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Neuro-linguistic Programming Based on the Concept of Modelling

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Abstract

Purpose of the article is: with this work, we want to present some neuro-linguistic programming (NLP) techniques that will improve the performance of junior and senior athletes, cadets, and children of the representative judo team of Romania.
Methods : we use an questionnaire and we show that communication is the main channel between athletes and coaches.
Results: two ways are emphasised in NLP: first, through asking descriptions, such as "saw," "heard," "felt" (visual, auditory, kinaesthetic [VAK]), and second, by making the language more dynamic and empirical based on the senses and space-time-nominated topics and events. NLP is replete with behaviour-modification techniques which cause rapid adaptations, particularly in sporting activity, where search-optimising cognitive behaviour is often a short-term goal. Verbs, movements, actions, processes, etc., set the reality in a more precise, more accurate manner. NLP has a real arsenal of effective techniques capable of generating rapid changes in behaviour of athletes for favourable performance. NLP identifies these ways as visual, auditory, kinaesthetic, somatosensory, olfactory, and gustatory to refer to different systems of representation of actions.
Conclusions: The basic principles of neuro-linguistic programming are based on the concept of modelling. Subjects that stimulate visual and auditory channels will have positive effects in the kinaesthetic sphere.

Keywords: behaviour, neuro-linguistic programming, modelling, sensation

1. Introduction

With this work, we want to highlight some specific aspects of judo training. Using neuro-linguistic programming (NLP) techniques, we want to achieve ultimately increasing the performance capacity components of the representative judo team of Romania. We chose this topic because these techniques have been barely applied in the science of sports.

Verbs, movements, actions, processes, etc., set the reality in a more precise and accurate manner. "P.N.L. has a real arsenal of effective techniques capable of generating rapid changes in the behavior of the athletes, by influencing the performance" (Grosu, E. F., 2001, p. 33). If there is a particular person who is brave enough to develop a specific task or issue with NLP, we can copy the internal processes to achieve similar results. PNL

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Consciousness, subconsciousness, will, desire, imagination, body structure, relationship dynamics—"all represent a kind of interface between how we relate between each others, how we would like to be ourselves, and how we finally achieve self fulfillment" (Halimi, D., 2001, p. 4). Language reflects our experience. The experience begins from the senses and the internal development of the information. Some linguists say that using basic language is derived from sensations that we had before and that brought us experience. These sensations are certainly influenced by other senses. "Language reflects these relationships more than normally when people realize" (Jacobs, S., 2009, p. 191). "P.N.L. has a real arsenal of effective techniques capable of generating rapid changes in behavior athletes by influencing performance" (Nideffer is quoted by Grosu, E. F., 2001, p. 33). General panorama PNL refers to how to use the nervous system (neurology and brain) to create a model that in turn creates the sense of reality. Within our nervous system, the brain receives information from the environment through the senses. We use this to develop sensor information ("thoughts") and store them ("memory"). NLP defines these ways as visual, auditory, kinaesthetic, somatosensory, olfactory, and gustatory to refer to different systems of representation of actions.

2. Material and methods

This paper is part of a larger study which aims for the optimisation of the judo training of women of all ages in the Olympic Centre in Cluj-Napoca. This experiment took place from October to December 2012. We asked athletes to think and imagine the following processes as they were running: uchi-mata, harai goshi, and koshi-guruma. Athletes needed to think about and focus on technique and execution: kuzushi (unbalancing), uchi-komi (input method), nage-komi (projection, design). It is important that ideomotor representations of motor acts are doubled by the sensations that accompany the implementation of the respective motor act.

The research methods we used were as follows: the study of the literature, the observation, the questionnaire inquiry, the statistical-mathematical method, and the graphical representation method.

For this, we did an investigation that was based on a 42-item questionnaire of authors R. Bandler and T. Garner (2011, pp. 419–420) and S. Jacobs (pp. 46–48). The authors classified these items into three categories: visual, acoustic, and kinaesthetic. The athletes gave their responses in written form. An analysis of submodal distinctions determined the main channel of communication between coaches and athletes (for each individual). The questionnaire was given to 25 athletes of the representative judo team of Romania, which is divided into four groups: children (12–13 years old), cadets (14–16 years old), juniors (17–19 years old), and seniors (up to 20 years old). At this point, we can say that the change of submodalities can have a strong effect on other submodalities, even in another sense. For example, if you increase the brightness of an image in our minds, that intensity could increase the sensations it determines. They speak either qualitative or quantitative trading.

3. Results

Here's a list of the main visual submodalities followed by a brief description of each and some instructions on what you can change: brightness, sharpness, distance, static image, size, motion picture, shape, associate, position, dissociated, direction, profundity, dimension, contrast, flat image, clarity, framed/unframed, colour, others.

"In most of these cases that we have difficulty in understanding these types of differences are examples of limits we use our language (rather limits our sensory experience)" (Jacobs, S., 2012, p. 191). Colour indicates the number of colours you see. The image is in black and white or in colour or a combination of both. There are glaring colours that you deem as somehow central or most important. The following guidelines give athletes. For example, an image can be focused but is not clear, or it may be exposed more accurately, or it may have diffused parts. As a form, layout means that it has a picture, but even any form is seen within the image. The same is true for size, distance, and position.

The athletes were instructed, "When you are assigned the image, you see through your eyes just as you would if you were there (generally speaking, a panorama). In other words, you do not see inside the image. When you disassociate yourself from the image, the opposite happens—you see the image through the eyes of another person, as if watching a movie." A submodule distinctions analysis (after R. Bandler and T. Garner, 2011)—including visual, auditory, and kinaesthetic components—can be seen in the table below.

Table 1. Analysis of sub-module NLP - Visual distinctions - lots of judo components

#	Category																									
Group	12 – 13 age Childrens			14 - 16 ages Cadets												17- 19 ages Juniors					Up 20 ages Seniors					
Subjects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Visual	7	8	3	4	4	11	4	3	5	11	5	4	4	10	6	4	7	8	6	5	8	3	7	10	10	

The values of the distinctions between visual submodalites distinctions can be seen in Table 1. In the children category, athletes had visual preferences with the value 8. Cadets in group sports were three values of over 10 visual components, being the largest group in terms of number. In the junior athletes' group, the maximum value was 8. One of the athletes preferred visual communication training. Three of five senior athletes preferred visual submodalites with values above 8.

Acoustic submodalites distinctions. Sure, there are other submodalites of sound quality more important than volume, especially with regard to voices. "The characteristic voice of a person technically called vocal could have an impact on us more than anything" (Jacobson, S., 2009, p. 46). Auditory submodalites were described by Bandler and Garner (2011, p. 198–199) using the following terms: sounds, vocal words, internal, position, external, frequency, direction, tone, tempo, voice, volume, distance, time, pace, among others.

Giving information to athletes. It may be important to note and identify the precise location where the sounds come from, whether inside or outside. The direction where it comes from and its distance from us are relevant. "The volume could be influenced by distance and direction usually sounds even worse when on, and volume stronger when closer" (Jacobson, S., 2009, p. 46).

Table 2. Analysis of sub -module NLP - Auditory distinctions - lots of judo components

#	Category																									
Group	12 – 13 ages Childrens			14 - 16 ages Cadets												17- 19 ages Juniors					Up 20 ages					
Subjects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Auditory	3	2	3	3	2	3	2	2	3	7	2	4	3	3	4	4	3	4	3	2	2	1	2	5	6	

There are other sound qualities that are important. For the distinguished, it is clearly useful to think in terms music. "A feature is the frequency, the more higher or lower notes that are sung to a piano also thinking of music could be a rhythm and tempo (speed)" (Jacobson, S., 2009, p. 46). Even the time that it takes to actually make a sound may be important in some cases. Tone and timbre cover the frequency range and sound distribution.

With regard to data interpretation, we can say that in this phase of the experiment, athletes do not use submodule acoustic distinctions in the training process. There is only one sports group category—that is, cadets (14–16 years old)—using acoustic submodalities with a value 7. More work on the ideomotor to complete the representation of motor acts, as well as on the technical elements of training, should be done in the future.

A kinaesthetic submodalities data analysis shows two sports groups: one group of cadets and another group of children for representations of certain ideomotor/kinaesthetic sensations with values of 9 and 10, respectively.

Table 3. Analysis of submodalities NLP kinaesthetic distinctions - lots of judo components

#	Category																									
Group	12 – 13 age Childrens			14 - 16 ages Cadets											17- 19 ages Juniors					Up 20 ages Seniors					
Subjects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Kinestethic	0	9	0	2	3	2	3	3	3	10	3	0	5	4	7	6	4	3	7	5	0	1	5	6	**6**

Kinaesthetic submodule distinctions include the following: internal, proprioceptive sensation, external shape, position, temperature, weight, movement, duration, intensity, size, humidity, pressure, consistency, frequency, rhythm, tactile sensation, balance, emotion.

Kinaesthetic submodalities refer to the following sensations listed below, which may or may not identify athletes. Athletes were suggested to think about the tactile, proprioceptive, and vestibular sensations they felt during ideomotor representations of various technical elements.

1. Tactile sensation: sensation upon skin contact (temperature, composition, humidity, physical contact)
2. Proprioceptive sensation: sensation inside the body (internal pressure, tension, weight, posture, and limbs)
3. Vestibular sensation: sense of balance (position in space, gravity-dependent relationships)

A strong emotion contains all these elements and more. We may have physical sensations similar to each other in very different ways, so we describe them using different names. If we want to feel that feeling, it means that we like it, and we feel bad otherwise—same physiological sensation, but different interpretation.

Table 4. Analyses of submodalities NLP – average ages categories -- lots of judo components

Nr issues	Category			
SUB MODULE OF PERCEPTION	12 – 13 ages Childrens	14 - 16 ages Cadets	17- 19 ages Juniors	Up 20 ages Seniors
Subjects	3	11	5	6
Visual	22,6	28	30,4	29
Auditory	19,3	25,3	13,2	16,8
Kinaesthetic	14,3	25,5	18,4	19,6
Gustatory - Olfactory	5	1,54	9,6	4,8

More work on these distinctions of training submodules is needed in the future so that athletes feel better about their every move (act motor) and know if kinaesthetic submodalities refer to them identifying those feelings or not.

The table below is in part averages on each submodule of perceptions within NLP and in part visual, auditory, kinaesthetic, gustatory, and olfactory components for different athletic groups.

Components of visual, auditory, kinaesthetic, gustatory, and olfactory submodalities were selected after an operative scheme proposed by Sid Jacobson (2009, p. 191). Until recently, it took into account in an analogue manner only the presence or absence of different sensations felt during the execution of motor acts, as seen in the

first part of the study. Today, the analysis of sensations felt during ideomotor representations take into account the different submodalities of each sensation in digital type. For example, brightness and its value can be different for each sport. Also the size, shape, and all other distinctive distance and visual submodalities can be felt and interpreted differently by each athlete. The same can be said of all other components of submodalities: auditory, kinaesthetic, gustatory, and olfactory. The values in Figure 1 refer to each category by each age-group's sensations. It can be seen that in terms of the kinaesthetic component, all age-groups can work longer to reach the levels achieved by visual sensations.

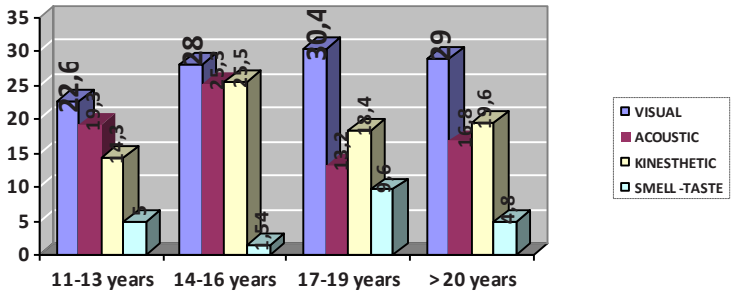

Figure 1. Analysis of all submodalites's perception

4. Statistical processing of data

It was performed using SPSS 15.0. In order to compare averages between groups of subjects, we applied the analysis of variance (ANOVA) and post hoc test for multiple comparisons. Based on Bonferroni correction, materiality was $p \leq 0.05$. The correlation between variables was performed using the Pearson product-moment correlation coefficient (r). The seminification threshold was $p \leq 0.01$. Graphics were made with the box plot method, which included the minimum and maximum values, median, percentile 75 and 25, and extreme scores.

Results were determined by ANOVA.

Table 5. Results analyse test ANOVA

	Mean Square	F	p
Visual sensations	39.991	1.918	.158
Acoustic sensations	202.838	8.306	**.001**
Kinaesthetic sensations	133.944	2.106	.130
Gustatory, and olfactory sensations	40.991	2.466	.090

* The mean difference is significant at the .05 level.

Coaching NLP was significantly different only if acoustic sensations ($F = 8.30$, $p = 0.001$). After making adjustments using Bonferroni number of comparisons, significant differences between the averages were observed between cadets and juniors ($MD = 12.164$, $p = 0.001$) and between cadets and seniors ($MD = 8.53$, $p = 0.016$). The average acoustic sensations of cadets ($M = 25.36$, $SD = 4.5$) was significantly higher than the average of juniors ($M = 13.3$, $SD = 2.77$) and senior women ($M = 16.83$, $SD = 4.62$). In other cases, there was no significant difference in the comparison of averages.

Post Hoc Tests - Multiple Comparisons - Bonferroni

Table 6. Results analyse Post Hoc Tests - Multiple Comparisons – Bonferroni

Dependent Variable	(I) Subjects	(J) Subjects	Mean Difference (I-J)	Std. Error	Sig.
Auditory sensations	childreni (12-13 years)	cadets (14-16 years)	-6.030	3.219	.450
		Jun.(17-19 years)	6.133	3.609	.624
		seniors (>20 years)	2.500	3.494	1.000
	cadets (14-16 years)	childrens (12-13 years)	6.030	3.219	.450
		Jun. (17-19 years)	**12.164(*)**	**2.665**	**.001**
		senioare (>20 years)	**8.530(*)**	**2.508**	**.016**
	jun (17-19 years)	childrens (12-13 years)	-6.133	3.609	.624
		cadets (14-16 years)	**-12.164(*)**	**2.665**	**.001**
		seniors (>20 years)	-3.633	2.992	1.000
	Sen. (>20 years)	childrens (12-13 years)	-2.500	3.494	1.000
		cadets (14-16 years)	-8.530(*)	2.508	.016
		jun.(17-19 years)	3.633	2.992	1.000

* The mean difference is significant at the .05 level.

Correlations

Table 7. Results analyse - Correlations

		Visual sensations	Auditory sensations	Kinaesthetic sensations	Gustatory, and olfactory sensations
Visual sensations	r	1	.270	**.593(**)**	-.037
	p		.192	**.002**	.861
Auditory sensations	r	.270	1	**.652(**)**	-.293
	p	.192		**.000**	.156
Kinaesthetic sensations	r	**.593(**)**	**.652(**)**	1	-.300
	p	**.002**	**.000**		.145
Gustatory, and olfactory sensations	r	-.037	-.293	-.300	1
	p	.861	.156	.145	

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

There is a significantly positive correlation between visual sensations and kinaesthetic sensations ($r = 0.59$, $df = 23$, $p < 0.01$) and auditory sensations and kinaesthetic sensations ($r = 0.65$, $df = 23$, $p < 0.01$). There is no significant correlation between kinaesthetic, olfactory, and gustatory sensations. Subjects that stimulate visual and auditory channels will have positive effects in the kinaesthetic sphere.

5. Conclusions

NLP deals with "doing your own brain work" so that we can take responsibility of the mechanisms of cognitive behaviour that control the subjectivity of an individual. These mechanisms, or the ideomotor representations (modalities and submodalities coding ideas, knowledge, conventions, values, decisions) and physiology (quality using our own body and nervous system), can be more complete. To illustrate this process, NLP invented and discovered numerous techniques (human technology) and methods providing specific schemes (programs) that allow us to manage our subjectivity with ease and efficiency, as well as to develop our self-assessment ability and the

athletes' tendency to surpass their abilities and to perfect themselves. To summarise, the controlled movement of athletes of the representative judo team of Romania resulted in the following:

1. The athletes being fully conscious of the action they are performing.
2. Clarity of thought associated with the action and with all distinction submodalites of NLP.

In addition, athletes are obliged to concentrate on the present moment (Vittoz, R., Godefroy, C.H., 2001, p. 50).

For technical staff, sports groups are very important in order to understand the best way to communicate within each sport so that the teams reach optimal results at major national and international competitions**.**

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