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OPINION OF PUPILS WITH DIFFERENT MOTOR PERFORMANCE ON THEIR PHYSICAL EDUCATION TEACHERS

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ABSTRACT

The perception of motor performance is one of the essential factors of pupils' subjective interpretation of the physical education experience. In accordance with this the pupil experiences and also assesses the behaviour of his PE teacher. 485 primary school pupils of both sexes were measured with a battery of tests for motor skills and morphologic characteristics. At the same time pupils evaluated the didactical behaviour of their PE teachers. Pupils with a positive model of motor skills perceived and evaluated the behaviour of their teachers as expected. In perceiving and evaluating didactic behaviour of PE teachers male pupils differed from female pupils in certain essential dimensions.

Key words: physical education, motor skills, pupils, primary school, PE teacher

LE OPINIONI DEGLI ALUNNI CON CAPACITÀ MOTORICHE DIFFERENTI SUI LORO INSEGNANTI DI EDUCAZIONE FISICA

SINTESI

La facoltà di comprendere le capacità motoriche è uno dei fattori cruciali dell'interpretazione soggettiva dell'alunno riguardo all'esperienza concernente l'educazione fisica. In base a tale esperienza l'alunno sente ed anche valuta la competenza del suo insegnante di educazione fisica. Sono state testate e studiate le capacità motoriche e le caratteristiche morfologiche su un campione di 485 alunni che frequentano la scuola elementare di tutti e due i sessi. Contemporaneamente gli alunni hanno valutato la competenza didattica dei loro insegnanti di educazione fisica. Gli alunni con buone capacità motoriche hanno capito ed anche valutato la competenza dei loro insegnanti conformemente alle aspettative. Per quanto riguarda il capire ed il valutare la competenza didattica degli insegnanti di educazione fisica i ragazzi si sono differenziati dalle ragazze in modo considerevole.

Parole chiave: educazione fisica, capacità motoriche, scuola elementare, insegnante di educazione fisica

INTRODUCTION

In school physical education the pupil expresses himself or herself with exercise. Physical activity and confirmation of motor skills can produce feelings of ease that prove foundations for judging the worth of their PE teachers. On the other hand, however, the level of motor performance also influences the response of others and their expectations and behaviour. On this basis the pupil has at his or her disposal a system of wishes and therefore expects that the behaviour of the PE teacher is in accordance with his or her model of teacher. Comparisons will demonstrate whether pupil expectations are in fact in accordance with teachers' actual behaviour. The matching of expectations to responses is to a large degree linked to a model of performance ascribed by the pupil. The perception of motor skills is one of the essential factors of individual subjective interpretation of the physical education experience. We can therefore surmise that pupils with positive model of motor skills will mark their teacher's behaviour as expected, whilst those with poor model of motor skills will perceive a mismatch in expectations.

In the complex relationships a pupil has towards his body and his motor abilities various conceptions and experiences from the past are reflected as well as expectations for the future. The attitude to one's body and to one's motor abilities is not only the essential part of a pupil's personal image and the perception of one's value, but also the issuing point of one's understanding of the universe and reality, and it is an important part of emotions and social relations with other people.

Perhaps it is foreseeable that the identification of important didactic dimensions include pupil impressions expressed with marks given by the pupils interdependent of their general attitudes to teachers. The theory that the pupils' attitude and position to physical education to a considerable degree is conditional on their PE teacher, is confirmed by the pupils' positive or higher marking of the methods of his behaviour. Negative or lower evaluation of the latter proves just the opposite.

We partly dispose of the empirical proofs that school children with their positive model of motor abilities estimate actions of their PE teacher as anticipated, and pupils with less sports experiences detect disproportion's in their expectations. There is no literature available to explain what components of motor efficiency form a pupil's positive model of motor abilities and how it is linked with different forms of pedagogic actions of PE teacher.

PRINCIPAL DETERMINANTS OF PHYSICAL EDUCATION TEACHER ACTIONS

When observing different teachers in similar situations we can see that they react very differently. Differences in their behaviour can be explained with the fact

that a teachers actions can be understood as a result of subjective reasons, which depend on a given situation. Teachers understand and interpret similar "objective" situations slightly differently. They create various situation imagery, which consequently lead to different actions. Imagery of given situations are derived from a personal inner self (personal model) and from outside circumstances (external model) (compare Nitsch, Allmer, 1976).

Personal model on one hand contains evaluation of a teacher on the basis of his capabilities and abilities (Widmer, 1978), linked to the assignments and requirements of the physical education and formation process (capability model). On the other hand the evaluation of a teacher is based on his readiness or rather his acceptability (acceptability model). It is determined by a structure of motives conditioned by different pedagogical approaches. The model of "capability" and the model of "acceptability" are not independent from each other, they rather mutually influence and link a teacher's actions.

The model of external world (external model) is composed from the model of a pupil and a model of a teacher. They are both, the pupil as well as the teacher, in the interaction with the model of a lecture.

In case of the pupil – model it is not a question of teacher's evaluation of a pupil, which is reflected in the teacher's anticipation of a pupils reactions in certain circumstances. A teacher makes for himself a personal picture of each pupil taking into account pupil's capabilities and physical condition.

A model of a teacher determines his actions from the point of view of educational and formation assignments. Every teacher creates a personal model of a lecture, which is in line with the level of difficulty, encouragement and challenge of a given situation.

Personal model and the model of external world help to approve a teachers expectations based on calculation processes, directing him towards the realisation of the proposed or personally imposed objectives, which leads also to the decisions of how he is going to react.

From this issuing point a pupil disposes with a system of wishes, expecting that the actions of a PE teacher are going to be in line with his model of a teacher. Comparison will show, whether a pupil's expectations are compatible with the actual actions of a teacher or not.

THE PURPOSE AND THE OBJECTIVE OF THE RESEARCH

If we agree that the efficiency of a PE teacher is limited with a context and a situation, we can accept the issue that the pupil's reaction is identical with those conditions. This is the essence of the pupil's opinions, views and wishes in connection with their PE teacher. Such

real and ideal picture of pupils most certainly is a variable, which in a long term affects their images and interests for sports. If for instance a pupil considers his teacher to be too severe, as a person, who does not respect their initiative, and if the process of physical education is conceived in an invariable manner, with little diversity, that kind of socialisation environment shall imprint mostly negative attitudes towards sport. It is quite different if a PE teacher, who is familiar with a pupil's expectations, respects them.

It is possible to foresee that the identification of important teacher's dimensions is captured in the pupil's impressions. They are expressed with the signs and marks given by the pupils. The thesis that the attitudes of a pupil depend significantly on their PE teacher is confirmed from the point of view of the pupil's positively or highly evaluated ways of his actions. Their negative and lower evaluation is just the opposite of the above said.

We attempted to clarify in the study certain appearances of forms of interdependent connection between pupil motor skills and morphological characteristics and methods of didactic behaviour of their PE teachers. We set the following objectives:

1. To establish the existence and definition of models of motor skills and morphological characteristics of pupils characteristically influencing their perception and evaluation of methods of didactic behaviour of their PE teachers.
2. To establish the connection between the motor skills and morphological characteristics of pupils and the dimensions defining individual methods of the didactic behaviour of their PE teachers.
3. To establish the differences in connection between motor skills and morphological characteristics of pupils and the dimensions defining individual methods of the didactical behaviour of their PE teachers.
4. To find the extent of the influence of motor abilities and morphological characteristics of male and female pupils on the criteria variables, which define particular ways of pedagogical actions of their PE teacher.

STUDY METHODS

485 pupils of both sexes from the sixth and seventh grade of primary school were included in the study. When selecting schools which were frequented by pupils involved in the research we respected to a large extent the specificity of the residential area. Schools were selected in rural areas, in the areas with separate industrial plants and rural background, in cities and in exclusively industrial areas, to get this way a representative sample in regard to geographical and economic characteristics.

Girls evaluated their female PE teacher, boys their male PE teacher. At the same time pupils were tested

with a battery of tests measuring their motor skills and morphological characteristics. Didactic behaviour of the PE teachers was evaluated using five instruments defining:

- encouraged interpersonal relations and understanding (A)
- open and clear communication (B)
- specific professional competence (C)
- educational strategy (D)
- leadership (E)

The measuring characteristics of all five instruments defined with 65 standardised variables are accurately presented in the study entitled *The forming of instruments for measuring behavioural forms and methods of PE teachers* (Cankar, Ambrožič, 1991). The coefficients of the reliability of all five instruments varied from 0.70 to 0.85.

To measure motor abilities and morphological characteristics of female and male pupils involved in the study we implemented a battery of eleven measuring procedures (Strel, Šturm, 1981).

1. body height – longitudinal dimension of the body (BH)
2. body weight – volume of the body (BW)
3. skin fold – quantity of fat under the skin (SF)
4. touching plates with the palms – speed of alternating movements (TPP)
5. jumping a distance – explosive power (JD)
6. overcoming a barrier backwards – co-ordination of the whole body's movement (OBB)
7. lifting the trunk – muscle endurance of the trunk (LT)
8. bending to a bench – mobility (BB)
9. hanging from a beam – muscle endurance of the shoulder blades and arms (HB)
10. 60 metre sprint – sprint speed (SS)
11. 600 metre run – endurance in submaximum, continuous effort (ES)

The measuring characteristics of the battery of eight motorical and three morphological tests are accurately presented in the study entitled *The reliability and structure motorical and morphological characteristic six year old pupils* (Strel, J., Šturm, J., 1980). The coefficients of reliability of the tests varied from 0.75 to 0.90. The data were processed using canonical correlation analysis and the orientation and size of relationship between dimensions of PE teacher behaviour and pupil motor skills and morphological characteristics were determined.

RESULTS AND DISCUSSIONS

The algorithm for determining the canonical correlation between variables of motor skill and dimensions defining the five methods of PE teacher behaviour was confirmed on one characteristic root only of the canonical equation at 00 level of risk. The other two factors were at the border of interpretability and with boys was

only characteristic at 0.2, and girls 0.3. The structure of the block of motor and morphological variables (tables 1 and 2) define the measuring procedures with boys and girls that define the motor skills and morphological characteristics as a complex structure activated when it is necessary to perform certain motor tasks.

Table 1: The structure of canonical factors isolated in the area of motor and morphological variables – boy pupils.

Tabela 1: Struktura kanoničnih faktorjev, izoliranih v prostoru motoričnih in morfoloških spremenljivk – dečki.

	1	2	3	4	5
BH	-.074	-.428	-.456	.446	-.025
BW	.073	-.194	-.322	.463	-.184
SF	.378	.236	.060	.511	-.028
TPP	-.165	-.114	.306	-.101	-.111
JD	-.545	-.265	-.303	.139	.243
OBB	.385	.154	.003	.036	-.307
LT	-.127	.176	.192	.399	-.091
BB	-.426	-.251	.482	.054	.505
HB	-.133	.106	-.143	-.449	.146
SS	.456	.513	.014	-.105	.389
ES	-.826	-.216	.184	-.046	.260

Table 2: The structure of canonical factors isolated in the area of motor and morphological variables – girl pupils.

Tabela 2: Struktura kanoničnih faktorjev, izoliranih v prostoru motoričnih in morfoloških spremenljivk – dečke.

	1	2	3	4	5
BH	-.098	.041	.165	.162	-.272
BW	-.195	-.347	.043	.663	-.082
SF	-.055	-.256	-.337	-.485	-.238
TPP	.053	.139	.258	.123	-.288
JD	.743	.205	.145	.083	-.054
OBB	-.336	-.018	-.138	.198	.526
LT	.216	.107	.466	-.247	-.314
BB	.348	.596	-.091	.574	-.087
HB	.099	.610	.525	-.236	-.011
SS	-.132	-.045	-.426	-.288	.417
ES	-.602	.169	-.609	.004	-.087

There is a specially high correlation coefficient from the first canonical factor with the boy pupil variable 600 metre run representing a typical energy type of regula-

tion of motor activity. This model of motor skills is complemented by explosive power and sprinter speed with medium to high correlation coefficients. Both well represent the general factors of motor skills. The following two variables with significant coefficients complimenting the first canonical factor are bending to a bench and overcoming a barrier backwards. They manifest motor skills of mobility and co-ordination of the body and according to their functionality are information-orientated components of movement. Finally there are the motor skills with low coefficients, the three variables defining speed of alternating movement, muscle endurance of the shoulder blades and arms and endurance of the trunk. The movements manifested by these tests express relatively simple but unusual factors that are not commonly used in everyday life. The latter are also not so dominant in physical education lessons and are not decisive in measuring complex pupil motor performance. It is not surprising that compared to the first factor fat under the skin and body weight coefficients are equally low. The effect of too much fat under the skin and with this the linked volume of the body is not positive for certain components of physical education.

With girls the motor skills are similarly defined as with boys but with special peculiarities. Unlike with the boys, jumping a distance stands out followed by endurance in submaximum continuous effort. The exception at the other end of the scale is the low coefficient provided by the 60 metre sprint. Variables with a little lower coefficient than with boys are also bending to the bench and overcoming a barrier backwards. There follow variables of raising the trunk and alternative touching of plates with the palms, both with very low coefficients.

The structure of the second block of the first pair of canonical factors (tables 3 and 4) for boys and girls define the dimensions of didactic behaviour of their PE teachers. Correlation coefficients of these dimensions are comparatively high and are higher with boys than with girls.

Table 3: The structure of canonical factors isolated in the area of latent dimensions of didactic behaviour of PE teachers – boy pupils.

Tabela 3: Struktura kanoničnih faktorjev, izoliranih v prostoru latentnih dimenzij pedagoškega ravnanja športnih pedagogov – dečki.

	1	2	3	4	5
A	-.647	-.714	-.061	.110	.236
B	-.330	-.873	-.342	-.070	-.091
C	-.509	-.268	.719	.068	.384
D	-.752	-.347	.208	-.518	-.049
E	-.823	-.449	.240	.111	-.228

Table 4: The structure of canonical factors isolated in the area of latent dimensions of didactic behaviour of PE teachers – girl pupils.

Tabela 4: Struktura kanoničnih faktorjev, izoliranih v prostoru latentnih dimenzij pedagoškega ravnanja športnih pedagogin – deklice.

	1	2	3	4	5
A	.550	-.409	.250	.080	.679
B	.779	-.472	-.197	.184	.313
C	.384	-.878	.087	-.259	.091
D	.343	-.795	.223	.434	.110
E	.727	-.489	.452	.145	.083

The largest canonical correlation coefficients with the first canonical factor are the didactic dimensions leadership and educational strategy along with the encouraged interpersonal relations and understanding. With medium high coefficients there follow specific expert competence and open and clear communication. In this segment too it is unthinkable to consider individual dimensions of didactic behaviour separately. The emphasis is on concord and intertwining of individual components and not a hierarchical arrangement.

Both with the boys and girls the quality of the methods of social relations expressed in the dimension leadership is one of the most important methods of PE teacher behaviour. Impressions and perceptions of PE teacher behaviour to a large degree also influenced whether pupils enjoyed physical education or sport and whether they would continue with it in later life. Pupils therefore placed the social behaviour of their PE teacher highest where their motor skills were dominated by endurance in submaximum continuous effort, explosive power and fine movement regulation. This means that this method of PE teacher behaviour was marked highest by boys and girls with an emphasised energy component not neglecting the information-orientated component. These are essentially those motor skills enabling success at those recreational and sporting activities achievable by most of the population.

With boys long runs, fast sprints and jumps in the process of physical education frequently confirm the teacher's encouragement and integrated social grasp and lead them to competitive success. With girls the method of PE teacher leadership is also fundamental and a highly marked behaviour. In spite of this, however, there are those whose model of motor skills emphasises explosive power and endurance in submaximum continual effort who place open and clear communication highest among dimensions of PE teacher behaviour. Boys are more likely to mark this dimension higher than girls. This means that success in physical education at this age is more the result of motor performance with boys than with girls. Apparently there are differences between

them in their understanding of movement confirmation. Girls of this age are not looking for physical leaders among their peers. They are more related to their PE teacher who with her behaviour brings them connotation and understanding that are more important messages for girls (compare Messing, 1989). The prevailing points of mutual perception, acceptance and evaluation with girls are not the result of PE teacher teaching strategies or specific professional competence but their perception of her openness and sociability. In this an important role is played by a number of social factors.

The following dimension in addition to the high marks given to the method of social behaviour of their PE teacher, mainly by those pupils with energy components of motor performance, is the learning strategy. Girls tended to mark this dimension lower than boys. An important reason for the difference in marking is the teacher's grasp based on selecting, determining and solidifying didactic goals and use of different teaching methods. This is understandable as we know that boys at this age are very motivated towards sport, their motor skills are highly developed and they are full of energy that they most like to direct towards sports. This is reflected by their high marks in endurance in submaximum continuous effort, explosive power, success at short sprints and optimum regulation of movement. Girls do not generally keep up with the boys in this area. Greater emphasis is on their general need for movement and fun (compare Miethling, 1977; Martens, 1978). Their enthusiasm for competition is less than with boys. Probably their success, conditional on better motor performance, does not bring with it a higher status among their peers. A significant distinction in this is shown by measures of endurance in submaximum continuous effort that is strong with girls but not as developed as in boys, and their attention is directed to the didactic methods of PE teacher behaviour. Perhaps we can presuppose their performance motivation is orientated elsewhere and their motivation and position with regards to sport is already formed at this age (compare Pierson, Cheffers, 1988). Such a developmental orientation in girls must be taken into account when planning and directing the didactic process. Perhaps we can say the school curriculum and its realisation accommodate the interests of boys above those of girls. Girls need greater variegation and less agonistic and more playful expression of movement, especially variegated elements and forms of dance.

The dimension of didactic PE teacher behaviour, encouraged interpersonal relations and understanding, pupils of both sexes marked moderately when compared with other dimensions. This can easily be understood as this behaviour should be present in every situation. This dimension is linked especially to endurance in submaximum continuous effort, explosive power, especially in boys sprinting speed and in both sexes fine regulation

of movement and co-ordination of body movement - all those motor skills enabling variegated and efficient functioning in sports encountered most frequently in physical education lessons. Too high a body weight in boys and too high levels of fat under the skin in girls are not advantageous as certain activities are less pleasant for them, and this is apparently linked to their teacher's personal behaviour and attitudes.

The last but not least significant dimension of didactic PE teacher behaviour is specific professional competence. Pupils marked this dimension lower but its still significant canonical coefficient demonstrates this method of behaviour is also important.

CONCLUSIONS

The study confirms the theory on "The Mirrored Self" (Cooly, 1956) according to which each compares himself to others and other people compare him with themselves and others. The findings confirm the hypothesis set as they demonstrate that pupils with positive models of motor skills perceive and evaluate the behaviour of their PE teacher as expected. Their interpretation of the games experience also conforms to expectations and to a large extent is dependant on the level of motor skill development. The study confirms the finding that in their perception and evaluation of their PE teacher's behaviour, boy pupils differ from girl pupils in certain essential dimensions.

From the point of view of functional conception of motor abilities it is difficult to talk of a hierarchic classification of motor abilities model, as the general motor efficiency of the girls and boys is determined by all the components of motor abilities. From the point of view of correlation between the perception of self motor efficiency and the perception of teacher's actions derived from it, we can isolate capabilities, which to a large extent influence the perception of the ways of a PE teachers behaviour. From this we can assume that certain motor abilities and morphological characteristics of

twelve years old pupils determine certain experiences and significance's in the experiencing and evaluating of ways of mutual co-operation with their PE teachers.

This at the same time approves the process of physical education emphasising the development of principal energy and involves at the same time the development of information components of sports activity of twelve years old female and male pupils.

The research has confirmed the finding that when perceiving and evaluating the ways of pedagogical actions of a PE teacher male pupils differ from female pupils in certain essential dimensions. The reasons can be sought for in the developmental differences, in particular in motor development, in the socialisation influences as well as in the doctrine of physical education at schools. All this affects the development of a system of value judgement and attitudes, and with it also the motives for sports participation which seems to be quite stabilised at that age.

Yet, for directing of physical education and formation processes even general recognition's about the age and gender differences and differences in motor abilities of pupils cannot be decisive. It is much more important to know and to respect a pupil's individual differences and situational behaviour of a teacher and a pupil. For teachers already working at schools those recognition's help to compare and analyse their ways of actions and to direct their physical education process from the point of view of better motivation of pupils. Discrepancies in the cognition of mutual expectations and in the motor efficiency of pupils can be partly reduced through the education process by introducing more flexible methods of work, which are based on uniting pupils into more homogenous exercise teams. Theoretical and practical values of cognition established in the study must gradually be reflected in supplementary programmes of staff schools, in permanent professional training of physical education teachers and in upgrading other components of the physical education curriculum.

MNENJA RAZLIČNO MOTORIČNO SPOSOBNIH UČENCEV O NJIHOVIH ŠPORTNIH PEDAGOGIH

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POVZETEK

Z namenom, da se ugotovi korelacija med motoričnimi sposobnostmi in morfološki značilnostmi učencev in dimenzijami didaktičnega procesa njihovih učiteljev telesne vzgoje, je bilo testiranih 485 učencev obeh spolov šestega in sedmega razreda osnovne šole. Dimenzije didaktičnega procesa učiteljev telesne vzgoje so definirane z naslednjimi petimi instrumenti: spodbujevalni medosebni odnosi in razumevanje, odkrita in jasna komunikacija, posebna strokovna sposobnost, vzgojna strategija in vodstvene sposobnosti.

Motorične sposobnosti in morfološke značilnosti učencev, ki so ocenjevali didaktični proces svojih učiteljev telesne vzgoje, so bili ugotovljani tudi z enajstimi merilnimi enotami. Podatki so bili obdelani z analizo kanonične korelacije. Študija je pokazala, da dečki in deklice z visoko vzdržljivostjo, eksplozivno močjo in dobro koordinacijo gibov spoštujejo večino svojih učiteljev telesne vzgoje, ki med svojim vodenjem zahtevajo visok nivo medosebnih odnosov. Učenke tudi zelo cenijo odprtost in odkrito komunikativnost svojih učiteljev, učenci pa njihovo didaktično strategijo. Ugotovitve raziskave so pokazale, da so pri učencih tolmačenja njihove izkušnje telesne vzgoje in zatorej pričakovanja, kar zadeva njihove učitelje telesne vzgoje, v veliki meri odvisna od razvojne ravni njihovih lastnih motoričnih sposobnosti.

Ključne besede: športna vzgoja, motorične sposobnosti, osnovna šola, športni pedagog

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