

The relationship between perceived training opportunities, work motivation and employee outcomes

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The purpose of this study was to explore alternative relationships between training opportunities and employee outcomes. A cross-sectional survey of 343 trainees from a broad range of Norwegian service organizations showed that the relationship between perceived training opportunities, and both task performance and citizenship behaviors were fully mediated, and that the relationship between perceived training opportunities and turnover intention was partially mediated by employee intrinsic motivation. In addition, intrinsic motivation was found to moderate the relationship between perceived training opportunities and organizational citizenship behaviors. The form of the moderation revealed a positive relationship for those with high intrinsic motivation. In sum, the variables included as predictors in our study explained 13 per cent of the variance in task performance, 19 per cent of the variance in organizational citizenship behavior and 24 per cent of the variance in turnover intention. Implications for practice and directions for future research are discussed.

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Employee Training and Development (TAD), or a systematic approach to learning and development to improve individual, team and organizational effectiveness (Kraiger & Ford, 2007, p. 281), is regarded as one of the most widespread human resources (HR) practices (Boselie *et al.*, 2005). As the overall focus of TAD is on improving employee performance (Kraiger *et al.*, 2004), a central issue is whether there is a direct relationship between TAD and employee outcomes. Such an assumption seems to exist, at least, based on its widespread presence across countries and cultural settings (Kraiger & Ford, 2007). With regard to Norwegian workplace settings, recent surveys suggest that as many as 86 per cent of Norwegian companies provide training opportunities for their employees (Steffensen, 2007) at an estimated annual cost of 17.7 billion NOK¹ (Nordhaug *et al.*, 2004).

Although TAD is one of the more heavily researched topics in work psychology (Chen & Klimoski, 2007; Tharenou *et al.*, 2007) and a number of studies have focused on employees' reactions to TAD (e.g. Arthur *et al.*, 2003), there is a lack of empirical evidence explaining why and how reactions to TAD matter (Schmidt, 2007; Sitzmann *et al.*, 2008). Trainee reactions, or the subjective evaluations learners make about their training experiences (Sitzmann *et al.*, 2008), are the primary means by which organizations evaluate training programs (Sugrue & Rivera, 2005). However, although trainee reactions are frequently assessed in practice, they are still poorly understood (Sitzmann *et al.*, 2008). Furthermore, researchers have not reached a consensus on the validity of employee reactions to TAD, leading to confusion over how to interpret the aforementioned reactions and questions as to whether they have value for decision making. These contrasting perspectives suggest that further research into trainee reactions and potential consequences of such reactions is warranted. In addition, only a limited amount of studies have investigated the relationship between perceptions of training and work attitudes (Santos & Stuart, 2003). Accordingly, the purpose of this study was to explore alternative relationships between perceived training opportunities and employee outcomes in the form of task performance, citizenship behavior and turnover intention.

Prior findings show that the relationship between perceived training opportunities and employee outcomes is mediated through a number of different individual and situational variables (e.g. Colquitt *et al.*, 2000; Meyer & Smith, 2000; Tannenbaum *et al.*, 1991). Although there are several alternative pathways between perceived training opportunities and employee outcomes, research on intrinsic motivation suggests that work motivation could be a key mediating variable. Deci and Moller (2005) and Kraiger and Ford (2007, p. 302) implicitly argue that motivation should be studied both as a mediator '... how perceptions of training relevancy affect motivation ...' and as a moderator '... issues such as how motivation affect willingness to learn', for the relationship between TAD reactions and employee outcomes. With regard to investigating the hypotheses of moderation, it seems plausible that employees will react differently to TAD, partly because of individual differences (Kraiger, 2003). Deci and Ryan (2000) reviewed a number of studies that demonstrate that intrinsically motivated students are more likely to perceive learning content more constructively, and demonstrate higher levels of persistence in acquiring the content of the learning setting. Recent research on performance appraisal also suggests that the relationship between performance appraisal satisfaction and work performance is moderated by intrinsic motivation, probably in part, because intrinsically motivated employees may benefit more from developmental HR practices owing to their more active learning orientation (Kuvaas, 2006a). Despite strong reasons to investigate moderators of training, the recent review by Chen and Klimoski (2007) points to a paucity of studies assessing interactional effects between reactions of training and individual characteristics. Thus, in addition to investigating a direct relationship, we investigate the hypotheses claiming that intrinsic work motivation will mediate and moderate the relationship between perceived training opportunities and employee outcomes.

¹ The amount corresponds to approximately 3.5 billion US dollars.

Theory and hypotheses

Despite the strong assumptions that workplace training influences employee outcomes (e.g. motivation, commitment, withdrawal behavior and work performance), there is a limited number of studies in field settings addressing these issues empirically (Boselie *et al.*, 2005; Kraiger & Ford, 2007). Although results from more than 20 years of macro human resource management (HRM) demonstrate a positive association between different HR practices, including TAD, and organizational performance, it is not clear whether HRM practices lead to increased organizational performance, or if it is the other way around (Wright *et al.*, 2005). Recent studies suggest that it is also just as likely at this level of analysis that organizational performance is an antecedent of TAD investments, than such efforts being the antecedent of organizational performance (Guest *et al.*, 2003; Wright *et al.*, 2005). Furthermore, macro studies typically assess TAD in terms of presence (yes or no) or numbers of options available, usually with responses from managers. Accordingly, macro HR practice or systems research should not be regarded as evidence in favor of the notion that the scope or magnitude of TAD necessarily influences employee attitudes or behaviors positively, which is the assumption in this type of research.

An alternative way of addressing the relationship between TAD and employee attitudes and behaviors is to investigate trainee reactions. Although the validity of trainee reactions is questionable, owing to the lack of direct relationships between reactions and performance (e.g. Alliger *et al.*, 1997; Arthur *et al.*, 2003; Colquitt *et al.*, 2000), there is an emerging consensus that trainee reactions are important in providing additional insight into the relationship between TAD efforts and employee outcomes. First, investing in TAD or other developmental HR practices implies providing employees with new knowledge and skills, thus, offering them the opportunity to develop and in turn, perform more effectively. Still, employee perceptions of HR practices may be significantly different from those of senior management and HR advocates in the organization (Gavino & Wayne, 2004; Khilji & Wang, 2006). For an understanding of the impact of HR practices on employee work-related behaviors, studies of the employee constituency hold the potential of additional insights (Tsui *et al.*, 1997), as they are the intended recipients of the HR activities in terms of attraction, retention and motivation. Second, trainee reactions involve mood and emotion (Sitzmann *et al.*, 2008), and positive affect is related to a number of outcomes relevant for organizations such as engagement and information-processing, training reputation and training enrollment (Brown, 2005).

A direct relationship between training opportunities and employee outcomes

From the 'best practice HRM perspective', high levels of training opportunities will lead to superior organizational performance (Guest, 1997; Purcell, 1999). More specifically, the fulfillment of employee developmental needs leads to flexible, autonomous and empowered employees based on their self-regulated behavior and discretionary effort (Arthur, 1994; Pfeffer, 1998; Truss *et al.*, 1997). The 'best practice' model, therefore, argues more or less implicitly, that all firms will be better off if they adopt the same 'best practices' (Khilji & Wang, 2006). Extending this argument, TAD advocates suggest that, when based on reflective and systematical planning, TAD may have a positive impact on employee and organizational performance (Campbell & Kuncel, 2001; Wright & Boswell, 2002). TAD initiates both the development of skills and behavioral scripts, in addition to the motivation to apply those skills and behavioral scripts in their in-role-related activities at work (Pfeffer & Veiga, 1999; Sels, 2002; Way, 2002). In addition, such 'best practices' in terms of providing high levels of training opportunities may be regarded as social exchanges between employer and employees (Maurer *et al.*, 2002). More specifically, research reviewed by Shore *et al.* (2006) clearly suggests that higher levels of organizational investment are associated with social exchange relationships that create feelings of employee obligation. Employee obligation, in turn, influences employees to benefit the organi-

zation through behaviors that exceed minimal requirements of employment. The affective and emotional aspects of TAD might influence the employee perception of being valued. This appreciation might, in turn, lead employees to exert more helpful behavior over and above in-role descriptions. Thus, we suggest that values added from TAD as perceived by the employees, will be increased task performance and organizational citizenship behavior (OCB; Joireman *et al.*, 2006). Finally, employees who perceive that they are not being provided with sufficient training opportunities might develop higher turnover intentions (Pfeffer & Sutton, 2006). In order to reduce such intentions and actual turnover, one strategy for organizations might be investments in TAD. Based on arguments from social exchange theory (e.g. Coyle-Shapiro & Conway, 2004; Shore *et al.*, 2006), employees who perceive that their employer provides sufficient and relevant training opportunities might be more reluctant to leave their employer, as they feel obliged to reciprocate the offer provided (Benson *et al.*, 2004). Training opportunities may, therefore, serve a general purpose in making the employees feel important and taken care of, in terms of having opportunities to develop. Similar arguments were recently presented by Kuvaas (2008), who found a strong negative relationship between perception of developmental HR practices (including training opportunities) and turnover intention. Based on this literature, we hypothesize:

- Hypothesis 1: There is a positive relationship between perceived training opportunities and: (a) task performance, (b) OCB, and a negative relationship between perceived training opportunities, and (c) turnover intention.

Mediating and moderating roles of intrinsic motivation

Intrinsic motivation refers to the motivation to perform an activity for itself, in order to experience the pleasure and satisfaction inherent in the activity (Deci *et al.*, 1989). Theories of intrinsic motivation focus on satisfaction of the needs for autonomy, competence and relatedness (Gagné & Deci, 2005), or work design characteristics that lead to productive psychological states (Hackman & Oldham, 1976). In the context of TAD, recent reviews have pointed to the need for further studies on how motivation affects the willingness to learn and how perceptions of training relevancy affect motivation (e.g. Chen & Klimoski, 2007; Kraiger & Ford, 2007). With regard to the latter, high levels of perceived training opportunities may contribute to need fulfillment (Roca & Gagné, 2008). More specifically, the need for competence could be satisfied when individuals are encouraged to seek challenges optimal for their capacities, and to persistently attempt maintenance of skills. In addition, if employees perceive the training opportunities to be high, they will probably fully accept the training offered, rather than perceiving it as coercive, which could satisfy the need for autonomy. Furthermore, fulfillment of the need for relatedness might occur in cases where the employee perceives a supportive work environment in terms of training opportunities. Accordingly, we expect that perceived training opportunities will be positively related to intrinsic motivation.

As far as the relationship between intrinsic motivation and work outcomes is concerned, intrinsic motivation seems to be a potent predictor of work performance (Gagné & Deci, 2005; Kuvaas, 2006a,b, 2007) and turnover intention (Kuvaas, 2006a; Vansteenkiste *et al.*, 2007). Furthermore, because intrinsic motivation is concerned with the motivation to perform a task for itself, it is highly related to measures of task involvement or task interest (e.g. Guay *et al.*, 2000). Accordingly, intrinsically motivated employees should also be more involved in the work of their colleagues, and thus, be more engaged in OCB. It is also possible that intrinsic motivation might increase OCB as a manifestation of satisfaction of the need for relatedness (Gagné & Deci, 2005). Accordingly, we suggest that the relationship between perceived training opportunities and task performance and OCB, will be fully explained by the

influence that perceived training opportunities will have on need satisfaction and intrinsic motivation.

In contrast with full mediation for task performance and OCB, there is reason to believe that intrinsic motivation may only partially mediate the relationship between perceived training opportunities and turnover intentions. First, there are compelling arguments and empirical data in support of a direct relationship between developmental HR practices and turnover intention (e.g. Kuvaas, 2008). Still, employees should be less prone to leave work settings that contribute to need fulfillment. Therefore, we hypothesize:

Hypothesis 2: The relationships between perceived training opportunities and: (a) task performance; and (b) OCB are fully mediated by intrinsic motivation; (c) whereas the relationship between perceived training opportunities and turnover intention will be partly mediated by intrinsic motivation.

Several reviews of TAD suggest that the idea that every individual will react the same way to such efforts is perhaps somewhat naïve, based on individual perceptions of content, individual characteristics and individual perceptions of the work environment (e.g. Colquitt *et al.*, 2000; Kraiger, 2003). Based on prior research findings, it seems that individual differences play a substantial role in understanding the relationship between perceptions of TAD and employee outcomes. Given that individual differences are likely to influence the relationship between perceptions of TAD opportunities and employee outcomes, such research should be relevant for practical purposes. Findings from a number of studies in educational settings reviewed by Deci and Ryan (2000) showed that intrinsically motivated students were more likely to perceive learning content more constructively, and had higher levels of persistence in acquiring the learning content than students with lower levels of intrinsic motivation. Such findings may suggest that intrinsically motivated employees should benefit more from TAD in terms of the inherent value in the job activities themselves. Also, opportunities to develop higher levels of competence should increase the probability that what they learn is used in work settings.

Furthermore, intrinsically motivated employees are more self-driven and more autonomy-oriented than those less intrinsically motivated (e.g. Ryan & Deci, 2000; Thomas, 2002), which suggests that they will take more responsibility for ensuring necessary levels of skills and abilities, and thus, respond more positively to training opportunities. In addition, because intrinsically motivated employees are more engaged and involved with their jobs (e.g. Guay *et al.*, 2000; Vansteenkiste *et al.*, 2007), they may – to a greater extent – use training opportunities to increase their own work performance, as well as be more engaged and involved in the work of their colleagues, when compared with employees with lower intrinsic motivation. Accordingly, the combination of high levels of perceived training opportunities and high intrinsic motivation should enhance work performance and OCB. Finally, if highly intrinsically motivated employees want to develop because of their engagement and take more responsibility for their own development, they will probably respond more negatively to low levels of training opportunities and be more likely to think about leaving the organization, and use good opportunities for training and development as an argument for retention. Therefore, we hypothesize:

Hypothesis 3: The relationships between perceived training opportunities and: (a) task performance; (b) OCBs; and (c) turnover intention will be moderated by intrinsic motivation. The higher the level of intrinsic motivation, the more positive the relationship between perceived training opportunities and: (a) task performance, and (b) OCB. The higher the levels of intrinsic motivation, the more negative the relationship between perceived training opportunities and (c) turnover intention.

Methodology

Sample and procedure

Respondents were drawn from 4320 employees participating in training activities offered by a large Norwegian training institution in the year 2006. These employees represent more than 400 organizations from a number of different industrial sectors. Representatives of the training institution provided the email addresses for 965 randomly drawn employees. A questionnaire was distributed to these employees by use of a web-based tool (Confermit), which resulted in data from 343 employees. The sampling rate of the total population was approximately 22 per cent. The response rate of the sample was approximately 36 per cent. Of the respondents, 103 were women and 234 were men (six respondents failed to report their gender). Approximately 29 per cent were baseline operators, 17 per cent held office functions, 43 per cent held staff positions and 10 per cent held managerial positions. With regard to education level, approximately 38 per cent held a university degree of 3-year study or more. Their average age and tenure were 40 and 11 years, respectively.

Measures

Unless otherwise noted, all items were on a 5-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Description of each item is presented in the Appendix.

Perceived training opportunities

Perceived training opportunities was measured by eight items based on prior work used in a Norwegian setting (Kuvaas, 2008) addressing employees' evaluation of their training opportunities (e.g. satisfaction and adequacy). The measure consisted of items addressing satisfaction with training, the sufficiency of training received and the comparability of training investments with those provided by other organizations.

Intrinsic motivation

Intrinsic motivation was measured by six items based on prior work used in a Norwegian setting (Kuvaas, 2006b).

Dependent variables

Task performance was measured by six self-report items based on prior work used in a Norwegian setting (Kuvaas, 2006b). OCB was measured by the seven-item helping behavior scale that was validated by Van Dyne and LePine (1998). Turnover intention, defined simply as the behavioral intent to leave an organization, was measured by five items based on prior work used in a Norwegian setting (Kuvaas, 2008).

Control variables

Predicting employee outcomes from TAD efforts is a complex task given the number of factors that influence this relationship. In order to provide some form of control for these influences, we included a number of control variables. At a more general level, work experience, tenure and staff position have been found to influence the relationship between TAD and employee outcomes (Kanfer & Ackerman, 2004; Maurer *et al.*, 2003). We, therefore, asked the respondents to state their work experience and tenure in terms of years of employment in general, and in their current position in particular. Staff position was reported by the respondents in terms of their position, ranging from baseline operators to managerial positions. With regard to the relationship between perceptions of TAD and gender, results appear equivocal (Mathieu & Martineau, 1997). Gender was, nevertheless, included as a control variable. We computed a dichotomous variable, coded, such that 2 represented 'female' and 1 'male'. With regard to age, previous studies have found a negative relationship between age and TAD perceptions (Colquitt *et al.*, 2000), and age and work performance (Kanfer & Ackerman, 2005). We,

therefore, asked the respondents to report their age when completing the survey. Formal education level has been considered a predictor of individual trainability (Mathieu & Martineau, 1997). Individuals with higher levels of formal education are more likely to benefit from TAD efforts and participate to a greater extent (Maurer *et al.*, 2003). We, therefore, included education level as a control variable, coded from 1 (basic mandatory education) to 6 (higher degree from university or college). Another variable is whether TAD efforts are voluntary or mandatory in terms of employee attendance. A general risk in training studies is obtaining a biased sample. Employees participating in training efforts on a voluntary basis exert more positive attitudes toward training opportunities than those not choosing to participate on a voluntary basis (Mathieu & Taylor, 2006). In addition, prior studies suggest that the influence of TAD varies in terms of taking place on company time or employee time (Birdi *et al.*, 1997). We, therefore, followed recommendations by Noe and Wilk (1993), and asked the respondents to state why they participated in workplace TAD. A number of explanations were provided, ranging from mandatory, after encouragement from coworkers or managers, to voluntariness and own initiative. From these responses, we computed a dichotomous variable, coded such that 1 represented 'mandatory' and 2 'voluntary'. In addition, we asked the respondents to state the number of training and developmental efforts they had attended during the last year.

Analyses

To test the hypotheses, we used both SPSS 15.0 (SPSS Inc., Chicago, IL) for linear regression modeling (Hair *et al.*, 2005) and LISREL 8.80 (SSI International, Lincolnwood, IL) (Jöreskog, 1993), a structural equation modeling (SEM) software. Although linear regression analysis might be regarded as a less complex analysis in the assessment of multiple dependent variables, it has a strong advantage over SEM techniques of being able to include several control variables in addition to the latent variables being studied. We, therefore, followed recent recommendations by Mathieu and Taylor (2006) and conducted complementary regression analyses conducting an SEM analysis. The main advantage of using SEM in this study is that we wanted to test the full measurement model, including the independent variable, the mediating variable and all three dependent variables, simultaneously.

The construct validity of measures employed is of concern when arguing for mediational relationships between latent variables. As a first step, therefore, to determine item retention, we followed the advice of Medsker *et al.* (1994) and performed an exploratory principal component analysis with varimax rotation on all multiple scale items to determine item retention.² This does not imply that we suggest the measures of the different constructs are uncorrelated, as this would imply no mediational covariance to be modeled. Instead, we wanted to avoid highly correlated items which would raise the question of whether different constructs are assessed (Mathieu & Taylor, 2006). We applied relatively stringent rules-of-thumb, and retained only items with a strong loading of 0.50 or higher on the target construct (Nunnally & Bernstein, 2007; Osborne & Costello, 2004), a cross-loading of less than 0.35 on other included factors (Kiffin-Petersen & Cordery, 2003), and a differential of 0.20 or more between included factors (Van Dyne *et al.*, 1994).

² Our reviewers questioned the use of principal component (PC) analysis and varimax rotation and suggested that principal analysis (PA) or maximum likelihood (ML) analysis with oblique rotation should be employed. We chose to maintain PC, as it is deemed convenient when the factor structure is well defined and consisting of more than 20 variables (Nunnally & Bernstein, 2007). Nevertheless, we examined the data with ML and PA analyses and the same factor structure was derived. With regard to rotation, Nunnally and Bernstein (2007) argue that the use of orthogonal rotation is often misinterpreted. Although the factors themselves are uncorrelated, factor score estimates are generally correlated, and these correlations need be determined separately. Nunnally and Bernstein (2007) suggest that orthogonal rotations should be employed as it is easier to be misled by an oblique solution than an orthogonal one. Nevertheless, we examined the data with an oblique rotation and found the same pattern of factor loadings, although the oblique solution demonstrated somewhat lower factor loadings and cross-loadings than that of varimax.

Regression analysis was then used to test the hypotheses. To test the direct effect hypotheses, the dependent variables were first regressed onto the control variables and perceived training opportunities. In a second step, intrinsic motivation was entered. The three-step procedure recommended by Baron and Kenny (1986) was used to estimate the mediation hypotheses.

Hierarchical moderated regression was used to test the moderation hypotheses (Cohen & Cohen, 1983). Interaction terms often create multi-collinearity problems because of their correlations with main effects. We thus, followed recommendations by Aiken and West (1991), and computed the interaction term by centering perceived training opportunities and intrinsic motivation before multiplying them with each other. In the moderated hierarchical regression analysis, the control variables and perceived training opportunities were entered, followed by intrinsic motivation and finally, the interaction term.

In the final part of the analysis, we conducted an SEM analysis in which the full model consisting of the independent variable, the mediating variable and all three dependent variables were estimated simultaneously.

Results

The exploratory factor analysis revealed that three of the perceived training opportunities items, two of the task performance items and one of the organizational citizenship items did not meet our criteria. These items were removed before the final scales were computed by averaging the remaining items. The items that were not included in the final scales are presented in the Appendix. All scales demonstrated acceptable reliability estimates, ranging from 0.72 to 0.92. Means, standard deviations, bivariate correlations, number of items in the final scales and reliability estimates are reported in Table 1.

Pair-wise and multiple variable collinearity were inspected by collinearity diagnostics in SPSS prior to analysis. The lowest tolerance value was 0.68, which is well above the commonly accepted threshold value of 0.10 (Hair *et al.*, 2005).

Results from the regression models are presented in Tables 2 and 3.

The results in Table 2 show that perceived training opportunities were positively related to intrinsic motivation ($\beta = 0.37, p < 0.001$). Table 3 shows that perceived training opportunities were significantly related to the dependent variables before intrinsic motivation was included. Finally, the direct relationships between perceived training opportunities and both task performance and OCB, become insignificant after intrinsic motivation is included in the model, although the relationship between perceived training opportunities and turnover intention was reduced. To test whether these drops in standardized betas were significant, we ran Sobel tests (Preacher & Leonardelli, 2001) and the computer software MedGraph (Paul E. José, Wellington, New Zealand) (Jose, 2003), where the latter provides tests for partial versus full mediation. Based on statistics from the full regression models, including the control variables, these tests provided support for full mediation for the relationship between perceived training opportunities and task performance ($Z = 4.34, p < 0.001$) and OCB ($Z = 4.55, p < 0.001$), and support for partial mediation for the relationship between perceived training opportunities and turnover intention ($Z = -3.77, p < 0.001$). Thus, Hypotheses 1, predicting direct relationships between perceived training and the dependent variables, was not supported. Hypothesis 2a, predicting that intrinsic motivation mediates the relationship between perceived training opportunities and task performance, and Hypothesis 2b, predicting that intrinsic motivation mediates the relationship between perceived training opportunities and OCB, were supported. Hypothesis 2c, predicting that intrinsic motivation partially mediates the relationship between perceived training opportunities and turnover intention, was also supported.

The third step of the regressions in Table 2 is used to test the moderation hypotheses. The regressions show that intrinsic motivation only moderates the relationship between perceived training opportunities and OCB, providing no support for Hypotheses 3a and 3c. The plots that illustrate the significant moderation are displayed in Figure 1.

Table 1: Descriptive statistics, correlations, and scale reliabilities

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) Gender	1.69	0.46	-												
(2) Age	40.05	10.22	0.00	-											
(3) Work experience	19.12	10.14	0.10	0.63**	-										
(4) Tenure	5.36	5.46	0.20**	0.60**	0.66**	-									
(5) Staff function	2.35	1.00	-0.03	0.41**	0.32**	0.18**	-								
(6) Attendance ^a	1.61	0.93	-0.03	-0.04	-0.04	-0.12*	0.05	-							
(7) Prior participation	3.71	3.17	0.03	-0.08	-0.08	-0.11*	-0.04	0.03	-						
(8) Education level	3.70	1.55	-0.23**	0.10	-0.14**	-0.20	0.32**	0.11*	0.06	-					
(9) Perceived training opportunities (5)	3.53	0.77	-0.10	-0.11*	-0.15**	-0.12*	-0.00	0.08	0.18**	0.08	(0.81)				
(10) Intrinsic motivation (6)	3.83	0.79	-0.12*	0.15**	0.09	-0.04	0.32**	0.06	0.09	0.17**	0.37**	(0.92)			
(11) Organizational citizenship behavior (6)	4.03	0.59	0.02	0.14**	0.13*	0.14**	0.14**	-0.08	0.19**	-0.03	0.19**	0.37**	(0.89)		
(12) Turnover intention (5)	2.24	1.07	0.09	-0.16**	-0.18**	-0.05	-0.02	0.06	-0.07	0.13*	-0.29**	-0.36**	-0.13*	(0.89)	
(13) Task performance (4)	3.51	0.58	0.06	0.07	0.06	0.04	0.15**	0.02	0.10	-0.06	0.19**	0.39**	0.50**	-0.10	(0.72)

Note: Coefficient alphas are displayed on the diagonal. Number of items included in the final scales in parentheses; $n = 333$ due to list-wise deletion of missing values.

* $p < 0.05$.

** $p < 0.01$.

^a Mandatory or voluntary attendance: voluntary = 2 and mandatory = 1.

Table 2: Regression results testing perceived training opportunities with intrinsic motivation

	Intrinsic motivation
Gender	-0.07
Age	0.19
Work experience	-0.07
Tenure	-0.08
Staff function	0.31***
Attendance ^a	-0.00
Prior participation	0.05
Education level	0.00
Perceived training opportunities	0.37***
R^2	0.261
F	13.12***

Standardized regression coefficients are shown. $n = 333$ due to list-wise deletion of missing values.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

^a Mandatory or voluntary attendance: voluntary = 2 and mandatory = 1.

The plots were constructed by plotting high versus low scores on perceived training opportunities and intrinsic motivation (one standard deviation below and above the means using standardized scores).

The plots suggest that there is a positive relationship between perceived training opportunities and OCB for employees scoring high on intrinsic motivation, but that there is no relationship between perceived training opportunities and OCB for employees scoring low on intrinsic motivation. Following the recommendations of Aiken and West (1991), simple effects tests were conducted to determine whether the slope differed significantly from zero. The test revealed that the slope for high levels of intrinsic motivation was significantly different from zero ($t = 3.37$, $p < 0.001$), and that the nature of the interaction is in the hypothesized direction. Finally, the t -test between the slopes of high and low intrinsic motivation, respectively, revealed that they were significantly different from each other ($t = 2.02$, $p < 0.05$). Thus, Hypothesis 3b, predicting that the relationship between perceived training opportunities and OCBs is moderated by intrinsic motivation, was supported.

The final step of the analysis was to test the latent variables in SEM in order to ensure that the results derived from the regression analyses were retained when assessing all dependent variables simultaneously. We, therefore, tested a model consisting of the hypothesized relationships. The structural model provided an adequate fit ($\chi^2[84] = 192.16$; $\chi^2/\text{d.f.} = 2.28$; CFI = 0.98; SRMR = 0.06; RMSEA = 0.06). The relationships in the model replicated the findings derived from the regression analysis.

Discussion

The main purpose of this study was to explore alternative relationships between perceived training opportunities and employee outcomes. The key finding is that the relationship between perceived training opportunities and task performance, OCB, and turnover intention, is fully or partially mediated by intrinsic motivation. Accordingly, this study contributes to this line of research by providing additional support for a mediating role of intrinsic motivation in relation to more general measures of TAD, and to more distal and general employee outcomes. This study provides support for, and credit to, the notion that perceived training opportunities may enhance motivation,

Table 3: Regression results testing the direct, mediation and moderation models

Step and variable	Task performance			Organizational citizenship behavior			Turnover intention		
	1	2	3	1	2	3	1	2	3
Gender	0.06	0.08	0.08	0.00	0.03	0.03	0.10	0.08	0.08
Age	0.10	0.04	0.05	0.20	0.14	0.10	-0.19	-0.15	-0.17
Work experience	-0.10	-0.08	-0.09	-0.17	-0.16	-0.12	-0.12	-0.13	0.12
Tenure	0.00	0.04	-0.04	0.11	0.14	0.14	0.14	0.11	0.11
Staff function	0.19**	0.09	0.09	0.15*	0.04	0.03	-0.01	0.07	0.07
Attendance ^a	0.00	0.00	0.00	-0.06	-0.06	-0.06	0.10	0.10	0.10
Prior participation	0.09	0.08	0.08	0.22***	0.20**	0.19**	-0.06	-0.04	-0.04
Education level	-0.08	-0.08	-0.08	-0.10	-0.10	-0.10	0.23**	0.23**	0.23**
Perceived training opportunities	0.15**	0.03	0.03	0.15**	0.02	0.01	-0.35***	-0.26***	-0.26***
Intrinsic motivation		0.35***	0.35***		0.36***	0.38***		-0.26***	-0.25***
Perceived training opportunities × intrinsic motivation		-0.02	-0.02			0.11*			0.06
ΔR^2		0.089	0.000		0.093	0.011		0.050	0.004
R^2	0.043	0.132	0.130	0.083	0.176	0.185	0.186	0.235	0.236
F	2.55**	5.71***	5.18***	4.12***	7.60***	7.40***	8.83***	10.48***	9.70***

Standardized regression coefficients are shown. $n = 333$ due to list-wise deletion of missing values.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

^a Mandatory or voluntary attendance: voluntary = 2 and mandatory = 1.

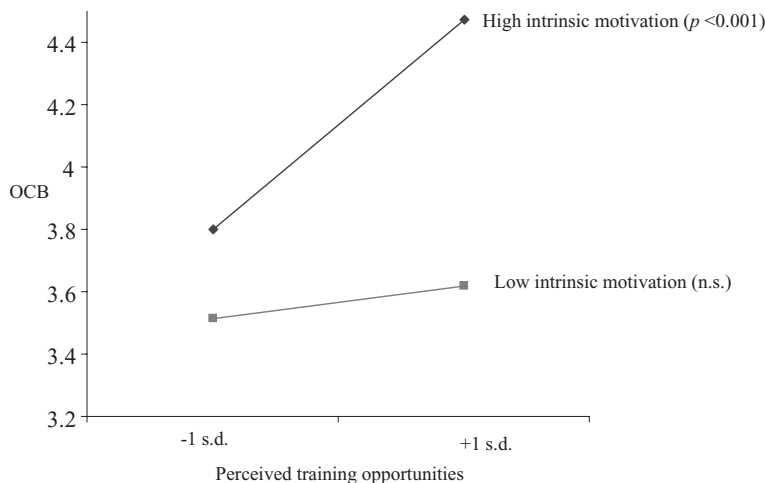


Figure 1: The moderating effect of intrinsic motivation on the relationship between perceived training opportunities and organizational citizenship behavior (OCB).
n.s. = not significant, *s.d.* = standard deviation.

task performance, discretionary efforts and intentions to stay, with the current employer. Perhaps the most practically important and novel theoretical finding of this study is that the relationship between perceived training opportunities and OCB was moderated by intrinsic motivation. This observation indicates that TAD may increase OCB when intrinsically motivated employees have positive perceptions of TAD. One interpretation of this finding is that this combination facilitates the presence of employees in the role of ‘missionaries’, who exert helping behaviors toward their colleagues and try to share their positive perceptions of their work environment. In a recent study, Grant (2008) found that the interaction of pro-social motivation and intrinsic motivation led to higher persistence and productivity. This finding may suggest that high levels of perceived training opportunities are interpreted as antecedents of pro-social motivation among employees. More specifically, when provided with TAD opportunities, this might lead to employee obligation toward giving a contribution back to the organization. It might, therefore, be argued that intrinsic motivation serves as a ‘booster’ for employees in exerting behaviors up and above what is expected of them in combination with their perceived obligation of returning the favor provided manifest in high levels of perceived training opportunities. In contrast, lower levels of OCB among employees with high levels of perceived training opportunities and low levels of intrinsic motivation may emerge, because there is a lack of a ‘booster’ (i.e. intrinsic motivation). For managers, this implies that intrinsically motivated employees may demonstrate behaviors that emerge as a value-added effect from TAD investments when these are perceived in positive terms. Therefore, rather than assuming that employees that are highly intrinsically motivated are in less need of TAD opportunities, this finding may serve as an argument for continuously investing in relevant TAD activities, also among highly intrinsically motivated employees.

This study presents both positive and negative implications for the relationship between TAD and employee outcomes. At the positive end, our study revealed little consistency between demographic variables, perceptions of training opportunities and employee outcomes, suggesting that a diverse mix of employees may react positively toward TAD efforts. The downside of these findings, however, is the lack of a direct relationship between perceived training opportunities and employee outcomes, and that this relationship is mediated by work intrinsic motivation. This implies that the potential value added from TAD efforts on employee outcomes, therefore, needs to be assessed in relation to other sources influencing employee intrinsic motivation, and

that employee perceptions of such efforts should not be underestimated (Sun *et al.*, 2007). Recent studies of high-performance work systems point to the value of both high internal consistency between different HR practices and the wider range of the employee–organizational relationship in which such efforts are embedded (Takeuchi *et al.*, 2007). Another potentially negative implication from this study is that in order for TAD efforts to increase employee citizenship behaviors, this partly seems to depend on employee level of intrinsic motivation. More specifically, our findings suggest that TAD may increase OCB when intrinsically motivated employees have positive perceptions of TAD. This may contrast with initial intentions behind TAD efforts in terms of increasing employee outcomes among employees, regardless of levels of work intrinsic motivation. Similar findings have recently been reported by Kuvaas (2006a) in relation to performance appraisal research, and in a broader array of HR-supportive practices (Kuvaas, 2008).

Limitations and research directions

The contributions of this research should be viewed in light of several limitations. First, this study investigated perceived training opportunities across a large number of different organizations, which implies that the emphasis of TAD was put on employee perception of training opportunities. As a consequence, no control for the actual content of training provided was possible. A related limitation is the use of relatively general and aggregated measures of training opportunities. Prior reviews of trainee reactions (Alliger *et al.*, 1997) recommend that separate measures of trainee reactions should be employed, in terms of affective reactions and more utility-based reactions of training opportunities. Recent studies by Brown (2005), however, suggest that such trainee reaction measures are related, and when assessed in relation to levels of individual motivation, they provide a more elaborate perspective on trainees' reactions. Also, because the respondents were probably exposed to differing training contexts, we used a more general measure of training opportunities in order to capture these perceptions across different levels of employment, work content and organizations. The presumed differences in training opportunities across organizations, access to employees and concerns of low response rates, led us to the use of a more general measure of employees' perceptions of training opportunities. In addition, we were not able to retain demographic information regarding the population as a whole from the training institution, so no comparison of the representativeness of the sample compared with the population can be estimated. However, because the sample was randomly drawn from the population, the probability of response bias should be low. Nevertheless, future studies should seek to control for this potential influence more effectively.

The data in this study were gathered at one point in time, making it impossible to draw inferences of causality or rule out the possibility of reverse causality. It seems likely, however, that employee perception of training opportunities will probably be influenced by other sources than training itself, and that the content and frequency of training are most probably different for employees across organizations. When testing for reverse causality in our data, we found that the relationships between all of the outcomes in our study and perceived training opportunities, demonstrated the same pattern as for the hypothesized directions. It might, therefore, also be that high levels of employee outcomes or need satisfaction lead to high levels of perceived training opportunities. In order to control more effectively for reverse causality arguments, however, longitudinal studies are needed. A related limitation is the lack of measures of both prior task performance and citizenship behavior. Previous research efforts suggest that when we control for past performance, the influence of training on future employee outcomes in terms of performance becomes marginal (e.g. Delery & Doty, 1996; Morin & Renaud, 2004). We believe this limitation to be less critical for this study, however, as we were more interested in assessing employee perceptions of training opportunities in more general terms, rather than in isolating alleged effects of a particular training effort on employee outcomes.

Another limitation is the reliance on self-reported questionnaire data, which causes concerns about possible mono-method bias and percept-percept inflated measures (e.g. Crompton & Wagner, 1994). The principal component analysis, however, generated six factors with eigenvalues of 1 or more, and an explained variance of the factors ranging from 26 per cent (factor 1) to 1.6 per cent (factor 6). Although this analysis, the Harman's one-factor test (Podsakoff & Organ, 1986), is nothing more than a diagnostic technique for assessing the extent to which common method variance may be a problem (Podsakoff *et al.*, 2003), it seems to indicate that mono-method variance was not a serious threat in this study. Furthermore, given the modest correlations between the variables in this study, the collinearity diagnostics and the strong criteria used in determining item retention, it is very unlikely that common method bias has heavily influenced the observed relationships. In addition, common method variance actually reduces the likelihood of detecting such effects (Van Yperen & Hagedoorn, 2003).

This study investigated employee perceptions of training opportunities, and the only constructs that could have been validly measured by other means than self-report are task performance and OCB. Also, given the vast number of organizations to which the respondents in this study belong, it would be an insurmountable task to collect multiple sources of data for the work-related outcomes of citizenship behaviors and task performance. This clearly impacts on the strength of the data, and sets limits for the potential findings derived from this study. Recent research on salespeople suggests, however, that self-rated performance tends to be upward-biased, but also, the amount of bias does not seem to vary across performance levels (Sharma *et al.*, 2004). It is, therefore, likely that the employees in the present study have overestimated their performance levels, but that such an overestimation has not heavily affected the results. Furthermore, whereas performance ratings by supervisors help rule out the validity threats of self-report and mono-method, previous research suggests that performance ratings conducted by supervisors may be even more biased than self-report measures (Kuvaas, 2006b). Fox and Dinur (1988), for instance, found that self-ratings were markedly less affected by halo than ratings that were offered by others; Sharma *et al.* (2004) also recently reported that both salespeople and managers overestimated performance, but that self-ratings showed a better ability to discriminate between medium and high performers than managerial evaluations. Thus, it is far from obvious that the extra effort involved in gathering performance data by supervisors of the client organizations would have produced better performance data. Still, future research should ideally use both self-report and supervisor measures of task performance and citizenship behaviors.

Despite its limitations, this study may have important implications for practice. First, it is interesting to note that the findings point to positive reactions toward training opportunities being insufficient in terms of obtaining vital employee outcomes. In order for such a relationship to occur, it seems that employees must report high levels of perceived training opportunities, which may lead to higher levels of work intrinsic motivation, which then relate to employee outcomes. These are by no means novel findings, but point to the importance of regarding TAD efforts as an integrated part of the wider workplace equation, as a number of different antecedents (e.g. in terms of job design, peer and supervisor support) may probably have stronger influences on work motivation than training opportunities alone. Consequently, we hope the findings from our study might guide practitioners in applied settings in improving their TAD efforts by permeating them more fully with theoretical knowledge and empirical findings, at the cost of normative assumptions of alleged relationships between such investments and employee outcomes.

Appendix

Principal component analysis with varimax rotation

Items	OCB	IM	TI	TP	PTO
I assist others in my work group with their work for the benefit of the group	<u>0.83</u>				
I get involved in order to benefit my work group	<u>0.83</u>				
I attend functions that help my work group, even though they are beyond the formal requirements of my job	<u>0.77</u>				
I help others in my work group learn about the work	<u>0.77</u>				
I help others in my work group with their work responsibilities	<u>0.71</u>				
I help orient new employees in my work group	<u>0.70</u>				
I volunteer to do things for my work group	0.56			0.40	
My job is so interesting that it is a motivation in itself		<u>0.85</u>			
My job is very exciting		<u>0.84</u>			
The tasks that I do at work are enjoyable		<u>0.83</u>			
My job is meaningful		<u>0.79</u>			
The tasks that I do at work are themselves representing a driving power in my job		<u>0.77</u>			
Sometimes I become so inspired by my job that I almost forget everything else around me		<u>0.68</u>		0.29	
I will probably look for a new job in the next year			<u>0.89</u>		
I may quit my present job during the next twelve months			<u>0.86</u>		
I will likely actively look for a new job within the next three years			<u>0.85</u>		
I often think about quitting my present job		0.25	<u>0.82</u>		
I do not see many prospects for the future in this organization		0.30	<u>0.59</u>		
I almost always put in more effort than what can be characterized as an acceptable level of effort				<u>0.79</u>	
I deliver higher quality than what can be expected				<u>0.71</u>	
I intentionally expend a great deal of effort in carrying out my job	0.38	0.26		0.59	
I try to work as hard as possible				<u>0.58</u>	
The quality of my work is top-notch	0.32			<u>0.54</u>	
I often expend extra effort in carrying out my job	0.39	0.30		<u>0.49</u>	

My organization invests extensively in improving the levels of competency among the employees	<u>0.84</u>				
It is my impression that my organization is better than its competitors to provide training and development	<u>0.78</u>				
It is important for my organization that its employees have received the necessary training and development	<u>0.61</u>				
I feel certain that I will get the necessary training and development to solve any new tasks I may be given in the future	<u>0.57</u>	0.50			
The training and development I have received is not enough to solve the tasks I am responsible for (R)		0.73			
The training and development I have received is not individually adjusted to my personal needs (R)		0.69			
I have received better training and developmental opportunities in my previous jobs (R)		0.54			
I am satisfied with the training and development I have received	<u>0.50</u>	0.54			
Eigenvalues		8.26	4.11	2.45	2.21
% of variance		26.94	12.89	7.66	6.93

Factor loadings less than 0.30 are not shown; **bold and underlined loadings included in the final scales**. OCB = organizational citizenship behavior; IM = intrinsic motivation; TI = turnover intention; TP = task performance; PTO = perceived training opportunities.

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