Carolin Abrell, Jens Rowold, Jürgen Weibler, Martina Moenninghoff*

Evaluation of a Long-term Transformational Leadership Development Program**

This study represents a multi-method, multi-source, and longitudinal evaluation of a leadership development program in Germany. For the development of transformational leadership, the methods of leadership feedback, training, and coaching were combined into a program. The effects of this program were evaluated at three, six, nine, and twelve months after training. Altogether, 25 leaders participated in the program. The results revealed that transformational leadership (subordinate assessment) improved six months after training and later on. Also, leaders' performance (leaders' supervisor ratings) and Organizational Citizenship Behavior (subordinate assessment) improved over time.

Evaluierung eines Personalentwicklungsprogramm zur langfristigen Verbesserung der transformationalen Führungsleistung

In dieser Studie wird ein Personalentwicklungsprogramm zur Verbesserung der transformationalen Führungsleistung bei Führungskräften vorgestellt und empirisch evaluiert. Diese Evaluierung erfolgt im Längsschnitt und bedient sich verschiedener Methoden (Führungsstilfeedback, Trainingseinheiten, Coaching) und Perspektiven. Die Trainingseffekte wurden 3, 6, 9 und 12 Monate nach dem Training erfasst. Insgesamt nahmen 25 deutsche Führungskräfte an dem Programm teil. Die Ergebnisse belegen eine Verbesserung in transformationaler Führung (Mitarbeiter-Einschätzung) bereits nach 6 Monaten. Zudem verbesserten sich die Leistung der Führungskräfte (Einschätzung durch Vorgesetzte) und das Organizational Citizenship Behavior (Mitarbeiter-Einschätzung).

Key words: **leadership development, performance, Organizational Citizenship Behavior, personnel development, transformational leadership**
(JEL: M10, M53, N28)

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Introduction

In times of rapid changes in the environment of organizations such as those posed by the global economy, the increasing pace of technological development, and fierce competition, leaders in organizations face extraordinary challenges. In order to support leaders in coping effectively with these challenges, organizations are committed to invest in education and training to develop managers' competencies (Conger & Benjamin, 1999; Day, 2007). Accordingly, the need for empirical evidence on the effectiveness of leadership development has increased radically during the past decades (Collins & Holton, 2004; Day, 2001). Meta-analytic results show that leadership development programs produce positive outcomes with effect sizes ranging from 0.35 to 1.37 (e.g., Burke & Day, 1986; Collins & Holton, 2004). Although these results are encouraging, current research on leadership development still faces several limitations:

First, the majority of evaluated leadership development programs focus on one or two specific leadership tasks or fields of activity, for example communication methods such as discussing performance problems constructively, motivation, getting employees involved in problem solving etc. (Taylor, Russ-Eft, & Taylor, 2009). Due to the increased complexity of leadership duties and responsibilities, this narrow exploration of leadership development hardly meets organizations' needs of leader competencies (Collins, Lowe, & Arnett, 2000; Küpers & Weibler, 2008). Although during the past 25 years leadership research has mainly focused on complex leadership behaviors such as the transformational leadership style (Bass, 1985), virtually no complex leadership training evaluation studies exist (Collins & Holton, 2004; Taylor et al., 2009).

Second, complex and long-term leadership development programs are only randomly described and almost never evaluated empirically. Specifically the length of leadership development programs with a pretest-posttest design varies from one day to two weeks (Collins & Holton, 2004; Taylor et al., 2009). Not surprisingly, due to high costs and the efforts involved for organizations, most of the research on transformational leadership was conducted with only short-term interventions (Barling, Weber, & Kelloway, 1996; Kelloway, Barling, & Helleur, 2000; Frese, Beimel, & Schoenborn, 2003). Moreover, because of the absence of empirical data, it remains unclear how long the effects of leadership development would last. Up to date, evaluations detect changes only after a day or after six months. Therefore, also Barling et al. (1996) call for investigations on whether the benefits are maintained over a longer period of time.

Third, utilization and examination of development methods, which are highly conducive to the transfer of learned contents, often remain unconsidered in the existing research. Specifically, the effect of peer coaching and feedback interventions has only rarely been examined (Collins & Holton, 2004).

Fourth, for the purpose of evaluating the effects of leadership development programs, many different criteria have been used such as knowledge outcomes, expertise outcomes etc. (Taylor et al., 2009). However, to date, relatively little effort has been spent on examining organizationally relevant outcomes (Collins & Holton, 2004). In their meta-analysis, Collins & Holton (2004) reported that less than 10% of studies were focused on the organizational level. Thus, the relationship between, for example,

corporate performance and individual leadership development still lacks significant empirical support (Avolio, Avey, & Quisenberry, 2010). Moreover, specific organizational criteria, which are crucial for organizational performance in times of rapid changes (e.g., Innovation Implementation Behavior, Organizational Citizenship Behavior etc.), have only been the subject of cursory research.

Study goals

The present study aims at addressing the aforementioned gaps in the existing literature. More specifically, a leader development intervention was designed and evaluated that aimed at

1. addressing the complex challenges facing today's leaders by using all facets of transformational leadership as the main content,
2. evaluating the long-term effectiveness of a leadership development intervention (12 months),
3. fostering the transfer of contents by combining methods like group-based training, feedback, and peer coaching intervention, and
4. extending our knowledge of actual organizationally relevant outcome criteria by investigating leaders' performance and Organizational Citizenship Behavior (OCB) of followers.

Developing transformational leadership

Among the leadership theories in organizational research, transformational leadership, originally developed by Bass (1985), has captured scholars' interest over the past two decades (Judge, Woolf, Hurst, & Livingston, 2006). Several meta-analyses suggest that transformational leadership represents a set of highly effective leadership behaviors (Dumdum, Lowe, & Avolio, 2002), especially in challenging times of continuous change (Fuller, Patterson, Hester, & Stringer, 1996; Lowe, Kroeck, & Sivasubramaniam, 1996). The effectiveness of transformational leadership has been confirmed across cultures (Rowold & Rohmann, 2008; Koh, Steers, & Terborg, 2005) and within a broad range of organizations (Rowold, 2008). By transforming employees' self-interests into a shared vision of the group, transformational leaders stir their employees to performance beyond expectations (Bass, 1985). Thus, true transformational leadership requires employee empowerment – not employee dependence.

Dimensions of transformational leadership behavior are typically measured by the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 2000). These dimensions are defined as (a) Idealized Influence (the leader is viewed as a respected role model, is authentic, trustworthy and highly credible), (b) Inspirational Motivation (the leader provides meaning by communicating a shared vision and simplifying complex ideas and problems), (c) Individualized Consideration (the leader treats followers differently, but equitably on a one-to-one basis and develops people to higher levels of potential), and (d) Intellectual Stimulation (the leader encourages followers to question their old way of doing things and work procedures or to break with the past for the good of the future). Empirical research largely supports the effectiveness of transformational leadership. For example, numerous studies showed that transformational leadership is positively related to followers' attitudes such as job satisfaction (DeGroot, Kiker, &

Cross, 2000; Bass, 1999; Judge & Piccolo, 2004), organizational commitment (Lowe et al., 1996; Avolio, Zhu, Koh, & Bhatia, 2004; Bono & Judge, 2003; Dumdum, Lowe, & Avolio, 2002; Walumbwa & Lawler, 2003), and trust in the leader (Podsakoff, MacKenzie, & Bommer, 1996). Also, research results show that transformational leadership style is positively correlated with perceived leadership effort (Yammarino, Spangler, & Bass, 1993), team effort (Howell & Frost, 1989), innovation behavior (Howell & Avolio, 1993), and financial performance (Barling et al., 1996).

Due to the confirmed leadership style's effectiveness, the existence of transformational leaders is seen as an economic benefit for companies. This is why researchers and organizational managers are increasingly interested in training and developing transformational leadership. Addressing the developmental needs of today's leaders facing a challenging and continuously changing environment, the development of transformational leadership behavior is seen as highly beneficial, exceeding the results of classic managerial development programs. There exist few summative evaluations of transformational leadership development programs (Collins & Holton, 2004). Besides single evaluations of group-based transformational leadership training within a military context (Dvir, Eden, Avolio, & Shamir, 2002) and with student samples (Towler, 2003), there are rare evaluations of the effects of transformational leadership training within civilian contexts (Barling et al., 1996; Frese et al., 2003). In their remarkable study, Barling et al. (1996) assessed the effects of transformational leadership training in a pretest-posttest control-group design on 20 bank branch managers in Canada. They used subordinates' perception of leadership behavior, subordinates' organizational commitment, and subordinates' financial performance as outcome criteria to assess the effectiveness of training in transformational leadership. The focus of the training intervention was mainly on Intellectual Stimulation and, to a smaller degree, on Individualized Consideration behaviors, as charismatic behaviors (such as Idealized Influence and Inspirational Motivation) are more difficult to change. Results showed that transformational leadership behavior can be improved by group-based training, and moreover, that training transformational leadership results in increased organizational commitment and financial performance. These results were confirmed by the work of Kelloway, Barling, and Helleur (2000), who used the same training intervention. Two studies reported by Frese (2003) focused on the enforcement of visionary communication by a group-based training intervention in two German samples. Findings of the studies suggest that, as expected, the training was successful in that leaders displayed improvements in the trained variables. Even though these studies provide encouraging confirmation that transformational leadership can be trained, their results are limited by the fact that they only examine one facet of transformational leadership behavior and therefore do not allow conclusions to be drawn on the training effects taking into account all transformational dimensions.

Moreover, leadership development literature is limited by its short-term time frame. That is, in the majority of cases, research designs regarding transformational leadership development detect changes after a day or after six months. In contrast, practitioners often expect effects to last for one year or longer. This is a problem because without empirical data, it remains unclear how strongly the effects of leadership training would vary in time. The present work addresses the lack of longitudinal stu-

dies. To the authors' knowledge, it is the first evaluation of transformational leadership development investigating effects after twelve months and nine months, respectively.

Another critical issue in training and development literature is the transfer of learned content from development programs to the workplace. The effects of different constructs on training transfer have been identified through prior research. Empirical research supported the notion that transfer is dependent on a variety of trainee characteristics, work environment variables, and features of training design such as learning goals, content relevance, and practice with feedback (Taylor et al., 2009; Burke & Hutchins, 2007). Bass (1990) initially recommended individual feedback processes via personal coaching additional to group based training to foster the transfer of contents of transformational leadership development programs. Individual feedback processes focus on the individual accommodation of a specific behavior that is effective in the actual situation of the participant. Although this individual feedback process via personal coaching in addition to group based training was already evaluated within the research design of Barling et al. (1996), its incremental use for the effectiveness of training remained in question. Consequently, Kelloway et al. (2000) assessed the unique effects of personal coaching and of leadership group based training on subordinates' perceptions of transformational leadership. Results suggest that group based training and personal coaching may be interchangeable to some extent, as the combination of both methods did not lead to higher ratings of transformational leadership than either intervention alone. In view of the high expense of individual coaching, it is important to consider other forms of feedback processes via coaching such as Peer-based Team Coaching (PTC) (Rowold & Schley, 1998; Rowold & Rowold, 2008). Individual coaching refers to the counseling of one manager by an external coach in the workplace, whereas in Peer-based Team Coaching, members of a group (i.e., leaders) coach each other by using a formal methodology. This method offers several perspectives and experiences to the leaders, as group members provide insights and help each other. There is initial evidence that PTC leads to increased transfer of learned content after training. Findings of a study designed by Rowold (2008) that evaluated a general management development program which included PTC showed that supervisors perceive a marginally significant improvement of transformational leadership behavior and management performance after training.

PTC has been chosen as a method for the present leadership development program, as it reflects transformational leadership behavior in its methodology and in its philosophy. First, the method of PTC makes use of the different perspectives of leaders and supports creative thinking. This is evocative of Intellectual Stimulation, as transformational leaders view problems from different perspectives and stimulate the creativity of their followers. Second, the philosophy of PTC emphasizes an optimistic and encouraging future orientation. This facet is reminiscent of the leadership styles Inspirational Motivation and Idealized Influence, as both place much emphasis on optimistic visions of the future. Finally, PTC starts an open process of personal development by focusing on continual learning to bring out the best in the participant. This is in line with the principles of Individualized Consideration and its focus on development of followers. Since PTC has a strong fit to the contents of transformational

leadership and offers the leaders the possibility to transfer training contents on their individual leadership situation by sharing their knowledge and reflecting each other's situation, PTC was selected as an additional method in the current study. This development program has the additional advantage of operating on different learning levels. Following the evaluation criteria of Kirkpatrick (1976), we expect to change behavior as well as results. Thus, this study is the first piece of research combining group based training and Peer-based Team Coaching to develop transformational leadership, and testing the probable effects on different levels.

Thus, the present study addresses the aforementioned gaps in the existing literature by evaluating a development intervention that contains all aspects of transformational leadership. Moreover, combining different methods, the long-term intervention is evaluated after 3, 6, 9, and 12 months. Given the empirical results provided above and following discussions with the personnel department of the organization where the leadership development program was done, these four points in time were found to be most suitable and feasible for the purposes of the present study. Based on the grounded assumption that transformational behaviors can be learned (Bass, 1990; Bass & Avolio, 1992), and the above mentioned initial findings of transformational leadership development, we therefore hypothesize:

H1: The long-term transformational leadership development program significantly increases subordinates' perception of participants' transformational leadership behavior three, six, nine, and twelve months after the first development intervention.

In terms of Kirkpatrick's (1976) taxonomy of evaluation criteria, this hypothesis evaluates the development program on the level of behavior (i.e., Level III).

Additional outcome criteria of transformational leadership development

In addition to subordinates' perception of transformational leadership behavior, we investigated two supplemental evaluation criteria of the development intervention: Performance ratings by participants' supervisors and subordinates Organizational Citizenship Behavior.

Performance ratings by supervisor

Judge and Bono (2000) stated that it would be useful to know whether transformational leadership behaviors result in supervisors evaluating the leader as more effective, since these superiors are largely responsible for the development and promotion of their subordinates. Thus, those leaders who enact transformational behaviors early on will be promoted to broader leadership positions only if their superiors see them as effective. Thus, performance ratings by supervisors are also an important indicator of the success of a leadership development intervention.

The majority of studies investigating transformational leadership used effectiveness scales embedded in the MLQ 5X Short (Bass & Avolio, 2000) to evaluate the performance of the leader. However, several meta-analyses (Fuller et al., 1996; Lowe et al., 1996) questioned the appropriateness of this effectiveness criterion measure. Fuller et al. (1996) found meaningful correlations between the transformational scale Idealized Influence and overall performance of the leader. This relationship was sig-

nificantly smaller when performance was measured with multi-source designs, indicating that the operationalization of the criterion variable is a powerful moderator (Fuller et al., 1996). In regard to these findings, the consideration of different measurements of leaders' performance appears to be important. Supporting this assumption, Waldman, Bass, and Einstein (1987) obtained performance appraisals using 13 ratings of the company's Management by Objectives program. A single index of performance was created by combining the overall performance ratings. Results of the study indicate that only aspects of transformational leadership were related to performance appraisal scores, whereas transactional leadership did not show a relationship to performance appraisals. Judge and Bono (2000) measured leaders' effectiveness with five items completed by the leaders' immediate supervisors and found positive correlations with transformational leadership. A study provided by Rowold (2008) investigated leaders' managerial performance with a subjective performance scale that was developed on the basis of Conway's (1999) four factors of management performance: *technical-administrative task performance* such as being a good planner, *leadership task performance* such as motivating followers, *job dedication* such as being motivated even when difficulties appear, and *interpersonal facilitation* such as being sensitive with others. Conway (1999) identified these performance categories as relevant task performances and context performances (extra-role performance) for managerial jobs. Supervisors' ratings of leaders' managerial performance improved marginally after leaders underwent a management program.

In summary, these findings suggest that transformational leadership is positively associated with supervisors' performance appraisals. Furthermore, it is recommended to utilize effectiveness measures other than the effectiveness scales embedded in the MLQ. Thus, the present study makes use of scales measuring Conway's managerial performance to evaluate if transformational leadership development has positive effects on a broad and conservative success criterion of leaders, as measured from their supervisor's perspective.

Due to restrictions made by the top management of the organization where the study took place, collecting data only before and three months after the development program was allowed for.

H2: The long-term transformational leadership development program significantly increases performance ratings by leaders' supervisors three months after the first development intervention.

Organizational citizenship behavior

Research on leadership development still lacks an examination of the organizational evaluation criteria that are crucial for organizations' success in times of complex and fast changing challenges. Focusing again on transformational leadership development, Barling et al. (1996) noted that in addition to followers' affective commitment and followers' financial performance, empirical research is needed to investigate which other variables might be affected by enhanced transformational leadership. One concept that addresses a crucial success factor for organizations is Organizational Citizenship Behavior (OCB, Organ, 1988), reflecting followers' "extra-role" behavior. OCB refers

to the individual contributions in the workplace that go beyond job-role requirements and contractually rewarded achievements (Organ & Ryan, 1995).

Organ (1988) defined OCB as "… individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the effective functioning of the organization. By discretionary, we mean that the behavior is not an enforceable requirement of the role or the job description, that is, the clearly specifiable terms of the person's employment contract with the organization; the behavior is rather a matter of personal choice, such that its omission is not generally understood as punishable" (p. 4).

Firstly, Smith, Organ, and Near (1983) differentiate between two dimensions of OCB: a) altruism (to provide help to coworkers) and b) compliance (exemplary attendance, use of work time, respect for company). Later, Organ (1988) added three more facets: c) courtesy (to prevent problems of work associates), d) sportsmanship (willingness to tolerate the inevitable inconveniences of work without complaining), and e) civic virtue (responsible involvement in the issues of organizations). These citizenship behaviors are considered to be important components of job performance as they promote the effective functioning of the organization as a whole (Organ, 1988) and are part of the spontaneous and innovative behaviors which Katz and Kahn (1966) note to be instrumental for effective organizations.

With regard to antecedences of OCB, several studies examined the impact of leadership behaviors on followers' OCB (MacKenzie, Podsakoff, & Rich, 2004; Podsakoff et al., 1996; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Empirical findings support the assumption that especially transformational leadership behaviors correlate significantly with subordinates' OCB (Deluga, 1995; Felfe, 2006; Goodwin, Wofford, & Whittington, 2001; Wang, Law, Hackett, Wang, & Chen, 2005).

In conclusion, findings suggest that transformational leadership is positively associated with OCB in a variety of contexts. This makes sense, since visions often rely on followers' engagement beyond expectations and beyond narrowly-defined performance criteria. Thus, organizations that aim at proposing and attaining visions are interested in motivating followers for OCB. One possible means of achieving this would be to offer leadership development programs for managers. However, it remains unclear whether development of transformational leadership would be directly linked to followers' levels of OCB. Consequently, in this study, we examine OCB of subordinates as an outcome criterion of the development program. Again, due to limitations made by the top management, we were only allowed to collect data at the first three points in time.

H3: The long-term transformational leadership development program significantly increases subordinates OCB, three and six months after the first development intervention.

From the perspective of Kirkpatrick's (1976) taxonomy of evaluation criteria, both hypotheses 2 and 3 were tested on the level of results (i.e., Level IV).

Method

Setting and participants

The study was conducted within a German branch of an internationally operating, US American drug development corporation. About 200 employees work at the German local laboratory service. When the study was conducted, the local branch in Germany faced major challenges such as high workload, growth, and diversity as headquarters are abroad and German employees are exposed to American corporate management. With regard to the small number of headcount, there is no department of HR development at the German branch. Consequently, leaders received few opportunities to attend managerial training prior to the present investigation.

Twenty-five leaders participated in the development program conducted by the fourth author and a co-trainer. Additionally, nine upper-level managers functioned as a control group. All of the leaders were native Germans with an academic background, mostly in the pharmacological area, and were full-time corporate employees. All leaders were informed that the development program was to be evaluated.

Development intervention

The development program consists of five two-day interventions. With regard to Bass' (1990) differentiation for interventions to improve transformational leadership, the program combines group-based training aspects such as lecture, role-play, and discussion, and two methods of feedback processes. Firstly, 360-degree feedback reports were provided for the leaders of the experimental group at each of the five times of the training program. Secondly, Peer-based Team Coaching was conducted at each of the five times of the development program.

The program started with a two-day group-based *Transformational Leadership Workshop* for all leaders in the experimental group. This workshop was followed by four two-day follow-up sessions at intervals of three months. Thus, after twelve months a participant had passed through all five training interventions. Each of the four follow-up sessions focused on one of the four transformational leadership styles.

Transformational leadership workshop

The Transformational Leadership Workshop was designed to familiarize leaders with the concept of transformational leadership, and to reflect and plan the implementation of transformational leadership in the leaders' work situations (Bass & Avolio, 1990; Bass & Avolio, 2005).

Referring to the setting of Bass' *Training Full Range Leadership* (Bass & Avolio, 1990; Bass & Avolio, 1999), leaders were introduced to the theory of transformational leadership in a theoretical lecture. Leaders then received their individual 360-degree feedback report and were offered individual feedback by the facilitator. Being adverted to these feedback reports, leaders were instructed to create a first draft of their respective individual action plan via goal setting for the implementation of transformational leadership behavior at their specific workplace. In order to enhance the commitment to the goal, trainees were free to select which transformational leadership style they planned to work on to make improvements.

On the second day of the Transformational Leadership Workshop, leaders were arranged in groups of four or five leaders. Guided by the facilitator or the co-trainer, leaders sequentially provided individual peer-based feedback to each participant's plan and his or her individual leadership situation in Peer-based Team Coaching (PTC, see below). With regard to this feedback and to the action plan, leaders practiced implementing selected transformational leadership behaviors through role-play. Finally, the leaders were asked to prepare an improved version of their action plan.

Follow-up Sessions

The purpose of the four two-day follow-up sessions was to deepen the knowledge about the four transformational leadership styles.

Table 1: Key elements of the four follow-up sessions

Session	"Individualized Consideration"	"Inspirational Motivation"	"Intellectual Stimulation"	"Idealized Influence"
Content	recognizing followers' requirements, developing followers with regard to their requirements	need for a vision, motivation through Leading by Pygmalion (optimism), motivation through teamwork	need for creativity, using conflicts at the workplace to find better solutions, utility of different perspectives	values in organizations, utility of values, reflecting ones' own values compared to values of the organization
Trained Skills	conversational skills such as asking the right questions to detect followers' requirements	team building by group-building via peer-based team coaching	creativity techniques, conversational skills regarding conflicts	rhetorical skills such as using metaphors, body language
Literature	e.g., Fisher & Shapiro, (2005); Dehner & Dehner, (2007)	e.g., Lundin, Paul, & Christensen (2003)	e.g., Dehner & Dehner (2007); Benien, (2007)	e.g., Braun (2007)

The follow-up sessions always started with lectures, discussions, and exercises referring to one of the transformational leadership styles (see 'presented content' in table 2). The afternoon of the first day and the morning of the second day focused on PTC. The method of PTC starts with the presentation of the individual leadership situation of one leader (protagonist). The other group members (counselors) ask questions to further understand the situation of the protagonist. In the second phase, the counselors collect their impressions, thoughts, and emotions regarding the protagonist's presentation. The protagonists may not speak or intervene but simply listen to the thoughts of the counselors, helping him/her to consider and accept different viewpoints. This phase discharges into the search for the key theme. In this phase, the counselors strive to find the key theme, an encouraging sentence, which will lead the protagonist to face actual challenges and to further develop. After the counselors have found the more abstract key theme, they collect more practical and creative advice and ideas on how the protagonist can implement the key theme at the work place. Optionally, one idea is chosen to practice via role play during the session. In the last phase, the process is reflected by the protagonist and the counselors.

The aim of the follow-up sessions was to help leaders to transfer the newly-learned behaviors to their individual work settings by Peer-based Team Coaching over time. The second day ended with role-plays or exercises of the learned skills (see 'trained skills' in table 2) and with the preparation of a renewed action plan. With

regard to these action plans, trainees were asked to plan actions to enhance transformational leadership behavior, which was focused on in the actual follow-up session.

Table 2: Curriculum of peer-based team coaching

Phase		Duration
1.	Protagonist presents Leadership Situation	20 minutes
2.	Counselors' Conference	20 minutes
3.	Search for Key Theme	10 minutes
4.	Collecting Ideas for Implementation of Key Theme	10 minutes
5.	Activation through Role-Play *(optional)*	20 minutes
6.	Reflection of PTC-Process	10 minutes

Measures and procedure

Data referring to transformational leadership behavior were collected 2 weeks before the Transformational Leadership Workshop (T1), and two weeks prior to each of the four follow-up sessions (T2-T5), each after three months respectively. Due to organizational needs, the time span between T1-T2 was 4 months, whereas the time span of all other measuring times was 3 months. Only for T1 and T2, data of control group leaders could be obtained.

Collection was conducted through an Internet-based survey (Bass & Avolio, 2000; Rowold, 2004). Leaders were asked to administer the assessment by inviting and instructing all of their subordinates. Since the training intervention scheduled a 360-degree feedback, leaders were also asked to fill out the questionnaires themselves and to also send them to their supervisor and at least 3 peers.

Data referring to followers' OCB and supervisors' performance appraisal were administered by paper-pencil-questionnaires. All questionnaires were sent to the leaders in order to hand them to their followers (followers' OCB) or supervisors (performance appraisal). Completed questionnaires were collected in sealed envelopes and returned to the author. Due to time limitations imposed by the organization, measures of OCB could only be obtained from T1-T3, performance appraisals were collected at T1 and T2. Due to restrictions set by the organization, no control group measures were possible.

Ratings of leadership

Ratings of transformational leadership were obtained using the Multifactor Leadership Questionnaire (MLQ-Form 5X, Bass & Avolio, 2000) translated by Rowold (2004). Research has shown the MLQ-5X to be a psychometrically sound instrument in terms of measuring the construct of transformational leadership (Rowold, 2005; Avolio, Bass, & Jung, 1999; Antonakis, Avolio, & Sivasubramaniam, 2003). In the present study, the MLQ sub-scales measured as components of transformational leadership were aggregated to one transformational score (20 items, $\alpha = .93$). Raters rated each item on a 5-point rating scale, declaring the frequency with which a certain leadership behavior is perceived ranging from 1 (not at all) to 5 (frequently, if not always).

Organizational Citizenship Behavior of the followers was measured using ten items of a self-report measure by Six, Felfe, Schmook, and Knorz (2001), based on Podsakoff, Ahearne, and MacKenzie's (1997) original work. A sample item reads "Even in my free time, I am engaged with topics from work". Followers rated each item on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Reliability estimate (coefficient alpha) was $\alpha = .77$.

Leadership performance appraisal by the supervisor was measured using Rowold's (2008) translation of Conway's (1999) survey. This survey includes four dimensions relevant to task performance and context performance (extra-role performance) for managerial jobs. The four dimensions were aggregated to one performance score (37 items, $\alpha = .95$).

Transformational scores for subordinates reporting to each manager were averaged into one overall score. Before aggregation, we ensured that interrater agreement was sufficiently high. The following indices were obtained, representing the average for all times of measurement: ICC1 = .32, ICC2 = .58, $r_{wg} = .96$, AD = .58. Also, the followers' ratings of attitudes (OCB) were aggregated: ICC1 = .49, ICC2 = .75, $r_{wg} = .96$, AD = .51. In accordance with the methodological literature (McGraw & Wong, 1996; James, Demaree, & Wolf, 1984), it was concluded that aggregation was appropriate.

Typically for longitudinal studies conducted in civilian contexts, the rate of return regarding questionnaires reduced over time due to drop-outs and reduced motivation of raters despite the efforts made. Notwithstanding methodological limitations, it was decided to integrate all data which was gathered to increase the power of the analyses.

Results

Descriptive statistics for all variables at pretest and posttests and intercorrelations of variables for the intervention group are presented in table 3.

Table 3: Descriptive statistics and intercorrelations of variables

Variable	Intervention			Control			Intercorrelations								
	M	SD	*N*	M	SD	*N*	1.1 TFL	1.2 OCB	1.3 PERF	2.1 TFL	2.2 OCB	2.3 PERF	3.1 TFL	3.2 OCB	4.1 TFL
							Pretest								
1.1	2.41	0.48	21	2.68	0.50	9	-	-	-	-	-	-	-	-	-
1.2	3.47	0.27	22	-	-	-	-0.54*	-	-	-	-	-	-	-	-
1.3	3.73	0.75	14	-	-	-	-0.70	0.13	-	-	-	-	-	-	-
							Posttest T2								
2.1	2.44	0.54	22	2.60	0.58	8	0.55**	-0.47*	-0.22	-	-	-	-	-	-
2.2	3.52	0.21	19	-	-	-	-0.15	0.68**	0.15	-0.17	-	-	-	-	-
2.3	4.34	0.69	21	-	-	-	-0.16	0.19	0.78*	-0.04	-0.26		-	-	-
							Posttest T3								
3.1	2.84	0.37	14	-	-	-	0.41	-0.02	-0.08	0.72**	0.19	-0.41	-	-	-
3.2	3.58	0.39	14	-	-	-	0.30	-0.27	0.22	0.40	0.26	0.07	0.63	-	-
							Posttest T4								
4.1	2.72	0.42	17	-	-	-	0.44	-0.19	0.26	0.51	0.51	-0.37	0.64*	0.30	-
							Posttest T5								
5.1	2.72	0.40	14	-	-	-	0.48	-0.46	0.70	0.32	0.46	-0.48	0.41	0.46	0.91**

Note. Intercorrelations are shown for Intervention Group. Means of TFL (transformational leadership) and OCB (Organizational Citizenship Behavior) were rated by subordinates, PERF (Performance) was rated by supervisors. OCB and Perf. were not available in the control group.
*$p < 0.05$, **$p < 0.01$

Repeated measurement analyses of variance (RM-ANOVA) between the inner subject factor 'Time' (repeated measures) and subject factor 'Group' (intervention group vs. control group) were used to test whether leaders improved after training in the dependent variables compared to leaders of the control group. Box's M Test revealed homogeneity of covariance matrices between the groups ($p > .88$); also, the assumption of normal distribution was not rejected by Kolmogoroff-Smirnoff-Tests at all points in time (Intervention Group: all $p > .70$; Control Group: all $p > .71$). Thus, errors due to sample size differences and especially due to the small control group could be neglected. Moreover, analyses of variance suggest that groups did not differ significantly in their means of transformational leadership ratings at pretest, $F(1, 28) = 1.99$, $p = .17$, ns.

In cases when there was no data of the control group available, RM-ANOVA with inner subject factor 'Time' was used on data of the intervention group in order to detect changes in the intervention group over time. Accordingly, effects of 'Time' are reported in F-statistics. The assumption of normal distribution at all measurement points could also be proved for OCB (all $p > .18$), and performance appraisal (all $p > .58$). Due to small sample sizes, the level of significance was set to $p = .10$.

Also, in line with the literature on training evaluation (Hochholdinger, Rowold, & Schaper, 2008), effect sizes (Cohen's d) were calculated as the most important measurement to detect changes over time in the trained behavior of transformational leadership (Arvey, Cole, Hazucha, & Hartanto, 1985; Yang, Sackett, & Arvey, 1996). Generally, an effect size of $d = .20$ is referred to as a small effect, whereas an effect size of $d = .50$ is referred to as medium (Cohen, 1992; Cohen, 1988), and a large effect size is $d > .80$ (Cohen, 1988; Cohen, 1992). Effect size estimates were obtained by comparing pre- and post-intervention means (with respective pre- and post-intervention standard deviations). Thus, it is also possible for negative effect sizes to appear, which would indicate a decrease of the measured indicators over time. Cohen's d was calculated using gain scores and pooled standard deviations (Cohen, Cohen, West, & Aiken, 2002).

Effects on transformational leadership behavior

For the hypothesized subordinate perspective, descriptive statistics show that means of transformational leadership of the intervention group improve over time (especially from T2-T3). However, there is almost no change in transformational leadership between T1 and T2 (after 3 months). Means of the control group do not change much from T1-T2.

We first tested improvements of the experimental group compared to the control group by using RM-ANOVA. No effect (Time x Group) was obtained between pretest (T1) and posttest (T2), $F(1, 26) = 0.003$, $p = .95$, ns. Secondly, improvements over time of the intervention group in transformational leadership were tested by using RM-ANOVA with only 'Time' as inner subject factor. Significant effects were found between T1-T3, $F(1, 20) = 4.21$, $p = .05$, and T1-T5, $F(1, 21) = 4.09$, $p = .06$. Finally, effect sizes were assessed as they display the most important results in training research. With regard to the effect sizes, leaders participating in the training did not change in their transformational leadership style after the first training intervention (at T2), whereas leaders in the control group decreased their transformational leadership

behavior marginally (see Table 4). In comparison to T1, at T3 (after 6 months), a large effect size was found, whereas at T4 and T5 medium effect sizes were obtained in the intervention group. Thus, hypothesis H1 can be accepted partially: The leadership development program had a positive effect on subordinates' perception of transformational leadership six, nine and twelve, but not three months after the intervention.

Effects on performance appraisals by supervisors

It was hypothesized that leaders increase their performance after participating in the Transformational Leadership Workshop. No control group data was available. Means of supervisors' performance appraisal indeed indicate an increase in leaders' performance rating. Results of RM-ANOVA also showed significant effects after three months (T1-T2) for supervisors' performance appraisals, $F(1, 12) = 10.33$, $p < .01$, even representing a remarkably large effect size ($d = 0.85$).

Thus, findings suggest that H2 can be accepted. The training intervention had a positive effect on the leaders, such that their supervisors perceived an improvement in their performance three months after leaders had participated in the training intervention.

Effects on subordinates' OCB

It was expected that subordinates would improve their OCB over time when their leaders had participated in the training intervention. Again, no data of the control group was available. RM-ANOVA showed no significant effects (Time) after three months, $F(1, 17) = .01$, $p = .91$, ns, as well as no effects after six months, $F(2, 90) = .26$, $p = .62$, ns. Thus, H3 cannot be accepted. However, the effect sizes for subordinates' OCB three months after the workshop ($d = .21$), and six months after the workshop ($d = .30$) were small but positive, indicating a positive tendency of the training intervention to influence the leaders of this study in such a way that they positively affected their subordinates' OCB (see Table 4).

Table 4: Effect sizes

	T1 to T2	T1 to T3	T1 to T4	T1 to T5
		Intervention Group		
TFL	0.06	1.00	0.69	0.70
OCB	0.21	0.30	-	-
PERF	0.85	-	-	-
		Control Group		
TFL	-0.15	-	-	-

Note. TFL = transformational leadership, OCB = Organizational Citizenship Behavior, PERF = performance.

Discussion

The present study contributes to our understanding of effective leadership development. It goes beyond prior research in a number of ways.

First, the present research effort demonstrated that despite its complexity, transformational leadership can be enhanced by means of a combination of leadership feedback, training, and peer-based coaching. This result is in line with Barling et al.'s

(1996) study, which was based on leadership feedback and training. However, the present study went beyond Barling et al.'s study by extending the time frame utilized to detect changes in transformational leadership. In the present study, transformational leadership, as assessed by subordinates, improved six months after training and later on. The fact that results showed no improvements after three months suggest that the development of complex behaviors such as transformational leadership does not happen within a short time frame, but takes several months. The change in behavior takes time before it is recognized by the recipients of the leadership behavior. Additionally, beside the presented results we also calculated effect sizes for the change of perception of transformational leadership by leaders' supervisors. Findings show that it takes 9 months until an improvement is recognized by supervisors. These findings highlight the fact that long-term leadership development is in itself a complex endeavor embedded in a social network with various agents responding at different times.

An important finding of the present study is that target leaders' performance improved. This result underlines the notion that the development of transformational leadership has positive effects on a broad and conservative success criterion of leaders, as measured from supervisor's perspective.

Second, the present development program built on a combination of methods to enhance transfer, for example PTC. It may be concluded from the results of the present study that the multiple usage of PTC might result in increased transformational leadership. More specifically, significant effects could only be obtained in the wake of the first follow-up session after three months – in which PTC was the main content for the first time. In contrast to the follow-up sessions, during the Transformational Leadership Workshop PTC was only used as an additional sequence, yielding only small effect sizes. The present study found that within six months, transformational leadership can be developed with an effect size of $d = 1.00$. In comparison to Barling et al.'s (1996) study ($d = .50$), and in comparison to meta-analysis which focused on managerial trainings (Collins & Holton, 2004; $d = .41$), the present development program yielded a very large effect. Thus, as a speculation, PTC is helpful in developing transformational leadership.

Third, to the authors' knowledge, the present study was the first study to test whether subordinates' OCB improves over time. Even though RM-ANOVA didn't reveal significant improvements, effect sizes indicate a positive tendency of the effect on OCB within the first months of the development intervention. This is interpreted as an interesting and important effect of the development intervention, because OCB represents an increasingly important construct for our understanding of effective organizations within times of rapid changes. A possible reason for the non-significant effects could be the difficulty of detecting changes in distal organizational criteria such as OCB - it may apparently take additional time until change of leadership behavior results in change of subordinates' behavior.

Finally, it should be mentioned that the present study represents the first systematic research effort to demonstrate the effectiveness of transformational leadership development outside the U.S. Even though the cooperating organization is a German branch of an American company, participating leaders, followers, and supervisors are German. Thus, results indicate the usefulness of transformational leadership devel-

opment in the context of German recipients. However, the possible impact of the American head office's organizational culture on the German branch (major strategies, decisions, responsibility structure) should be taken into account. Future research should broaden the knowledge about whether organizational culture or a country's culture affects the applicability of transformational leadership development.

Limitations and implications for future research

There are several limitations of this study that need to be addressed. First, although the present study detected several significant effects, future studies should rely on larger sample sizes in order to have sufficient statistical power (i.e., to obtain conventional levels of significance). Moreover - also a known problem in training evaluation research - the drop-out-rate in our study is high. This might have had an important effect on our results, especially with regard to the small sample. Leaders who quit participation in the training program might have done so as a result of a lack of training motivation. Thus, the possibility that the group of remaining leaders might be distinct to the initial group of participants should be taken into consideration. For example, they could have been more motivated and interested in the topic. Even though all participants who quit in our study made clear that they did so because of time limitations due to upcoming projects, we still cannot control for the possibility that results might have been biased due to the high drop-out rate. It seems necessary for future studies to explore reasons for drop-out more elaborately (e.g., focused interviews) to control for factors that might influence the results of training outcomes.

Second, the development of supervisors' performance appraisal and followers' OCB could not be compared to a control group. Thus, the conclusion that leadership development fosters leaders' performance appraisal and shows a positive tendency to increase followers' OCB remains somewhat unclear until future studies include control groups to test the development performance appraisal and OCB. Additionally, due to practical reasons, control group data for transformational leadership could only be obtained for T1 and T2, also the group size is rather small compared to the size of the intervention group. Both limitations reduce the validity of our results. Future studies should invest in realizing a consummate pretest-posttest control group design with data of same-sized groups at all points in time.

Third, although the repeated measurement of outcome variables is a strong point of our study, we were unable to investigate effects after the complete training series had been completed. Thus, our evaluation does not capture the success of the development program after the last of the four follow-up sessions was conducted. Additionally, the outcome variables performance appraisal and OCB were not fully available at each measurement time. Because of that, results do not provide evidence of the intervention's success after nine and twelve months for OCB, and after six, nine, and twelve months for performance appraisal, respectively. Thus, results need to be interpreted limited to the point of time of the intervention's progress.

Fourth, our sample size did not allow for moderator analysis. Therefore, moderators of the effectiveness of leadership development interventions should be studied in future research. For example, Rowold (2007) showed that dimensions of career exploration predicted subsequent training performance. Also, trainee's personality, shown

as a predictor of transfer motivation (Colquitt, LePine, & Noe, 2000), could be added to an evaluation design with regard to the complex transformational leadership development. Additionally, due to organizational restrictions, we also were unable to integrate any control variables such as age, team structure or leader-follower relationship (e.g., time of the relationship, possible situations to interact etc.).

Results demonstrate that the time frame is an important issue when planning effective leadership development. Especially in the case of complex leadership skills, several months are necessary before subordinates detect changes in target leader's behavior. This idea is in line with Baldwin and colleagues' (Baldwin, Ford, & Blume, 2009) theoretical framework of training and transfer. Nevertheless, the exact mechanisms about how and how much time whichever kind of trained skill needs to be transferred to the workplace remain unexplored. For example, the reason for the time span to detect changes in leadership behavior could also be related to the challenge to transform changed behavior cognitions into real behavior in complex situations. It might take time to practice these behaviors so that they become an authentic part of leaders' visible actions. Moreover, especially from the supervisor's perspective, it might be difficult to detect changes in target leaders' behavior due to random contact or the simple fact that target leaders exhibit subordinate rather than leadership behavior in the dyadic relationship with their supervisor. In sum, so far a clear theoretical understanding has not been established.

Also, future research should contrast the different transfer methods such as Individual Feedback and PTC to detect systematical differences in their individual effects.

Implications for practice

Organizations aiming at a long-term, substantive leadership development should invest in long-term leadership development programs similar to the one described in this study. Since leadership, especially transformational leadership, is a complex topic and involves many facets of the leader's behaviors, any intervention should consist of more than one single-shot training or workshop. By participating in a long-term program, leaders get the chance to integrate the learned behavior in their behavioral concept.

Also, the combination of methods for leadership development is highly recommended. Just as the learning effect (transfer effect) of lectures and discussions can be greatly improved by individual feedback and coaching, additional methods such as PTC could possibly increase the intervention's success even more. Through PTC, leaders get the opportunity to be coached by their peers in regard to their individual and real leadership situations, thus applying the learned topic in the context that matters. Moreover, the benefits of the interaction effects of different methods can be used - which might even augment their summative effects.

The results of this study not only show a certain degree of statistical significance, but also the economic relevance of a long term leadership program. Since the program resulted in improved leadership behaviors, exhibited by medium to high effect sizes, practitioners could probably expect a positive return on investment (Avolio et al., 2010) though we are not able to calculate this in precise figures. However, the prospect of this economic relevance should foster the willingness of organizations to invest in this kind of complex development programs, which enable leaders to improve

their leadership behavior for the benefit of their organizations (Knyphausen-Aufseß, Smukalla, & Abt, 2009).

References

Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and Leadership: An Examination of the Nine-factor Full-range Leadership theory using the Multifactor Leadership Questionnaire. *Leadership Quarterly, 14,* 261-295.

Arvey, R. D., Cole, D. A., Hazucha, J. F., & Hartanto, F. M. (1985). Statistical Power of Training Evaluation Designs. *Personnel Psychology, 38,* 493-507.

Avolio, B. J., Avey, J. B., & Quisenberry, D. (2010). Estimating Return on Leadership Development Investment. *Leadership Quarterly, 21,* 633-644.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the Components of Transformational and Transactional Leadership Using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72,* 441-462.

Avolio, B. J., Zhu, W., Koh, W. L., & Bhatia, P. (2004). Transformational Leadership and Organizational Commitment: Mediating Role of Psychological Empowerment and Moderating Role of Structural Distance. *Journal of Organizational Behavior, 25,* 951-968.

Baldwin, T. T., Ford, J. K., & Blume, B. D. (2009). Transfer of Training 1988-2008: An Updated Review and Agenda for Future Research. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology 2009. Volume 24* (pp. 41-70). Chichester: Wiley-Blackwell.

Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of Transformational Leadership Training on Attitudinal and financial Outcomes: A field Experiment. *Journal of Applied Psychology, 81,* 827-832.

Bass, B. M. (1985). *Leadership and Performance beyond Expectations.* New York: Free Press.

Bass, B. M. (1990). From Transactional to Transformational Leadership - Learning to Share the Vision. *Organizational Dynamics, 18,* 19-31.

Bass, B. M. & Avolio, B. J. (1990). *Manual for the Multifactor Leadership Questionnaire.* Palo Alto: Consulting Psychology Press.

Bass, B. M. & Avolio, B. J. (1992). Developing Transformational Leadership: 1992 and beyond. *Journal of European Industrial Training, 14,* 21-27.

Bass, B. M. & Avolio, B. J. (1999). *Training Full Range Leadership.* Redwood City: Mind Garden.

Bass, B. M. & Avolio, B. J. (2000). *MLQ Multifactor Leadership Questionnaire.* Redwood City: Mind Garden.

Bass, B. M. & Avolio, B. J. (2005). *Training Full Range Leadership* (J. Rowold, J. Radstaak, M. Mönninghoff Trans.). Redwood City: Mind Garden.

Bono, J. E. & Judge, T. A. (2003). Self-concordance at Work: Toward Understanding the Motivational Effects of Transformational Leaders. *Academy of Management Journal, 46,* 554-571.

Burke, L. A. & Hutchins, H. A. (2007). Training Transfer: An Integrative Literature Review. *Human Resource Development Review, 6,* 263-296.

Burke, M. J. & Day, R. R. (1986). A Cumulative Study of the Effectiveness of Managerial Training. *Journal of Applied Psychology, 71,* 232-245.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences.* Hillsdale: Erlbaum.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin, 112,* 155-159.

Cohen, P., Cohen, J., West, S. G., & Aiken, L. S. (2002). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences.* New Jersey: Lawrence Erlbaum Associates.

Collins, D. B. & Holton, E. F. (2004). The Effectiveness of Managerial Leadership Development Programs: A Meta-analysis of Studies from 1982 to 2001. *Human Resource Development Quarterly, 15,* 217-248.

Collins, D. B., Lowe, J. S., & Arnett, C. R. (2000). In E. F. Holton & S. S. Naquin (Eds.), *Developing High-performance Leadership Competency* (pp. 18-46). Baton Rouge: Academy of Human Resource Development.

Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an Integrative Theory of Training Motivation: A Meta-analytic Path Analysis of 20 Years of Research. *Journal of Applied Psychology, 85,* 678-707.

Conger, J. A. & Benjamin, B. (1999). *Building Leaders.* San Francisco: Jossey-Bass.

Conway, J. M. (1999). Distinguishing Contextual Performance from Task Performance for Managerial Jobs. *Journal of Applied Psychology, 84,* 3-13.

Day, D. V. (2001). Leadership Development: A Review in Context. *Leadership Quarterly, 14,* 581-613.

Day, D. V. (2007). Structuring the Organization for Leadership Development. In R. Hooijberg, J. G. Hunt, J. Antonakis, K. B. Boal, & N. Lane (Eds.), *Being there even When You Are not: Leading through Strategy, Structures, and Systems* (pp. 13-30). Amsterdam: Elsevier.

Deluga, R. J. (1995). The Relationship between Attributional Charismatic Leadership and Organizational Citizenship behavior. *Journal of Applied Social Psychology, 25,* 1652-1669.

Dumdum, U. R., Lowe, K. B., & Avolio, B. J. (2002). A Meta-analysis of Transformational and Transactional Leadership Correlates of Effectiveness and Satisfaction: An Update and Extension. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and Charismatic Leadership: The Road ahead* (pp. 35-66). Amsterdam: JAI.

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of Transformational Leadership on Follower Development and Performance: A Field Experiment. *Academy of Management Journal, 45,* 735-744.

Felfe, J. (2006). Validierung einer deutschen Version des "Multifactor Leadership Questionnaire" (MLQ Form 5 x Short) von Bass und Avolio (1995). Zeitschrift für Arbeits- und Organisationspsychologie, 50, 61-78.

Frese, M., Beimel, S., & Schoenborn, S. (2003). Action Training for Charismatic Leadership: Two Evaluations of Studies of a Commercial Training Module on Inspirational Communication of a Vision. *Personnel Psychology, 56,* 671-698.

Fuller, J. B., Patterson, C. E. P., Hester, K., & Stringer, S. Y. (1996). A Quantitative Review of Research on Charismatic Leadership. *Psychological Reports, 78,* 271-287.

Goodwin, V. L., Wofford, J. C., & Whittington, J. L. (2001). A Theoretical and Empirical Extension to the Transformational Leadership Construct. *Journal of Organizational Behavior, 22,* 759-774.

Hochholdinger, S., Rowold, J., & Schaper, N. (2008). Ansätze zur Trainings- und Transferevaluation. In S. Hochholdinger, N. Schaper, & J. Rowold (Eds.), *Trainingsevaluation und Transfersicherung: Modelle, Methoden, Befunde* (pp. 30-52). Göttingen: Hogrefe.

Howell, J. M. & Avolio, B. J. (1993). Transformational Leadership, Transactional Leadership, Locus of Control, and Support for Innovation: Key Predictors of Consolidated-business-unit Performance. *Journal of Applied Psychology, 78,* 891-902.

Howell, J. M. & Frost, P. J. (1989). A Laboratory Study of Charismatic Leadership. *Organizational Behavior and Human Decision Processes, 43,* 243-269.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating Within-group Interrater Reliability with and without Response Bias. *Journal of Applied Psychology, 69,* 85-98.

Judge, T. A., Woolf, E. F., Hurst, C., & Livingston, B. (2006). Charismatic and Transformational Leadership. A Review and Research Agenda. *Zeitschrift für Arbeits- und Organisationspsychologie, 50,* 203-214.

Judge, T. A. & Bono, J. E. (2000). Five-factor Model of Personality and Transformational Leadership. *Journal of Applied Psychology, 85,* 751-765.

Katz, D. & Kahn, R. L. (1966). *The Social Psychology of Organizations*. New York: Wiley.

Kelloway, E. K., Barling, J., & Helleur, J. (2000). Enhancing Transformational Leadership: The Roles of Training and Feedback. *Leadership & Organization Development Journal, 21,* 145-149.

Kirkpatrick, D. L. (1976). Evaluation of Training. In R. L. Craig (Ed.), *Training and Development Handbook: A Guide Resource Development* (pp. 301-319). New York: McGraw-Hill.

Knyphausen-Aufseß, D., Smukalla, M., & Abt, M. (2009). Towards a New Training Transfer Portfolio: A Review of Training-related Studies in the Last Decade. *Zeitschrift für Personalforschung, 23,* 288-311.

Koh, W. L., Steers, R. M., & Terborg, J. R. (2005). The Effects of Transformational Leadership on Teacher Attitudes and Students Performance in Singapore. *Journal of Organizational Behavior, 16,* 319-333.

Küpers, W. & Weibler, J. (2008). Inter-leadership: Why and How Should We Think of Leadership and Followership Integrally? *Leadership, 4,* 443-475.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness Correlates of Transformational and Transactional Leadership: A Meta-analytic Review of the MLQ Literature. *Leadership Quarterly, 7,* 385-425.

MacKenzie, S. B., Podsakoff, P. M., & Rich, G. A. (2004). Transformational and Transactional Leadership and Salesperson Performance. *Journal of the Academy of Marketing Science, 29,* 115-134.

McGraw, K. O. & Wong, S. P. (1996). Forming Inferences about some Intraclass Correlation Coefficients. *Psychological Methods, 1,* 30-46.

Organ, D. W. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome.* New York: Random House.

Organ, D. W. & Ryan, K. (1995). A Meta-analytic Review of Attitudinal and Dispositional Predictors of Organizational Citizenship behavior. *Personnel Psychology, 48,* 775-802.

Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational Citizenship behavior and the Quality of Work Group Performance. *Journal of Applied Psychology, 82,* 262-270.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational Leader Behaviors and Substitutes for Leadership as Determinants of Employee Satisfaction, Commitment, Trust, and Organizational Citizenship Behaviors. *Journal of Management, 22,* 259-298.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational Leader Behaviors and their Effects on followers' Trust in Leader, Satisfaction, and Organizational Citizenship behaviors. *Leadership Quarterly, 1,* 107-142.

Rowold, G. & Rowold, J. (2008). Grundlagen des KTCs. In J. Rowold & G. Rowold (Eds.), *Das Kollegiale Team Coaching* (pp. 15-82). Köln: Kölner Studien Verlag.

Rowold, G. & Schley, W. (1998). Kollegiales Team Coaching (KTC). *Journal für Schulentwicklung, 4,* 70-78.

Rowold, J. (2004). *MLQ-5X. German Translation of Bass & Avolio's Multifactor Leadership Questionnaire.* Redwood City: Mind Garden.

Rowold, J. (2005). *Multifactor Leadership Questionnaire. Psychometric Properties of the German Translation by Jens Rowold.* Redwood City: Mind Garden.

Rowold, J. (2007). The Effect of Career Exploration on Subsequent Training Performance. *Human Resource Development International, 10,* 43-58.

Rowold, J. (2008). Effects of Transactional and Transformational Leadership of Pastors. *Pastoral Psychology, 56,* 403-411.

Rowold, J. (2008). Zur Wirksamkeit des Kollegialen Team Coachings: Ergebnisse einer zweijährigen Längsschnittstudie. In J. Rowold & G. Rowold (Eds.), *Das Kollegiale Team Coaching* (pp. 141-154). Köln: Kölner Studien Verlag.

Rowold, J. & Rohmann, A. (2008). Relationships between Leadership Styles and Followers' Emotional Experience and Effectiveness in the Voluntary Sector. *Nonprofit and Voluntary Sector Quarterly, 38,* 270-286.

Six, B., Felfe, J., Schmook, R., & Knorz, C. (2001). *Commitment in neuen Arbeitsformen.* Unpublished Manuscript.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational Citizenship Behavior: Its Nature and Antecedents. *Journal of Applied Psychology, 68,* 653-663.

Taylor, P. J., Russ-Eft, D. F., & Taylor, H. (2009). Transfer of Management Training from Alternative Perspectives. *Journal of Applied Psychology, 94,* 104-121.

Towler, A. J. (2003). Effects of Charismatic Influence Training on Attitudes, Behavior, and Performance. *Personnel Psychology, 56,* 363-381.

Waldman, D. A., Bass, B. M., & Einstein, W. O. (1987). Leadership and Outcomes of Performance-Appraisal Processes. *Journal of Occupational Psychology,* 60, 177-186.

Walumbwa, F. O. & Lawler, J. J. (2003). Building Effective Organizations: Transformational Leadership, Collectivist Orientation, Work-related Attitudes and Withdrawal Behaviors in three Emerging Economies. *International Journal of Human Resource Management, 14,* 1083-1101.

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. (2005). Leader-member Exchange as a Mediator of the Relationship between Transformational Leadership and Followers' Performance and Organizational Citizenship Behavior. *Academy of Management Journal, 48,* 420-432.

Yammarino, F. J., Spangler, W. D., & Bass, B. M. (1993). Transformational Leadership and Performance: A Longitudinal Investigation. *Leadership Quarterly, 4,* 81-102.

Yang, H., Sackett, P. R., & Arvey, R. D. (1996). Statistical Power and Cost in Training Evaluation: Some New Considerations. *Personnel Psychology, 49,* 651-668.