

Training Evaluation to navigate the shortage of truck drivers in Western Canada

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Abstract summary

The extreme shortage of truck drivers in Canada is expected to increase, reaching up to 48,000 drivers by 2024 (CPCS, 2016). Transportation organizations are implementing training programs to deal with the shortage and lower the hiring requirements. This study aimed to evaluate the training implemented by a transportation organization in Western Canada and identify key results to be incorporated in their talent acquisition efforts. Data included surveys to trained (43) and non-trained drivers (18), driver reviews (75), and organizational metrics.

Results showed high perceived training transfer ($M = 4.56$, $SD = 0.51$) and perceived application ($M = 3.93$, $SD = 0.15$). High and medium-high levels for the factors of training, which correlated between them and with training transfer. Driver reviews did not differ between groups (TD: $M = 1.02$, $SD = .05$; NTD: $M = 1.05$, $SD = .14$; $t(71) = -1.65$, $p > .05$). Turnover cognitions and employee wellbeing did not differ between groups (TD: $M = 1.64$, $SD = .91$; NTD: $M = 1.94$, $SD = 1.14$; $t(56) = -1.08$, $p > .05$). First year attrition was higher before the implementation ($28.57 < 62.50$), retention rate and accident rate were higher after the implementation of the training ($.08 > .07$; $.24 < 7.77$).

Results provide beginning of evidence for theory building in the areas of Human Resource Development and learning and professional development in the transportation sector. The evaluation procedure can be used by HR practitioners to evaluate training programs in the trucking sector.

Keywords training evaluation, transfer, training transfer evaluation, training effectiveness, case study

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Extended summary

Introduction and theoretical framework

The trucking sector in Canada is experiencing an extreme shortage of drivers which is expected to increase, reaching up to 48,000 drivers by 2024 (CPCS, 2016). A well-established transportation company in Western Canada, implemented an innovative strategy to attract, develop, and retain drivers consisting of incorporating a training program that allowed them to lower the hiring requirements while maintaining the quality of the workforce. Although the training was informally known to be very successful, a formal evaluation had not been performed.

The study was framed under Kirkpatrick's four level evaluation model (Kirkpatrick, 1975; Kirkpatrick, 1979; Kirkpatrick, 1994; Kirkpatrick & Kirkpatrick, 2005, Kirkpatrick & Kirkpatrick, 2006), and the models for evaluating training transfer (Baldwin & Ford, 1988; Bell, Tannenbaum, Ford, Noe, & Kraiger, 2017; Burke & Hutchins, 2008; Ford, Baldwin, & Prasad, 2018).

The research aimed to evaluate the effectiveness of the training and analyze its influence on the employee's well-being. It focused on 6 research questions:

RQ1: What is the diagnosis of the training evaluation of the trained driver group (TD)?

RQ2: Are there differences in the driver reviews between the TD and the non-trained driver (NTD) groups?

RQ3: Are there differences in the turnover cognitions between the TD and the NTD groups?

RQ4: Are there differences in the employee well-being between the TD and the NTD groups?

RQ5: How are the responses of the drivers in the turnover cognition and employee-wellbeing scales?

RQ6: Are there differences in the selected metrics (first-year attrition, retention rate, and accident rate) before and after the training?

Research method and design

Data was gathered cross-sectionally from three sources: driver surveys to trained and non-trained drivers, driver reviews, and organizational metrics. A quasi-experimental, non-equivalent control group, post-test-only design was applied (Krishnan, 2018). The training

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was offered by a trainer, who provided one-on-one training for one to three weeks. Sixty-one drivers responded to the survey (TD: 43; NTD: 18). Reviews of 75 drivers were collected. Measures of the FPT (Factors Predicting Transfer questionnaire, Gonzalez, Alonso, Quesada-Pallarès, Berrocal & McLean, *In Press*), the CdE (perceived training transfer, Quesada-Pallarès, Ciraso-Calí, Pineda-Herrero, & Janer-Hidalgo, 2015), perceived application (Lim & Morris, 2006), observed application, and relevant metrics, were collected. Data analysis included reliability estimates for the scales, descriptive and inferential statistics (correlation, significance of the correlation, t-test for related subjects, and independent samples t test).

The study complied with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (Canada), and all participants completed a written informed consent prior to their participation in the study.

Results

Trained drivers were highly motivated to transfer ($M = 4.73$, $SD = 0.39$), satisfied with the training ($M = 4.45$, $SD = 0.48$), and perceived that the content of the training as highly related their jobs ($M = 4.70$, $SD = 0.37$). Accountability was considered a weak facilitator of transfer ($M = 3.90$, $SD = 0.88$), showing room for improvement. Trained drivers showed high levels of perceived training transfer ($M = 4.56$, $SD = 0.51$), and medium-high levels of perceived application ($M = 3.93$, $SD = 0.15$). Most of the factors of transfer correlated between them, and with training transfer: (1) a high positive significant correlation between motivation to transfer and perceived training transfer ($r = .79$, $p < .001$), satisfaction with the training and perceived training transfer ($r = .73$, $p < .001$), and satisfaction with the training and motivation to transfer ($r = .70$, $p < .001$), (2) a moderate positive significant correlation between satisfaction with the training and perceived content relevance ($r = .66$, $p < .001$), motivation to transfer and perceived content relevance ($r = .61$, $p < .001$), and satisfaction with the training and accountability ($r = .52$, $p < .001$), (3) a low positive significant correlation between perceived content relevance and accountability ($r = .38$, $p < .05$), motivation to transfer and accountability ($r = .38$, $p < .001$), satisfaction with the training and perceived application ($r = .34$, $p < .05$), and perceived application and motivation to transfer ($r = .31$, $p < .05$), and (4) a little positive non-significant relationship between perceived content relevance and perceived application ($r = .20$, $p > .05$).

Responses to the perceived training transfer scale ($M = 4.56$, $SD = 0.51$) were higher than to the perceived application scale ($M = 3.93$, $SD = 0.15$; $t(41) = -8.86$, $p = 0.003$). Driver reviews did not differ between the TD ($M = 1.02$, $SD = .05$) and NTD groups ($M = 1.05$, $SD = .14$; $t(71) = -1.65$, $p > .05$) and showed very low variance (.00). Turnover cognitions and employee wellbeing did not differ between the TD ($M = 1.64$, $SD = .91$) and NTD groups ($M = 1.94$, $SD = 1.14$; $t(56) = -1.08$, $p > .05$), and showed a negative correlation ($r = .55$, $p < .001$). First year

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attrition was higher before the training was implemented ($28.57 < 62.50$), retention rate was higher after the training ($.08 > .07$), and accident rate was lower after the training ($2.24 < 7.77$).

Conclusion and Discussion

Results provide beginning of evidence for theory building in the areas of Human Resource Development and learning and professional development (training evaluation, training transfer evaluation, employee commitment and employee well-being). The nature of the study made randomization and pre-test unattainable; future research should aim to gather pre-test measures and some previous knowledge about the comparability of the groups with regards of the dependent variable (Polit and Beck 2107).

Human Resources practitioners and management in the trucking sector could use the evaluation performed to assess the effectiveness of their programs. They might benefit from the results and the contextual descriptions provided, by increasing their knowledge in context-specific training evaluation and by comparing data for benchmarking purposes.

Originality/value – The research performs the first comprehensive evaluation of a training program to navigate the shortage of truck drivers in Western Canada.

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