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Neuro-Linguistic Programming and Managerial Communication

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Abstract

Neuro-linguistic programming (NLP) can be considered as a tool for the identification and change of communication behaviour. NLP is based on the concept of the construct of behaviour created by the series of stages, which are perceived as one action. In this chapter, the attention is paid to the NLP characteristics, NLP techniques, mainly to representational systems, rapport, pacing and leading. The chapter presents the results from the research of the assessment of NLP based on comparing the respondents who attended NLP trainings and those who did not attend NLP trainings and comparing managers and non-managers. The research results indicate the effectiveness of NLP in the context of managerial communication.

Keywords: communication, neuro-linguistic programming, managers, training

1. Introduction

The effectiveness of managerial work is multifactor-conditioned, and at the same time, it is examined within an interdisciplinary approach. This concept corresponds to the current conditions of an economic environment characterized by dynamics, turbulence, and continual changes [1]. The effectiveness of managerial work is related to the development of managerial competences, which enable to meet the presented conditions. Managers are expected not only to face the changes but also to suggest and implement these changes [2]. In this connection, an important role is also played by the form and way of managerial communication. From the point of view of the effectiveness of managerial work, mainly in the social context, the issue of managerial communication skills has a dominant position [3]. Effective managerial

communication is one of the fundamental pillars of the activities for which the cooperation of people is inevitable. At the same time, it is one of the significant issues discussed in the context of managerial work [4], entrepreneurship, business [5], services, marketing [6] and many other areas of the economic environment.

The answer to the question how to communicate better, how to effectively communicate with our surrounding and how to communicate with ourselves is also offered by neuro-linguistic programming (NLP). It arose in the 70s of the last century, and its founders are Richard Bandler and John Grinder [7]. According to the authors, NLP is a set of models, abilities, and techniques for effective thinking, behaviour, and communication. Supporting results were also brought by the studies of Scott [8, 9]. Witkowski [10] pointed out the disunity of the research results that supported the NLP method or did not support it.

NLP is often presented as a magic tool for self-improvement of individuals and in this sense, it recently relies more on the assumptions of NLP rather than on qualitative and quantitative research. It is also caused by the fact that there are only few researches, which prove the reliability of NLP tools. In this context, we can mention the study of [11]. The author points out that the intelligent management by applying NLP in the techniques of interpersonal and intrapersonal communication in management can relate to the success of a whole organization. The given study was conducted in a cooperation of the Solidarity Union and large non-profit organizations in South Africa where five strategic leaders using and implementing NLP in their organizations were analyzed. The result is that NLP improves interpersonal and intrapersonal behaviour of the leaders, and this subsequently contributes to the success of organizations by using NLP in their behaviour, communication, and leadership.

It is obvious that the major part of examining the NLP method was conducted in the context of communication research [11]. NLP relates to the idea that the meaning of communication is in a reaction which it creates. Therefore, it is needed to adapt our communication until a required result, a reaction, occurs. In this context, according to [12], one of the first discoveries of NLP is the knowledge that experienced communicators use their language in order to create the climate of trustworthiness and understanding.

Determining the issue of NLP in the context of managerial communication assumes its specification from the point of view of conceptualization and operationalization. Within the conceptualization of the issue, the chapter presents individual concepts, approaches and opinions of several authors who pay their attention to the study in the area of neuro-linguistic programming.

2. Neuro-linguistic programming

Neuro-linguistic programming (NLP) is a model used by people to structuralize their unique life experiences. It is a set of abilities and techniques for effective thinking and behaviour [7]. Within NLP, several tools and techniques for discovering what represents perfection are presented [12]. NLP enhances the efficiency of the processes of remembering, forgetting, information evaluation and their displaying, perception, and responsiveness in all areas of a human being to a maximum support of a subjective and objective benefit, flexibility, and other abilities which are essential for satisfactory life-building [13]. NLP is an art and a science how

to be excellent and it is also a study of subjective experiences. It helps to understand the differences between the things we do leading to average results and a failure, and the things we do which bring success and excellent results [14].

Knight [12] mentions that neuro-linguistic programming (NLP) is a process of modeling unique, own, conscious and unconscious patterns (of thinking, communication, and behaviour) used to continuously develop and strengthen our own potential. The author adds that modeling enables to reveal the uniqueness, specificity, quality, and the features of inborn talent as well as natural abilities of an individual. According to Knight [12], the essence of this approach lies in the study of perfection. It is an approach to learning, curiosity, and respect to a unique way of existing in the world.

According to O'Connor and Seymour [15], it is a set of models and skills for effective thinking and communication. Alder [14] adds that NLP deals with a whole structure of human experiences, and it tries to model the trains of thoughts, feelings and beliefs, the result of which is human behaviour. Hamill and Kerr [16] claim that the NLP concept shows that the major part of our seemingly autonomous behaviour is a constructed behaviour created by a series of successive stages which produce a final result. These stages run very often so quickly and spontaneously that we perceive them as one action. Hamill and Kerr [16] mention that NLP is based on the existence of programmed sequences of thinking and behaviour. It offers knowledge and tools for discovering the structures of these programmes and their effective influencing, change and using. NLP provides tools, techniques, and means for discovering the nature of excellent results in the way which can be coded and reproduced [12]. By accepting the fact that what we experience comes out from programmed sequences of thinking and behaviour, NLP provides us with the knowledge and tools for discovering the structures of these programmes.

In the literature, different NLP attributes are mentioned, for example, rapport, representational systems, modeling, metaprogrammes, definition of aims, anchoring, speech, body, asking questions in a right way, and many other techniques, which are connected to the setting of our mind, our values, attitudes and so on [12, 15, 17–22]. In this chapter, the attention is paid to representational systems, rapport and leading.

2.1. Neuro-linguistic programming techniques

According to O'Connor and Seymour [7], communication begins with thoughts, which we share with others using words, voice intonation and body language. When we are thinking about what we see, hear, and feel, we internally create these images, sounds, and feelings again. We again experience information in the sensual form in which we accepted it for the first time. Knight [12] claims that the way we think influences our actions. When we can understand how our thinking forms our actions, we can catch and repeat the moments of excellent behaviour.

2.1.1. Representational systems

There is a belief behind representational systems that every human being depicts the surrounding world, in other words, people represent the surrounding world in their brains preferably by one of the five sense systems [18]. Every person has one's own, the so-called, preferred sensual system which the person uses the most preferably and in which one feels the best. To depict

experiences, we internally use the same neurological ways as by a direct experience. The same neurons generate an electrochemical charge which can be measured by an electromyographic reading device. A thought has direct physical effects, a mind and a body represent one system [7].

2.1.2. Rapport

Rapport creates an ideal state of communication based on trust and understanding, which can be used by managers and leaders when influencing behaviour, initiating a change, and persuading people [21]. According to Lazarus [19], rapport is one of the principles of success and can be defined as creating the spirit of trust and respect among people in order to create a higher probability of cooperation. Stone [23] claims that without rapport, there would be only a one-way communication. It requires practice and authenticity, and it means that we must be decided to accept opinions, observations, or motivation of other people. Bradbury [24] says that when we deal with another person, whether individually or in a group, we will always either follow or lead somebody. Regardless of how much we know about NLP, we will either:

- act similarly as the other person—in NLP, it is called following, that is pacing; or

- act absolutely differently than the other person—what is called leadership, that is leading.

2.1.3. Leading

Leading means leadership, accompanying, managing. According to Alder [25], leading means to have an influence on the behaviour of another person. Appropriate behaviour of another person is achieved by leading him/her when it is needed to become an agent of a change that is to create a change. This offers more control in communication. McCartney [26] states that adapting oneself to and creating a harmony with a partner for a certain time should lead to creating sufficient rapport, which subsequently allows to lead the partner where we want. By this way, we can use different representational systems of the partner. If the partner follows our leading, we have a good level of rapport. If the partner does not follow our leading, it is necessary to turn back to a harmony, to pacing and consequently to continue again with leading.

According to Alder [14], changes should be carried out gradually and not in a way which is too obvious. This technique can be used as a tool by persuading another person to think, feel and act differently. A therapeutic and pedagogical process, of any type, is always based on pacing, rapport and leading [13]. Basu [17] says that his understanding of a relationship is not only a basic principle of harmony and mirroring as understood within the NLP method.

In connection to the specification of the NLP issue, in the next part of the chapter, the attention is paid to the questions of operationalization of this issue.

2.2. Assessment of NLP

Based on the results of our research, it was possible to suggest and verify a new, original NLPT methodology—neuro-linguistic programming techniques. The managers were answering each item of NLPT methodology at a six-point scale of disagreement or agreement (0—definitely no, 1—no, 2—rather no, than yes, 3—rather yes than no, 4—yes, 5—definitely yes).

	Representational systems	Leading	Rapport
In communication with a partner, I use his style of expressing.	0.584		
In a conversation, I listen carefully to the words that a partner uses.	0.734		
In a conversation with a partner, I follow carefully his eyes.	0.733		
When presenting in front of people, I use several communication styles.	0.745		
I behave in the way which fits the other person the best.	0.616		
In a conversation with a partner, I try to understand his point of view.			0.588
To understand information properly, it is important to create a relationship with a partner.			0.550
What kind of relation I have with a given person is important when persuading this person.			0.723
Sharing information among people depends on mutual trust.			0.819
I communicate better with a person who has the same values, attitudes, and opinions as me.			0.581
By persuading another person, I try to change the thinking and behaviour of that person.		0.691	
When communicating to an annoyed person, I first get angry and after calming down, I get to what I want.		0.899	
Using emotions in communication makes my communication much easier.		0.588	
First, I try to change the opinion of my partner and then I expect the change of his behaviour.		0.803	
In communication, I use the experience of my partner which leads to his new way of thinking about a problem.		0.500	
Eigenvalues	3.466	2.716	2.628
Percentage of explained variance	23.105	18.106	17.519

Table 1. The extracted factors in the concept of neuro-linguistic programming techniques (NLPT).

Using a factor analysis in the concept of NLPT—neuro-linguistic programming techniques, three factors which specify three basic areas of perceiving the effect of neuro-linguistic programming were extracted (**Table 1**). Regarding their content, these factors can be characterized as follows:

• Representational systems—finding out and using a preferred method of thinking of a partner. The managers scoring high in this attribute use more often a partner's style of expressing when communicating. They perceive more carefully the way in which the partner thinks and uses words. They observe more the partner's non-verbal expressions. According to their need, they change and use several communication styles. (Cronbach's alpha 0.775).

- Leading—It is focused on the changes of partner's thinking and subsequent changes of his behaviour. The managers scoring high in this attribute try to use or better to say change the values, attitudes, and opinions of a partner in communication. They act so that they use linguistic means which their partner understands, and they proceed from his opinions. Subsequently, they offer their own solution (Cronbach's alpha 0.812).

- Rapport—an intimate relation between communication partners. The managers scoring high in this attribute try harder to create mutual trust and understanding of partner's attitudes. By persuading the partner, they focus more on the relationship with this person (Cronbach's alpha 0.781).

The extracted factors explain totally 58.7% of variance. Statistically highly significant values of correlation coefficients among the attributes of representational systems, leading, and rapport demonstrate the fact that these phenomena are closely interrelated, and it is inevitable to pay attention to all factors (**Table 2**). The given correlation indicates the fact that a higher degree of using a preferred way of partner's thinking is connected to a higher level of a mutual relation between communication partners and a higher level of leading.

The managers assessed the individual NLP techniques statistically significantly differently (**Table 3**). The managers positively assessed the importance of all studied NLP techniques. However, most positively, they assessed the importance of rapport as an intimate relation between the communication partners. On the contrary, the significance of leading, as focusing attention on the changes of partner's thinking and subsequent changes of his behaviour, was assessed negatively.

The extracted NLP attributes enable to describe and better understand the NLP construct from the point of view of NLP techniques. At the same time, from the methodological point of view, they offer a possibility to quantify the phenomena related to NLP.

2.3. Communication skills

Apart from the assessment of political, economic, social and technological contexts, effective solutions of the impacts of turbulences in the economic environment, which we mentioned in the introduction, also assumes a complex personality development of managers including communication skills [27]. Coping with the changes resulting from these turbulences requires from managers a high level of flexibility, creativity, and courage but also the ability to communicate effectively. Even when communication skills are included into soft skills, they significantly influence the success of managerial work. The importance of communication in managerial work is also emphasized by the fact that managers pay a significant part of their job to different forms of

	Leading	Rapport
Representational systems	0.448**	0.548**
Leading		0.437**

**Correlation is significant at the 0.01 level (2-tailed).

Table 2. The intercorrelations of the factors of NLPT—Neuro-linguistic programming techniques.

Factors	Mean	Standard deviation
Representational systems	3.451	0.7987
Leading	2.799	1.0375
Rapport	3.981	0.6997

Table 3. Assessment of individual NLP techniques.

communication [28]. Communication skills are therefore one of the priorities of selecting people onto managerial positions as well as of further education and the development of managers.

Effective managerial communication is conditioned not only by the expertise of managers but also by the way of communication. In the concept of communication, Annan-Prah [29] emphasizes that sharing information among its participants is not spontaneous but planned and organized with a precisely defined goal. The authors deal with the specification of communication skills and define many communication skills from different angles.

2.3.1. Asking questions

One of the important communication skills is the art of asking right questions in an appropriate way [30]. It is true that if we want to get a reasonable answer to a question, we must ask for it in a right way. By asking questions, we can obtain, specify and verify information, but also support or block individual communication. Therefore, asking questions must be thoughtful but also purposeful so that communication does not deviate from a chosen topic [31].

2.3.2. Active listening

In many concepts, we meet with the requirement of being able to listen to a partner in communication [28, 32–35]. The ability to listen to a partner in communication is not only one of the essential communication skills but also a primary condition for the effective communication. At the same time, active listening, by which it is outwardly clear that we are willing to listen to a partner in communication, creates an atmosphere of trust and interest in partner's problems, knowledge, information, and so on. Active listening also allows to verify the accuracy of the message interpretation by a communication partner. On the contrary, unwillingness to listen, the suppression of listening by one's own narrative, interrupting speech, verbal and non-verbal expressions of the interference reduce the effectiveness of communication, or they cancel it.

2.3.3. Body language

Identifying and interpreting non-verbal communication expressions is another important communication skill [25]. Body language, as many authors call non-verbal communication, includes the expressions of mime, haptics, proxema, posturology, gestures, kinesis, eye movements, paralinguistics and so on. Body language tells about the emotions and inner attitudes of a person, sometimes more than a spoken speech. It is the first expression, and it can reveal a lot to an experienced observer [36].

2.3.4. Assertiveness

Assertiveness is an important part and the condition of effective communications. Potts and Potts [37] state that the essential characteristic of assertive behaviour in the concept of profit-loss is the orientation towards the strategy of profit-profit. Lahnerová [38] claims that assertiveness is based on a natural human behaviour. We can adapt assertiveness to ourselves and our needs. The techniques of assertive communication include the DESC methodology [39]: D (description), E (expressing), S (specifying), C (stating consequences) as well as ERPG methodology [40]: E (empathetic understanding of a partner's position), R (respect of a partner's position), P (problem), G (goal). According to Frankovský et al. [41], the aim of assertive communication in the sense of sound self-assertiveness is the authentic expression of emotions and appropriate communication of one's own attitudes and demands and staying to one's own points. It is about acquiring adequate communication skills within interpersonal relationships, while respecting moral principles.

The four described communication skills of asking questions, active listening, body language and assertiveness were the subject of the research, the results of which are presented in the following sections.

2.4. Assessment of communication skills

It is clear from the presented research results that NLP relates closely to the issue of communication. From a methodological point of view, one of the possible approaches to examine NLP methodology is the comparison of the respondents who attended NLP trainings and the respondents who did not attend such trainings. NLP was studied in the context of communication skills based on the comparison of the answers of the respondents who attended NLP trainings and the ones who did not attend NLP trainings. The conducted research was focused on evaluating the impact of the knowledge from the NLP area on communication skills. The aim of the research was to confirm the impact of NLP trainings based on the verification of the existence of statistically significant differences in perceiving the communication skills among the respondents who attended or did not attend NLP trainings.

In the research, an original questionnaire CS—communication skills methodology, which contained 17 items, was used. The managers were answering each item of CS methodology at a six-point scale of disagreement or agreement (0-definitely no, 1-no, 2-rather no than yes, 3-rather yes than no, 4-yes, 5-definitely yes).

Based on the available literature and using a factor analysis in the concept of CS—communication skills methodology, four factors which specify four basic areas of perceiving communication skills were extracted (**Table 4**). Regarding their content, these factors can be characterized as follows:

- Asking questions—the skill to ask appropriate questions by which we can get important information (Cronbach's 0.870).

- Active listening—the skill to pay a focused attention to a communication partner (Cronbach's 0.802).

- Body language—it is the skill outside verbal communication (Cronbach's 0.763).

- Assertiveness—the skill to express our opinions, attitudes, feelings in communication with other people (Cronbach's 0.717).

	Asking questions	Active listening	Body language	Assertiveness
In conversation, I pay attention to the body language of my counterpart.			0.768	
There are situations when I consciously supress my own negative body language signals.			0.818	
Body language often says more about emotions and inner attitudes than verbal speech.			0.686	
Nonverbal accompaniment of my verbal speech follows the rule of the golden mean.			0.643	
When listening to my partner, I focus myself on verbal as well as nonverbal expressions of the partner's speech.		0.648		
When listening to a speaker, I show with my verbal and nonverbal expressions that I pay attention to the speaker.		0.586		
Listening is very important for conversation therefore I pay a considerable attention to it.		0.691		
My ability to listen is at a high level.		0.790		
I always try to achieve the satisfaction of both sides in communication.				0.409
If it is needed, I can say no in every situation.				0.602
If somebody behaves unfair to me, I would tell him/her about it.				0.756
I am open and decided by expressing my positive and negative feelings towards the other side.				0.727
In communication, I use one of the techniques of asking questions.	0.734			
By asking appropriate questions, I get precise information.	0.860			
I ask questions to have a clear idea what my communication partner thinks.	0.787			
I realize that by asking wrong questions, I can disrupt communication.	0.598			
My skill to ask questions is at a high level.	0.731			
Eigenvalues	6319	1990	1544	1104
Percentage of explained variance	37.170	11.704	9084	6495

Table 4. The extracted factors in the concept of CS—Communication skills methodology.

The presented factor structure is also supported by the values of Cronbach's alpha and the intercorrelations of factors (**Table 5**).

The managers assessed individual communication skills statistically significantly differently (**Table 6**). The managers positively assessed the importance of all studied communication skills. However, they most positively assessed the importance of active listening, the ability

	Active listening	Body language	Assertiveness
Asking questions	0.684**	0.390**	0.437**
Active listening		0.351**	0.470**
Body language			0.276**

**Correlation is significant at the 0.01 level (2-tailed).

Table 5. The intercorrelations of factors of the CS—Communication skills methodology.

to pay attention to a communication partner. On the contrary, the least positively (but not negatively), they assessed the significance of assertiveness, the skill to express our opinions, attitudes, and feelings in communication with other people.

It is clear from the presented research results that NLP relates closely to the issue of communication. From a methodological point of view, one of the possible approaches to examine the NLP methodology is the comparison of the managers who attended NLP trainings and the managers who did not attend such trainings. The concept of a research project presented in this chapter accepted the two mentioned attributes of examining the issue. NLP was studied in the context of communication skills based on the comparison of the answers of the managers who attended NLP trainings and the ones who did not attend any NLP trainings.

The conducted research was focused on evaluating the impact of the knowledge from the NLP area on communication skills. The aim of the research was to find out the effect of NLP trainings based on the verification of the existence of statistically significant differences in perceiving the communication skills among the managers who attended or did not attend NLP trainings.

In the research, we used an original questionnaire CS—communication skills methodology, described and characterized above. The questionnaire contained 17 items. The managers were considering each item of CS methodology at a six-point scale of disagreement or agreement (0—definitely no, 1—no, 2-rather no than yes, 3—rather yes than no, 4—yes, 5—definitely yes).

We compared the answers of the respondents who attended NLP trainings and the ones who did not attend any NLP trainings. A mathematic-statistical data analysis was carried out using the Student's T-test in the statistical programme SPSS 20.

Factors	Mean	Standard deviation
Asking questions	3.8774	0.88040
Active listening	3.9375	0.80182
Body language	3.6895	0.85026
Assertiveness	3.5544	0.72594

Table 6. Assessment of individual communication skills.

	NLP training	Average	Standard deviation	T-test	Significance
Body language	Attended	3.49	0.812	2.858	0.005
	Not attended	3.92	0.843		
Listening	Attended	3.61	0.821	5.511	0.000
	Not attended	4.33	0.574		
Assertiveness	Not attended	3.31	0.789	4.382	0.000
	Attended	3.85	0.510		
Asking questions	Not attended	3.44	0.864	7.311	0.000
	Attended	4.41	0.543		

Table 7. Differences between the managers who attended NLP trainings and the managers who did not attend NLP trainings in perceiving communication skills from the point of view of extracted factors.

The discovered results were first presented from the point of view of the four mentioned factors of communication skills (**Table 7**), and subsequently, we analyzed the differences at the level of individual items which supplement these factors (**Tables 8–11**).

Table 7 presents statistically significant differences in assessing the factors of communication skills from the point of view of attending or not attending NLP trainings. We found out that the respondents who attended NLP trainings assessed the factors of communication skills more positively than those respondents who did not attend any NLP trainings.

The respondents who attended NLP trainings focus more on nonverbal communication using nonverbal expressions more often when communicating and listening more carefully to their partner in communication. Regarding body language, the respondents who attended NLP trainings confirm that they pay more attention to the body language of their partners in communication. They consider their ability to use nonverbal expressions to be highly developed, and their body language reflects their inner attitudes more than their

	Attended	Not attended	T-test	Significance
In conversation, I pay attention to the body language of my counterpart	4.41	3.60	4.989	0.000
There are situations when I consciously supress my own negative body language signals	3.22	3.22	0.030	0.976
Body language often says more about emotions and inner attitudes than verbal speech	4.40	3.90	3.210	0.002
Nonverbal accompaniment of my verbal speech follows the rule of the golden mean	3.76	3.16	3.632	0.000

Table 8. Differences between the managers who attended NLP trainings and the managers who did not attend NLP trainings in perceiving communication skills from the point of view of body language.

	Attended	Not attended	T-test	Significance
When listening to my partner, I focus myself on verbal as well as nonverbal displays of the partner's speech	4.13	3.62	3.105	0.002
When listening to a speaker, I show with my verbal and nonverbal expressions that I pay attention to the speaker	4.03	3.40	3.932	0.000
Listening for conversation is very important; therefore, I pay great attention to it	4.71	3.74	6.661	0.000
My ability to listen is at a high level	4.43	3.47	6.452	0.000

Table 9. Differences between the managers who attended NLP trainings and the managers who did not attend NLP trainings in perceiving communication skills from the point of view of active listening.

	Attended	Not attended	T-test	Significance
I always try to achieve satisfaction of both sides in communication	4.54	3.69	6.094	0.000
If it is needed, I can say no in every situation	3.68	3.03	3.774	0.000
If somebody behaves unfair to me, I would tell him/her about it	3.48	3.11	2.241	0.026
I am open and decided by expressing my positive and negative feelings towards the other side	3.60	3.34	1.949	0.050

Table 10. Differences between the managers who attended NLP trainings and the managers who did not attend NLP trainings in perceiving communication skills from the point of view of assertiveness.

	Attended	Not attended	T-test	Significance
In communication, I use one of the techniques of asking questions	4.22	2.74	7.341	0.000
By asking appropriate questions, I get precise information	4.51	3.45	7.057	0.000
I ask questions to have a clear idea what my communication partner thinks	4.52	3.59	6.816	0.000
I realize that by asking wrong questions, I can disrupt communication	4.56	3.97	4.785	0.000
My skill to ask questions is at a high level	4.40	3.17	7.797	0.000

Table 11. Differences between the managers who attended NLP trainings and the managers who did not attend NLP trainings in perceiving communication skills from the point of view of asking questions.

verbal expressions. Considering active listening, they pay attention to their communication partner using verbal and non-verbal expressions, and they are persuaded that their listening abilities are at a high level. With respect to the factor of asking questions, statistically

significant differences were identified in all items which constitute the factor. Also in this case, the respondents who attended NLP trainings scored higher. The NLP trainings participants understand the importance of questions in communication, and therefore, they realize they must pay considerable attention to them. They apply the techniques of asking suitable questions in communication resulting in acquiring accurate information. They know that by asking inadequate questions, they can disturb a conversation and so they need to know what their partner in communication thinks. The differences in assertiveness between the respondents who attended NLP trainings and the ones who did not attend NLP trainings were recorded only in some indicators. In communication, they always want to achieve the satisfaction of both parties and if necessary, they say no in every situation. The biggest differences were identified in the items connected to the factor of asking questions. NLP represents a technique of unprejudiced questions enabling to put questions at a higher level or to approach the core of a problem.

The results of the analysis of the differences between the managers who attended NLP trainings and those who did not attend any NLP trainings assessing individual items, which supplement extracted factors also support the presented findings (**Tables 8–11**).

It is evident from the presented results that after attending NLP trainings, the managers assessed communication skills more positively not only at a level of the examined factors but also from the point of view of individual items, which describe particular aspects of communication skills. There is only one case related to the conscious suppression of one's own negative body language signals, from the point of view of which, no difference between the managers who attended and did not attend NLP trainings was found out. The given expression of communication skills is probably so significant that managers pay their attention to it regardless of having attended NLP trainings or not.

3. Discussion and conclusion

Many authors and users of NLP techniques have an opinion that NLP improves communication. Parkes [42] states that neuro-linguistic programming has become one of the most successful methods in the area of corporate as well as personal education. In this context, Singh [43] states that NLP offers managers and employees a significant improvement in the effectiveness of work, understanding and motivation of other people, individually but also in groups. According to Tripathi [44], by using NLP, we will understand our emotional and behavioral patterns of our behaviour. It is possible to apply NLP techniques to improve interpersonal, intrapersonal, and communicational skills of managers.

Neuro-linguistic programming is not only about understanding communication with the others but also about understanding oneself.

Understanding communication from the point of view of NLP provides us with the possibility to find the reasons how and based on what people communicate the way they communicate or they behave. The whole communication takes place in our heads, and it is therefore important to know that not circumstances but reactions to circumstances determine our behaviour in a given situation [45].

The results of the research speak in favor of confirming the effects of NLP techniques from the point of view of improving the communication with oneself as well as from the point of view of communication with other people [43]. They can be used, as already mentioned, in the context of managerial work [4], entrepreneurship, business [46, 47], services, marketing [5, 6] and many other areas of the economic environment [48, 49].

Based on the presented results and findings, we can think about the knowledge gained by attending NLP trainings as the knowledge which helps to improve communication skills. The presented results can be also used as a starting point for further research of NLP. From the point of view of further research, the question of the analysis of the connections between NLP and the development of communication competences of managers in the context of personal features of managers comes to the foreground.

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Conflict of interest

The authors hereby declare that the research is original in its entirety and there is no conflict of interest.

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References

[1] Drucker PF. Management Challenges for the 21st Century. New York: Harper Business; 2001

[2] Peters TJ, Waterman RH. In Search of Excellence: Lessons from America's Best-Run Companies. New York: Harper & Row; 1982

[3] McKay M, Davis M, Fanning P. Messages: The Communication Skills Book. New Harbinger: Oakland. CA; 1995

[4]   Daňková A, Droppa M. The impact of National Culture on working style of Slovak man-
      agers. Procedia Economics and Finance. 2015;**34**:164-171

[5]   Bačík R, Mihal J, Fedorko R. The analysis of the impact of selected communication chan-
      nels on the selected city population opinion. Polish Journal of Management Studies.
      2015;**12**(2):7-14

[6]   Korauš A, Štefko R, Dobrovič J. Decision-making satisfaction and behaviour of bank
      customers: Survey results analysis. Actual Problems of Economics. 2016;**186**(12):291-301

[7]   O'Connor J, Seymour J. Úvod Do neurolingvistického programování [Introducing
      Neuro-Linguistic Programming]. Praha. Institut pro neuro-lingvistické programování;
      1998

[8]   O'Connell S. Harnessing power with your mind: Final 1 ed. Sunday Times. London:
      News International Trading Limited; 2006

[9]   Albalawi KS. Effectiveness of neuro-linguistic programming on enhancing university
      students' quality of life. International Journal of Arts and Sciences. 2014;**7**(6):431-442

[10] Witkowski T. Thirty-five years of research on neuro-linguistic programming. NLP
      research data base. State of the art or pseudoscientific decoration? Polish Psychological
      Bulletin. 2010;**41**(2):58-66

[11] Oberholzer CH. The Role of Neuro Linguistic Programming in Improving Organisational
      Leadership through Intrapersonal Communication Development. South Africa:
      University of Pretoria; 2013

[12] Knight S. NLP at Work: The Essence of Excellence. London. Nicholas Brealey Publishing;
      2010

[13] Lübeck W. Handbuch Des Spirituellen NLP. Windpferd: Verlag; 2003

[14] Alder H. NLP for Managers: How to Achieve Excellence at Work. United Kingdom:
      Piatkus Books; 2006

[15] O'Connor J, Seymour J. Introducing NLP Neuro-Linguistic Programming. Great Britain:
      Thorsons, (Reissue) edition; 1990

[16] Hamill D, Kerr D. An Introduction to NLP: Exploring What Works. What Works Consul-
      ting: Cheshire; 2013

[17] Basu R. Persuasion Skills Black Book: Practical NLP Language Patterns for Getting the
      Response you Want. UK Mainland: Bookshaker; 2009

[18] Fritzsche T. Jak přesvědčivě vyjednávat: Psychologické Strategie a Metody [How
      to Negotiate Convincingly: Psychological Strategies and Methods]. Praha: Grada
      Publishing; 2015

[19] Lazarus J. Part 2: Communication—Learning the many subtleties—Chapter 05: Getting
      people on your side: How to build trust with anyone. Richmond: Crimson Business;
      2010. pp. 69-79

[20] Miller M. How to Persuade Anyone using Pacing and Leading [Internet]. 2017. Available from: http://www.mindwhirl.com/marketing/marketing-psychology/how-to-persuade-anyone-using-pacing-and-leading/ [Accessed: 2017-12-07]

[21] Perez C, Parker D. Creating Rapport to Influence. Enfield: Institute of Management Services; 2015

[22] Wake L. Applying NLP Tools and Techniques in an FMCG Environment. Hong Kong: Emerald Group Publishing, Limited; 2011. pp. 121-125

[23] Stone K. Influential People. Manager. Telford: Institute of Administrative Management; 2005

[24] Bradbury A. Manažerské Dovednosti: Jak ovlivňovat druhé [How to Influence Others]. Praha: Computer Press; 2001

[25] Alder H. Handbook of NLP: A Manual for Professional Communicators. New York: Gower Publishing Limited; 2002

[26] McCartney TK. The NLP Practitioner: A Practitioners Toolkit. United States: Lulu Publishing Services; 2014

[27] Kenton S. Studying Business and Management. Trotman and Company: Richmond; 2000

[28] Ferguson JG. Careers Skills Library: Communication Skills [Internet]. 2004. Available from: http://library.ikhzasag.edu.mn/ebooks/Communication%20Skills.pdf [Accessed: 2017-12-14]

[29] Annan-Prah EC. Basic Business and Administrative Communication. Bloomington: Xlibris; 2015

[30] Von Kanitz A, Scharlau C. Gesprächstechniken. Freiburg im Breisgau. Haufe Lexware GmbH & Co; 2015

[31] Knippen JT et al. Clarifying communication. Journal of Workplace Learning. 1999;**11**(5): 161-163

[32] Borg J. Talkability: Discover the Secrets of Effective Conversation. Pearson Business. Amazon Media EU S.à r.l.; 2016

[33] McLagan P, Krembs P. On-The-Level: Performance Communication that Works. Berrett-Koehler Publishers; 1998. 192 p

[34] Khelerová V. Komunikační a obchodní Dovednosti manažera [Communication and Business Skills of a Manager]. Praha: Grada Publishing; 2010

[35] DeVito JA. Essentials of Human Communication. Books a la carte edition. Cambridge, Pearson: Books a la Carte; 2013

[36] Bruno T, Adamczyk G. Körpersprache. München, Bayern, Deutschland: Rudolg Haufe Verlag GmbH & Co. KG.; 2009

[37] Potts C, Potts S. Asertivita—umění být silný v každé situaci [Assertiveness—The Art of Being Strong in Every Situation]. Praha: Grada Publishing; 2014

[38] Lahnerová D. Asertivita Pro manažéry [Assertiveness for Managers]. Praha: Grada Publishing; 2009

[39] Bower SA, Bower GH. Asserting Yourself: A Practical Guide for Positive Change. DA: Capo Press; 2004

[40] Stevens IG. You Can Choose to be Happy. "Rise Above" Anxiety, Anger and Depression with Research Evidence. California: Wheeler- Sutton Publishing Co.; 2010

[41] Frankovský M, Birknerová Z, Janovská A, Zibrínová Ľ. Vybrané kapitoly sociálnej psychólgie pre manažérov [Selected Chapters of Social Psychology for Managers]. Prešov: Prešovská Univerzita V Prešove; 2012

[42] Parkes P. NLP for Project Managers. Make Things Happen with Neuro-linguistic Programming. London: BCS; 2011. 222 p

[43] Singh A. Neuro Linguistic Programming: A Key to Business Excellence. Abingdon: Total Quality Management & Business Excellence; 2008

[44] Tripathi S. Neuro-linguistic programming: A tool for developing behavioral skills and competencies. Hyderabad. IUP Journal of Soft Skills. 2012;**6**(1):16-28

[45] Krištofovič P. Minulé neúspechy Nie sú zárukou budúcich neúspechov [Past Failures Are Not a Guarantee of Future Failures] [Internet]. 2016. Available from: https://www.pkacademy.eu/sk/blog/minule-neuspechy-nie-su-zarukou-buducich-neuspechov/ [Accessed: 2018-01-08]

[46] Hudec O, Suhányi L, Urbančíková N. Regional decision-making criteria: Strategic investment in the Central Europe. Theoretical and Empirical Researches in Urban Management. 2014;**92**:104-117

[47] Suhányi L, Suhányiová A. Multi-criteria decision-making tool design for the investment decision-making of territorial self-government regions. Journal of Applied Economic Sciences. 2014;**91**:110-122

[48] Horváthová P. The application of talent management at human resource management in organization. In: 3rd International Conference on Information and Financial Engineering (ICIFE 2011); China: Shangai. 2011. pp. 50-54

[49] Mikušová M, Čopíková A. The identification of crisis manager skills by using Saaty's method. In: Proceedings of the 16th Eurasia Business and Economics Society Conference; Financial Environment and Business Development; Switzerland: Springer International Publishing. 2016. pp. 341-367