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A Quasi-experimental Study on Management Coaching Effectiveness

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Coaching has become an important managerial instrument of support. However, there is lack of research on its effectiveness. The authors conducted a quasi-experimental study to figure out whether coaching really leads to presupposed individual goals. Sixty managers of the federal government were divided in two groups: one group followed a coaching program, the other did not. Before the coaching program started (Time 1), self-efficacy beliefs and outcome expectancies were measured, linked to three central domains of functioning: setting one's own goals, acting in a balanced way and mindful living and working. Four months later (Time 2), the same variables were measured again. Results showed that the coached group scored significantly higher than the control group on two variables: outcome expectancies to act in a balanced way and self-efficacy beliefs to set one's own goals. Future examination might reveal whether coaching will also be effective among managers who work at different management levels, whether the effects found will be long-lasting, and whether subordinates experience differences in the way their manager functions before and after the coaching.

Keywords: management coaching, quasi-experiment, outcome experiences, self-efficacy

Coaching has become very popular among managers. It is considered to be an instrument that supports managers in times of organizational changes. Today, managers have to be effective, flexible, and competent in social skills. Leadership requires reflection on one's own emotions, values, and standards. Moreover, irrespective of age and seniority, managers are almost continually confronted with rapid successive innovations and reforms, often instigated by market forces. Modern leadership more

and more asks for personal coaches who support managers (Bertels, 2001).

Coaching is different from training or mentoring. Grant (2001) asserts that individuals who attend training must adapt themselves to the process and structure of training. Training is a more rigid and externally determined process than coaching. In the case of mentoring, someone with expert knowledge in a specific domain passes on this knowledge to someone with less expertise. In coaching practice, however, it is the coachee who sets the agenda and determines the goals to be achieved. The coach need not be an expert in the domain the coachee is employed in and consequently does not tell the coachee how to perform his tasks. First and foremost, the coach helps the coachee to maximize his own performance (Whitmore, 1992). The relationship between a coach and a coachee can be characterized by mutual respect, patience, and reservedness. Moreover, the coach looks upon the coachee as an equal whom he will stand by in an objective but also supportive way.

A review of the literature on coaching reveals that only few studies appear to have been published on its effectiveness

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(Kampa-Kokesch & Anderson, 2001). One category of studies is retrospective. With only one measurement time at the end of the coaching period, they attempt to draw conclusions about the program's effectiveness. This type of study evaluates whether the coaches' initial goals have been achieved (Haarst, 2002).

An example of a retrospective survey is from KPGM Consulting (Talboom, 1999). Managers of eight organizations were asked about their experiences after they had attended coaching or counseling programs. The survey covered all four levels that Kirkpatrick (1987) distinguished: reaction, learning, behavior, and organization. At the reaction level, 80% of the participants were favorable to the coaching; at the level of learning 70–90%; at the behavioral level over 50%; finally, at the organizational level the participants asserted they witnessed lower rates of absence among subordinates, increased preparedness to attend schooling, and more openness within the organization.

Another example of a retrospective survey is from Manchester Inc., an American organization of executive coaches that inquired into the effects of their own coaching programs. The results among 100 senior managers showed that 70% reported a growth at the behavioral level, and 50% noticed a growth at the organizational level (Hooft van Huysduynen, 2002).

A survey at the reaction level (Hall, Otazo, & Hollenbeck, 1999) found that the 75 participating managers were of opinion that coaching was effective when the coach was honest, provided them with provocative feedback, gave them valuable suggestions, and was result-oriented.

Gegner (1997) studied the effectiveness of management coaching at the learning level and the behavioral level. The most valuable results according to the participating managers were positive effects on personal life and on social interactions with others. Moreover, they said they had

learned new skills that were important in the day-to-day managerial activities.

In respect of retrospective surveys, it may be concluded that the answers may suffer from hindsight bias, that is, the respondents' memories may have influenced the entered data. As a result of this, the actual facts and situations from the past may not be accurately reported. Furthermore, retrospective surveys mostly relate to one group only, and comparison between managers that participate and that do not participate in the coaching and counseling program cannot be made.

Quasi-experimental studies with pretest and posttest measurements between two groups—an experimental and a control group—were not found. We found one study about a management-coaching program among 31 managers of a government agency that covered two periods (Olivero, Bane, & Kopelman, 1997). However, it cannot be categorized as a pretest-posttest study because the scores of the participants were not compared before and after the coaching. In period one, participants were trained in management skills. In the second period participants were offered coaching, and that for a period of eight weeks. After period one had ended, it appeared that productivity had increased with 22%, and after period two, it appeared that productivity had increased to 88% in all.

The present study aims to fill the gap in literature on research concerning the effectiveness of coaching: to this end we employ a design in which an experimental group is compared with a control group at two measurement points.

As coaching aims to help managers acquire new skills and new modes of thinking, it seems that Bandura's (1986) learning theory may offer a plausible explanation of its effectiveness. Bandura distinguished two relevant concepts: self-efficacy beliefs and outcome expectancies. Self-efficacy beliefs refer to personal judgments about one's capability to employ specific actions

and tasks, and outcome expectancies refer to the consequences of one's actions. Both variables have been found to play an important role in actually entering upon specific activities. Outcome expectancies and self-efficacy beliefs are domain-specific. The three domains studied here are setting one's own goals, acting in a balanced way, and mindful living and working. According to Whitworth, Kimsey-House, and Sandahl (1998), these domains include significant coaching topics.

Method

Coaching

In this study, coaching was meant to improve outcome expectancies and self-efficacy beliefs in three specific domains (see before) of the participating managers (experimental group). The coaches' point of departure was Whitmore's GROW model (2003). In this model, "G" stands for goal setting: the coach helps clarify and concretize the manager's goals; "R" stands for reality: the coach helps the manager focus on setting individual goals that can be materialized; "O" stands for options: the coach helps the manager to try and find the best possibilities to achieve his individual goals; finally, "W" stands for will power: the coach helps the manager to actually implement the best opportunities. It means that coaching was focused on individual needs and not on prearranged general objectives. As coaching is different from mentoring or training, the agenda was set by the coachee, which also applied to the methods employed by coaches during the contacts. The coachee was free to opt for one or more of the following methods: role playing, disclosing his deepest motives, rational emotive training, brainstorming, goal formulating and planning, or entering into an agreement to display the behavior desired. Outcome expectancies and self-efficacy beliefs of the domains mentioned before were

measured at the beginning and at the end of the coaching.

Participants

The Experimental Group

We asked staff managers of various departments which managers were about to be coached. We also invited research bureaus Intermin and Intercoach to cooperate with us. These bureaus mediate between managers and coaches. We got names of 41 managers who were about to register for coaching; 30 managers agreed to participate in our quasi-experiment, 19 men (63.3%) and 11 women (36.7%). Their age ranged between 27 and 53 years ($M = 38.8$; $SD = 8.20$). The mean number of years as a manager was 5.34 years ($SD = 5.66$), and the mean number of years in the present position was 1.76 years ($SD = 2.52$).

The Control Group

We asked 77 managers of the Department of Housing and Urban Development to fill up our questionnaires: of this Group 22 did not respond, whereas 48 of them answered the questionnaires both at the beginning and the end of our quasi-experiment. We matched the groups with the help of salary scales, for these scales of the federal government are indicative of the weight of a position. We also matched the groups as much as possible according to sex and age, which ultimately resulted in a control group of 30 managers, 20 (66.7%) were male, and 10 (33.3%) were female. Their age ranged from 26 to 56 years, with a Mean of 43.6 ($SD = 8.31$), which means that the mean age of the control group is 4.8 years older. The mean number of years as a manager was 8.64 years ($SD = 7.55$), which means that they worked 3.3 years longer in this position than members of the experimental group did. The members of the control group had been working in the

present position for a Mean of 2.76 years ($SD = 2.39$), which is 1 year more than the members of the experimental group.

The experimental and the control group (see Table 1) were equal on sex [$\chi^2(1) = .14, p = .71$], the number of years as a manager [$t(58) = 1.91, p = .06$], and the total number of years in the present position [$t(58) = 1.58, p = .12$], but not on age [$t(58) = 2.25, p = .03$].

Instruments

We constructed a questionnaire that measured outcome expectations and self-efficacy beliefs of the experimental and the control group. According to the literature (Bandura, 1986; Pajares, 1996), both outcome expectations and self-efficacy beliefs, which are reliable predictors of behavior, are domain-specific. We used Whitworth's et al. (1998) coactive coaching model that described three domains of behavior which fitted our coaching purposes very well, namely setting one's own goals, acting in a balanced way, and mindful living and working. The 35 items were scored two times on a 10-point scale, ranging from "Completely significant" to "Completely insignificant" for outcome expectations, and from "Quite uncertain" to "Quite certain" for self-efficacy beliefs. Table 2 shows the reliability of the three domains of our questionnaire at Time 1 and Time 2.

Procedure

Depending on the organization they worked for, the participants of both the

experimental and the control group were sent questionnaires by internal mail or by e-mail. Time 1 measurement took place before the coaching started, and Time 2 measurement four months later, after the coaching had ended. The number of meetings for the experimental group varied from 1 to 8 meetings ($M = 3.67, SD = 1.45$) with the coach.

Results

Table 2 shows that the reliability of our questionnaire was .79 or higher, which is adequate according to the criterion suggested by Nunnally and Bernstein (1994).

In the present paper, we measured outcome expectations and self-efficacy beliefs with respect to three behavioral domains both at Time 1 and at Time 2. The results of the analysis of variance (see Table 3) show that the experimental group scored significantly higher on the variable "outcome expectations with respect to acting in a balanced way" and the variable "self-efficacy beliefs with respect to setting one's own goals." We did not find significant differences between the two groups with respect to the other variables measured.

Figure 1 graphically shows the differences between the experimental and the control group concerning outcome expectations on acting in a balanced way. The control group scored a mean of 7.53 at Time 1, and 7.59 at Time 2, whereas the experimental group scored 7.43 at Time 1, and 8.0 at Time 2.

Table 1
A Survey of the Experimental and the Control Group

Variables	Experimental group ($N = 30$)			Control group ($N = 30$)		
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%
Men	19		63.3	20		66.7
Women	11		36.7	10		33.3
Age	38.8	8.2		43.6	8.3	
Mean number of years as manager	5.3	5.7		8.6	7.5	
Mean number of years in present position	1.8	2.5		2.8	2.4	

Table 2
Internal Consistencies (Cronbach's alpha) and Correlations of the Scales (N = 60)

Variables	α	Correlation coefficients																
		1	2	3	4	5	6	7	8	9	10	11	12					
Time 1																		
1. Outcome experience setting	.91	—																
2. Outcome experiences acting in a balanced way	.89	.64**	—															
3. Outcome experiences mindful living and working	.90	.45**	.67**	—														
4. Self-efficacy beliefs setting one's own goals	.91	.32*	.15	.13	—													
5. Self-efficacy belief acting in a balanced way	.84	.22	-.09	-.04	.53**	—												
6. Self-efficacy beliefs mindful living and working	.84	.03	-.06	.05	.30**	.57**	—											
Time 2																		
7. Outcome experiences setting one's own goals	.92	.73**	.41**	.21	.44**	.20	.01	—										
8. Outcome experiences acting in a balanced way	.91	.52**	.61**	.31*	.20	-.08	-.25	.66**	—									
9. Outcome experiences mindful living and working	.88	.55**	.44**	.59**	.24	.07	-.03	.58**	.61**	—								
10. Self-efficacy beliefs setting one's own goals	.92	.27*	.30**	.27*	.76**	.32*	.18	.47**	.43**	.39**	—							
11. Self-efficacy beliefs acting in a balanced way	.79	.17	.11	.17	.52**	.50**	.35**	.25	-.00	.18**	.47**	—						
12. Self-efficacy beliefs mindful living and working	.89	.08	.02	.17	.38**	.39**	.68**	.01	-.23	.03	.36**	.59**	—					

* $p < .05$. ** $p < .01$.

Table 3

A Survey of the Mean Scores and Standard Deviations for Experimental and Control Group at Time 1 (T1) and Time 2 (T2) and F-values

Variables	Experimental group N = 30				Control group N = 30				F
	T1	T1	T2	T2	T1	T1	T2	T2	
	M	SD	M	SD	M	SD	M	SD	
1. Outcome experiences setting one's own goals	7.41	1.73	7.81	1.22	7.17	1.18	7.61	.95	.13
2. Outcome experiences acting in a balanced way	7.43	1.56	8.00	1.10	7.53	0.84	7.59	.87	5.05*
3. Outcome experiences mindful living and working	6.95	1.68	7.42	1.21	7.04	1.02	7.21	.60	1.59
4. Self-efficacy beliefs setting one's own goals	7.28	1.24	7.67	1.13	6.96	1.27	7.09	.99	4.18*
5. Self-efficacy beliefs acting in a balanced way	6.62	1.12	6.85	.92	6.32	1.06	6.41	.76	2.88
6. Self-efficacy beliefs mindful living and working	6.20	1.17	6.59	1.04	6.43	1.00	6.50	1.18	1.41

* $p < .05$.

Figure 2 is a graphical representation of the significant differences between the control group and the experimental group concerning self-efficacy beliefs on setting one's own goals. The scores of the control group were 6.96 and 7.09, and of the experimental Group 7.28 and 7.67, at Time 1 and Time 2, respectively.

Discussion

In the present paper, we examined the question whether management coaching might be effective. To this end, we conducted a quasi-experiment in which we compared an experimental group of managers with a control group at Time 1 and Time 2. We measured hypothesized outcome expectations and self-efficacy beliefs on three domains of behavior, for example, acting in a balanced way, setting one's own

goals, and mindful living and working. Our expectations were confirmed with regard to outcome expectations of the domain "to act in a balanced way" and self-efficacy beliefs of the domain "to set one's own goals."

The conspicuous finding that we found a significant difference between the experimental and the control group on only outcome expectations and not on self-efficacy beliefs regarding the domain "acting in a balanced way," may be explained by the fact that coaching attempts to both increase someone's understanding and to achieve behavioral changes. Dotlich and Cairo (1999) distinguish four objectives of coaching. The first one is to increase the manager's consciousness with respect to a better understanding of his own behavior and to an increased awareness of his weak and strong points. The second objective is the improvement of the man-

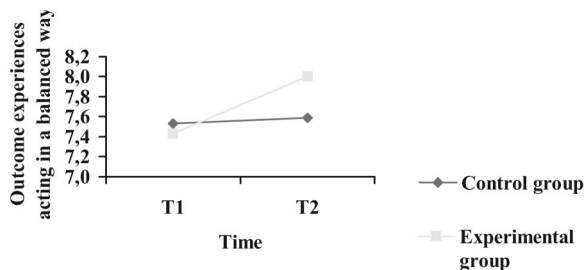


Figure 1. Difference between the experimental group and the control group on outcome experiences with respect to acting in a balanced way. T1 = Time 1; T2 = Time 2.

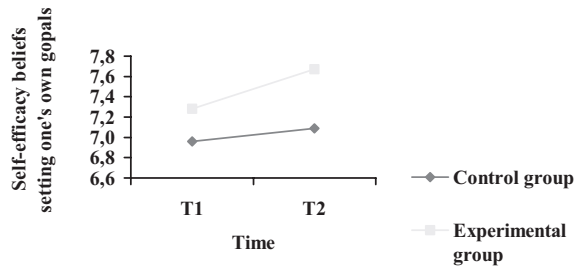


Figure 2. Difference between the experimental group and the control group on self-efficacy beliefs with respect to setting one's own goals. T1 = Time 1; T2 = Time 2.

ager's achievements, both in quality and in quantity. The third objective is to help the manager achieve a performance breakthrough, enabling him to perform at a higher level and differently assess possibilities and potentialities of others. The fourth objective is the achievement of a fundamental transformation implying an essential change in the manager's attitudes and behavior. These objectives clearly show that improving existing skills and developing new ones precede new beliefs, convictions, and judgments, which may explain the nonsignificance of differences between the experimental and the control group with respect to the variable "to act in a balanced way." In the short time between measuring the variable at Time 1 and Time 2 self-efficacy beliefs with respect "to act in a balanced way" may not have developed yet. It may also be that the manager has come to the conviction that some specific type of behavior will be advantageous, but that he still experiences some inner feelings of resistance to get rid of his old behavior (Van den Nieuwenhof, 2002).

As for outcome experiences and self-efficacy beliefs regarding the domain "to state one's own goals," we only found significant differences between the two groups with respect to self-efficacy beliefs. As the coaching intended to stimulate the manager to clearly state his own goals, he may have become closely associated with these goals. Close relationships between manager and goal setting will lead to increased efforts to

reach one's goals, followed by new success experiences that are likely to enhance self-efficacy feelings (Bandura, 1997).

We did not find any differences between the two participating groups of managers with respect to outcome experiences and self-efficacy beliefs regarding the domain "to live and work in a mindful way." The reason may be that coaching in general mainly focuses on goal setting and acting in a stable way. In support of this, we would like to refer to the results of a Leadership inquiry (Danko, 2002) suggesting that managers are of opinion that achieving results is more important than being social-minded or emphatic. The participants of our quasi-experiment may have had similar convictions.

As for the practical value of our results, we believe to have shown that coaching is not an expensive fad: for the first time empirical facts suggest that coaching is effective. Moreover, added comments of the participants of our quasi-experiment gave evidence of satisfaction with the possibilities they had been offered to not only reflect on their skills, but also to improve the effectiveness of their functioning, in particular in the domain of acting in a balanced way and goal setting. In compliance with respect for the individual characteristics of the coachee, consultants seem to have fairly good chances to reveal the potentialities of the coachee, who in turn will have to face

the task to develop and internalize his new skills in his daily routine.

In short, empirical results of this quasi-experiment suggest that management coaching is effective regarding outcome expectations with respect to acting stably, and on self-efficacy beliefs with respect to setting one's own goals. We would recommend future examination in which measurement at Time 2 would be followed by measurement at Time 3, some four months later, in order to examine the long term effects of coaching. It would furthermore be advisable to conduct future examinations among larger groups of managers than we did, which may be conducive to the generalization of the results. And finally, we recommend follow-up examinations among managers working in different positions and to ask subordinates whether they experience differences in the managers' behavior before and after coaching.

Our paper probably suffers from some limitations. First, the participating members of the control group were all managers from only one institution, for example, the Department of Housing, which fact may have influenced the results. Moreover, the mean age of the control group was significantly higher than of the experimental group. Younger managers may be more open to new experiences and ideas, so that the results of the effectiveness of coaching of our experimental group may not quite accurately reflect the differences between the two groups. Second, we believe that MANOVA may have led to results without the high inter correlations we found in our ANOVA. Although the *F* values go in the direction expected, and suggest that the coaching program has been effective, we must take chance capitalization into consideration. Third, we used self-report questionnaires, which are known for response bias. On the other hand, it was impossible for us to conduct a 360-feedback method because we did not examine environmental influences, for example, personality characteristics of coaches and participants and inconsistent or

subjective judgments, which is necessary in order to obtain unquestionable results.

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