

THE IMPACT OF THE TEACHING PROCESS ON STUDENTS CONSIDERING SOME MOVEMENT VARIABLES

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Original scientific paper

Abstract

The paper aims to study-experiment some changes in movement variables to first year students of the Faculty of Physical Education and Sports (private-public) in Pristina. This study-experiment is a new science and research method, which includes 25 male entities of an average age 19.1 + / - 6 months. Measurements were performed during the psychomotor class in the beginning of October '11 and the end of May '12. Eleven movement tests were applied in the movement space. Systematic differences were observed between the two measurements through the descriptive statistical data, while the T-test has confirmed significant differences in all movement variables, however, the data show that in the whole group of variables better results have been achieved during the second measurement. The impact of the teaching process in the psychomotor subject is undeniable in transforming young students during an academic year (8 months).

Key words: motor, movement, students, teaching process, T-Test

Introduction

The study of the anthropological status dimensions of humans is still a goal of our kinesiologists. Still, we need to find suitable operators for the transformation of these dimensions, however, it is a constant challenge for the researchers, scholars, theorists, teachers of kinesiological problems. To investigate students' movement status, we placed a segment of human multidimensional structure in the experiment. Study-experiments in the movement space are conducted by many domestic and foreign authors as well. This issue is addressed through various movement variables and entities in the sample of first year students, but the interrelationship of this space defined on the impact of the psychomotor learning process has not been addressed so far in our country. Therefore, the problem of this experiment is just a goal of ours to explore this important phenomenon with students

Aim

The aim of this study-experiment is to determine the changes of some movement variables in first year students of the Faculty of Physical Education and Sports, under the influence of a learning program in form of training - practical lessons in some general movement variable general locomotive.

The main goal of the Faculty of Physical Education and Sports is to train qualified staff in the area of kinesiology and to influence their transformation in gaining professional-scientific and pedagogical knowledge, and transferring those skills (qualities) to new generations.

Methods

Entity Sample: The experiment includes 25 young males with an average age of 19.1 years. + / - 6 months, students at the Faculty of Physical Education and Sports in the city of Pristina. As a criterion in this study sample, is that students should all be regularly following the first year Psychomotor course, and who are able to perform their actions in the field of Physical Education and sports as they are provided with the program content during the learning process. During the learning process, these students have systematically attended classes in subjects such as psychomotor, volleyball, athletics, table tennis, and other activities that students perform during the practical lessons and extra-curricular activities.

Variables Sample: Eleven movement tests have been applied. MPRDO - The hand precision; MTARDO - Hand taping; MTAPKĚ - Leg taping, MPOLIGO - Polygon; MFLEKS - Flexibility (deep bending); MKVLAR - High jump from a stand; MKVGJA - Long jump from a stand; MMUSBA - Abdominal muscles; MUSSH - Back muscles; MNGOPA - Rising on parallels; MVR40M - Running 40 metres.

Data processing: Data analysis was performed by using the statistical software SPSS Windows version 16.0, where through the primary statistical analysis (descriptive) the distribution of results was made for each variable separately from the initial measurements to the final one through the statistical method: the minimum value (Min), the maximum value (Max), arithmetic average (Mean), standard deviation (Std. Dev.), coefficient of variability (KV%), variance, asymmetry of the distribution curve (Skewness), and the acuteness of the distribution curve (Kurtosis). While the T-Test method was applied to present the changes (differences) between the two measurements.

Results and discussion

Table.1. Descriptive statistical parameters – Initial measurement

	MPRDO	MTARDO	MTAPKË	MPOLIGC	MPLEKS	MKVLAR	MKVGJA	MMUSEBA	MUSSH	MNGOPA	MVR40M
Min.	50	50.00	18.00	00	1.00	21.00	190.00	7.00	12.00	.00	530.00
Max.	100	98.00	38.00	27.00	22.00	65.00	272.00	19.00	22.00	10.00	689.00
Mean	.20	65.16	23.20	20.60	11.44	53.12	224.28	9.64	15.28	5.16	590.56
Std. Dev.	.40	11.68	5.19	5.12	6.82	8.88	18.94	2.72	2.63	3.00	37.76
KV %	100	17.92	21.99	25.04	59.61	16.71	8.44	28.21	17.21	58.13	6.39
Variance	1.6	136.50	26.94	26.25	46.59	78.86	358.79	7.40	6.96	9.05	1425.84
Skewness	1.59	1.13	1.50	-2.86	-.045	-2.27	.324	1.87	1.31	-.57	1.19
Kurtosis	.59	1.12	1.60	10.97	-1.07	6.84	.818	4.84	1.15	-.74	1.62

Table.2. Descriptive statistical parameters – Final measurement

	MPRDO	MTARDO	MTAPKË	MPOLIGO	MPLEKS	MKVLAR	MKVGJA	MMUSEBA	MUSSH	MNGOPA	MVR40M
Min.	.00	55.00	23.00	13.00	4.00	25.00	199.00	9.00	15.00	3.00	520.00
Max.	3.00	108.00	40.00	22.00	27.00	69.00	273.00	22.00	24.00	13.00	681.00
Mean	1.36	70.60	27.16	17.84	15.88	56.00	228.28	11.80	18.72	9.04	583.76
Std. Dev.	.75	13.22	4.64	2.09	6.46	9.15	17.62	2.62	2.09	3.18	37.12
KV %	55.14	18.72	17.08	11.71	40.68	16.33	7.71	22.20	11.16	35.17	6.35
Variance	573	174.91	21.55	4.39	41.86	83.83	310.79	6.91	4.37	10.12	1378.52
Skewness	.51	1.28	1.48	-.21	-.43	-1.96	.57	2.49	1.05	-.63	1.12
Kurtosis	.28	1.19	1.43	-.21	-.47	5.07	.88	9.04	1.43	-.80	1.70

Table.3. t-test

		Mean ₁	Mean ₂	Mean	Std. Dev.	Std. Error Mean	T-Value	Df	Sig. (2-tailed)
Pair 1	MPRDO	.20	1.36	-1.1600	.80000	.16000	-7.250	24	.000
Pair 2	MTARDO	65.16	70.60	-5.4400	12.32910	2.46382	-2.208	24	.037
Pair 3	MTAPKË	23.20	27.16	-3.9200	4.55448	.91090	-4.303	24	.000
Pair 4	MPOLIGO	20.60	17.84	2.7600	4.25519	.85104	3.243	24	.003
Pair 5	MPLEKS	11.44	15.88	-4.4400	8.46601	1.69320	-2.622	24	.015
Pair 6	MKVLAR	53.12	56.00	-2.8800	2.45493	.49099	-5.866	24	.000
Pair 7	MKVGJA	224.28	228.28	-4.0000	3.71932	.74386	-5.377	24	.000
Pair 8	MMUSEBA	9.64	11.80	-2.1600	2.05508	.41102	-5.253	24	.000
Pair 9	MUSSH	15.28	18.72	-3.4400	2.51794	.50359	-6.831	24	.000
Pair 10	MNGOPA	5.16	9.04	-3.8800	3.75633	.75127	-5.163	24	.000
Pair 11	MVR40M	590.56	583.76	6.8000	3.51188	.70238	9.681	24	.000

Based on the descriptive statistical indicators in Table 1 and 2 the results measures are distributed for each variable separately, by the initial and final measurements. Through the methods of central tendency, such as standard deviation and the coefficient of variability, the distribution of results in both measurements has a remarkable change. The sample of this study was proved with high values of the standard deviation (St.Dev.) and the variability coefficient (KV%), which indicates heterogeneity of the group in both measurements. Although the final measurement has shown better values than the initial measurement, the standard deviation and the variability coefficient are quite high. Especially in the handmade precision variables we should distinguish this variable that in both measurements is quite high in comparison with other variables with the value 100% in the initial measurement, and 55.14% in the final measurement. Even in the variable (MNGOPA) is shown as a variable that has a high variability of 58.13 in the initial measurement and 35.17 in the final measurement. From this we can conclude that the variables; hand precision and rising on parallels, are difficult movement tasks to perform, because these variables are affected by many internal (endogenous) and external factors (exogenous).

Table no. 3 shows that the results of the initial and final measurements represent significant statistical differences. They show a significant contribution to the difference between the first and the second measurement in all movement variables. The distribution of results of the first and second measurement, after eight (8) months was achieved in the whole system of 11 variables on a probability level.05 and .01, relying on the T-test method. Below we will present a more detailed overview considering the validity of each variable separately.

The movement test of the hand precision (MPRDO) during the initial measurement had an average value of .20 accurate shots, while in the final 1:36 accurate shots, where the difference between these measurements is 1.160 accurate shots and the probability is at .000, other variables have the same probability level as well such as: MTAPKË, MKVLAR, MKVGJA, MMUSBA, MUSSH, MNGOPA, MVR40M. Whereas, the hand taping variable (MTARDO) during the initial measurement is 65.15 average plate hits, and in the final is 70.60 plate hits, which differs in value of 12:32 plate hits, the difference is also important at level .037. The Polygon test has the average value of the first measurement of 20.60 seconds, but the second measurement has a value of 17.84 seconds and the difference is significant at the optimum value of .003. The parameter of flexibility (deep bending) is reflected with the value of 11:44 cm for the initial measurement, while 15.88 cm in the final, where the difference is 4:44 cm, on a probability level of .015. However, the obtained differences in the movement variables of first year students of the FPES are a result a of systematic work during the school hours of the psychomotor, other subject such as volleyball, athletics, tennis and free activities which students exercise during practical lessons.

Conclusion

This study-experiment has treated a sample of 25 male students from the Faculty of Physical Education and Sport of average age 19.1 + / - 6 months from all centres of the Republic of Kosovo. The aim of this study-experiment is to determine the changes-differences in some movement variables of first year students, under the influence of the Psychomotor program learning content in which 11 movement variables were applied. The analysis of the descriptive statistical parameters has found that the scattered result through the central tendency are heterogeneous in both measurements. The results analyzed by the T-Test method show significant differences in all movement variables, however, the data shows that in the whole group of variables better results have been achieved in the second measurement. The impact of the learning process from the psychomotor subject is undeniable in the changing-transformation of students during an academic year (8 months), statistically significant differences were observed between the two measurements.

References

- Aliu, M. (1990). Something about the permanent process of kinesiology. *Acta Kineziologica*, Pristina.
- Bonacin, D. (2010). *Uvod u kvantitativne metode* [Introduction to quantity methods.. In Croatian.]. Travnik: Edukacijski fakultet.
- Bonacin, D., Bilić, Ž., & Bonacin, Da. (2008). *Uvod u antropološku analizu* [Introduction to anthropological analysis. In Croatian.]. Travnik: Edukacijski fakultet.
- Gjinolli, E. (2001). The impact of learning football in some motor dimensions of students. *Acta Kinesiologica*, 7(1), 10.
- Metikoš, D. (1982). Basic motor abilities of subjects above average motor status. *Kinesiology*, 14, 21-62.
- Momirović, K. (1974). *Metode za transformaciju i kondenzaciju kinezioloških informacija* [Methods for transformation and condensation of Kinesiology information. In Croatian.]. Zagreb: Institute of Kinesiology.
- Momirović, K. (1984). *Kvantitativne metode za programiranje i kontrolu transformacijskih procesa* [Quantitative methods about programming and control of transformation processes. In Croatian.]. Zagreb: FFK.
- Mikić, B. (1996). *Temelji ljudske psihomotorike* [The basis of human psychomotorics. In Bosnian.]. Tuzla: FFK.
- Rushiti, H. (1997). Changes in development relation of some motor skills of students in different working conditions. *Acta kineziologica*, 1, 50.
- Salihu, H. (2011). *Testovi (mjere) evaluacije u odabranim sportovima (Izabrana poglavlja)* [Tests (measurements) evaluation in selected sports (Selected lectures). In Albanian.]. Prishtina: Faculty of Physical Education.
- * * * (2000). *Bulletin of Physical Education*. Tirana: Institute of Pedagogical sciences.

UTJECAJ NASTAVNOG PROCESA NA STUDENTE UVAŽAVAJUĆI NEKE VARIJABLE GIBANJA

Sažetak

Ovaj rad ima za cilj da utvrdi neke moguće promjene varijabli gibanja studenata prve godine Fakulteta za fizičku kulturu i šport (privatno-javno) u Prištini. Ova studija predstavlja novi pristup metoda, i uključuje 25 muških osoba prosječne starosti 19,1 +/- 6 mjeseci. Mjerenja psihomotorike su provedena tijekom nastaveu početku listopada 2011 do kraja svibnja 2012. Jedanaest motoričkih testova je primijenjeno za praćenje kontrole kretanja u prostoru. Sustavno su uočene razlike između dva mjerenja kroz deskriptivne statističke podatke, dok je t-test je potvrdio značajne razlike u svim varijablama gibanja. Međutim, podaci pokazuju da su u cijeloj grupi varijabli bolji rezultati postignuti u drugom mjerenju. Utjecaj nastavnog procesa u psihomotornim testovima je neporeciv u transformaciji mladih studenata tijekom akademske godine (trajanja osam mjeseci).

Ključne riječi: motorika, gibanje, studenti, nastavni proces, t-test

Received: March 15, 2012

Accepted: December 20, 2012

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