

TENDENCIES IN THE ACHIEVING OF EXPLOSIVE STRENGTH IN FIRST-YEAR STUDENTS AT THE FPE FOR A PERIOD OF 25 YEARS

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Abstract

In order to determine the tendencies in terms of FPE's first year students' achievements for the generations from 1988 to 2013, a research was carried out on the explosive strength tendencies assessed by using the standing long jump. For that purpose, the results from the student records for the anthropometrics course were used. The total number of examinees covered with the analysis was 1459 students from the Faculty of Physical Education. The examinees were tested at the beginning of each student year (in first semester), for a 25 years period. The norm from the practical part of the exam in the anthropometrics course (240 cm) was taken as critical measure in terms of students' achievements. Basic statistical parameters and trend analysis were applied for data analysis. A negative (downward) trend of achievements of the examinees for a 25 years period was determined. It generally means that the examinees of the newer generations show smaller abilities regarding the leg explosive strength. Authors' recommendation is to seek the possible causes in the specifics of each generation separately, as well as to select the candidates for enrolment in the studies at the Faculty of Physical Education in Skopje. Such tendency, of course, is partly a characteristic of the current potential of each generation, conditioned with genetic determination; whereas in the other part, it is possibly connected with the insufficient exploitation of the moving capacity for this basic movement form (training, sport, recreation and everyday movement activity).

Key words: *Standing long jump, students, 25 years, trend norm, Faculty of Physical Education*

INTRODUCTION

The Faculty, by following the needs and requirements of the overall living style in the country, makes efforts to provide relevant personnel for education, sport and recreation. The study programmes innovation (accreditations as of 2009 till today) in the last few years is directed towards training of relevant personnel that shall realize social activities according to the modern examples in many fields. The profile of graduated students from the Faculty of Physical Education is changing, and the same is inevitably being influenced by the applications from the programmes per subjects and, of course, by the specifics of the current social life within legal and ethical norms. At the Faculty, since its foundation (1979, till the study year 2010/11), with various changes in terms of the requirements for enrolment of the first year students at the University "Ss Cyril and Methodius" in Skopje, entry exam was conducted for faculty enrolment in order to, inter alia, recognise the future teaching, training or potential new scientific

generations. The entry exam valued the secondary education grades, including the theoretical and practical parts of the entry exam taken. The practical part of the entry exam, with various changes, in different study years, through the exam requirements (norms), assessed the psychomotor capacities, skills and knowledge in swimming, athletics, sport games and gymnastics thereby "being in the hunt" for potential candidates that fit in the planned profile for graduation titles produced by the Faculty. However, in the last study years (2011/12, 2012/13 and 2013/14) at the Faculty of Physical Education in Skopje, the entry exam which includes tests for assessment of the physical readiness of candidates has not been realised; the candidates have been ranked for enrolment in accordance with the achieved secondary education grades. The current programmes per subjects in both courses (physical education and sports) contain systemic general and specific competences that note the ability to demonstrate certain sport elements and the ability to create, realise and eval-

uate specific exercise programmes. During the last few study years, the secondary education grades success is the first and the deciding factor for enrolment in the first year at the Faculty of Physical Education in Skopje, which allows for the possibility to have full quotas, in extreme cases, only with candidates with medium grades or only with excellent grades, “thus covering the success capacity in the previous and for the subsequent knowledge” without taking into consideration the movement potential of the future professors or trainers. Such assumed situation in practice generates a conflict between the current programme requirements and the acquiring of the afore-stated competences (if the enrolled candidates have modest movement qualities), especially when referring to the capacity for demonstration of certain movement-related tasks. The selection of candidates who are to study at the Faculty for Physical Education, in our opinion, should contain mechanisms and elements that also value other segments of the anthropological status. The existing curricula for main studies, especially in terms of the theoretical and practical preparation, according to the content determined by the subjects’ programmes, set serious engagements in psycho-physical terms, which should make them a serious factor for selection (elimination) of students who are not able to realise the determined elements so as to successfully master the subjects being taught. By upholding the position that the human being represents an entirety in which physical readiness and the movement wealth of the individual is a requirement for quality living, we tried in retrospective terms to analyse part of the motor space of the students for a 25 year period by complying with the attitudes related to high hereditary load of explosive strength and its discriminative role in determining the differences between individuals, especially in groups with same or almost same age (18-19 year old students).

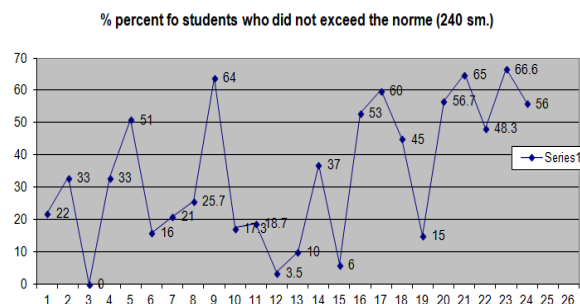
DISCUSSION

The main objective of the research was to determine the tendencies in explosive power assessed by the standing long jump in adolescents, first year students at the FPE for a period of 25 study years (1988 till 2013). The tests were carried out in accordance with the recommendations of (Kurelic, 1975). The standing long jump is part of the standardized exam requirements in the anthropomo-

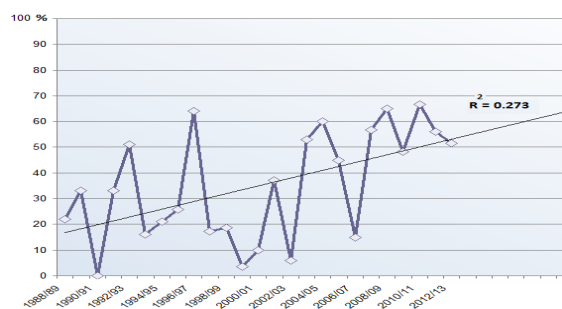
torics course. For this purpose, the results from the records in the anthropomotrics course were used. The total number of examinees covered with the analysis was 1459 students at the Faculty of Physical Education in Skopje. The examinees were tested at the beginning of each study year (in first semester) for a 25 year period. The norm of 240 cm for a standing long jump was taken as a real benchmark in terms of success of the students of each generation. Basic statistical parameters as well as trend analysis (linear) were applied for this analysis.

The analyzed data show (although fluctuating) negative dynamics during the 25-year period, in the norm compliance by the examinees. It can be noted (Graph No 1) that only in one generation (1990/1991) all examinees were able to exceed the 240 cm norm, compared to the students of the newer generations of which 66,6% jumped below 240 cm. This speaks of the potential for display of explosive strength which the examinees carry within, which is highly hereditary and with poor training process response (Jovanovski, 2013). In the last few years, this percentage of students who have not met the norm is higher, although even the older generations of enrolled students note an excess of 64% below 240 cm for the study year 1997/1998.

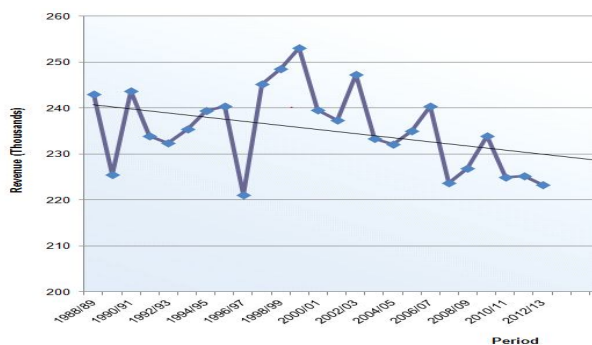
Graph No 2 displays a downward trend of the achievement results in the long jump test, which is in compliance with the previous analysis, meaning that the new generations display poorer results in terms of explosive force assessed with this test as compared with the previous generations. The analysis displayed in Table No 1 shows that students of the 2001/2002 generation were in average closest as a group to the exam norm, that is, 68% of them, according to the result, are within the interval from 239.8 to 267.03 cm.



Graph 1 Percent of students who did not exceed the norm of 240sm



Graph 2 Linear trend of the percentage of students per study years with result below 240 cm.



Graph 3. Linear trend of results from the long jump test of students per study years.

CONCLUSION

It can be concluded that the average results of the enrolled first-year students for the analysed period indicate a downward tendency with continuity, which is mostly expressed in the last 5 years.

At the same time, it can be concluded that from one year to another, in continuity, there is a growing trend in terms of the number of students who are not able to comply with the norm of the practical part of the anthropometrics course regarding the explosive strength of legs. When discussing the exam requirements, this fact leads to considering the potential intervention in the given norm, which would mean adaptation of the curricula contents for each generation or a different selection of candidates.

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Table 1. Lower and upper limit within one standard deviation (68%)

generation	Sd	Xbar	68% lower limit	68% upper limit
1988/1989	15.87	243.52	227.65	259.38
1989/1990	19.92	231.60	211.68	251.52
1990/1991	10.10	243.85	233.75	253.95
1991/1992	16.58	235.34	218.76	251.92
1992/1993	12.17	232.75	220.59	244.92
1993/1994	6.76	235.45	228.69	242.22
1994/1995	14.83	239.75	224.92	254.58
1995/1996	13.00	240.75	227.74	253.75
1997/1998	23.58	221.65	198.06	245.23
1998/1999	13.15	245.49	232.34	258.63
1999/2000	16.72	248.68	231.97	265.40
2000/2001	13.62	253.41	239.80	267.03
2001/2002	13.77	240.87	227.10	254.64
2002/2003	20.54	238.17	217.62	258.71
2003/2004	11.18	247.84	236.66	259.01
2004/2005	14.15	233.99	219.84	248.14
2005/2006	16.67	232.45	215.79	249.12
2006/2007	21.62	235.61	213.98	257.23
2007/2008	11.27	242.29	231.02	253.56
2008/2009	15.83	224.91	209.08	240.74
2009/2010	15.09	227.40	212.31	242.49
2010/2011	17.10	234.42	217.32	251.53
2011/2012	16.67	225.75	209.09	242.42
2012/2013	16.58	226.44	209.86	243.02
2013/2014	19.90	224.97	205.07	244.87

The conclusions shall not allow for drawing of a general position on the reasons for the given situation which is directly linked to the anthropological features of the enrolled candidates. Still, in our opinion, the general picture could be:

1. characteristic of the current potential of each generation, conditioned by the genetic determination and partly by the insufficient exploitation of the movement capacity of this basic movement form (training, sporting, recreation and everyday movement forms).

2. related to the made selection of candidates

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ТЕНДЕНЦИИ ВО ПОСТИГНУВАЊАТА ВО ЕКСПЛОЗИВНАТА СИЛИНА КАЈ СТУДЕНТИТЕ ОД ПРВА ГОДИНА НА ФФК ЗА ПЕРИОД ОД 25 ГОДИНИ

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(Оригинален научен труд)

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Абстракт

Со цел да се утврдат тенденциите во постигнувањата на студентите од прва година на ФФК за генерациите од 1988 до 2013 година, реализирано е истражување за тенденциите на експлозивната сила проценувана со тестот скок во далечина од место. За оваа цел користени се резултатите од евиденција на податоци за студентите на предметот антропомоторика. Вкупниот број на испитаници кој беше опфатен со анализата е 1459 студенти на Факултетот за физичка култура во Скопје. Испитаниците беа тестирани на почеток на секоја учебна студентска година (во прв семестар), за период од 25 години. Како критична мерка за постигнувањата на студентите е земена нормата од практичниот дел од испитот по предметот антропомоторика (240см.). За анализа на податоците применети се основните статистички параметри и анализа на тренд. Утврден е негативен (опаѓачки) тренд на постигнувањата на испитаниците за период од 25 години. Тоа генерално значи дека испитаниците во поновите генерации прикажуваат помали способности во експлозивната сила на нозете. Препорака на авторите е да се бараат евентуалните причинители во карактеристиките на секоја генерација одделно како и да се селектираат кандидатите за упис на студентите на факултетот за физичка култура во Скопје. Ваквата тенденција секако во еден дел е одлика на актуелниот потенцијал на секоја генерација, условена со генетската детерминираност и во другиот дел можно е да е поврзана со недоволната експлоатација на движечкиот капацитет за оваа базична движечка форма (тренинг, спортување, рекреација и секојдневна движечка активност).

Клучни зборови: Скок во далечина, студенти, 25 години, тренд норма, факултет за физичка култура