

Fig.3 The progression of girls and boys realized by the two classes

The results obtained in the first test (throwing the rounders ball) and about we can say that it is also a force test for rural boys they achieved a progression of 1.5, while those from the urban area were very close to a progression of 1.4. The progression in girls is higher in urban area. This is because the teacher focused on acquiring throwing technique.

The other three tests, as can be seen from the graphs, the good results of the students from the country, compared to the urban students activities, we consider the fact that the students from the countryside are involved in farms and household activities from early ages, and these things can positively influence the general strength development for both girls and boys.

A greater progression in urban than in rural areas it is observed only in the test # 2 (speed running-50 m), where we have a progression of 3.9 urban versus 2.3 rural areas.

CONCLUSIONS

In this article I pointed out that the current Romanian education is lacking in terms of material

resources, particularly in rural areas, and urban only locally.

Modern, sedentary life of the children from the urban areas influences their development physically illustrated in the graphs above.

Although in rural area, there was a superficial concern for the class of physical education, more the concern was from the teacher side, however the students are physically better developed and due to participation in household activities that require physical activity.

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IDENTIFICATION THROUGH VIDEO ANALYSIS OF TECHNICAL ERRORS SPECIALIZED FOR THE TWO HANDS CHEST THROW PROCEDURE

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Abstract

The article underlines the importance of video analysis programs in the objective detection of technical errors for the two hands chest pass procedure, inside the basic course at basketball subject. This was based on the data of an ample experimental study, regarding the technical optimization under an educational and biomechanical aspect of the technical procedures with a ball, which are fundamental in the basketball game. The experimental study subjects were the students from The Physical Education and Sports Faculty in Galati, who got through the subject “Basketball” basic course.

Key words: video analysis, spatial parameters (the segments trajectory), two hands pass from the chest technical training.

INTRODUCTION

The reform of the higher education level in Romania, caused changes in the syllabuses and in the basketball subject, as well, its content being merged due to the reduced numbers of hours. Thus it was necessary finding a modern learning methodology, fast anchorage of techniques. This short training period for the basketball games also needs an evaluation, an objective tracing and

correction of technical errors in due time to avoid wrong assimilation of technical procedures.

Classification concerns the causes mistakes and technical sports games were made by a number of specialists, a fact which shows their importance in training. sportive (A. Popescu, 1954; V.V. Belinovici, 1959, A. Hrișcă, C.Negulescu, D.Colibaba-Evuleț, 1977; R.W.Christina, D.M.Corcoc, 1999; A.Păcuraru, 2002; C. Hânsa, 2003; A. Păcuraru, L.Călin, G. Prisecaru, 2004; A.

Păcuraru, P. Ghervan, A. Acinte, 2006, C. Ciorbă, I. Comarnițchi, 2007; L.D. Ciocoiu, C., Ciorbă, 2009, C., Preda, 2010, etc.).

The specialized program of video analysis was used in other technical programs specific to the basketball game and other sport disciplines (I. Dospineanu, G. Nenciu, V. Potop, M.Crețu, 2005; M.Crețu, 2006; D.L.Ciocoiu, M.Crețu, 2007; D.L.Ciocoiu, C.Ciorbă, 2008, D.L.Ciocoiu, 2009; D.L.Ciocoiu, L.J.Fleancu, C. Ciocan, 2010, 2011; G L. Ionete, E Mereuță, C. Mereuță, M.S.Tudoran, D.Ganea, 2011; C. Preda, 2012, etc.)

RESEARCH HYPOTHESIS

Using the specialized video analysis during the basic course at basketball subject will efficient the methodical step initiation – learning – consolidation – evaluation of the technical procedure two hands chest pass procedure, by knowledge of movement components and objective detection of technical errors.

PURPOSE

Detection of technical mistakes for the two hands chest pass procedure, in the basic course in basketball by applying video analysis.

Research objectives

1. Analysis and generalisation of data in specialised literature.
2. Identification of the main moments in the execution, and common technical mistakes for the given procedure.
3. Ascertaining the efficiency of the video method in technique analysis and mistake detection for the given procedure in teaching basketball.

METHODS

The methods and techniques of scientific research in the present article are as follows: bibliographic documentation, pedagogical observation, video analysis, biomechanical analysis of spatial parameters (trajectory of the movement of segment articulation), the experimental study, mathematical statistics, graphics and tables.

The specialised video analysis of the two hands chest pass procedure was performed by the "Physics ToolKit" - version 6.0 programme, and focused on the trajectory of the segment articulations in 5 movement points (ankle, knee, hip, shoulder and fist).

The research activity took place in the Faculty of Sports and Physical Education and the Phoenix Sports HighSchool Club in Galati. The subjects were 10 students of the Faculty of Sports and Physical Education, selected on the basis of the average grades between 7.40-7.84 obtained in testing the technical procedures, and 3 high performance athletes of the Phoenix Club, Galati.

RESULTS

The presentation and interpretation of data provided by the specialised program of video analysis, which confirmed the research hypothesis, will be exemplified in the execution of a student, randomly selected out of the 10 participants.

Determining the trajectory of the movement of segment articulation in executing the procedure of two hands chest pass for the executing student is shown in Figures 1-2 and Table 1, providing the possibility to observe the position indicator on the horizontal (Xm) and vertical (Ym) axis.

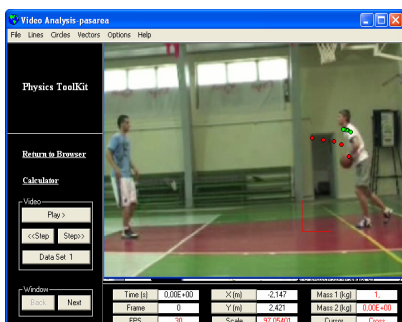


Fig 1. Movement points at the level of the fist and shoulder articulations student execution

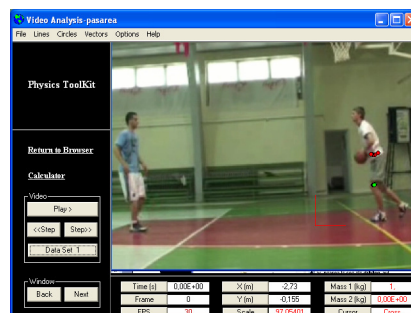


Fig.2. Movement points at the level of the the hip and knee articulations –student execution

Table 1 Data and coordinates during student evolution

a) for the fist

Time t(s)	The data coordinates for the fist in all five moments					
	X1(m)	Y1(m)	R1	Dx1(m)	Dy1(m)	D1(m)
0,00E+00	0,644	0,979	1,172	0,00E+00	0,00E+00	0,00E+00
3,30E-02	0,541	1,133	1,256	-0,103	0,155	0,186
6,70E-02	0,438	1,176	1,255	-0,206	0,197	0,285
1,00E-01	0,292	1,193	1,229	-0,362	0,215	0,412
1,33E-01	0,137	1,219	1,227	-0,507	0,24	0,561

b) for the shoulder

Time	The data coordinates for the shoulder in all five moments					
t(s)	X2(m)	Y2(m)	R2	Dx2(m)	Dy2(m)	D2(m)
0,00E+00	0,67	1,297	1,459	0,00E+00	0,00E+00	0,00E+00
3,30E-02	0,627	1,322	1,463	-0,043	0,026	0,05
6,70E-02	0,61	1,322	1,466	-0,06	0,026	0,065
1,00E-01	0,584	1,331	1,463	-0,086	0,034	0,092
1,33E-01	0,567	1,331	1,447	-0,103	0,034	0,109

c) for the hip

Time	The data coordinates for the hip in all five moments					
t(s)	X1(m)	Y1(m)	R1	Dx1(m)	Dy1(m)	D1(m)
0,00E+00	0,941	0,97	1,284	0,00E+00	0,00E+00	0,00E+00
3,30E-02	0,799	0,944	1,237	-0,043	-2,60E-02	0,05
6,70E-02	0,773	0,944	1,22	-0,069	-2,60E-02	0,073
1,00E-01	0,756	0,953	1,216	-0,086	-1,70E-02	0,088
1,33E-01	0,747	0,953	1,211	-0,094	-1,70E-02	0,096

d) for the knee

Time	The data coordinates for the knee in all five moments					
t(s)	X2(m)	Y2(m)	R2	Dx2(m)	Dy2(m)	D2(m)
0,00E+00	0,799	0,55	0,969	0,00E+00	0,00E+00	0,00E+00
3,30E-02	0,781	0,541	0,95	-0,017	-8,59E-03	0,019
6,70E-02	0,773	0,541	0,943	-0,028	-8,59E-03	0,027
1,00E-01	0,781	0,541	0,95	-0,017	-8,59E-03	0,019
1,33E-01	0,79	0,541	0,957	-8,59E-03	-8,59E-03	0,012

e) for the ankle

Time	The data coordinates for the ankle in all five moments					
t(s)	X1(m)	Y1(m)	R1	Dx1(m)	Dy1(m)	D1(m)
0,00E+00	0,893	0,129	0,902	0,00E+00	0,00E+00	0,00E+00
3,30E-02	0,893	0,129	0,902	0,00E+00	0,00E+00	0,00E+00
6,70E-02	0,893	0,129	0,902	0,00E+00	0,00E+00	0,00E+00
1,00E-01	0,893	0,129	0,902	0,00E+00	0,00E+00	0,00E+00
1,33E-01	0,902	0,129	0,911	8,59E-03	8,59E-03	0,012

The graphical representation of segment trajectory in the 5 essential points of the student's movement allowed the inclusion of the global execution into a synthetic, easily observable form (Figure 3).

The movement moments analyzed by a methodical point of view were: **M1**- the initial position; **M2**- holding the ball; **M3**- amplitude motion; **M4**- movement coordination; **M5**- releasing the ball pass.

For the objective detection of technical mistakes, the student's execution was compared to the execution of a high performance athlete, taken as a model. The comparative analysis of the execution of the procedure under study was made by superposing the two initial positions (student and athlete) where from the segment displacement was effected during the execution (Figure 4).

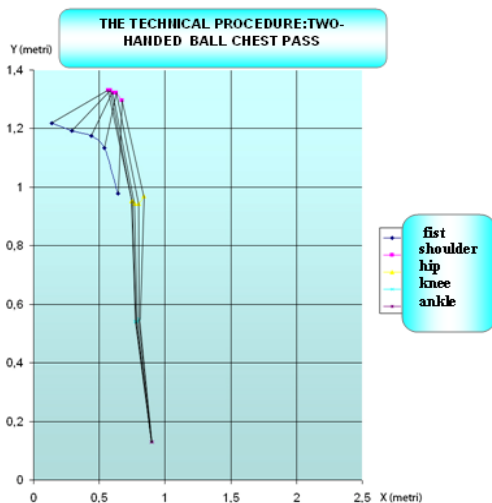


Figure 3. Graphical representation of segment trajectory in the 5 points of the given technical

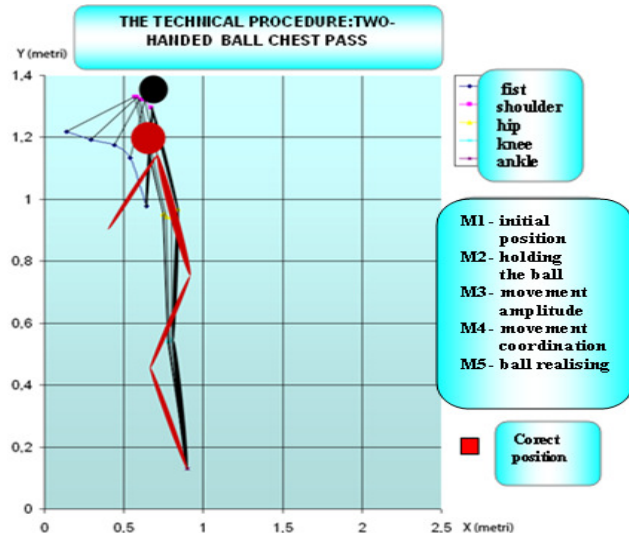


Figure 4. Comparative analysis of the evolution of segment trajectory in the given procedure - student execution

procedure - student execution

The common technical mistakes seen during the acquisition of the sequential stages of the technical procedure were synthesised in figure 5.

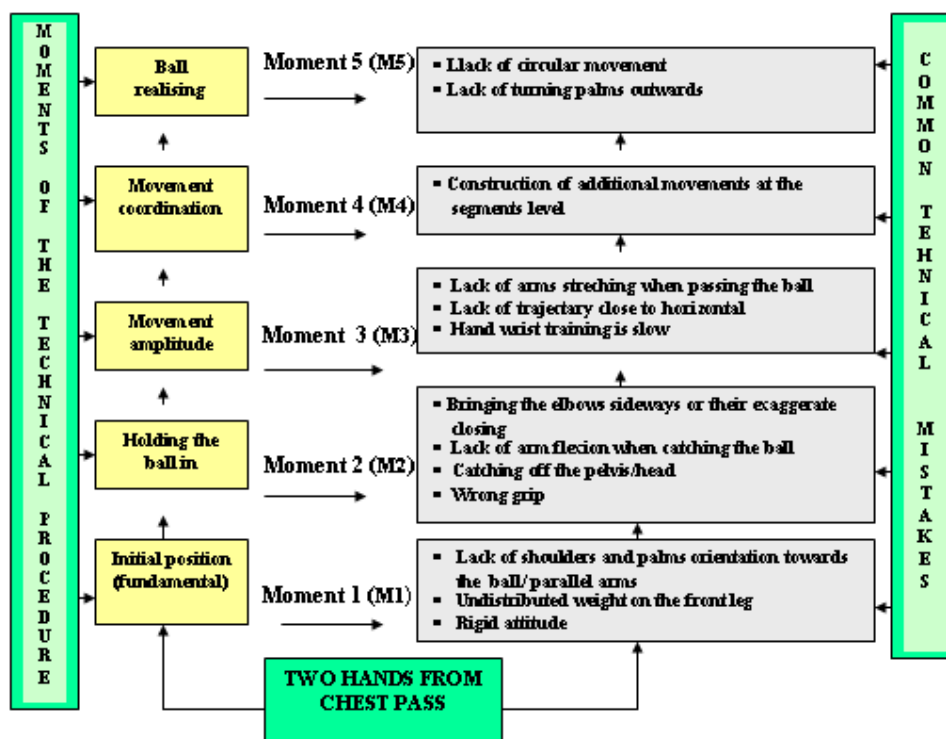


Fig. 5 Frequent mistakes of technical execution two hands from chest pass

CONCLUSIONS

- The program has contributed to evincing the main moments in performance and the detection of technical mistakes improving the progress of the technical training of the student in this two- handed ball chest pass procedure.
- The combined use of video and traditional methods was a safe way to effectiveness in the methodological path of learning-consolidation assessment- detection-prevention-correction, providing objective solutions for the teacher and also for the students in the given procedure.
- The video analysis method has assured interactivity during the lessons and the students' motivation.
- The program's possibility of analysing some spatial parameters (the segments trajectory), has contributed in highlighting the execution and finding the technical errors which improved the process of students' training from a technical point of view.

- The specialized software of biomechanical analysis of spatial parameters (segments trajectory) has also allowed the observation of body segments which are differently involved (as percentage) in the procedure of two- handed ball chest pass.

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COMPARATIVE STUDY REGARDING THE TESTING OF MOVEMENT AND BALANCE MIXING CAPACITY OF 3RD GRADE STUDENTS FROM RURAL AND URBAN ENVIRONMENT THROUGH SPECIFIC MEANS OF BASKETBALL GAME

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Abstract

The present paper is based on an ample comparative study in which five tests were elaborated. These are made of specific means for the basketball game and have been used to evaluate different coordinative