21.898$; $p = 0.000$); peer relations ($F = 5.814$; $p = 0.023$); school adjustment ($F = 8.274$; $p = 0.008$); and empathy ($F = 6.901$; $p = 0.014$). Results indicated the CSL intervention produced large effects for all four subscales of social competence. The PWE group did not make significant improvements in any of the four subscales for social competence.

Hypothesis Eight

There will be a significant difference between the pre-test and post-test scores of community service learning and paid work experience across the subscales of vocabulary and reading comprehension of ED adolescents as measured by the NDRT.

Multivariate tests did not reveal a significant main effect for time on vocabulary or reading comprehension and produced small effects. Neither group made significant improvements over time in vocabulary or reading comprehension.

Hypothesis Nine

There will be a significant interaction effect for group and time for the overall work performance, social competence, and academic achievement for ED adolescents as measured by the WPP, WSSC, and NDRT.

An interaction effect for group and time bordered on significance for overall work performance, favoring the CSL group ($F = 3.975$; $p = 0.051$). For social competence, a significant interaction effect was obtained for group and time, also favoring the CSL group ($F = 8.080$; $p = 0.006$). Finally, for academic achievement, no significant interaction effects for group and time were obtained.

Results suggest that the CSL intervention is significantly better than the PWE intervention given the interaction effect for group and time on work performance and social competence. Results are presented in Table 1.

Table 1. Multivariate tests for the interaction for group and time on overall scores

Source	Df	F	Sig.	Partial Eta Squared	Observed Power
Time*Group					
WPP	1	3.975	0.051	0.067	0.500
WSSC	1	8.080	0.006*	0.128	0.797
NDRT	1	0.005	0.944	0.000	0.051
* $p < 0.05$					

Hypothesis Ten

There will be a significant interaction effect for group and time across the five subscales of task orientation, social skills, work motivation, work conformance, and personal presentation of ED adolescents as measured by the WPP.

A significant interaction effect for group and time was found for work motivation ($F = 4.583$; $p = 0.037$) and personal presentation ($F = 10.534$; $p = 0.002$), in favor of the CSL group. Results suggest that the CSL intervention produced significantly greater changes in work motivation and personal presentation than the PWE intervention. Results are presented in Table 2 (next page).

Table 2. Multivariate tests for the interaction for group and time on WPP subscales

Source	Df	F	Sig.	Partial Eta Squared	Observed Power
Time*Group					
Task orientation	1	3.431	0.069	0.059	0.444
Social skills	1	0.563	0.456	0.010	0.114
Work motivation	1	4.583	0.037*	0.077	0.557
Work conformance	1	2.016	0.161	0.035	0.287
Personal presentation	1	10.534	0.002*	0.161	0.890
*p < 0.05					

Hypothesis Eleven

There will be a significant interaction effect for group and time across the four subscales of self-control, peer relations, school adjustment, and empathy of ED adolescents as measured by the WSSC.

A significant interaction effect for group and time was found for peer relations (F = 6.631; p = 0.013) and school adjustment (F = 6.108; p = 0.017), in favor of the CSL group. Results suggest that the CSL intervention produced significantly greater changes in peer relations and school adjustment than the PWE intervention. Results are presented in Table 3.

Table 3. Multivariate tests for the interaction for group and time on WSSC subscales

Source	Df	F	Sig.	Partial Eta Squared	Observed Power
Time*Group					
Self-control	1	3.805	0.056	0.065	0.483
Peer relations	1	6.631	0.013*	0.108	0.716
School adjustment	1	6.108	0.017*	0.100	0.680
Empathy	1	3.203	0.079	0.055	0.420
*p < 0.05					

Hypothesis Twelve

There will be a significant interaction effect for group and time across the subscales of vocabulary and reading comprehension of ED adolescents as measured by the NDRT.

Multivariate tests did not detect a significant interaction effect for vocabulary and reading comprehension.

Discussion

Work Performance

The analysis of work performance demonstrated an interaction effect for group and time on the dependent variables of work motivation and personal presentation, favoring the CSL group and producing medium and

large effects respectively. The interaction effect bordered on significance for overall work performance, again favoring the CSL group with a medium effect being detected. While both groups improved their work performance for the most part over time, the CSL group produced more significant changes when compared to the PWE group.

This is perhaps the area that shows the most promise for utilizing CSL as an important work-based learning approach. As we know from previous research, paid work experience during high school is an important predictor of postsecondary employability (Benz, Lindstrom, & Yovanoff, 2000; Bullis, Moran, Benz, Todis, & Johnson, 2002). The fact that CSL contributes to significant improvements in overall work performance, and is shown to be significantly better than PWE in certain areas confirms the suggestion that CSL should be utilized more in schools as an effective work-based learning method.

The analysis did not produce a main effect for group on overall work performance, task orientation, social skills, work motivation, work conformance, and personal presentation. In addition, there were no differences between the CSL group and the PWE group for these variables.

As this was an exploratory study, it is noteworthy to find that the two groups were not different in terms of overall work performance and the five subscales of work performance. As of this writing, there are no comparative studies of CSL and PWE for high school students with ED. However, the results may indicate that both interventions are equally effective, perhaps due to the different components each offers, specifically, pay as a motivator for employment success (PWE) and the use of mentoring, reflection, and empathic learning as a means to personal and interpersonal growth (CSL).

The analysis produced a significant main effect for time on overall work performance, social skills, work conformance, and personal presentation, suggesting that the 13-week duration of work-based learning had an impact on these variables. In particular, the CSL group significantly improved over the time of the intervention for overall work performance, task orientation, social skills, work motivation, work conformance, and personal presentation. The PWE group significantly improved over time for social skills and bordered on significance for work conformance.

The findings suggest that both work-based learning interventions are important for improving performance in those areas. The CSL group improved in each work performance subscale to scores of over three, which is well into the satisfactory range. Given the large effect sizes, CSL appears to be a very effective job training intervention. Essentially, by improving their overall work performance, task orientation, social skills, work motivation, work conformance, and personal presentation, students in the CSL group became more independent workers, learned to relate well with their co-workers, responded to job assignments better, learned to conform to the rules of the job, and responded more appropriately to authority and supervision.

The PWE group improved significantly for social skills and near significance for work conformance. For both work performance areas, the PWE group also increased their mean scores to over three, representing a satisfactory performance. Improvement in social skills specifically means the PWE group improved their relationships with their co-workers, such as being friendlier and more sociable on the job whereas in work conformance, this group learned to adapt much better over time to relevant job requirements and improved their ability to display good social judgment.

The PWE group did not demonstrate significant improvement for overall work performance, task orientation, or work motivation. Further, the pre-test–post-test scores for task orientation and work motivation had little variation at all, and in the end remained under three, a potential employability problem (Bolton & Roessler, 1986a). It appears that the PWE group fell short on areas related to overall work habits, such as learning

quickly and performing independently (task orientation) as well as accepting routine assignments and responding to change (work motivation).

While the group did improve their overall work performance score, it was not significant and in the end remained less than satisfactory. It is possible that these results may have to do with students' work history, as the more work experience one has the more likely they will experience employment success. In this study, more than 56 percent of participants ($n = 17$) in the PWE group were either never employed or held only one job prior to the investigation. Students with more work experience prior to the investigation (two or more jobs) accounted for 43 percent of the group ($n = 13$).

Social Competence

The analysis found an interaction effect for group and time on overall social competence, peer relations, and school adjustment, favoring the CSL group. However, this result should be interpreted with caution as the PWE group obtained higher pre-test scores than the CSL group.

The analysis did not detect a main effect for group for overall social competence. In addition, there were no significant differences between the CSL group and the PWE group for overall social competence. However, statistical significance was less than 10 percent, and it is possible that the failure to find this difference was due to low power.

The analysis did not find a main effect for group on the subscale scores of the WSSC. Results did show significant differences between the two groups for self-control, peer relations, school adjustment, and empathy, favoring the CSL group. Consistent with these findings are studies that show how community service learning promotes overall social-emotional change for high school students with ED (McCarty & Hazelkorn, 2001), including self-esteem (Jennings, 2001), problem-solving, leadership (Kluth, 2000), and social skills (Yoder, Retish, & Wade, 1996). This is important given the longitudinal studies which indicate that high school students with ED have significantly lower social skills than their others in their peer group (Armstrong, Dedrick, & Greenbaum, 2003; Wagner & Cameto, 2004).

Results showed a significant main effect for time on overall social competence, self-control and empathy. With medium and large effects detected, the 13-week intervention was again considered to be an important factor for these variables. The CSL group in particular improved significantly over the course of the intervention for overall social competence, self-control, peer relations, school adjustment, and empathy.

The PWE group did not improve over time. However, as indicated earlier, their pre-test scores were considerably higher than the pre-test scores of the CSL group. Given these differences, a ceiling effect may have occurred. At week 13, the post-test scores for the PWE group were quite comparable to the post-test scores for the CSL group, with both groups obtaining mean scores above three for all the subscales.

A possible reason the PWE group had higher pre-test scores for social competence may have to do with differences in age. This group had more individuals in the 18-21 year old range than the CSL group. While age itself doesn't necessarily imply maturity or social competence, it at least must be considered given these findings.

Academic Achievement

In terms of academic achievement, results did not detect an interaction effect for group and time. In addition, the analysis did not produce a main effect for group, and there were no significant differences between the two groups on overall reading achievement, vocabulary, and reading comprehension. Results also did not

produce a main effect for time, as neither group improved their reading scores over the course of the intervention.

It is possible that the lack of improvement in reading may also have more to do with the relatively short duration of the intervention. Perhaps 13 weeks is not enough time to make significant gains in reading given the literature's findings that high school students with ED need comprehensive services over a longer period of time (Greenbaum, Dedrick, Friedman, Kutash, Brown, Lardieri, & Pugh, 1996).

Summary

In this study, community service learning demonstrated great value as a work-based learning intervention when compared to paid work experience. CSL appears to be effective because of the unique components of mentoring, empathic learning, and reflection. The mentoring that the CSL group received not only provided them with job support and supervision, students were also able to experience these adults as role models whose commitment in life were to the service of others. This altruism is important when it comes to developing empathy as well as appropriate workplace relationships. Reflection also plays a part in this as it provides students with an opportunity to examine the community service learning experience to include the various aspects of their work performance, including social skills and relationships with others. For this study, reflection occurred through various methods, including group discussion, personal presentations, research, and journal writing.

Cognitive development and constructivist learning theory provide a theoretical connection to the unique components of CSL. Constructivist learning theory states that individuals have an inherent drive to understand and find meaning in the world (Kerka, 1997). Community service learning facilitates the construction of knowledge as high school students with ED improve their work performance through their active, interpersonal, and reflective engagement in community-based work.

Reflected intelligence is a construct that provides a basis for why mentoring, empathic learning, and reflection are a part of why community service learning is effective. It is defined as an interpersonal process that occurs when individuals reflect upon their own cognitive processes and compare them to the cognitive processes of others (Piaget, 1995). As a result, individuals grow both personally and interpersonally as they are more aware of others' points of view and feelings. Community service learning has this important interpersonal process where adolescents gain socially from mentors, coworkers, supervisors, and even clients.

Implications for Counseling Practice

Perhaps the most important implication for this study is the efficacy of CSL in improving work performance and social competence. Given the postsecondary employment concerns of high school students with ED, the need for effective work-based learning programs such as CSL are critical for the future of this population.

Many professionals in the field of counseling and special education will encounter the ED population, including rehabilitation counselors, vocational educators, transition coordinators, and mental health counselors. These professionals will have the challenge of developing CSL interventions that focuses on job-development and social skills. In addition, rehabilitation counselors may want to consider utilizing CSL as these students exit high school.

Further, professionals in the field should be aware that mentoring and reflection strategies are effective and necessary components for CSL interventions. Mentors are important for teaching and modeling appropriate work-place relationships. They act as social supports for those students who are adjusting to the interpersonal demands that often occur on the job.

Counselors should also be well-versed in understanding how to incorporate reflection into the CSL intervention. Counselors should be facilitative in engaging students to think about, interpret, and share their experiences with others as a way to grow personally and interpersonally on the job.

Finally, counselors should be aware that community service learning offers high school students with ED easy access to a wider array of employment options that often are more focused on vocational interests, potential careers, and opportunities in the field of non-profit and charitable organizations. It is often easier to help high school student with ED obtain volunteer jobs than more competitive positions in the general market.

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