Glossary

**AAHPER youth fitness test:** Battery of six test items measuring primarily performance-related physical fitness, although two of the items are measures of health-related fitness

**AAHPERD physical best test:** Five-item test battery designed to measure physical performance, particularly health-related physical fitness

**accountability:** Provision of evidence that predetermined goals and objectives have been met

**achievement:** Ability level of an examinee at a designated point

**active stretching:** Muscle stretching resulting from the voluntary forceful contraction of opposing muscles

**affect:** Sociological or psychological characteristic manifested in a feeling or behavior, such as attitude, interest, and sportsmanship

**affective domain:** Levels of emotional behavior, including attitudes, interests, and various personality characteristics

**alternatives:** Set of responses in a multiple-choice item; correct alternative is the answer; incorrect alternatives are *distractors*

**anomaly:** Unusual; irregular; contrary to general rule

**applications programs:** Computer programs designed to aid users in solving specific problems (e.g., word processing, spreadsheets)

**athletic performance-related physical fitness:** Type of physical fitness that enhances performance in sports and other forms of physical activity; different from health-related physical fitness, although health-related fitness may also benefit performance

**attitude:** Feelings about a specific attitude object, such as a situation, a person, or an activity

**balance:** Ability to maintain equilibrium

**basic movement patterns:** Types of movement that emerge developmentally, usually at a young age, such as running, jumping, and throwing

**behavioral objective:** Objective stated in terms of the behavior the student will exhibit when the objective is successfully attained

**bicycle ergometer:** Stationary bicycle that can be operated at a variety of workloads used to measure physical work capacity

**bit:** Smallest amount of information that can be identified by a computer; can specify either of two alternatives, 1 or 0

**body composition:** Combination of bone, muscle mass, and fatty tissue

**booting:** Loading a program into the computer's memory

*The definitions of words marked with an asterisk (*) are taken from the Rules and Regulations for PL 94-192 published in the Federal Register. The definitions of words marked with a dagger are taken from the American Alliance for Health, Physical Education, Recreation and Dance. 1980. AAHPERD health-related physical fitness test manual. Reston, VA: AAHPERD.*
bus: Communication links between the components of a computer system
byte: Equals one character, which is a letter, number, or punctuation mark; made up of eight bits or two nibbles
cable tensiometer: Device used to measure static strength; cable tension is determined "from the force needed to create offset on a riser in a cable stretched between two points" (Clarke, 1976:124)
carotid artery: Either of two arteries on the sides of the neck that carry blood to the head; often used to measure pulse rate
CATALOG: BASIC command to list the files on a disk
central processing unit (CPU): Component of a computer that performs mathematical calculations and coordinates the flow of information through the computer
central tendency: Center of distribution of test scores
cerebral palsy: Neuromuscular disability resulting from brain damage
checklist: An observational analysis instrument that records the presence or absence of critical elements of behavior
checklist of objectives: Set of symbols to rate major objectives; often used in elementary schools
circumference measure: Measure of the outer surface of a body part, such as the upper arm; sometimes used to estimate body fatness
cognitive domain: Intellectual behavior ranging from a low level (memorization of facts) to a higher level (application of these facts) in some way
compact disk read only memory (CD-ROM): Laser disk used as a computer storage device
competency-based evaluation: Approach to evaluation in which a desired level of competency is identified, and examinees designated as competent must be able to meet or exceed this level
component model of intratask development: Identification of developmental characteristics of body parts in performing a task
components of skill: Elements of the skill that are essential to its correct execution
computer program: A set of instructions directing the computer to perform a task
concentric action: Muscle action that results in a shortening of the muscle
concurrent validity: Degree to which a predictor test correlates with a criterion test
condition (in an objective): Situation in which behavior is expected to occur
congenital: Condition present at birth
construct validity: Degree to which a test measures an attribute or a trait that cannot be directly measured
content (in an objective): Material or skill the student is expected to learn
content validity: Degree to which the sample of test items, tasks, or questions on a test are representative of some defined universe or "domain" of content (American Psychological Association, 1985)
contingency coefficient: Method of determining the validity of a mastery test
contingency table: Table with numbers in each cell determined by jointly considering the two joint categories
contrasting groups method: Determination of valid cutoff point by comparing students expected to master an objective with those not expected to master it
correction for guessing: Alteration of test score based on number of items answered incorrectly
correlation: Relationship between two variables
correlation coefficient: Statistical procedure for estimating the relationship between two variables, x and y
criterion: Standard of behavior

criterion-referenced test: Test with a predetermined standard of performance that is tied to a specified domain of behavior

criterion-related validity: Extent to which a test measures the true or criterion behavior of examinees, usually determined by correlational procedures

criterion test: Highly valid test of the attribute to be measured; cannot be used in a practical setting because of its complexity, expense, and need for specially trained testers; standard against which a practical test is compared

cumulative frequency (cf): Column in frequency distribution table obtained by summing the frequencies from the bottom to the top of the column; the number at the top of the column equals N, the number of scores; represents the number of examinees scoring at or below a given interval

cumulative percent (c%): Column in frequency distribution table obtained by dividing the cumulative frequency by N and multiplying by 100; represents the percentage of examinees scoring at or below a given interval

curriculum objective: Translation of long-term objective into specific behavior expected after exposure to a curriculum

database: Information organized into records and fields and used as a filing system; computerized database management systems provide an electronic means for inputting, organizing, and managing a database

deaf: Severe lacking in sense of hearing

decision validity: Accuracy of classification of masters and nonmasters

descriptive statistics: Statistics used to describe a set of data

desktop computers: Computers that fit comfortably on a desk

disabled: Because of an impairment, the disabled individual is limited or restricted in executing some skills, performing specific jobs or tasks, or participating in certain activities (American Alliance for Health, Physical Education, Recreation and Dance)
disk: Magnetic media on which the computer stores information; also known as floppy disk or diskette

disk drive: Device for storing data; means of communication between disk and central processor

disk operating system (DOS): Operating system for microcomputers; controls communication between the disk drives and the central operating system (see operating system)
display: Information appearing on screen of monitor
domain: Range of all possible criterion behaviors

domain-referenced validity: Extent to which the tasks sampled by the test adequately represent the total domain of tasks

dot-matrix printer: A printer that employs an array of dots (e.g., metal pins) to create images on paper
dynamic balance: Ability to maintain equilibrium while in motion
dynamic strength: Force exerted by a muscle group as a body part moves through space
dynamometer: Device used to measure static strength and endurance
eccentric action: Muscle action that results in a lengthening of the muscle
educable: Capable of learning or being educated, as in educable mentally retarded
electromechanical device: A device (such as Cybex II) used to measure static and dynamic strength, endurance, and power
electronic bulletin board: A computer used to store messages; users access the bulletin board via a modem and post and retrieve messages much like a paper bulletin board
electronic mail (e-mail): Mail sent directly from computer to computer along a computer network or via a modem

elegon: Goniometer with a potentiometer substituted for the protractor; also known as electrogoniometer; used to measure flexibility

eligibility: In special education, the process of verifying if a significant impairment exists; used to develop additional services for the student

enter key: Key on the keyboard used to enter commands into the computer

essay item: Item requiring examinee to construct a response at least several sentences long

evaluation: Interpretation of a test score

evaluation objective: Short-term objective reflecting a change in behavior that has occurred over a short period

face validity: Having the appearance of validity, but not formally validated

field test: Practical but valid substitute for a more complex laboratory test

Flexed-arm hang test: Measures arm and shoulder girdle strength; usually designated for girls

flexibility: Range of movement about a joint, from a position of extension to flexion or the opposite movement

flexometer: Instrument with a weighted 360-degree dial and a weighted pointer, used to measure flexibility; both the dial and the pointer move independently as affected by gravity

forced-choice item: Item requiring examinee to choose between two or more alternatives that appear equally favorable or unfavorable

formative evaluation: Evaluation that occurs throughout a training period or instructional unit

formatting a disk: Preparing a disk for use; must be applied to new disks before using

freeware: Computer software obtained for the price of a blank disk

frequency (f): Number of scores in an interval; sum of tallies in an interval

frequency distribution: Method of organizing test scores into mutually exclusive intervals

frequency polygon: Line graph of the frequency distribution, with score limits on the horizontal axis and frequency of cases on the vertical axis

game statistics: Record of events occurring during a game, such as number of shots attempted, percentage of successful shots, and so forth

gates: Pictorial representation of bits; open gate represents a "yes" choice; closed gate represents a "no" choice

gigabyte: Unit of computer memory storage representing approximately 1 billion bytes or typed characters

goniometer: Protractor of 180 degrees with extended arms; used to measure flexibility

grade: Mark assigned to a student based on his or her performance on one or more tests

graphical-user interface (GUI): A computer program that provides a visual or pictorial mode of communication between the user and the computer; GUI is characterized by use of a mouse, icons, and windows

halo effect: Rater bias that can occur when the rater is unduly influenced by previous performance of the examinee

handicapped: Because of an impairment or disability, the handicapped individual is adversely affected psychologically, emotionally, or socially

hard disk: A rigid magnetic disk encased in an airtight box; used to store data and programs
hardware: Physical components of the computer, such as keyboard and monitor
health-related physical fitness: See Physical fitness (health-related)
histogram: Bar graph of the frequency distribution, with score limits on the horizontal axis and frequency of cases on the vertical axis
HOME: BASIC command to clear the screen
hydrostatic weighing: Assessment of body composition by weighing a person underwater
impaired: An impaired individual has an identifiable organic or functional condition: some part of the body or a portion of an anatomical structure is actually missing; one or more parts of the body do not function properly; may be temporary or permanent
improvement: Change in behavior occurring between an initial and a final testing period
inclinometer: A clinical device for measuring joint angle and range of motion, particularly of the spine
index of discrimination: Ratio of high to low scorers on the total test who answer a given item correctly
Individualized Education Program (IEP): Written plan of instruction, including evaluation procedures, developed for each student receiving special education
individually based norms: Norms based on the distribution of scores of individual examinees; type of norms used in the AAHPER youth fitness test
initializing a disk: Preparing a disk for use, specifically on an Apple computer
ink-jet printer: A printer that uses ink sprayed through nozzles to form characters on paper
instructed/uninstructed approach: Determination of valid cutoff point by comparing an instructed group with an uninstructed group
integrated software: Computer programs that include two or more application programs in a single package; provide the capacity to easily transfer data between applications
interclass reliability coefficient: Method of estimating reliability ($R_{xx}$) using correlation procedures
interests: Affect reflecting one's likes and dislikes about various matters, such as physical activity, programming, and scheduling
interface card: Element of a bus that provides communication between the computer circuit board and a hardware component
interjudge objectivity: Consistency in scoring between two or more independent judgments of the same performance
interpercentile range: Measure of variability used in conjunction with the median; can be represented by a variety of ranges as long as equal portions of each end of the distribution are eliminated
interval (i): Range of scores identified to form categories of a frequency distribution
intraclass reliability coefficient: Method of estimating reliability ($R_{xx}$) using analysis of variance
intrajudge objectivity: Consistency in scoring when one person scores the same test two or more times
intratastic analysis: Identification of stages of development of a task from the time the task is first attempted to the time it is performed at a mature or an adult level
isokinetic resistance training: Resistance training that requires a machine that adjusts resistance throughout the range of motion at a preset fixed speed
isometric resistance training: Resistance training that involves no limb movement at the joint being exercised
**isotonic resistance training**: Resistance training that involves concentric and eccentric contractions against a constant weight

**item analysis**: Method for determining the usefulness of each individual item as a part of the total test

**item difficulty**: Proportion of examinees answering the item correctly

**item function**: Percentage of examinees selecting an alternative as the correct response, whether it is correct or not

**kappa coefficient** ($\kappa$): Method of determining the reliability of a mastery test where change is taken into account

**keyboard**: Used to transmit information to computer; similar to keyboard of typewriter

**kilobyte** (K): 1,024 bytes

**Kraus-Weber test**: Test of minimal functioning of the low back area

**kyphosis**: A postural defect characterized by excessive posterior curvature of the spine

**laptop computer**: A small (usually under 10 lb) computer that fits comfortably in an attaché case

**laser printer**: A printer that uses a laser beam much like a dot-matrix printer to create high resolution images on paper

**least restrictive environment**: The learning environment that enables persons with a disability to perform to their fullest capacity

**level of behavior**: Level of the process (cognitive, affective, or psychomotor) the learner uses in attaining an objective

**Likert scale**: Scale measuring degree of agreement or disagreement with a series of affective statements

**LIST**: BASIC command to list each line of the program in random access memory (RAM)

**LOAD (program)**: A BASIC command to take a specified program from the disk and put it into RAM

**logical validity**: Extent to which a test measures the most important components of skill required to perform the motor task adequately

**long-range goals**: Long-term global goals that describe the end product of a complete education

**lordosis**: A postural defect characterized by excessive anterior curvature of the spine

**mastery learning**: Model of instruction whereby frequent feedback is given to the learner and a large percentage of learners can attain at least minimal success in a unit of instruction

**mastery test**: Type of criterion-referenced test in which examinees are classified as masters or nonmasters

**matching item**: Item containing two columns of words or phrases, with the right-hand column used as alternatives to match with the material in the left-hand column

**maximum oxygen uptake** ($\text{Vo}_2 \text{ max}$): Maximum amount of oxygen an individual can transport and use during exercise, expressed as milliliters per kilogram of body weight per minute (ml/kg/min)

**mean**: Arithmetic average of a set of scores; a measure of central tendency

**measure**: When used as a noun, refers to an instrument or technique used to obtain information (usually a score) about an attribute of a person or an object; when used as a verb, refers to the process of obtaining the score

**measurement**: Process of assigning a number to an attribute of a person or an object; the process of obtaining test scores

**median**: Score dividing the distribution such that 50% of the scores fall above that point and 50% fall below; the 50th percentile
megabyte: Unit of computer memory storage representing approximately 1 million bytes or typed characters

mentally retarded*: Significantly subaverage, general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested in the developmental period, which adversely affects a child's education performance

MET: Metabolic equivalent; the oxygen cost of energy expenditure at rest; 1 MET = 3–4 mL/kg/min

microcomputer: A computer that employs a microprocessor as a central processing unit; laptop, desktop, and palmtop computers are types of microcomputers

mode: Most frequently occurring score in the distribution; a measure of central tendency

modem: Device allowing a computer to communicate over telephone lines and other communication media

motor ability: Originally, the innate ability to perform motor skills; more commonly, the ability to perform motor skills

motor capacity: Individual's capacity to perform motor skills

motor educability: Individual's ability to learn new motor skills

mouse: A handheld pointing device used to direct the movement of the cursor on a computer screen

multiple-choice item: Test item that is answered using one of three or more alternatives

muscular endurance: "The ability of the muscle to maintain submaximum force levels for extended periods" (Heyward, 1984:5)

muscular strength: "The maximum force or tension that can be produced by the muscle group" (Heyward, 1984:4)

needs assessment: Comparison of actual status of target group with desired status on some attribute to determine program needs

network: Two or more computers connected for purposes of sharing resources and communication

normal curve: Bell-shaped curve with known properties

norm-referenced test: Test used to compare an examinee's score with the scores of other similar examinees

objective test: Test with highly precise scoring system, yielding little error

objectivity: Precision with which test is scored

observational analysis: Analysis of performance that involves recording subjective observations of behavior

operating system: A series of computer programs that control the flow of information and overall operation of the computer (see disk operating system)

orthopedic impairment*: A severe orthopedic impairment adversely affecting a child's educational performance; includes impairments caused by a congenital anomaly (e.g., clubfoot, absence of some member), impairments caused by disease (e.g., poliomyelitis), and impairments from other causes (e.g., cerebral palsy, leukemia)

palmtop computer: A computer that will fit comfortably in the palm of the hand

parallel communication: Communication between computer components that transmits information on parallel paths (e.g., 8 bits are transmitted at one time along parallel paths)

paraplegia: Paralysis of the legs and lower part of the body

pass-fail method: Method of grading using two grade categories

passive stretching: Muscle stretching that is largely involuntary and results from an assist from gravity or from another person while the subject relaxes the muscles around the joint
Pearson product-moment correlation coefficient: Statistical technique used to determine the relationship between two sets of measures of the same persons.

perceived exertion scale: Scale used to assess the examinee’s perception of his or her physical exertion during exercise.

percentage method: Method of grading based on the assignment of a percentage to each grade category; a norm-referenced approach to grading.

percentage-correct method: Method of grading based on the percentage of test items or trials successfully completed; a criterion-referenced approach to grading.

percentile: Score value for a specified percentage of cases in a distribution of scores.

percentile norms: Norms calculated by converting raw scores to percentiles.

percentile rank: Percentage of cases falling at or below a specified score in a distribution.

peripheral: Device that can send information to the computer as well as receive information from it.

physical fitness (health-related): Multifaceted continuum extending from birth to death; affected by physical activity; ranges from optimal abilities in all aspects of life to severely limiting disease and dysfunction.

placement: In special education, the process to determine the least restrictive environment for the student.

posture: Alignment of the body and its segments.

power: Ability to generate maximum force in a minimum amount of time.

predictive validity: Appropriateness of a test as a predictor of behavior.

predictor: Test or variable that predicts a criterion behavior.

program evaluation: Assessment of the extent to which a program has met predetermined objectives.

proportion of agreement (P): Method of determining the reliability of a criterion-referenced test.

psychomotor domain: Motor behavior ranging from a low level, reproducing a skill, to higher levels in which the skill is used creatively in a game setting.

Pull-ups test: Measures arm and shoulder girdle strength; usually designated for boys.

pulse rate: Estimation of heart rate; often made by placing the tips of two or three fingers on the skin above an artery and counting the beats.

qualitative measurement: Predominantly judgmental approach to measurement.

quantitative measurement: Objective approach to measurement in which a number is assigned to the attribute of interest.

range: Spread of scores; in a distribution, the bottom score subtracted from the top score plus 1.

random access memory (RAM): Primary memory of a computer; information can be stored in RAM as well as retrieved and modified.

rank difference correlation coefficient: Statistical technique used to calculate the correlation coefficient when the scores are ranked.

rating scale: Scale used to subjectively assess performance.

raw score: Score obtained by an examinee on a test.

reactive effect: Change in affect resulting from heightened awareness because of the experience of taking an inventory measuring the affective behavior.

read only memory (ROM): Computer memory in which information is stored once, usually by the manufacturer; cannot be changed.

real limits: Upper and lower limits of intervals in a frequency distribution representing the entire area between intervals; do not represent score units actually obtained on the test.
reflexes: Inborn, genetically endowed, involuntary behaviors
reliability: Dependability of scores, their relative freedom from error; the consistency of an individual's performance on a test
reliability (criterion-referenced): Consistency of classification of masters and non-masters
response distortion: Invalid response because of failure to respond to an item, usually an affective measure, with total honesty
scoliosis: A postural defect characterized by lateral curvature of the spine
score limits: Upper and lower limits of intervals in a frequency distribution represented in raw score units, i.e., the actual scores obtained on the test
screening: In special education, the process to determine if a student is likely to require special assistance
semantic differential scale: Rating of concepts with scales anchored at the extremes with bipolar adjectives
serial communication: Communication between computer components that transmits information one bit at a time along a single path
shareware: Computer software that is distributed for free; users are asked to make a donation if they intend to use the software
short-answer item: Test item including a statement with one or more blank spaces to be filled in by the examinee
Shuttle run test: Measures speed and change of direction
Sit-ups test: Measures abdominal strength
skewness: Shape of the curve when the majority of the scores fall at one end of the distribution, with the remainder of the scores tapering off as reflected in the long tail of the distribution
skinfold caliper: Device for measuring skinfold thickness
skinfold thickness: Thickness of a fold of skin when lifted away from the muscle; used to estimate body fat
social behavior: Behavior displayed in dealing with others, such as relationships among peers
software: Encompasses the instructions used to run a computer (i.e., programs), the media on which the instructions are stored (e.g., disks), and the documentation required to effectively use the program (i.e., computer manuals)
specificity: A concept in resistance training that asserts that muscle strength, endurance, and power are specific to muscles and groups of muscles
speech impairment*: Communication disorder, such as stuttering, impaired articulation, language impairment, or voice impairment, which adversely affects a child's educational performance
split-half reliability estimate: Reliability estimate determined by dividing the test into halves and correlating scores on the two half-tests
sport profile: An administrative tool used for recording test scores associated with the cognitive, affective, and psychomotor components deemed necessary for successful performance in a particular sport or activity
sportsmanship: Behaviors considered appropriate for sports participants and spectators; e.g., fair play, following rules, and showing respect for officials
spreadsheet: A matrix of columns and rows into which data are entered for mathematical analysis; computerized spreadsheet application programs provide the capacity for sophisticated calculation and forecasting using numerical data
standard deviation: Square root of the average of the squared deviations of scores from the mean; a measure of variability
standard deviation method: Method of grading based on the standard deviation of the distribution of scores; a norm-referenced approach to grading

standard error of measurement: Estimate of the absolute error of an individual’s score

standard of performance: Degree to which the student is expected to meet the objective

standard score: Score standardized by taking the deviation of the score from the mean and dividing it by the standard deviation

standard score method: Same as the standard deviation method of grading; use of z-scores

Standing long jump test: Measures explosive leg power

static balance: Ability to maintain equilibrium in a stationary position

static strength: Force exerted against an immovable resistance

statistics: Methodology for analyzing a set of test scores

stem: Introductory question or statement in a multiple-choice item

step test: Field test of cardiorespiratory function in which the examinee steps up and down on a bench until a predetermined heart rate is reached

subjective test: Test with imprecise scoring system, usually because of differences in the judgment of scorers

subjectivity: Use of individual judgment in evaluating motor performance

summative evaluation: Evaluation that takes place at the end of a training period or instructional unit

systematic decrease in scores: Gradual decrease in test scores from trial to trial, often because of fatigue or loss of motivation

systematic increase in scores: Gradual increase in test scores from trial to trial, often because of practice or learning

table of specifications: Table of the categories of cognitive behavior (knowledge) to be tested; categories are weighed according to their importance

tally: Mark placed adjacent to an interval in a frequency distribution representing a score in the interval

task specificity: Concept that ability to perform a task is specific to the task

taxonomy: Classification scheme

terminal behavior: Behavior a student is expected to display upon successful attainment of the objective

test: Instrument or technique used to obtain information (usually a score) about an attribute of a person or object

test battery: Two or more tests administered together to measure separate dimensions of a single characteristic or single sport or activity (e.g., FITNESSGRAM is a test battery of several tests which together measure health-related physical fitness)

test user: Person who selects or administers the test

Title IX: Legislation providing for equality by gender in many areas, including physical education programs

trait: Enduring and unchanging characteristic

true-false item: Test item that is answered using one of two alternatives

T-scores: Distribution of standard scores with a mean of 50 and a standard deviation of 10; a conversion of the z-score distribution

user-friendly: Describes computer programs that are easy to learn, easy to use, and self-instructing

validity: Soundness of the interpretations of a test; the extent to which a test measures what it is supposed to measure

validity coefficient: Correlation coefficient representing the relationship between a test and a criterion measure
variability: Spread of scores in a distribution

variance: Squared deviations of scores from the mean; indicator of the variability or spread of a set of scores

vertical jump: Jump executed as high as possible in a vertical direction; reflects explosive power of leg extensor muscles

virus: A destructive computer program secretly attached to an existing program that alters and deletes data and causes other malfunctions

visual impairment*: A visual impairment, even with correction, adversely affecting a child's educational performance; includes both partially seeing and blind children

weak measure: Measure lacking adequate evidence of validity and reliability

weight (of grade): Number designating the importance of a grade; higher number reflects greater importance

weight-training machine: Device used to measure muscular strength and endurance

Windows: A popular graphical user interface developed by Microsoft Corporation

word processor: A computer application program designed for editing, storing, formatting, and printing documents

50-yard dash test: Measures speed

600-yard run: Measures cardiorespiratory function

z-scores: Most basic of standard score distributions, with a mean of 0 and a standard deviation of 1; used as the basis for many other standard score transformations