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# COMPARISON OF GROUP AND INDIVIDUAL SOFT SKILLS DEVELOPMENT PROGRAMS - MANAGERIAL TOOLS AND MANAGERIAL TRAINING SIMULATOR

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## Abstract

*Competitive pressures are increasing demands on managerial performance and, thus, on creating effective management development programs. The purpose of this study was to compare group and individual approaches to developing line and middle managers. The Managerial Tools and Managerial Training Simulator programs were used, with 256 managers participating. We examined the following five soft management skills: effective goal setting, giving feedback and evaluating performance, accepting feedback as a manager, management coaching, and leading discussions and team meetings using a facilitative leadership style. After both types of development programs, both groups of managers showed improvements in developing skills as assessed by their subordinates. At the first measurement, individual and group development resulted in the same positive increase in subordinates' perceptions. However, in terms of a long-term effect (the second measurement), this positive increase was*

*maintained for the individual development programs but not group programs, where it decreased. Thus, the effect of the individual development programs appears to be longer-term. Overall, we found no significant difference between line and middle managers - both groups responded similarly to the development activities. Regarding developing individual skills, the smallest change was found in the ability to set goals and provide feedback. The most considerable change was the ability to accept feedback, coach, and facilitate. This research provides information for specialists in education and development and may help select appropriate leadership development tools, particularly for individual programs with longer-term impacts.*

**Keywords:** *soft skills, group and individual development programs, line and middle management*

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## 1. INTRODUCTION

In human resource development, not exclusive to management development, soft skills are central to training for several reasons. Rao (2010) considers soft skills critical and crucial for effective communication. These skills are essential for communicating and cooperating with superiors, colleagues, subordinates, customers, and suppliers.

Schulz (2008) considers soft skills to be “*a decisive factor in managerial success*” in a world where it is often no longer necessary to retain know-how and information (hard skills) because they are available in seconds with the help of modern technology. According to Conger (1992), organizational leadership development can be divided into four categories: leadership training through personal growth, leadership development through conceptual understanding, leadership development through feedback, and leadership development through skill building that focuses on the most critical leadership competencies that can be taught. In this study, we consider development programs through the development of specific managerial skills that saturate the essential leadership competencies in different combinations so that we can speak of skills that translate into concrete behaviors.

Sitkin et al. (2009) point out in their research that the development of management and leadership competencies in an organization is perceived as the second most crucial challenge, right after the need for innovation and flexible adaptation to changing conditions. At the same time, based on their research findings, the authors state that organizations that want to improve their performance need to get their top and middle managers to invest more time in developing their management and leadership competencies.

Sitkin et al.’s (2009) research found that organizations in which leadership increased the percentage of time spent on management and leadership development achieved higher business performance in a given fiscal year compared to the previous year.

Organizations need development programs to adapt, innovate, achieve goals, and be competitive. Still, at the same time, budgets for training and development are limited, so the form and type of development programs must be evaluated (Salas et al., 2012). Unfortunately, to make competent decisions in choosing a certain type of development program and to know what to expect from it, there must be research findings focusing on managerial training. Hudáková (2012) points out that the trend in training is currently shifting from traditional formal training to a more “on-the-job” approach and simulations of real-life challenges for managers. Increasingly, the focus is on line managers, who are in direct contact with employees and influence individual and team productivity and success. These line managers are expected to spend more time taking an active role in organizational training. The most common activities are assessing performance evaluations, approving personal development plans, or coaching employees. Similarly, a global study by the International Coach Federation (2013) in collaboration with the PricewaterhouseCoopers global network of firms shows that companies are becoming more willing to invest in individualized forms of managerial development (coaching/mentoring). Annual spending on individualized forms of development is increasing by an average of 10%. This growing demand for individualized manager development is also reflected in the growing number of professionals offering such coaching and consulting services (see, for example, statistics from the Global

Coaching Mentoring Alliance). This growing interest in the individual approach to manager development may be the result of the actual impact of these individual development programs on manager performance. Still, it may also be a popular trend, as development programs and business solutions are also subject to trends.

Horák & Matošková (2018) conducted desktop research in which they collected relevant information from secondary sources. They examined ten international programs conducted across Europe. The results showed that the analyzed programs focused mainly on hard skills development (mainly specific knowledge and skills needed for success in the cluster manager position - such as knowledge about cluster identification, tools, and methods for cluster development). However, soft skills (intrapersonal and interpersonal) are critical to the sustainable development of an organization. According to Richard (2003), the requirements of modern companies are such that they specifically look for candidates who can add value with their soft skills and the ability to develop and use these skills. Tangible reasons and subsequent choice of a development program require more detailed empirical evidence, which is currently lacking in research, especially in the case of soft skills development programs.

Nevertheless, some studies have shown that soft skills training can significantly improve management students' soft skills (John, 2009; Thacker & Yost, 2002).

Specifically for the management research sample, research findings are sparse. There is a lack of empirical evidence on the effectiveness and comparison of different management training programs and their long-term effects. Partial research has demonstrated the importance and relevance

of soft skills training through qualitative exploratory analysis (Tsey et al., 2018). Other studies indicated the effectiveness of individual interventions, such as improving autonomy-supportive management styles, which are subsequently associated with higher autonomous motivation and workplace engagement among supervised employees (Hardé & Reeve, 2009), or the effectiveness of soft skills manager training in general (Hunt & Baruch 2003; Thompson, 2019), but new empirical data are needed.

## 2. GOALS AND HYPOTHESES

We have focused on comparing the effectiveness of group and individual development programs.

**Hypothesis 1:** In all four groups of managers under evaluation, there will be an improvement in the perception of the managers' developing skills on the part of the evaluators (subordinates of the managers under evaluation) following the managers' participation in the development program.

**Hypothesis 2:** Managers participating in the individual development program (line and middle managers) will manifest a higher score at the first measurement (will get better evaluation) than managers participating in the group development program.

The ever-growing interest in individualized development programs supports this statement. We assume that companies are willing to invest more money in a more expensive individual development program because they see a more substantial positive impact on their managers' behavior than they do with group development programs. The impact on better individual development outcomes should include all the factors already mentioned: more precise

tailoring of program delivery to the manager; more “personal time,”; a more significant opportunity to repeat activities that focus on critical skill areas; more targeted and detailed feedback.

**Hypothesis 3:** In the case of line and middle managers, we expect a longer lasting positive effect of the individual development program than of the group development program.

In the case of the more expensive and organizationally more demanding individualized development program, we expect a higher, but above all, longer-lasting effect and positive impact on the individual management skills to be developed.

**Hypothesis 4:** Line managers will react more positively to the group development program than middle managers. Following the group development activity, the difference in score in the pre-development and first post-development evaluation will be higher for line managers than for middle managers.

Middle managers have participated in more group development activities than line managers. Therefore, it is more challenging to achieve the desired development in middle managers by repeating the same approach as with line managers, for whom this group development program may be a relatively new development tool. At the same time, in connection with the above, we also expect that middle managers may have a negative bias toward group development programs, which may reduce the effectiveness of a particular development program.

**Hypothesis 5:** In the introductory (pre-development) evaluation, middle managers will manifest higher scores in individual skills than line managers. In other words,

before participating in one of the development activities, middle managers will, on average, receive a better score from their subordinates in every activity under evaluation than line managers.

We assume the previous since middle managers have been in their managerial positions longer than line managers, having participated in more development programs on average than the latter. They are also supposed to have more managerial responsibilities and receive higher evaluations, which should also be reflected in the subjective perception of their performance by their subordinates.

## 3. METHODS

### 3.1. Participants

In this study, we focused on the following groups: line managers (managers who supervise rank-and-file employees) and middle managers). A total of four groups are compared:

- Line managers who participated in the group development program
- Line managers who participated in the individual development program
- Middle managers who participated in the group development program
- Middle managers who participated in the individual development program

A total of 256 managers participated in the selected development programs (see Table 1); 213 participated in the group development program, and 43 in the individual development program. There were 132 line managers and 124 middle managers.

**Table 1.** Number of participants in development programs

	1 <sup>st</sup> year	2 <sup>nd</sup> year	Total
<b>Number of participants in Managerial Tools</b>	<b>90</b>	<b>123</b>	<b>213</b>
Line managers	55	57	112
Middle managers	35	66	101
<b>Number of participants in Managerial Simulator</b>	<b>23</b>	<b>23</b>	<b>43</b>
Line managers	8	12	20
Middle managers	11	12	23
<b>TOTAL</b>			<b>256</b>

Source: Authors.

### 3.2. Development programs

Maxman Consultants designed the individual development programs and their evaluations over two years. For both programs whose impacts we compared, we selected only those parts that focused on the selected specific identical five skills, which we refer to as *target skills*.

The selected development programs included 256 participating managers. The following target skills were part of the Managerial Tools and Managerial Simulator development programs:

- Effective goal setting,
- Giving feedback and performance evaluation,
- Accepting feedback as a manager,
- Management coaching (using the Instant pay off model),
- Leading discussions and team meetings using a facilitative leadership style.

### 3.3. Managerial Tools group development program

The group development program (groups of 5-12 participants led by one lecturer/mentor) called Managerial Tools is a two-day training package focused on understanding, developing, strengthening, and improving managerial skills.

Based on the needs of our study, we explicitly focused on training packages aimed at developing the previously mentioned management skills: *effective goal setting / giving feedback / accepting feedback as a manager/management coaching/management facilitation* (leading discussions and team meetings with a facilitative leadership style). During the individual blocks of the Managerial Tools training program, a group of managers repeatedly goes through several learning phases - with short theoretical inputs, the trainer/mentor explains the basic principles of each technique. Afterward, the participants can test/practice the given techniques using interactive exercises (in group training, in most cases, it is not possible to ensure that every participant actively goes through all tasks, but this depends on the size of the group, group dynamics and the need of individual participants to analyze individual model situations in more depth and detail and to work with feedback).

These practical exercises are followed by self-reflection and reflection, where the individual participants and the lecturer/mentor evaluate the individual activities. The final section of the cycle includes summaries of the lessons and principles taught. Based on Kolb's (1984) classic learning cycle, these learning cycles are repeated in individual blocks.

### **3.4. Managerial Simulator individual development program**

The Managerial Simulator is an individual development program simulating actual, challenging management situations over a day. The manager has a team of people ("extras") at their disposal, which they lead through individual tasks during the simulation. The members of this team ("the extras") are specially trained consultants for this purpose, each of whom has a specific role to play in the simulation exercise and who create a variety of complicated situations for the participating manager. Such a trained team of "extras" is capable of creating/simulating both individual (participating manager - one of the team members) and group interactions (participating manager in collaboration/interaction with the entire team).

One or more consultants observe each activity the manager and their team are working on. Each activity is followed by self-reflection by the manager and feedback from the observing consultant(s); some activities also have feedback from the team. Theoretical input, tips, and skill development techniques are available to participants in blocks between simulations or are part of the reflection blocks after each simulation.

The advantage of this approach is the excellent flexibility in designing the content

of a Managerial Simulation, the ability to choose the level of difficulty of each model situation, the ability to adjust the pace, depth, and complexity of each debriefing session to the style and preferences of the participant, and the ability to repeat some model situations as needed (replay a situation in the same or a modified version). In addition, as mentioned in the previous section, it is essential to squeeze many challenging and stressful situations into a relatively short time frame.

### **3.5. Comparison of the Managerial Tools and Managerial Simulator programs**

Both programs we examined focus on developing the same skills. The fundamental difference is in the number of participants and the duration.

From the point of view of the program designer (the consulting company), the Managerial Simulator makes higher demands on human skills because it involves not only a mentor but four other trained consultants. From the client's perspective, price is essential, as it is much higher per participant for individual development with the Managerial Simulator. Table 2 provides a brief overview of the two development programs.

**Table 2.** Comparison of the Managerial Tools and Managerial Simulator development programs

	<b>Managerial Tools (group development)</b>	<b>Managerial Simulator (individual development)</b>
Number of participants in a run	6 – 12	1
Duration	Two days (09:00 – 17:00)	One day (09:00 – 16:30)
Mentor	One	One + “extras – 4 trained consultants“
Developing skills	Effective goal setting Giving feedback Accepting feedback Management coaching Management facilitation	Effective goal setting Giving feedback Accepting feedback Management coaching Management facilitation
Price	1.200 € / training day (entire group of participants)	1.200 € / training day (one participant)

Source: Authors.

The criteria used to include Managerial Tools and Managerial Simulator among the programs being compared are as follows:

- The same lector/mentor leads all development programs.
- All development programs focused on developing the same five soft management skills.
- Group development programs designed for groups of 6-12 participants/managers.
- Individual development programs are designed for only one participant (led by one trainer and four consultants – “extras”).

Using these criteria, over two years, we were able to include 23 Managerial Tools group programs in the sample to be compared (see Table 3), 12 of which were set up for line managers and 11 for middle managers, and 43 individual Managerial Simulator development programs, 20 of which were for line managers and 23 for middle managers.

**Table 3.** Number of development programs

	<b>1<sup>st</sup> year</b>	<b>2<sup>nd</sup> year</b>	<b>Total</b>
<b>Managerial Tools</b>	<b>10</b>	<b>13</b>	<b>23</b>
Line management	6	6	12
Middle management	4	7	11
<b>Managerial Simulator</b>	<b>19</b>	<b>24</b>	<b>43</b>
Line management	8	12	20
Middle management	11	12	23

Source: Authors.

## 3.6. Data collection

In evaluating the development programs to be compared, we focused on how the manager's immediate subordinates who participated in a particular group or individual program rated the manager's application of each of the management skills that were the focus of the training.

In other words, we were interested in how subordinates perceived the manifestation of each skill in the manager's behavior and how these perceptions were then reflected in anonymous online ratings.

We used an online rating system called 90° feedback to obtain this assessment. Unlike 360° feedback, with 90° feedback, we focused only on subordinates' ratings of their managers. The rating was anonymous, meaning managers could not determine what type of rating they received from individual subordinates. The output was a summary of all subordinates' ratings without the ability to identify specific individuals. We communicated with raters via group emails to ensure the anonymity of the survey and to adhere to all ethical principles. The online questionnaire also confirmed the anonymity of all data, as each individual rater had a randomly assigned identification number.

For both development programs, we conducted three collections of evaluations using the 90° online feedback.

Pre-development assessments took place over three weeks before the implementation of the development program. Thus, participants in the development programs were first assessed by their subordinates before participating in any of the development programs.

The first post-development program assessment took place 3-5 weeks after the end of the development program. The second post-development program assessment took place 12-14 weeks after the end of the development program.

For all three survey time points, evaluators had 14 days to complete their evaluation forms. If a rater had not completed an online evaluation form by the seventh day after the start of the study, the system automatically sent an email notification to a specific identification number (a rater). This process was repeated three days later, i.e., ten days after the start of the evaluation process.

If a rater did not respond even after repeated email notifications, that person's identification number was removed from the study (even if this occurred during the last rating). Therefore, we collected all data from each of the three survey time points from individual raters in the compared sample.

In our sample of managers, each area of their management skills was evaluated by their immediate subordinates, i.e., subordinates who report directly to a particular manager, meaning that there is no intermediary between the manager and the subordinate (this is an important criterion to consider, especially in the group of middle managers). The evaluation statements focused on five developing/evaluated skills: one statement per skill.

The rater's task in the online questionnaire was to tick the appropriate value on a seven-point scale according to the extent to which they agreed with a particular statement when rating their manager's behavior. The scale ranged from 1 = entirely disagree with the given statement to 7 = agree entirely with the given statement.



Table 4 shows the number of raters who rated their supervisors (who participated in the development program, i.e., belonged to one of the rated groups) on online questionnaires that yielded a pre-development

measure and the first and second post-development measures. We obtained data on all three measurements from 2058 raters/respondents.

**Table 4.** Number of evaluators of individual managers

Evaluators of line managers who participated in the Managerial Tools group development program	1016
Evaluators of middle managers who participated in the Managerial Tools group development program	688
Evaluators of line managers who participated in the Managerial Simulator individual development program	186
Evaluators of middle managers who participated in the Managerial Simulator individual development program	168

Source: Authors.

### 3.7. Data analysis

When comparing individual results in our research, we decided to use the latent trait estimate variable according to the IRT item response theory analysis, based on Samejima's continuous model for ordinal variables (Zopluoglu, 2012) in our five-item questionnaire used to evaluate line and middle managers.

As illustrated by Table 5, parameter a) expresses the differentiating ability of the item (ability to differentiate the schema of the responses of the respondents); parameter b) expresses the importance of the item in the questionnaire (its weight in the resulting score in the evaluation of the manager).

**Table 5.** Parameter description

Item	a	B
Goals	0.75	-0.30
Feedback – giving	1.01	-0.25
Feedback - accepting	2.72	-0.05
Coaching	1.28	0.00
Facilitation	1.44	-0.10

Source: Authors.

The aim of the IRT analysis is the estimation of the value of the so-called latent trait (variable)  $\theta$ , which, unlike a raw score (a sum of values arbitrarily assigned to possible individual responses to an item), considers the fact that not all items carry the same weight, in terms of the examined (not

directly measurable) trait, attitude, evaluation or theoretical construct.

Using the EstCRM package (Zopluoglu, 2015) for R, we estimated the value of latent variable  $\theta$  (evaluation of manager) and the parameters of Samejima's continuous model.

Based on the analysis, we subsequently excluded 278 cases whose  $\theta$  value exceeded the  $\pm 2.5 * SD(\theta)$  interval, i.e., the standard deviation in the given cases was higher than 2.5. We continued further in our study with

a linear regression model with a random intercept and random parameters for the dependent variable  $\theta$  (evaluation of manager), as illustrated by Table 6.

**Table 6.** Linear regression model

Fixed parameters	Estimate	SE	AIC	logLik	R <sup>2</sup>
Intercept	0.389	0.015	9957.074	-4970.537	0.19
Random parameters	Estimate	SE			
(var) Intercept	0.536	0.732			
(var) Measurement 1	0.375	0.612			
(var) Measurement 2	0.153	0.391			
(var) Residual	0.315	0.561			

Source: Authors.

Random effects for the groups defined by the variables *manager type* and *development type* (training type). The parameters were estimated using the Restricted maximum likelihood package lme4 (Bates et al., 2014) for R (3.1.2).

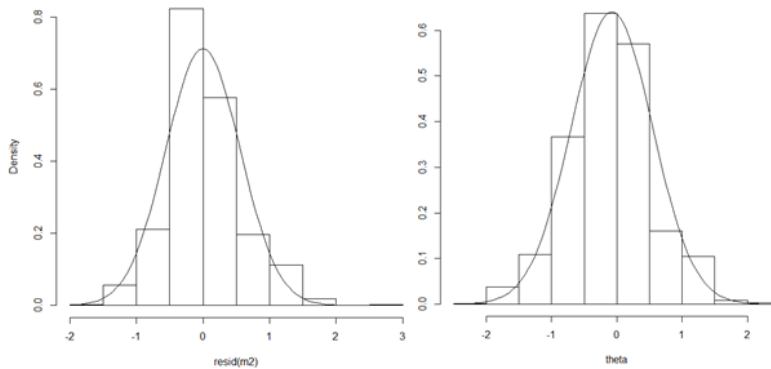
In this model, intercept expresses mean values for individual groups for the evaluations immediately before the training (first pre-training measurement), one month after the training (1st measurement), and three months after the training (2nd measurement).

The use of the model with random intercept and random parameters is also supported by the result of the  $\chi^2$  test, which compares the model with random intercept across groups and fixed effect of evaluation time and the model with random intercept and random effect of evaluation time for four combinations of groups of managers and types of development ( $\chi^2=54.615$ ,  $p<0.0005$ ,  $df=3$ ). This means that the changes in the evaluation of the managers in time (pre-training, one month, and three months post-training) differ for different

types of managers and different types of training.

### 3.7.1. Tests of normality

Because the size of the research sample does not allow us to apply exact normality tests for the distribution of the dependent variable (e.g., Kolmogorov-Smirnov, Cramer-von Mises) - the considerable power of the test can determine even a minimal deviation from the Gaussian distribution as significant - we present histograms of the dependent variable  $\theta$  (evaluation of a manager) and the residuals of the linear model with random intercept and random parameters (Figure 1), as well as the overlapping curve of the normal distribution with a given mean and standard deviation. Given the sufficient size of the statistical selection to use the central limit theorem, combined with relatively minor deviations from the expected normal distribution (based on a visual assessment), we can consider the distribution of the statistical sample to be sufficiently regular for the needs of the linear modeling application. In addition, we consider the normality of the distribution of the residuals (Figure 2) - as an indicator of the model's suitability - to be sufficient.

**Figure 1.** Normality of random parameters tests

Source: Authors.

### 3.7.2. Logistic models

To analyze the time sequence with the dependent variable representing the responses to each questionnaire item, considering the effect of manager type and development type, we used a mixed ordinal logistic model based on the logit function and parameter estimation with Laplace approximation (Christensen, 2019) with random intercept and parameters. The interpretation of these models is the same as a linear model. Still, the sum of the intercepts (constants) and the independent variables, multiplied by the appropriate parameter, is converted into the probability that a

response to a given question is equal to or less than  $x$  (when the response scale is sequenced so that a more negative response receives a lower number) by sequenced logit functions. In this way, the models capture how, in specific groups (defined by the type of manager and the type of training), the rating of a particular item changed over time (before training, one month after training, and three months after training), while preserving the ordinal (i.e., probabilistic) nature of the dependent variable. The parameters of the models were estimated using the ordinal package (Christensen, 2019) for R.

## 4. RESULTS

Comparing the effects of group and individual development of line and middle managers (see Table 12 and Graph 7), we find that both types of development in both groups (line and middle managers) resulted, on average, in almost identical effects on subordinates' values at the first measurement. In all cases, there was a noticeable improvement in subordinates' perceptions of managers using a particular skill. On this

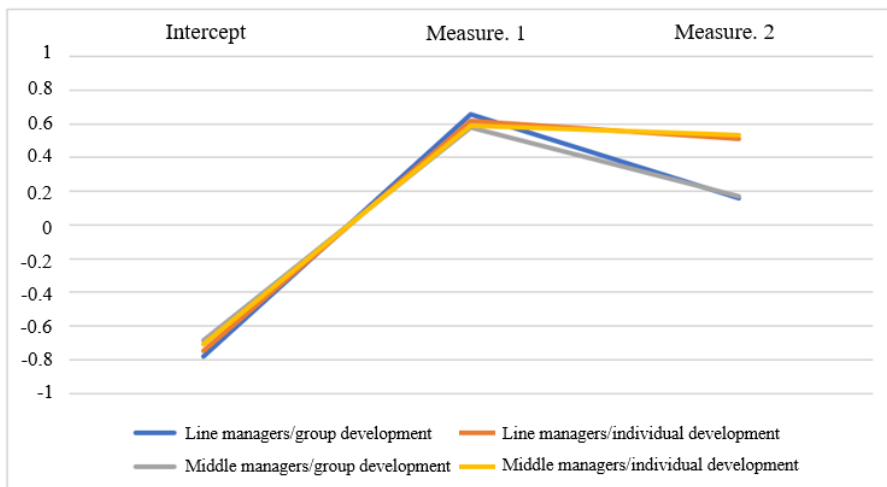
basis, we can assert that both types of development programs (group and individual) positively affected both groups of managers (line and middle). However, it is surprising that, in the first measurement, the given improvement manifested itself essentially identically regardless of the type of development activity and the level of managers participating in that activity. It seems that the type of development program does not matter, as the effect remains the same.

**Table 7.** Overall comparison of group and individual development

	Intercept	Measurement 1	Measurement 2
Line managers /group development	-0.781	0.658	0.1600
Line managers/Individual development	-0.745	0.619	0.510
Middle managers/Group development	-0.686	0.578	0.173
Middle managers/Individual development	-0.710	0.588	0.536

**Source:** Authors.

**Figure 2.** Overall comparison of group and individual development programs



**Source:** Authors.

In the case of the overall evaluation, we can confirm *Hypothesis 1*. In all four groups studied, after participation in a development program, there was an improvement in the raters' (subordinates of the rated managers)

perception of the development of the managers' skills.

On the other hand, *Hypothesis 2* was not confirmed. Line and middle managers

participating in an individual development program should receive higher scores (better ratings) on the first measurement than managers participating in a group development program. As illustrated by Table 12 and Graph 3, all managers in both types of development programs had very similar scores on the first measurement. Hence, in this case, the type of development program did not affect the score on the first development measurement.

This result has not been expected, as we assumed that individual development would have a more significant effect on subordinates' perceptions of a manager's improvement in skills than group development (based on all of the attributes mentioned above, such as individual adjustment of the pace appropriate for the manager participating in the program, more "personal time," etc.). Our research did not confirm this assumption.

However, we consider the difference between the first and second measurements (after development) necessary. After group development (for both line and middle managers), evaluation scores decrease between the first and second measurements. Subordinates generally rate managers' performance under the program worse on specific skills three months after development activities than they do one month after. In contrast, this decline in individual development (for both line and middle managers) is not evident, and perceptions of improvement in managers' skills remain in both measurements. This fact suggests that the effect of individual programs lasts longer.

In line with the previous discussion, *Hypothesis 3 has been confirmed*. Regarding the development of line and middle managers, individual development programs will have a long-lasting positive

effect compared to group development programs. Managers participating in the individual development program maintained higher scores on the second post-development measurement than managers who participated in the group development program, whose scores decreased from the first to the second measurement. Based on such a result, we can assume that individual development with the Managerial Simulator program is a better tool for achieving a positive long-term effect on management skills.

The overall comparison reveals another fact: there is no apparent significant difference between the effects of group development on line managers and middle managers. Therefore, *Hypothesis 4 was not confirmed*. Line managers respond more positively to group development than middle managers, i.e., the difference between the pre-development rating and the first post-development rating is higher for line managers than for middle managers. This phenomenon did not occur in our sample.

#### **4.1. Effect on the development on the goal-setting skill**

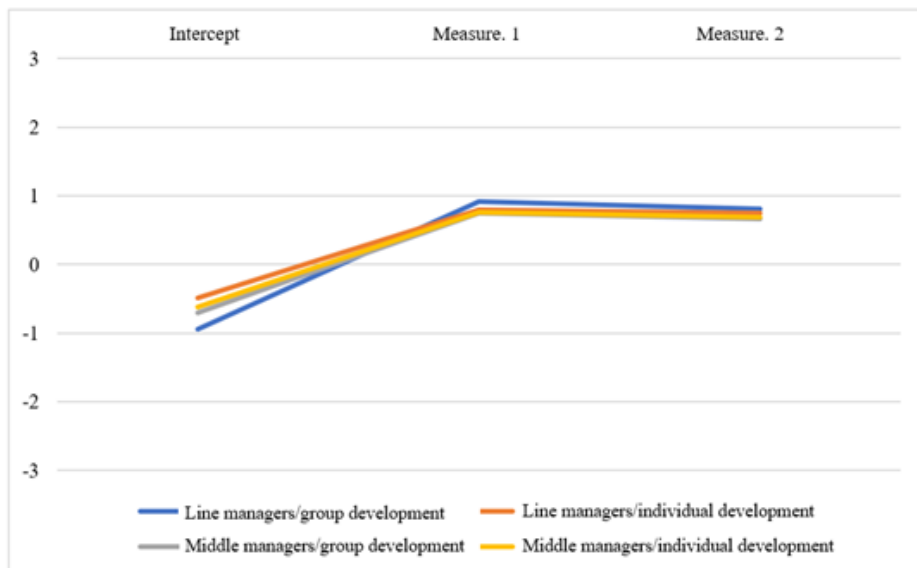
As shown by Table 8, when comparing the effects of individual and group development programs on managers' ability to effectively set clear goals for their subordinates (similar to the "giving feedback" skill), we see the slightest differences between types of development activities as well as between target groups (line and middle managers).

**Table 8.** Effect of the group and individual development on the goal setting skill

	Intercept	Measurement 1	Measurement 2
Line managers /group development	-0.943	0.921	0.806
Line managers/Individual development	-0.486	0.800	0.746
Middle managers/Group development	-0.700	0.746	0.661
Middle managers/Individual development	-0.622	0.765	0.691

Source: Authors.

**Figure 3.** Effect of the group and individual development on the goal-setting skill



Source: Authors.

This part of the study shows that whether this management skill is developed (regardless of management level) in a group or an individual program does not matter for the development of the ability to set goals for employees effectively. The expected effect of the development will be the same.

#### 4.2. Effect on development on the giving feedback skill

Table 9 shows that the starting point for the “giving feedback to subordinates” skill is further ahead. Namely, on the

pre-development assessments (Intercept), for all four skills, both line and middle managers performed best on this skill (the baseline score ranges from 0.022 - 0.217). Simultaneously, positive change/improvement in this skill is the least pronounced of all the skills to be developed. Furthermore, there was no significant difference in this ability between the different development types or the individual management categories.

**Table 9.** Effect of the group and individual development on the giving feedback skill

	Intercept	Measurement 1	Measurement 2
Line managers /group development	0.022	0.800	0.720
Line managers/Individual development	0.217	0.851	0.894
Middle managers/Group development	0.050	0.878	0.807
Middle managers/Individual development	0.124	1.180	1.123

Source: Authors.

**Figure 4.** Effect of the group and individual development on the giving feedback skill



Source: Authors.

Results show that both line and middle managers are perceived most positively by their subordinates regarding their ability to provide feedback. Still, at the same time, managers are least likely to improve this ability through group or individual development programs.

It follows that from the perspective of a manager responsible for training, investing in developing the *giving feedback* skill is the “least profitable investment.”

### 4.3. Effect on development on the accepting feedback skill

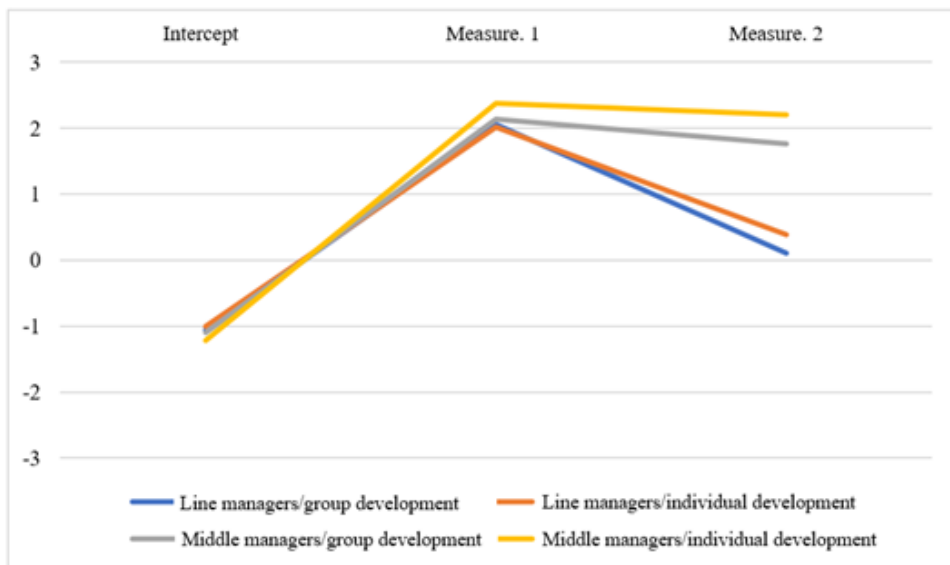
In the first measurement, both group and individual development had the same effect on this ability for both line and middle managers. However, looking at the long-term effect, the second measurement did not show a difference in the effect of group or individual development but rather in the different outcomes achieved by the two groups (line and middle managers). For line managers, the perception of this ability decreased after the second measurement, while for middle managers it did not, regardless of the nature of the development program.

**Table 10.** Effect of the group and individual development on the accepting feedback skill

	Intercept	Measurement 1	Measurement 2
Line managers /group development	-1.053	2.057	0.104
Line managers/Individual development	-1.008	2.013	0.385
Middle managers/Group development	-1.100	2.135	1.769
Middle managers/Individual development	-1.220	2.379	2.202

Source: Authors.

**Figure 5.** Effect of the group and individual development on the accepting feedback skill



Source: Authors.

Results show that both types of development have the same positive effect in terms of short-term impact. Still, in terms of long-term impact, middle managers benefit more from development (regardless of the type of development). Unlike their colleagues in line management, they did not experience a decline between the last two measurements.

One of the explanations could be the higher maturity and ability of middle managers to self-reflect, leading to a longer-lasting ability to accept and process feedback from their subordinates. This trend, or even a similar one, was not found in any other skill developed and compared.



#### 4.4. Effect on the development on the coaching skill

Table 16 and Figure 6, which show the development of the skill of coaching employees, indicate similar trends to the overall comparison of group and individual development activities. While the short-term effects of both types of development are comparable, and in all cases, there was a

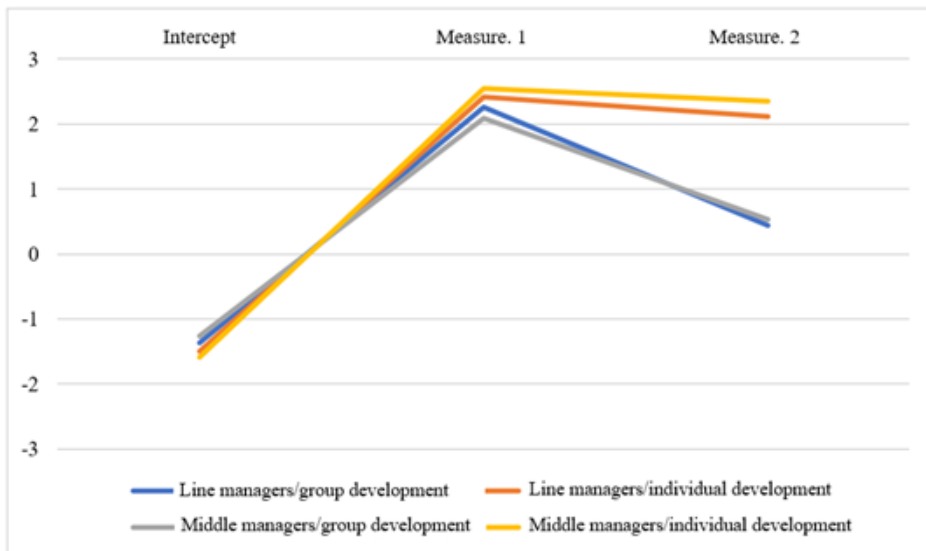
similar positive increase in subordinates' perceptions of this skill with their supervisor, the long-term effect of positive effects of individual development activities persisted. Still, in the case of group development, subordinates' positive perceptions of this skill decreased. These results suggest that individual development positively affects both line and middle managers.

**Table 11.** Effect of the group and individual development on the coaching skill

	Intercept	Measurement 1	Measurement 2
Line managers/Group development	-1.364	2.261	0.437
Line managers/Individual development	-1.497	2.413	2.114
Middle managers/Group development	-1.261	2.083	0.529
Middle managers/Individual development	-1.584	2.548	2.356

Source: Authors.

**Figure 6.** Effect of the group and individual development on the coaching skill



Source: Authors.

We believe it is more effective for specialists responsible for developing and training corporate managers to invest resources in individual development programs, rather than group development ones, if they seek a long-term effect in improving managers' coaching skills.

### 4.5. Effect on the development on the facilitation skill

The last skill observed in our study is the skill to lead team meetings using facilitation. Obtained results show a similar positive increase from the pre-development measurement to the first post-development

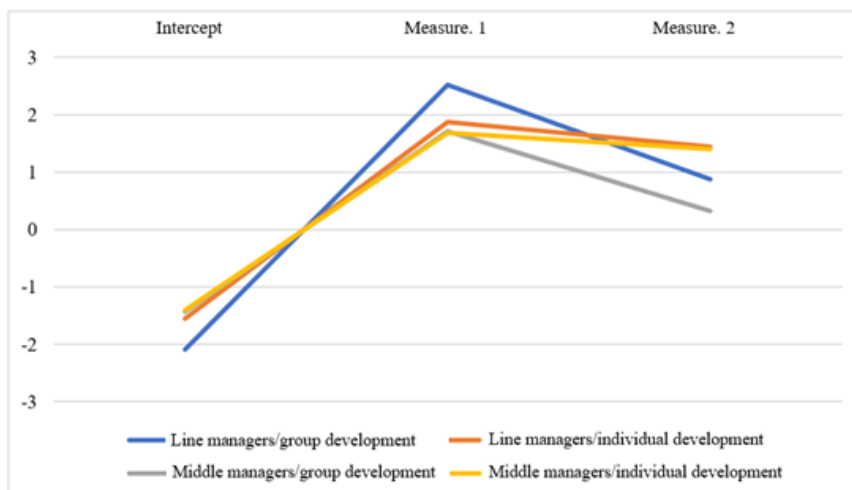
measurement as for the previous skill. In this case, the line managers who participated in the group development showed the most noticeable positive increase on the first post-development measurement, despite starting with the lowest pre-development score. However, it is essential to note the difference between the first and second measurements, where the effect of group development appeared to decrease. In contrast, the effect of individual development remained essentially the same. Thus, we can assume that for this skill, individual development's effect lasts longer than group development's.

**Table 12.** Effect of the group and individual development on the facilitation skill

	Intercept	Measurement 1	Measurement 2
Line managers /group development	-2.093	2.521	0.879
Line managers/Individual development	-1.555	1.873	1.438
Middle managers/Group development	-1.426	1.718	0.323
Middle managers/Individual development	-1.398	1.684	1.405

Source: Authors.

**Figure 7.** Effect of the group and individual development on the facilitation skill



Source: Authors.

In summary, we found no difference in the effect of group and individual development programs on goal setting and giving feedback skills. By participating in both types of development programs, both groups of managers (line and middle) improved to the same extent. We also found no difference in the skill of accepting feedback between the group and individual development programs. However, we did find a longer-term effect of both types of development on the group of middle managers (they showed the same positive development ratings on both the first and second post-development measurements), regardless of the type of program in which they had participated. There are apparent differences in coaching and facilitation skills resulting from the group and individual development programs. In the case of individual programs, we noted a longer-lasting effect, meaning that the positive effects of development manifested themselves in the second post-development. In the case of group development, we recorded an actual decrease in scores.

Based on the results of the measurements of the impact of development programs on the development of individual skills, we can conclude that in the long run, the 'best investment' is in the individual development of coaching and facilitation skills (using the Managerial Simulator). This is where both line and middle managers showed the most significant change when comparing pre-development measurements with the first and second measurements after development. From this point of view, the least beneficial 'investment' is the use of the development activities compared here to develop the skill of giving feedback, which showed the smallest increase of all other skills.

#### 4.6. Comparison of pre-development measurements

Comparing the pre-development scores, as in the previous logistic models, and looking at the mean (Table 13) for each category, we can see no significant difference in the pre-development scores of line and middle managers.

Thus, *Hypothesis 5 was not confirmed* concerning the expectation that middle managers would perform better than line managers on initial (pre-development) assessments of individual skills. Namely, it was expected that, even before participating in development activities, middle managers would, on average, perform better than line managers on all skills assessed by their subordinates. This assumption was not confirmed for any of the skills to be developed.

Although our work has not focused on examining the evaluation of individual skills of managers before the intervention, the data clearly show that the scores for *goal setting* and *giving feedback* are significantly higher than for coaching and facilitation. Thus, the subordinates perceived their managers as 'stronger' in goal setting and giving feedback and 'weaker' in accepting feedback, coaching, and facilitation before participating in any of the compared development activities.

**Table 13.** Mean score in pre-development measurement for individual skills

	N	Goals	SD	Giving Feedback	SD	Accepting Feedback	SD	Coaching	SD	Facilitation	SD
Line mng./ Group dev.	979	4.2104	1.05312	4.2921	1.12621	3.4259	1.05638	3.3442	1.03170	3.3279	1.12589
Middle mng./ Group dev.	646	4.4876	1.03084	4.4443	1.07364	3.5356	1.10016	3.4133	1.13346	3.6316	1.00720
Line mng./ Ind. dev.	174	4.3793	1.13016	4.2989	1.04373	3.4023	.93685	3.2184	1.00778	3.5287	.87798
Middle mng./ Ind. dev.	161	4.3975	.98285	4.4037	.90401	3.3851	.82962	3.2174	.94005	3.6211	.75783

Source: Authors.

## 5. DISCUSSION

After both types of development programs (individual and group), both groups of managers (line and middle management) showed improvement in the skills rated by their subordinates, i.e., the development led to the perception of improved behavior.

At the first measurement, both development programs (individual and group) positively increased subordinates' perceptions. However, at the long-term effect (second measurement 12-14 weeks after development), this positive increase remained only for the individual development programs, while the effect decreased for the group programs. Thus, the effect of individual development appears to be longer-lasting. Early (1994), however, points out that other variables, such as managerial self-efficacy, may also influence the effectiveness of development programs. A sample of managers from Hong Kong, China, and the United States showed that for individualists, self-focused training had a more substantial effect on self-efficacy and performance than group-focused training. For collectivists, group-focused training had a more substantial effect on self-efficacy and performance than individual-focused training.

However, according to a study by Milligan-Saville et al. (2017), the group's development can also last for a long time, even up to 6 months after the intervention. In their study, the authors reported that 4 hours of mental health training delivered to small groups of managers reduced work-related sick leave at a relatively low cost to contractors. Similarly, in effective decision-making training for managers (Kavathatzopoulos, 1994), the author found evidence that the effect lasted up to one month after the end of the training. Still, there was no comparison with a broader time frame.

We recognize that it is difficult to fit our research findings into the broader framework of comparing training interventions. As we have said, managerial development programs lack empirical evidence on the effectiveness and comparison of different managerial training programs and their long-term effects. However, existing research suggests the effectiveness of individual interventions aimed at manager development, such as improving autonomy-supportive management styles, which are subsequently associated with higher autonomous motivation and workplace engagement among supervised employees (Hardré

& Reeve, 2009), or the effectiveness of soft skills training for managers in general (Hunt & Baruch 2003; Thompson, 2019) or management students (e.g., John, 2009).

Our results showed no significant difference between the line manager and middle manager groups. Both groups responded similarly to development activities; therefore, we cannot say that a particular type of development is better or worse for a particular level of management.

Regarding the individual skills that were developed, the slightest change (both short and long-term) was seen in *goal setting* and *giving feedback*. The most significant change was seen in the skills of *accepting feedback*, *coaching*, and *facilitating*.

Regarding the individual skills to be compared, it appears that coaching supervised employees and facilitating team meetings through individual development programs is most effective for both levels of management (line and middle managers), as these skills showed the most significant positive increase in scores on both post-development measurements. On the other hand, investing resources in developing goal-setting and feedback skills appears to be the least effective based on our results. Regarding these skills, both groups showed the slightest improvement, and both types of development (group and individual) showed the same effect. This does not mean it is not helpful to develop managers in these two skills (after all, we found a slight improvement in both skills). Still, from a financial point of view (since individual development is many times more expensive than group development), developing these skills in line and middle managers using group development programs makes more sense.

The limitation of our study lies in the unequal number of managers who participated in the individual and group programs, as there were 213 managers in the group development program and 43 in the individual development program. This fact shows that there is more interest in group programs than individual ones. Moreover, we couldn't form a control group of managers, i.e., a group that did not participate in any development program. This would have resulted in a more methodologically sound research design.

For further research, it would be interesting to compare the effects of development programs on a larger number of management skills and to examine these effects from an even longer-term perspective (measurements 6 and 12 months after development).

In addition, it might be beneficial for professionals and specialists in the field of managerial development and training to compare the impact of complex development programs that focus on managerial skills (various combinations of group and individual development programs along with coaching, shadowing, and online courses, and e-learning applications, known as blended learning). Another idea for a separate research study could be to compare individual coaching approaches and their impact on improving managerial skills.

All of the above research ideas come with challenges, the biggest of which we believe is the collection of relevant data. It took us two years to collect data from 66 development programs focused on five skills, and we collected data one month and three months post-development. Nonetheless, the information gleaned from such a complex study would greatly benefit anyone professionally involved in training managers, be they providers, evaluators, or even the participants themselves.

## 6. CONCLUSION

When choosing the type of development intervention, it is essential to consider not only the management level, those who the development intervention will train, and the specific skills targeted by a particular development. Our research has shown that even financially sophisticated individual development programs have limitations and do not, in all cases, develop managerial skills better than cheaper group development programs. Therefore, organizers of development and education programs should consider the nature of the skills to be developed and select the appropriate means of developing those skills. In addition, it is also essential to consider the longevity of the impact of a particular development when selecting an appropriate method for training managers. From this perspective of longevity, our research findings suggest that individual development appears to be a more appropriate tool. The results of this study can help professionals make more effective decisions because making the right choices about development and training is a win-win situation for all stakeholders - participants, contractors, and delivery and consulting firms.

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## USPOREDBA PROGRAMA RAZVOJA GRUPNIH I POJEDINAČNIH “MEKIH VJEŠTINA”: MENADŽERSKI ALATI I SIMULATOR ZA MENADŽERSKU OBUKU

### Sažetak

*Konkurentski pritisak stvara sve veće zahtjeve za menadžerskim učinkom, a samim tim i na razvoj što učinkovitijih programa razvoja menadžmenta. Cilj je ove studije usporediti grupne i pojedinačne pristupe razvoju linijskih i menadžera srednje razine. Pritom su korišteni programi menadžerskih alata i simulatora za menadžersku obuku, s ukupno 256 sudionika. Analizirali smo pet “mekih” menadžerskih vještina: učinkovito postavljanje ciljeva, pružanje povratnih informacija i evaluaciju učinka, prihvatanje povratnih informacija u menadžerskoj ulozi, treniranje te vođenje diskusija i sastanaka korištenjem suradnog stila vođenja. Nakon pohađanja obje vrste programa razvoja, promatrane grupe menadžera su pokazala povećanje razine ciljanih vještina, promatranih od strane njihovih suradnika. U trenutku prvog mjerenja, pojedinačni i grupni razvoj su rezultirali istim pozitivnim trendom u procjeni od strane suradnika. Međutim, kod mjerenja dugoročnog (drugog) mjerenja, ovaj je pozitivan*

*trend sačuvan za pojedinačne programe razvoja, ali ne i za grupne programe, kod kojeg je došlo do smanjenja efekta. Stoga se čini da su efekti pojedinačnih razvojnih programa dugoročni. U cjelini, nismo pronašli značajne razlike između linijskih i menadžera srednje razine – obje su skupine slično odgovorile na aktivnosti razvoja. U smislu razvoja pojedinih vještina, najmanja je razlika identificirana kod postavljanja ciljeva, a najveća kod prihvatanja povratnih informacija, treniranja i suradnje. Ovo istraživanje pruža informacije specijalistima u području obrazovanja i razvoja kadrova te bi moglo biti korisno kod izbora odgovarajućih alata za obuku vođa, posebno kod pojedinačnih programa s dugoročnim efektima.*

**Ključne riječi:** „meke“ vještine, grupni i pojedinačni razvojni programi, linijski i menadžment srednje razine