

INTERNATIONAL STANDARDS FOR TESTING AND TESTS USED AS DIDACTIC AND PSYCHO-DIAGNOSTIC TOOLS

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(Review)

Reny Damjanova, Orlin Groshev, Pavel Jordanov and Mihail Michailov

*National Sports Academy "Vassil Levski", Sofia, Coaches Faculty,
Department - Theory of Sports Training, Sofia, Bulgaria*

Abstracts:

In this overview of the stages are considered in the development of understandings and definitions of concepts - a test and testing (psychological testing and teaching, knowledge tests) as well the basic regulations adopted in Bulgaria for the basic rules and standards for the description and presentation of the tests, their adaptation and application.

Key words: *psychological tests, knowledge tests, documentation, measuring characteristics*

One of the most common forms of objective and standardized control in international practice today is through the use of tests. However, the concepts of "test" and "testing" controversial and cause multivalued interpretations and definitions.

Uniformity of definitions is extremely difficult both by the widespread use of tests in various fields of human knowledge (psychology, pedagogy, sports medicine, science, technology, etc.). And the variety of target functions of their practical application (professional recruitment, training, retraining, etc.) and by the diversity of forms and patterns of administration in the national or international.

Broadest sense test is used as a synonym for any kind of examination, inspection and evaluation, research and methods to explore different aspects of human activity (psychological, pedagogical, motor-driven, etc.). And to describe the measurement characteristics different systems (computers, engines, etc.) and engineering or architectural designs, hypothesis testing, quality control of a production and more. Obviously this definition is too ambiguous.

It is believed that the use of the term "test" in the humanities was introduced for the first time by Sir Francis Galton, who founded in 1884 in London, the first laboratory measurement of some

physical qualities of man and first used correlation analysis to identify the degree of correlation between individual motor skills. Subsequently, attempts to specify and define the term "test" within a specific area of their application does not lead to its consolidation or clarification of responses.

By finding such ambiguous and too contradictory interpretation of test specialists arrive from other areas such as:

- Mathematical statistics and theory tests – (E. Thyssen & Veyner, 2001; Crocker & Algina, 2005; Klauer, 1987)

- Pedagogy, sociology and psychology – (Bizhkov, 2003; Avanesov, 1982; Lemnek, 1988, 1989; Sax, 1980; Garrison & Magoon, 1972; Brickenkamp, 1997). To support its finding regarding the definitions of the term "test" in the pedagogical literature, (Bizhkov, 2003) quoted in the labors of many definitions as authors (Ingekamp, 1963).

In the specialized literature, sports teaching is also a wide variety of definitions of concepts and testing a test, despite the fact that the vast majority of cases because of the nature of the action with the use of the term refers to and focuses primarily on measurement, monitoring and evaluation of level of motor skills or acquired motor skills and habits.

According to concept test is "in Latin, French and English origin and means a sample, determining the value, qualitative or quantitative research (Bube (Bube), 1972). According to Zatsiorski (Zaciorskié), 1982) engine tests can be divided into three groups - control exercises, standardized functional tests and maximum functional samples. Brogli (Brogli) (1992) test is 'any natural or artificially constructed situation task, which athlete must react to certain rules (Bachvarov (Bü-varov), 2002) defines the test as a test, examination of sport, mental, physical or internal functional capabilities of the organism to the needs of the athlete selection of sports development, optimizing and managing treniranostta. They 'can be engine (assessment of motor skills and activities), mental (semantic solving tasks), sensor (down reactions of light, sound, etc... (Bachev & Galov Ba~ev i Galov (2004), consider the term "test" as specialized and standardized locomotor exercise or other requirement of the implementation of which, by the results, judging the state of motor skills and abilities of people currently or in the future, a process of study and their latent qualities of determination – testing .

Aforementioned definitions is also not clearly disclose the contents of the test concepts and testing (testing). Overall, they confirm rather made in 1992 by finding (Brogli (Brogli), 1992) that are so comprehensive and complicated, as there are not very clear.

I definitely believe that enough examples adduced above clearly outline the ambiguity in the concept test in its broad and narrow sense now.

In the field of cognitive psychology and pedagogy broad sense of the term 'test' allows you to make different classifications according to formalized criteria defined as: areas of application - psychological, pedagogical, didactic, teacher-psychological, sociological, medical, motor (motor) and etc.; methods of their application - group or individual; paper (paper and pencil) or computer based, the method of their construction and their scope (an area or groups from different areas of knowledge, ways of evaluating them - objectively or subjectively; classical or kriterial orientated; purposes for which used - external or internal evaluation and self assessment, the assessment of curricula for teaching innovation, educational institutions or units of the education system and others.; recruitment in a professional field, selection of young talents, devel-

opment and analysis of forecasting performance (motor or theoretical) and others.

Classification of tests has its historical development, which is completely logical directly related to the occurrence and stages of development of the theory and methodology of the tests.

The first serious attempts to develop classifications widely used tests in the field of psychology and pedagogy date from the early and mid-twentieth century. They can be found in the writings Cronbach, 1960, 1970; Lyman, 1963; Michel & Conrad, 1982; Anastasi, 1973).

In the middle and end of the last century appeared structured classifications of (Linert, 1961; Brigenkamp, 1997; Meily & Stiengruber, 1982) For example, (Linert, 1961) tests grouped into 3 main areas: IQ tests - general and special (endowment, gifts, talents); tests for educational achievement: a. motor (motor) performance b. c. sensory performance and mental performance, tests to determine the characteristics of the individual - needs, interests, ideas, and other nature (typology).

In the late 20th century, these classifications are approved and become a basis for further development and detailing into the works of (Michel & Conrad, 1982; Meily & Stiengruber, 1982). Overall, they remain above mentioned three main groups of tests, while inside them is carried out restructuring included subgroups. As pointed out by (Brickenkamp, 1997) classification includes various subgroups in their uniformity. As he points too heterogeneous group of school tests (respectively learning achievement tests).

With the development of cognitive psychology and pedagogy in the late 20th and early 21st century classifications of tests in the U.S. and Europe as a whole achieved a significantly greater refinement and differentiation of the various groups klaster tests for to measure the performance, development, intelligence and personality characteristics. However, in our available sources of information found no single generally accepted classification tests.

The Bulgarian literature is accepted tests to help to verify and assess academic achievement, to be called pedagogical or didactic. In English literature they are known as achievement tests (Academic Achievement Test), in German literature - such as school or pedagogical (Schulleistungstests, Schulltst, Pädagogischer Test), French literature - as a method of testing

(Methode de Tests), and in Russian literature - as "objective test" achievements and others.

As for the tests in general and for didactic tests in particular, not in a consistent and common definition. Overall, the literature is a wide variety of definitions of didactic tests that differ in content and stylistic terms.

According to R. Thorndike and E. Hagen didactic test is "test, designed to manifest what it has learned to make the individual as a result of planned and already gained experience or training." According to Knoll and D. C. Skene didactic test is a "procedure or measuring instrument usually paper or pencil (paper and pencil test), which is used to measure student progress in attaining the objectives of curriculum (curriculum), ie knowledge or skills, generally obtained through training in school (classroom instructions). In L. Gay "didactic tests recorded achievement level of knowledge and skills in an area at some point in the pedagogical process, and for N. Graunland didactic tests are "systematic procedure for determining the quantity which the student has learned (what and how).

The use of tests as research tools for measuring, monitoring and evaluation of individual development and achievement of learning suggests standards and criteria that they must meet (reliability, validity, accuracy, the standards, etc.). This understanding of the concepts of test and testing is formed with the development of theory and methodology of the tests in the late 19th and early 20th century.

The growing interest of our scientific community to the review, monitoring and evaluation of educational achievement and opportunities for application of didactic tests found its expression in a material published research monographs and textbooks by the end of last century when the works go Gerganov, 1976; Stoimenova, 2000; Bizhkov, 2003).

With their scientific contributions in the field of educational diagnosis – (Bizhkov, 2003) definition requires didactic tests, clarifying the substantive differences that are consumed when used in narrow and broadly. He said the strict sense "didactic tests" is used when given the research method of measuring academic achievement and individual personality development.

Aforementioned determinations and classifications demonstrate the requisite variety of types of

tests and determinations of didactic tests in our time.

Despite the diversity in terminology different definitions can be summarized that the current interpretation of the concept of didactic test and consumed in the strict sense means research method to measure individual progress and results of the educational process, conducted in educational institutions. At the same time said definitions and demonstrate the development content of the test concepts and in particular didactic historical tests. Development of the theory and methodology of the tests have priority consideration of the concept test and test teaching as a research method and almost completely replacing the use of broad sense in modern research papers.

Academic and professional ethics of psychologist and educator currently required when acting as a research tool used psychological tests or teaching methods to be identified, assessments and statistical indicators in the current time perform adequately measuring characteristics of the status of each test or equivalent test battery options.

In learning with students from the NSA, Department of Theory of Sport 'test widely used form of assessment of knowledge. For example, in "Methodology and Metrology" apparatus used standardized methodology for determining the strength of certain muscle groups using a universal system dynamometric Dino-1. (See Figure 1.)

Standardization of measurements required to follow these rules:

Smallest possible length between the measured part of the body dynamometer. The dynamometer must not provisva and to abide by hand.

Respect of right angles in bone - joint units and the whole body kinematic chain measurements;

Always the same place of fixing belt limb - after a Costa maleulusite rather than joint. Moment of force change when the applied point belt covering a shank as changing the length of the lever;

Immobilization of other muscle groups that may participate to increase the force. Apply fixing belts trunk and extremities.

Should not be allowed to "impact" tension dynamometer, power is measured in the Isometric system without movement.

In the sectors of sport theory and statistical methods in sport "very widely used didactic assessment tests, and self knowledge of students from NSA. Each test was developed based on the postu-

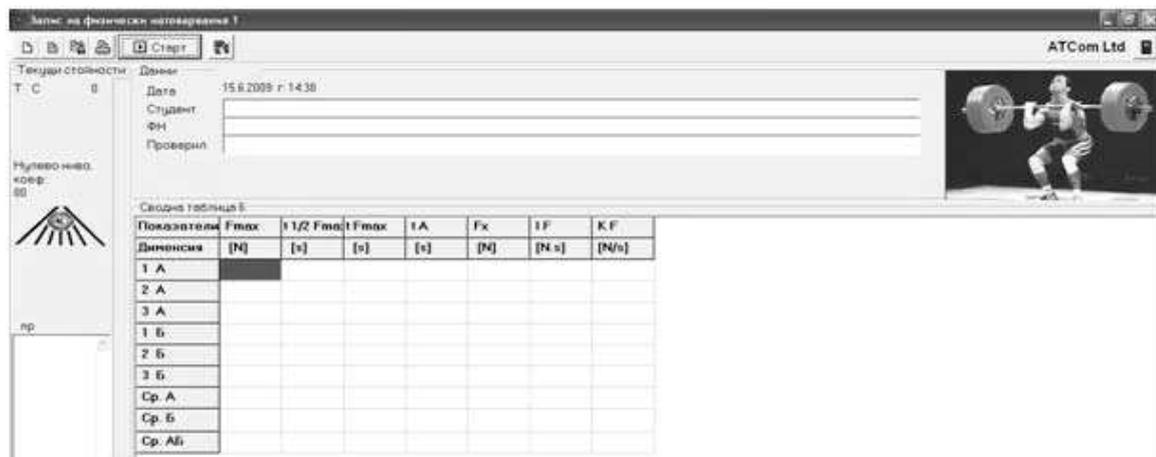


Figure 1. Universal system dynamometric Dino - 1

lates of classical theory and modern testing requirements for a description of the tests referred to in his passport part.

The methods for determining the measurement characteristics of didactic tests used to assess knowledge "Statisticheski methods in sport, ball-room dancing and other subjects taught at the NSA have been developed in the writings of Damjanova, Kostov & Stoimenova, 2006; Groshev & Yordanov, 2006).

Standards for proper use of tests to assess psychological parameters were adopted for the first time by the Council of the International Committee Test - ICC (International Test Commission - ITC) in Athens in 1995. Objective need for their development is determined by several very significant argument:

In different countries there are significant differences in the statutory rules on the use of tests. In some countries, professional associations have a legal registration for psychological activities in the other - no, there are some controls on the use of tests by non-specialists, others - no. That a set of internationally accepted rules will allow the national psychological associations and other relevant professional communities in countries where no standards exist or are incomplete, they are created and / or be supplemented.

Means of access, in terms of purchase and use of test materials, vary greatly in different countries. In some countries, access to test materials is limited to psychologists, others - to users registered in officially recognized, national distributor of tests, in others - anyone can obtain tests without limitation, whether from domestic or from foreign suppliers.

Several well-known tools appear on the Internet in violation of copyright law, without being referred to the authors or publishers of the test and in breach of security tests.

In vocational testing, exclusive of labor mobility leads to increased testing of candidates from different countries often tests are applied in one country on behalf of a potential employer in another country.

The U.S. and Britain are working hard on the opportunities of the Internet for remote or indirect evaluation in education and employment. This new aspect of testing raises many questions relating to standards of conduct and control the testing process, including security level of the tests.

In our first formally adopted standards for the tests developed by psychologists from the Institute of Psychology - Ministry of Interior. Subsequently, they adopted and the Society of Psychologists in Bulgaria. (See International Regulations for the use of tests, the Bulgarian version, 2000 - Adopted by the Society of Psychologists in Bulgaria and the Institute of Psychology of Interior. They include three main Document: 1 / Code adaptation of tests, 2 / International rules for the use of tests and 3 / Standards for the description and presentation of the tests.

In conclusion, we have to summarize that:

Current knowledge and correct application of established standards for the development, adaptation and application of tests as a psihodiagnostichen tools and / or method of assessing knowledge; skills and habits of persons testing, are an integral part of the content component of professional teaching competence;

The lack of developed and approved state standards for test evaluation in our country requires in its application to the realization of certain educational purposes to combine the advantages of normative theory and criteria oriented tests;

The use of standardized external and internal assessment using the tests in accordance with established Standards (rules) is one of the most powerful factors in the accession of each country to the process of building a common International and European educational and research area.

REFERENCIS

Anastasi, A. (1987). *Psychological testing*. London: MacMillan

Аванесов, В. С. (1982). *Тесты в социологическом исследовании* [Tests in sociological research. In Bulgarian]. Москва: Наука.

Бачев, В., М. Галов. (2004). *Основи на научноизследователската работа* [Basis in research work. In Bulgarian]. София: Национална Спортна Академия.

Бижков, Г. (2003). *Педагого-психологическа диагностика* [Pedagogical-psychological diagnosis. In Bulgarian]. София: НУБ „Св.Климент Охридски“.

Brickenkamp, R. (1997). *Handbuch psychologischer und pädagogischer Tests*. Bern, Toronto, Seattle: Hogrefe Verlag, Gottingen.

Брогли, Я. (1992). *Въведение в теорията и практиката на контрола върху факторите на спортното постижение* [Introduction of the theory and practice of control over the factors of sporting achievements. In Bulgarian]. Хабилизационен труд, София: Национална Спортна Академия.

Бъчваров, М. (2002). *Речник по спортология* [Dictionary of sports science. In Bulgarian]. София: БОЛИД-ИНС.

Crombach, L. (1960). *Essentials of psychological testing*. New York: Harper & Row.

Crombach, L. (1970). *Essentials of psychological testing*. New York: Harper & Row.

Дамянова, Р. и Стоименова, Е. (2004). *Дискриминативна сила на въпросите и задачите в дидактическите тестове - класически и съвременни методи за математико-статистическа обработка* [The discriminative power of questions and tasks in the didactic tests – classical and modern methods of mathematical and statistical ana-

lysis. In Bulgarian]. *Спорт и наука*, (1), 27.

Дамянова, Р., Костов, З., и Стоименова, Е. (2006). *Класически анализ на психометричните свойства на тестовата батерия за оценка на теоретичните знания по спортни танци* [Classic analysis of the psychometric qualities and the testing example for evaluating sport dancing theoretical knowledge. In Bulgarian]. *Спорт и наука*, (извънреден бр. (2)), 82-89.

Дамянова, Р. (2006). *Оценка на теоретичните знания в областта на физическата култура и спорта - състояние на проблема и перспективи* [Evaluation of theoretical knowledge in the field of physical culture and sport – State & Issues. In Bulgarian]. *В: Сборник “Личност, мотивация, спорт”*, том 12, (76-89). София: Национална Спортна Академия.

Дамянова, Р. (2008). *Дидактически тестов контрол във висшето спортнопедагогическо образование – теория и практика* [Didactic control tests in higher education sport – Theory and Practice. In Bulgarian]. Докторска дисертация, София: Национална Спортна Академия.

Garrison, S., & Magoon. (1972). *Education Psychology. An Integration of Psychology and Educational Practices*. Columbus: OH.

Герганов, Е. (1976). *Психометрични методи за проверка и оценка на знанията по български език* [Psychometric methods for checking and evaluation the knowledge of Bulgarian language. In Bulgarian]. София: Народна просвета.

Грошев, О. и Йорданов, П. (2009). *Методическо пособие 2 по Методология и метрология* [Methodical tool 2 for Methodology and Metrology. In Bulgarian]. София: Национална Спортна Академия.

Зациорский, В. М. (1982). *Спортивная метрология* [Sports Metrology. In Russian]. Москва: Физкультура и спорт.

Ingekamp, K. (1963). *Psychologische Tests in der Hand des Lehrers*. *Didacta medica*, (3), 65 – 70.

Klauer, K. (1987). *Kriteriumsorientierte Tests*. Verl. Psychologie. Toronto, Zuerich: Dr. J. Hogrefe Goettingen.

Lamnek, S. (1988). *Qualitative Sozialforschung; Bd. I: Methodologie*. Muenchen: Weinheim,

- Psychology Velags Union.
- Lienert, G. (1961). *Testaufbau und Testanalyse*.
Wanheim: Beltz.
- Lyman, H. (1963). *Test score and what they mean*. Englewood Cliffs, New Jersey Hall.
- Meily, R. & AJ Stiengrüber. (1978). *Lehrbuch dr Psychlogischen Diagnostik*. Bern: Huber.
- Милева, Е . (2007). Интернационализация на висшето спортнопедагогическо образование – европейски измерения [Internationalization of higer education pedagogy sport – European dimensions. In Bulgarian]. В: *Сборник “Личност. Мотивация. Спорт”, том 12*, 186-191. София: Национална Спортна Академия.
- Michel, L. & W. Conrad. (1982). *Theoretische Grundlagen psychometrischer Tests*. In K.-J. Groffman & L. Michel (Hrsg.) *Grundlagen psychometrische Diagnostik*. Enzyklopädie der Psychologie, Serie II, Band 1, Göttingen: Hogrefe.
- Sax, G. (1980). *Principles of Educational and Psychological Measurement and Evaluation*. 2-d ed. Wadsworth Publishing Company, Belmont, CA, A Division of Wadsworth, Inc.
- Стоименова, Е. (2000). *Измерителни качества на тестовете* [Measuring characeristics of tests. In Bulgarian]. София: НБУ „Св.Климент Охридски”.
- Thissen, D., H. Wainer. (2001). *Test scoring*. New Jersey: Lawrence Erlbaum Associates Publishers, Mahwah.

МЕЃУНАРОДНИ СТАНДАРДИ ЗА ТЕСТИРАЊЕ И ТЕСТОВИ КОИ СЕ ПРИМЕНУВААТ КАКО ДИДАКТЧКИ И ПСИХОДИЈАГНОСТИЧКИ ПОСТАПКИ

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(Прегледен иџруд)

**Рени Дамјанова, Орлин Грошев, Павел Јорданов
и Михаил.Михајлов**

*Национална сѝорѝска акдемија “Васил Левски”, Софија, Тренерски факулѝеѝ, ,
Кайшедра Теорија на сѝорѝоѝ, Софија, Буџарија*

Апстракт:

Во овој иџруд се иџреѝирааѝ фазиѝе на развојоѝ на сфаќањаѝа и дефинирањето на ѝоимѝе – иѝесѝ и иѝесѝирање (ѝсихолошко иѝесѝирање и ѝодучување, ѝроверка на знаењаѝа), како и основниѝе ѝроѝиси кои се донесени во Буџарија за основниѝе ѝравила и сѝандарди за оѝис и ѝрезенѝирање на иѝесѝовиѝе, нивнаѝа адаѝѝација и ѝримена.

Клучни зборови: психолошки тестови, тестови на знаења, документација, мерни карактеристики