

**13th International Association for Sport Information World  
Congress  
11-13 March, 2009 - Canberra, Australia**

**The development of a corpus-based multilingual dictionary of  
movement and training science and its implications for international  
documentation activities.**

**Dr Jürgen Schiffer**  
Central Library of Sports Science  
Cologne/Germany



Australian Government  
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*Building and sustaining sport information communities -  
through connectivity, collaboration and sharing*



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# Introductory remarks

- English has developed into the lingua franca of science.
- Numerous forms of 'pidginized' English have established themselves in scientific communication including sports science.
- This also applies to multilingual or monolingual dictionaries of sports science published in Germany.
- These sports dictionary are not only deficient in terms of English translations.

# First example: *Lexikon Sportwissenschaft [Sport-Science Lexicon]* edited by Günter Schnabel and Günter Tieß (Berlin: Sportverlag, 1993)

## Lexikon Sport- wissenschaft

Leistung - Training - Wettkampf

Herausgeber:  
Prof. Dr. sc. paed. Günter Schnabel  
Prof. em. Dr. sc. paed. Günter Tieß

**Band 1**  
**A bis K**

Sportverlag Berlin

kraft (z.B. Spagat), dehnende Wirkung nicht durch die jeweilig wirkenden Antagonisten, sondern durch Muskelkräfte anderer Gliedmaßen oder Körperregionen (z.B. bei Dehnübungen der Füße mit Hilfe der Hände). [62]

### Dehnungs-Verkürzungs-Zyklus extension-contraction-cycle

Vorgang beim reaktiven Kraftverhalten, wobei die konzentrische → Muskelkontraktion während einer Dehnungsphase plötzlich erfolgt.

Die dabei entstehende Energie wird in den serienelastischen Elementen des Muskels gespeichert und zum Teil während der konzentrischen Kontraktion genutzt (KOM). Dadurch kann im Vergleich zur einfachen willkürlichen konzentrischen Kontraktion eine stärkere Muskelspannung und eine höhere Schnellkraftleistung erreicht werden. [15]

→ Kraftfähigkeit, reaktive

### Dehydration dehydration

Entwässerung des Organismus im Sport durch starken Schweißverlust und/oder zu geringe Flüssigkeitsaufnahme während der Beanspruchung.

Sie bewirkt Eindickung des Blutes mit Abnahme der Fließeigenschaften. Die D. über 3% der Körpermasse führt zur Abnahme der sportlichen Leistungsfähigkeit. Übersteigt die D. 7% der Körpermasse, dann treten bedrohliche Funktionsstörungen auf. Es besteht die Gefahr der → Hitzelerkrankung. Der Flüssigkeitsverlust bei der D. kann über 10 l/Tag betragen. Durch reichliches Trinken bei längeren Belastungen kann der D. vorgebeugt werden. Auch Saunabad führt zur D. [47]

### Delphinbewegung

dolphin movement

Sporttechnisches Element im → Sportschwimmen; zyklische Bewegung des Rumpfes und der Beine in vertikaler Ebene zur Erzielung von Antrieb wie auch zur Stabilisierung der Körperlage beim → Schmetterlingsschwimmen bzw. → Delphinschwimmen.

Die D. beginnt im Lendenwirbelsäulenbereich und setzt sich wellenförmig fort über Hüftgelenke, Oberschenkel, Kniegelenke, Unterschenkel bis zu den Füßen. [41]

### Delphinschwimmen

dolphin stroke

Spezielle Technik im → Schmetterlingsschwimmen.

D. unterscheidet sich von der früher angewendeten Technik des Schmetterlingsschwimmens mit Grätschschlag durch eine synchrone Bewegung des unteren Körperabschnittes in vertikaler Ebene. [41]

### Delphinsprünge

dolphin dives

Klasse der aus dem Stand rücklings vorwärtsdrehenden Sprünge in der Sportart Wasserspringen.

D. bilden die IV. Sprunggruppe der internationalen Sprungtabelle dieser Sportart. Gegenwärtig ist der  $3\frac{1}{2}$ -fache Delphinsalto der schwierigste Sprung dieser Sprunggruppe. [61]

### Demographie

demography

Wissenschaftsdisziplin, die die Gesetzmäßigkeiten, Ursachen und Folgen der Bevölkerungsstruktur, -bewegung und -entwicklung erforscht.

Die D. bedient sich zunehmend statisti-

## Major points of Criticism of Schnabel/Tieß's lexicon

- Not really a sports-science lexicon, but rather one concerned with training theory.
- The headwords in the dictionary do not convey a true picture of the nomenclature of the entire field of German sports science, but only of sports science in the former GDR.
- Mixture of some **very banal practical expressions** that are not based on any selection criterion, along with **theoretical expressions that seem artificial**, and **general terminology without any original link to sports science**.
- Numerous, sometimes even **grotesque translation errors** contradict the purpose of the dictionary, which is to facilitate access to sports science texts in English.

## Translation examples taken from Schnabel/Tieß's lexicon

- *Bolzer*: 'bolter' (**correct**: 'cyclist giving all he's got' or 'soccer player playing rough' or 'soccer player merely kicking the ball about')
- *Dehnungs-Verkürzungs-Zyklus*: 'extension-contraction-cycle' (**correct**: 'stretch-shortening-cycle')
- *Delphinsprünge*: 'dolphin dives' (**correct**: 'inward dives')
- *Desensibilisierung*: 'de-sensibilization' (**correct**: 'desensitization')
- *Energieumsatz*: 'energy change' (**correct**: 'energy turnover')
- *Federbirne*: 'spring-'pear'' (**correct**: 'free-standing boxing punch ball')



# Second example: *Dictionary of Sport Science* edited by Erich Beyer (Schorndorf: Hofmann, 1987)

1  
ALL  
3/10

## Wörterbuch der Sportwissenschaft

\_\_\_\_\_ Deutsch \_\_\_\_\_  
 \_\_\_\_\_ Englisch \_\_\_\_\_  
 \_\_\_\_\_ Französisch \_\_\_\_\_

## Dictionary of Sport Science

\_\_\_\_\_ German \_\_\_\_\_  
 \_\_\_\_\_ English \_\_\_\_\_  
 \_\_\_\_\_ French \_\_\_\_\_

## Dictionnaire des Sciences du Sport

\_\_\_\_\_ Allemand \_\_\_\_\_  
 \_\_\_\_\_ Anglais \_\_\_\_\_  
 \_\_\_\_\_ Français \_\_\_\_\_

Redaktion / Editor / Sous la direction de **Erich Beyer**

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 JAN BROEKHOFF, ROBERT DECKER, PETER RÖTHIG

Verlag Karl Hofmann

**55 Astasia**

A. bezeichnet die Stehfähigkeit bei an sich intaktem neuromuskulärem Apparat. → Adynamie, → Amyostasie, → Atonie.

**Astasia**

Astasia is understood as the inability to stand despite unimpaired neuromuscular structure. → Adynamia; → Amyostasia; → Atonia.

**Astasia\*\*\***

L'astasia désigne l'impossibilité de se tenir debout, l'appareil neuro-musculaire étant intact. → Adynamie, → Amyostasie, → Atonie.

**56 Asthenie**

Allgem. Bezeichnung für körperl. Schwäche, muskuläre Schläfheit und Kraftlosigkeit, verbunden mit fehlerhaftem Einschätzen der Kraftentfaltung (Störung des Kraftsinnes). Es bestehen Beziehungen zur „Neurasthenie“ (psychische Schwäche und Labilität). Konstitutionelle und reaktivpsychogene asthenische Manifestationen sind ursächlich abzugrenzen gegen die hirnganische, zerebelläre Asthenie.

**Asthenia**

A general term for physical weakness, muscular softness and lack of strength, accompanied by inaccurate judgement of strength application (disturbance of "muscle sense"). A. is related to "neurasthenia" (psychological weakness and instability). Asthenic manifestations which are constitutional and reactive-psychogenic are to be distinguished in their causes from organic, cerebellar asthenia.

**Asthénie**

Terme général pour désigner une faiblesse corporelle, une mollesse musculaire et un manque de force, auxquels s'ajoute une appréciation imparfaite du déploiement de l'effort (trouble de la capacité à faire des efforts). Elle présente des relations avec la «neurasthénie» (faiblesse psychique et labilité). Il faut distinguer les phénomènes asthéniques d'ordre constitutionnel et psycho-génétique et l'asthénie d'origine organique: asthénie cérébelleuse.

Kiphard

**57 Ästhetik**

Formal als Lehre von der sinnlichen Wahrnehmung, → Erfahrung, Anschauung und Erkenntnis definiert. Im Sport vorwiegend in den Bereichen → Tanz/Tanztherapie/Tanzdaktik, → Gymnastik, → musische Erziehung, → natürliches Turnen diskutiert.

Asthet. Phänomene im Sport werden sowohl über kognitiv-logische, als auch über perzeptiv-rezeptive und emotiv-psychol. Ansätze beschrieben.

Kognitiv-logische Deutungen der Ä. im Sport, verstehen sportl. Aktionen als ein Produkt künstl. Tätigkeiten (Frayssinet bezeichnet dieses als „Oeuvre“, ein System ästhet. Phänomene). Sport schafft somit Kunst; den sportl. Aktionen kommt ein ästhet. Urteil zu. Im Faktischen der sportl. Handlung findet sich eine Beziehung zum Überfaktischen, zur „Idee“ (Hegel: sinnlicher Schein der Idee), zum (Kultur-) „Wert“, zum „Logos der idealen Bewegung“ (Buytendijk), zur (Zweck-) „Freiheit“, zum „Spielhaften“ (Schiller).

Perzeptiv-rezeptive Deutungen beschränken sich auf die Deskription der ästhet. Phänomene, vornehm-

**Aesthetics**

Defined as the theory of sense perception, → experience, intuition, and cognition. Pertinent to sport especially in the areas of → dance/dance therapy/dance instruction, → gymnastics, performing arts education, natural movement. Aesthetic phenomena in sport are described from cognitive-logical, perceptive-receptive, and emotive-psychological aspects.

Cognitive-logical interpretations of A. in sport take athletic performances as products of artistic activities (Frayssinet calls this "oeuvre"; a system of aesthetic phenomena). Sport produces art; athletic actions are judged aesthetically. The actual physical activity is set in relation to something meta-physical, to an "idea", (Hegel: the sensuous appearance of the idea), to a (cultural) "value", to the "logos of the ideal movement" (Buytendijk), to "freedom" (from purpose), to "play" (Schiller). Perceptive-receptive interpretations are limited to the description of aesthetic phenomena, particularly those concerning the body and its movements. The beautiful body and the harmonious movement become the

**Esthétique**

De façon formelle, l'esthétique est définie comme théorie de la perception sensible, de → l'expérience, de la contemplation et de la connaissance. Dans les APS, l'esthétique est avant tout concernée par les problèmes de la → danse, la thérapie par la danse, de la didactique de la danse, de la → gymnastique moderne, de → l'éducation musicale et esthétique, de la → gymnastique naturelle (natürliches Turnen).

Les phénomènes esthétiques dans les APS sont décrits tant par le biais d'une approche cognitive et logique que par le biais d'approches perceptives et émotionnelles.

Les interprétations cognitives de l'esthétique du sport voient dans les actions sportives le produit d'activités artistiques (Frayssinet appelle le sport «oeuvre», système de phénomènes esthétiques). Par conséquent le sport crée l'art; les actions sportives ont droit à une approche esthétique. Dans l'effectivité de l'action sportive se trouve une relation avec ce qui va au-delà du fait, une relation avec «l'idée» (Hegel: apparence sensible de l'idée), avec la «valeur» (culturelle) avec le «logos du mouvement idéal» (Buytendijk), avec la gratuité, avec le «ludique» (Schiller).

## Major points of criticism of Beyer's dictionary

- Almost exclusive orientation towards the source language German.
- Selection of headwords that are internationally relevant does not make sense (is, for example, 'Slavic Gymnastics Movement' an internationally relevant headword?).
- Special sport-science literature in the target languages has not been used as terminology source.
- Beyer's dictionary contains numerous translation errors.

# Translation examples taken from Beyer's dictionary

## **573 Organkraft**

Früher in der Sportpraxis benutzte Bezeichnung für die Leistungsfähigkeit von Herz, Kreislauf, Atmung und Stoffwechsel.

## **Organic Power**

Previously used in the practice of sport and physical education as an indication of the performance capacity of heart, circulation, respiration, and metabolism.

At present, the term is no longer used.

## **620 Punktrichter**

Punktrichter sind → Kampfrichter, die bei Wettkämpfen mit Punktwertung aufgrund bestimmter Kriterien beurteilen (Beispiel Boxen).

## **Point Judge\***

P. Js. are officials who judge events which are decided on points according to specific criteria (e.g. boxing).

Note: In the U.S. and U.K. no distinction is made between → judge and P. J.

# Third example: *Dictionary Sport – Physical Education – Sport Science* by Haag & Haag (Kiel, 2003)

Editors

Herbert Haag & Gerald Haag

# Dictionary

..... Sport .....

..... Physical Education .....

..... Sport Science .....

with indices in  
German, French, Spanish  
and a CD with  
indices in twelve languages

Kiel, Institut für Sport und Sportwissenschaften

English	Text
interval training	training method for developing and improving endurance; a systematic change of training load and incomplete recovery is its main characteristic (i.e. the physical load is applied again, when heart rate has dropped to only 120-130 beats/min: rewarding break). Depending on the duration of load, three forms of interval training are differentiated: the short-term interval method (load duration 15 sec to 1 min), the middle-term interval method (load duration 1-8 min), and the long-term interval method (load duration 8-15 min). Usually load intensity is higher, the shorter the load phase is. Opposite: duration interval method.
invalid sport	» sport for the handicapped.
inverse dives	group of dives which are performed from a backward standing position into a forward direction. Since the body turns towards the tower or springboard after take-off, inverse dives are also called dives against the board. Take-off must be exact to ensure that there is enough space between springboard or tower platform and diver, so that the movement (e.g. twist or somersault) can be executed without a danger of touching the take-off surface.
invitation, opening	an official announcement of or a request to attend a competition by means of a notice, bulletin, circular letter, etc. An invitation usually contains the following information: type of competition, program, date, location, eligibility, class categories, prizes to be awarded, jury or jury of appeal, insurance issues, medical service, modalities for entering, and closing date for entry applications.
IOA	abbrev. for » International Olympic Academy.
IOC	abbrev. for » International Olympic Committee.
ippon	in budo sports term for a whole point. If a competitor scores one Ippon, he has won the fight and is awarded the title Ippon-Gatschi. An Ippon can be achieved by throwing the opponent onto his back with momentum, lifting an opponent lying on his back up to the height of one's own shoulders, forcing an opponent to resign, holding an opponent down for 30 seconds after announcing an Osae-Komi (a holding grip used to keep the opponent under control on the mat) or successfully applying a strangulation technique or a lock.
Irish triple jump	» triple jump.
irradiation	in nerve physiology and medicine term for the expansion

# The basis of Haag's 'sport-science' dictionary: A German language sports dictionary for school pupils

# SCHÜLER DUDEN

## Der Sport

### Ein Sachlexikon für die Schule

Die wichtigsten Begriffe aus den Bereichen des Sports, der Sporterziehung, der Sportwissenschaft und Sportmedizin sowie aus angrenzenden Fachgebieten wie Biomechanik, Psychologie, Pädagogik, Soziologie und Geschichte. Über 2000 Stichwörter, zahlreiche Abbildungen, ausführliches Literaturverzeichnis.



### Irradiation

**Internationale Schulsport Föderation** (ISF): 1972 gegründeter Verband (Sitz Wien) mit dem Ziel der Organisation und Betreuung des internationalen Wettkampfwesens im Schulsport. Es geht dabei v. a. um die Erstellung von Wettkampfprogrammen für Schulmannschaften und um die Ausrichtung der sogenannten *Gymnasiade*, eines Sportfests für Einzelwettkämpfe für Schüler. Wegen der nicht unerheblichen Gefahren, die sich aus einer Trainings- und Wettkampfüberlastung für Kinder und Jugendliche ergeben, wird die Arbeit der ISF aus pädagogischen Gründen mit großer Skepsis beobachtet.

**Internationales Olympisches Komitee** (IOK; französisch Comité International Olympique [CIO], englisch International Olympic Committee [IOC]): 1894 von Pierre Baron de Coubertin (\* 1863, † 1937) in Paris gegründete oberste Instanz der olympischen Bewegung (Sitz Lausanne). Die Organe des IOK sind: der Präsident (seit 1980 Juan Antonio Samaranch [\* 1920]), das Exekutivkomitee (Präsident, drei Vizepräsidenten, fünf Mitglieder) und die Vollversammlung (Session; tagt in der Regel jährlich). Das IOK hat folgende Aufgaben: Aufstellung der olympischen Regeln, Wahl seiner Mitglieder, Anerkennung der *Nationalen Olympischen Komitees* und der internationalen olympischen Sportföderationen, Vergabe der Olympischen Spiele an Austragungsorte, Zulassung zu den Olympischen Spielen, Entscheidung über Ehrungen, Protokoll und Programm der Olympischen Spiele, Überwachung der Einhaltung der Amateurregeln. Das IOK versteht sich ausdrücklich als politisch, religiös und rassisch neutrale Institution.

**Intervalltraining** [...tre...; zu lateinisch intervallum „Zwischenraum, Zwischenzeit, Pause“ und † Training]: Trainingsmethode zur Entwicklung und Verbesserung der Ausdauer; charakteristisch ist ein systematischer Wechsel von Trainingsbe-

lastung und unvollständiger Erholung (d. h. die Belastung wird bereits wieder aufgenommen, wenn die Pulsfrequenz erst auf 120–130 Schläge/Minute gesunken ist: lohnende Pause). Je nach Belastungsdauer werden drei Formen des Intervalltrainings unterschieden: die *Kurzzeitintervallmethode* (Belastungsdauer 15 Sekunden bis 1 Minute), die *Mittelzeitintervallmethode* (Belastungsdauer 1–8 Minuten) und die *Langzeitintervallmethode* (Belastungsdauer 8–15 Minuten). Normalerweise ist die Belastungsintensität um so höher, je kürzer die Belastungsphase ist. – Gegensatz: † Dauerermethode.

**Invalidentensport** † Behindertensport.

**IOC** [englisch 'ai-oo'si:]: Abk. für: International Olympic Committee, † Internationales Olympisches Komitee.

**IOK**: Abk. für: † Internationales Olympisches Komitee.

**Ippon** [japanisch „Punkt“]: im Budosport Bez. für einen ganzen Punkt. Erreicht ein Wettkämpfer einen Ippon, ist der Kampf siegreich beendet; der Sieger heißt *Ippon-Gatschi*. Man erreicht einen Ippon dadurch, daß man den Gegner mit Schwung auf den Rücken wirft, den auf dem Rücken liegenden Gegner bis in Höhe der eigenen Schultern hebt, ihn zur Aufgabe zwingt, ihn 30 Sekunden nach Ansagen von *Osae-Komi* (ein Haltegriff, mit dem der Gegner auf der Matte unter Kontrolle gehalten wird) hält oder daß man eine Würgetechnik oder einen Hebel erfolgreich durchführt.

**irischer Dreisprung** † Dreisprung.  
**Irradiation** [zu lateinisch irradiare „strahlen, bestrahlen“]: in der Nervenphysiologie und Medizin die Ausbreitung bzw. Ausstrahlung einer Nervenerregung oder von Schmerzen über den normalen Bereich hinaus. Analog hierzu bezeichnet der Begriff im Zusammenhang des motorischen Lernens nach der Trial-and-error-Methode (Methode von Versuch und Irrtum) die Beob-

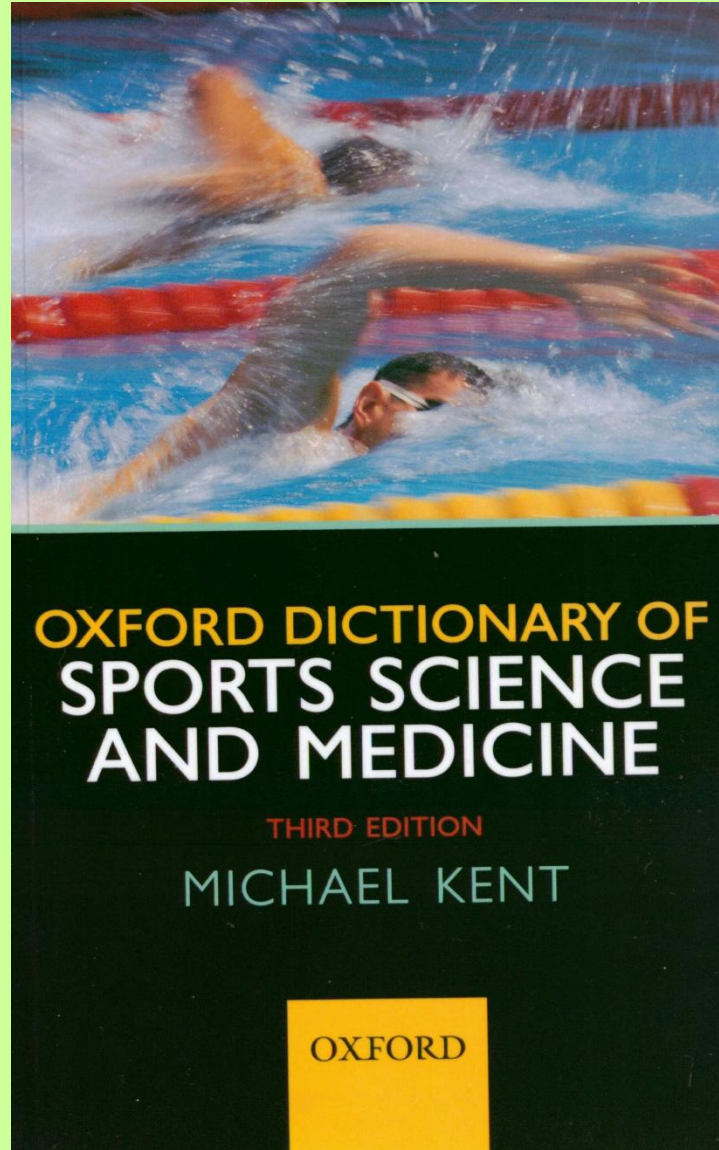
## Some translation examples taken from Haag's dictionary (correct English terms in brackets)

- *airplane model sport* (model airplane flying)
- *artistic flight sport* (aerobatics)
- *dry training* (dryland training)
- *equestrian versatility test* (three-day event)
- *equipment track* (obstacle course)
- *fitness training equipment* (resistance training machine)
- *grass strength sport* (outdoor acrobatics)
- *heat regulation* (thermoregulation)
- *hunt riding* (steeplechase/fox hunting)
- *invalid sport* (sports for the disabled/physically challenged)
- *intensified run* (acceleration run/sprint, strides, incremental run)
- *life vest* (life jacket)
- *prestart state* (pre-competition arousal, start fright)
- *recovery sport* (recreational sport)
- *relaxation exercises* (loosening/limbering-up exercises)
- *sledge dog sport* (sled dog racing)
- *sport heart* (athlete's heart)
- *sport capability* (fitness for sport)
- *street running* (road running)
- *tempo changing method* (alternating pace method)
- *tower diving* (platform diving)
- *training book* (training diary)

# First preliminary conclusion concerning the nature of sports science and its terminology

- Sports science can be regarded as either an interdisciplinary or a multidisciplinary applied science, whose subject matter deals with various everyday sports and the problems associated with them. The terminology of sports science
  - is extremely varied and mixed up with a non-scientific vocabulary,
  - its extent is difficult to establish, and
  - its limits can only be set pragmatically.
- This can also be seen in original English-language sport-science dictionaries.

***Oxford Dictionary of Sports Science and Medicine (3rd ed.)***  
**von M. Kent (Oxford: Oxford University Press, 2006)**





# Oxford Dictionary of Sports Science and Medicine

**altitude acclimatization** Reversible physiological adaptations to high altitudes. Although a number of environmental factors change with altitude, the adaptations are mainly in response to lower oxygen partial pressures. Early adaptations include hyperventilation and increases in submaximal heart rate, which raise the \*cardiac output. Major long-term adaptations improve the oxygen-carrying capacity of the blood by increasing the haemoglobin content and haematocrit, polycythaemia, and a decrease in plasma volume. Muscles develop more capillaries, and their myoglobin content and 2,3-diphosphoglycerate content increases with altitude. Acclimatization to avoid \*altitude sickness, generally takes 1–3 days at a given altitude. For example, if a person goes to 10,000 feet (3048 m) and spends several days at that altitude, their body acclimatizes to 10,000 feet (3048 m). If the person then climbs to 12,000 feet (3658 m), the body needs to acclimatize once again, taking another 1–3 days. For athletes preparing for competition at altitude, full acclimatization to medium altitudes (greater than 1829 m above sea level) may take about 2 weeks and will probably be longer for higher altitudes. Effects persist for about 3 weeks on return to sea level.

**altitude hypoxia** Breathlessness and respiratory distress caused by low oxygen partial pressures at high altitudes.

**altitude sickness** (mountain sickness) Sickness characterized by shortness of breath, fatigue, headache, rapid pulse, loss of appetite, insomnia, and nausea, which occurs at high altitudes due to lack of oxygen. In extreme cases, the patient may lose consciousness and, if untreated, altitude sickness can be fatal. Individuals differ in their susceptibility, but nearly everyone suffers at altitudes higher than 4900 m above sea level. Usually, symptoms are lost rapidly on return to lower altitudes. Typically, altitude sickness develops between 6 and 96 h after reaching high altitudes. Some climbers and skiers develop acute altitude sickness when ascending too

quickly above 2100 m. The sickness usually lasts several days. *See also* high altitude cerebral oedema, high altitude pulmonary oedema.

**altitude training** Training undertaken at moderately high altitudes to acquire the benefits of \*altitude acclimatization and to improve performance in endurance activities. It is used especially by athletes accustomed to low altitude conditions who are going to compete at high altitudes. To be effective, the training must take place 1500 m or higher above sea level, and for a period of not less than 3 weeks, with the first week consisting of light exercise. Training effects are usually lost 3–6 weeks after living at sea level. Altitude training is used by many athletes to improve performances in endurance events at low altitudes. Opinion is divided as to its effectiveness, but most physiologists believe that it is of little benefit to sea-level competition. Long-term altitude training, over a period of months, can lead to a loss of body weight and a reduction of muscle mass.

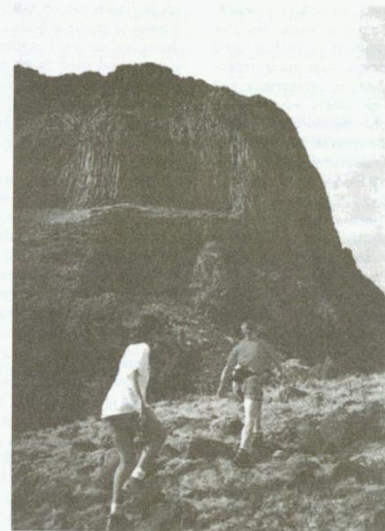
**altruism** Concern for the welfare of others, rather than oneself.

**alveolar-arterial oxygen partial pressure difference** The difference between the partial pressure of oxygen in the \*alveolus and the mean arterial pressure of oxygen, measured in mmHg or kPa. It indicates the efficiency of gaseous exchange in the lungs. During heavy exercise, the alveolar-arterial oxygen partial pressure difference increases 2.0–2.5 times the resting levels.

**alveolar-capillary membrane** The membrane separating the \*alveolus from the pulmonary capillaries. It is the site of \*gaseous exchange in the lungs.

**alveolar dead space** The difference between physiological dead space and anatomic dead space. It is a measure of that part of physiological dead space resulting from ventilation of alveoli that are under- or non-perfused.

**alveolar ventilation** The volume of air entering the alveoli for \*gaseous exchange.



altitude training

It is usually expressed as volume per minute and is given by the following equation: alveolar ventilation = (tidal volume – anatomical dead space) × respiratory frequency.

**alveolus** A microscopic air-filled sac at the end of the finest divisions of the bronchioles through which gaseous exchange takes place. The wall of an alveolus is one cell thick and lined on the outside with capillaries. Millions of alveoli occur in each lung to provide a very large surface area.

**ambient** Pertaining to the surrounding environment.

**ambivalence** A state of experiencing two opposing emotions at the same time. It may be produced by being psychologically pulled in opposite directions by two significant others. For example, a coach may encourage an athlete to win at all costs,

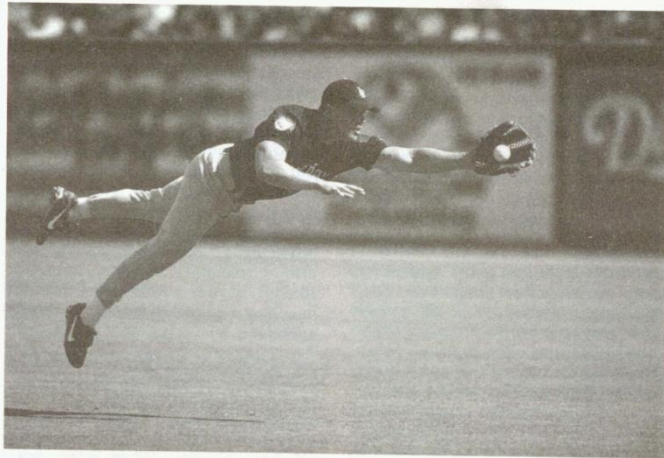
while a parent encourages the athlete to believe that taking part and developing good sporting behaviour is the most important consideration.

**ambivert** An individual who has neither pronounced \*introvert or \*extrovert characteristics.

**amblyopia** Poor vision not correctable with lenses. It may be due to an inability to focus with both eyes simultaneously, a condition known as lazy eye.

**amenorrhoea** Absence of menses (blood flow during the menstrual cycle) for at least 3 months or less than 2 menstrual cycles in a year. Women over 18 years of age who have never started to menstruate are said to have primary amenorrhoea; those whose normal menstrual function has been lost for months or even years are said to have secondary amenorrhoea. Although its exact

# Oxford Dictionary of Sports Science and Medicine



**baseball finger** An injury resulting from a hard object making impact with the tip of an stretched finger. Reproduced with permission Photolibary Group Limited.

**basic movement** (basic skill, fundamental skill) A movement or skill, such as walking, running, hopping, stretching, and twisting, which forms the basis of other, more complex skills.

**basic needs** In Maslow's hierarchy of needs, the physiological need for essentials such as air, water, food, sleep, sex.

**basic needs theory** A theory that focuses on the relationship between basic psychological needs, and psychological health and well-being. See also **self-determination theory**.

**basic psychological needs** Human needs that are central to the \*self-determination theory. They include the needs for competence (the need to be able to succeed at optimally challenging tasks and achieve a desired outcome), autonomy (the need to have a sense of choice and being the initiator of an action), and relatedness (the need

to establish mutual respect and reliance with others). According to the theory, these needs are innate and universal, and must be satisfied for people to develop and function in healthy or optimal ways.

**basic skill** See **basic movement**.

**basic skills training** A component of \*psychological skills training in which a range of techniques (e.g. stress management techniques, positive self-talk, and attention control training) is used to develop essential psychological skills, such as self-confidence and arousal control.

**basking in reflected glory phenomenon** See **BIRG phenomenon**.

**baths** Form of treatment used as a relaxant after activity and as a therapy for some sports injuries. There are many types of baths, but they all act by either extracting heat from or adding heat to the body. See also **contrast baths**.

**BCAA** See **branched-chain amino acids**.

**bee pollen** A mixture of bee saliva, plant pollen, and nectar. Bee pollen is taken by some athletes as an \*ergogenic aid, but claims that it increases energy levels and boosts performance have not been supported by scientific evidence. Honey bee-collected pollen contains bioflavonoids, such as rutin and quercetin. Bee pollen can cause allergic reactions in some people.

**behaviour** 1 The alteration, movement, or response of an object, person, or system acting within a particular context. 2 The externally observable response of a person to an environmental stimulus. In sociology, an important distinction is made between automatic forms of behaviour, which can be analysed in terms of reflexes, and intended action, where social meaning and purposes are also involved. The behaviour of sportspersons can involve a complex mixture of both.

**behaviour checklist** A means of categorizing and recording behaviours of interest as they occur during an activity. The behaviours are usually clear and specific. The observer records the frequency and/or timing of the behaviours, such as incidents of fighting in a game of soccer.

**behavioural anxiety** A form of \*anxiety reflected by a person's overt behaviour such as avoidance of social contact.

**behavioural coaching** A coaching strategy that emphasizes the use of \*positive feedback. Typically, the coach breaks down a motor skill into specific parts, which are then modelled for the athlete to copy. The coach then supports and encourages the athlete during and after the athlete's attempts to perform the skill.

**behavioural contract** A written agreement between two individuals (e.g. a coach and athlete) referring to desired behavioural changes and the consequences of those changes. The contract usually includes a description of the behaviour that is to be changed, the punishment for breaking the

contract, the reward for successful completion of the contract, the names and signatures of the contract partners, and the date. Behavioural contracts can be very effective in changing a wide range of behaviour, including excessive aggression.

**behaviour modification** The intentional alteration of human behaviour by various psychological techniques. For example, certain kinds of behaviour may be rewarded when they occur, with the result that these rewarded behaviours are repeated and unrewarded behaviours dropped. Sports coaches have varied opinions about behavioural modification. Some see it as a major method of motivation; others are very opposed and view it as a corrupt means of manipulating people; yet others see it as a useful tool, to be used only in certain situations.

**behaviour therapy** A technique for changing problem behaviour, including relaxation procedures requiring the subject to approach a feared situation gradually while maintaining physiological arousal at a low level.

**behavioural kinesiology** The study of the structures and processes of human movement and how they are modified by inherent factors, by environmental events, and by therapeutic intervention.

**behavioural orientation** An approach to sport psychology that views the environment (especially reinforcement) as the primary determinant of behaviour as coming from the environment. Compare **psychophysiological orientation**, **cognitive-behavioural orientation**.

**behavioural sciences** The discipline concerned with the scientific study of the behaviour.

**behaviourism** A school of psychology that stresses an objective natural science approach to psychological questions. Behaviourists usually study the principles of learning, for example, through animal experiments, then apply these principles to

# ***Dictionary of Sport and Exercise*** **(London: A & C Black, 2006, no author)**

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# Dictionary of Sport and Exercise (London: A & C Black, 2006)

ability

2

**ability** *noun* **1.** a natural tendency to do something successfully or well **2.** a high degree of intelligence or competence **3.** a particular gift for doing something well

**ability-to-skill transfer** *noun* the fact that an ability someone develops in learning one new skill can be extended to learn other skills

**ablation** *noun* the removal of diseased or unwanted tissue from the body by surgical or other means

**able** *adjective* **1.** physically or mentally equipped to do something **2.** having the necessary resources or talent to do something

**able-bodied** *adjective* healthy and physically strong

**ableism** *noun* discrimination in favour of those who are not physically or mentally disabled

**Ablokov test** *noun* a test of an athlete's ability to jump from a squat position

**ABO system** *noun* a system of classifying blood types. ◊ **blood type**

**abrasion** *noun* a minor injury in the form of a graze to the skin

**abs** *plural noun* the abdominal muscles, or exercises done to firm them (*informal*)

**abscess** *noun* a painful swollen area where pus forms (NOTE: The formation of an abscess is often accompanied by a high temperature. The plural is **abscesses**.)

**abseil** *verb* to descend a steep slope or vertical face using a rope that is secured at the top and passed through a series of coils or a harness around the body

**absolute dose** *noun* the amount of an ingested drug that is absorbed into the body

**absolute load** *noun* the amount of resistance against a movement

**absolute refractory period** *noun* the brief time during which a stimulated muscle fibre is not affected by any further stimulation

**absolute strength** *noun* the maximum weight that a person can lift

**absorption** *noun* the process of taking into the body substances such as proteins or fats that have been digested from food and enter the bloodstream from the stomach and intestines

**abstain** *verb* to choose not to do something

**abstemious** *adjective* tending not to eat or drink very much

**abstracting** *noun* the skill of being able to assess a situation in a team game and draw on previous experience to decide a course of action

**abuse** *noun* the harmful use of drugs or alcohol ■ *verb* to use something in an improper, illegal or harmful way

**academic sports psychology** *noun* sports psychology that is theoretical and research-based

**açaí** *noun* a berry with very high concentrations of essential fatty acids and anthocyanins, considered a superfood

**acapnia** *noun* a medical condition marked by a deficiency of carbon dioxide in the blood and tissues

**accelerate** *verb* to increase in speed. Opposite **decelerate**

**acceleration** *noun* **1.** the act of accelerating **2.** the rate of change of velocity. Opposite **deceleration** **3.** an outward force caused by a change in direction without a change in speed

3

achievement

**acceleration sprinting** *noun* a training exercise in which the athlete begins by jogging and gradually accelerates to a sprint

**accelerative force** *noun* the force exerted on a body when it travels at an increasing speed, which can lead to injuries such as whiplash

**accelerometer** *noun* an instrument or device for measuring acceleration, especially one in which a sensor converts acceleration into an electrical signal

**access** *noun* the easy availability of public sports facilities

**accessible** *adjective* suitable or adapted for people with disabilities

**accessory nerve** *noun* the eleventh cranial nerve which supplies the muscles in the neck and shoulders

**acclimatisation** *noun* the act of gradually getting your body used to something, e.g. heat or altitude

**accommodating resistance** *noun* the ability to exert maximum force on the muscles at all stages of a movement, usually achieved using specially adapted machines

**accommodation principle** *noun* the idea that someone attempting to learn a particular sport or skill should first develop general fitness and strength

**accomplished** *adjective* having considerable talent and skill

**accomplishment** *noun* something achieved, usually something impressive or aimed for

**accredit** *verb* to officially recognise a person or organisation as having met a standard or criterion

**accredited** *adjective* officially recognised as having met a standard or criterion

**accuracy** *noun* **1.** the state of being correct **2.** the state of being on target

**accurate** *adjective* **1.** correct **2.** on target

**ace** *noun* **1.** (*in tennis*) a serve that an opponent cannot reach **2.** (*in golf*) a hole in one **3.** someone who is outstandingly good at a sport (*informal*)

**acebutolol** *noun* a drug that reduces the heart rate and the force of heart muscle contraction

**acetabulum** *noun* the part of the pelvic bone, shaped like a cup, into which the head of the femur fits to form the hip joint. Also called **cotyloid cavity** (NOTE: The plural is **acetabula**.)

**acetic acid** *noun* an acid used in weak dilutions to cool the skin and prevent excessive sweating

**acetoacetate** *noun* a ketone substance secreted by the liver which indicates a failure of metabolism

**acetylcholine** *noun* a substance that is released from the ends of some nerve fibres to transmit impulses to other nerve cells or to muscles

**acetylcholinesterase** *noun* an enzyme, present in blood and some nerve endings, that aids the breakdown of acetylcholine and suppresses its stimulatory effect on nerves

**acetyl coenzyme A** *noun* a coenzyme produced during the metabolism of carbohydrates, fatty acids and amino acids. Abbreviation **acetyl CoA**

**achieved performance velocity** *noun* velocity attained in competition, which depends on the athlete's level of training, mental preparation and numerous other factors

**achievement** *noun* the successful completion of something demanding

## **Second preliminary conclusion concerning sport-science dictionaries in general**

- Sport and sport-science dictionaries reflect the basic problems of the theory of sport and sport science, particularly the fact that there are fluent transitions between sport science and other branches of science or between sport activities and other everyday or leisure activities.
- **Thus, the selection of headwords is the main problem of all sport and sport-science dictionaries!**
- Consequently, the content of sport and sport-science dictionaries is extremely inconsistent and disparate.
- Translations into foreign languages are not based on authentic (text) sources and are therefore often incorrect.
- Haag's dictionary has reached a new level of "lexicographic wrongness" because it is the **transformation of a German-language sports dictionary for school pupils into an English "sport-science dictionary"** with the English translation being done by native speakers of German!

**How should one proceed when developing a multilingual dictionary of sport science?**

# Important methodical aspects

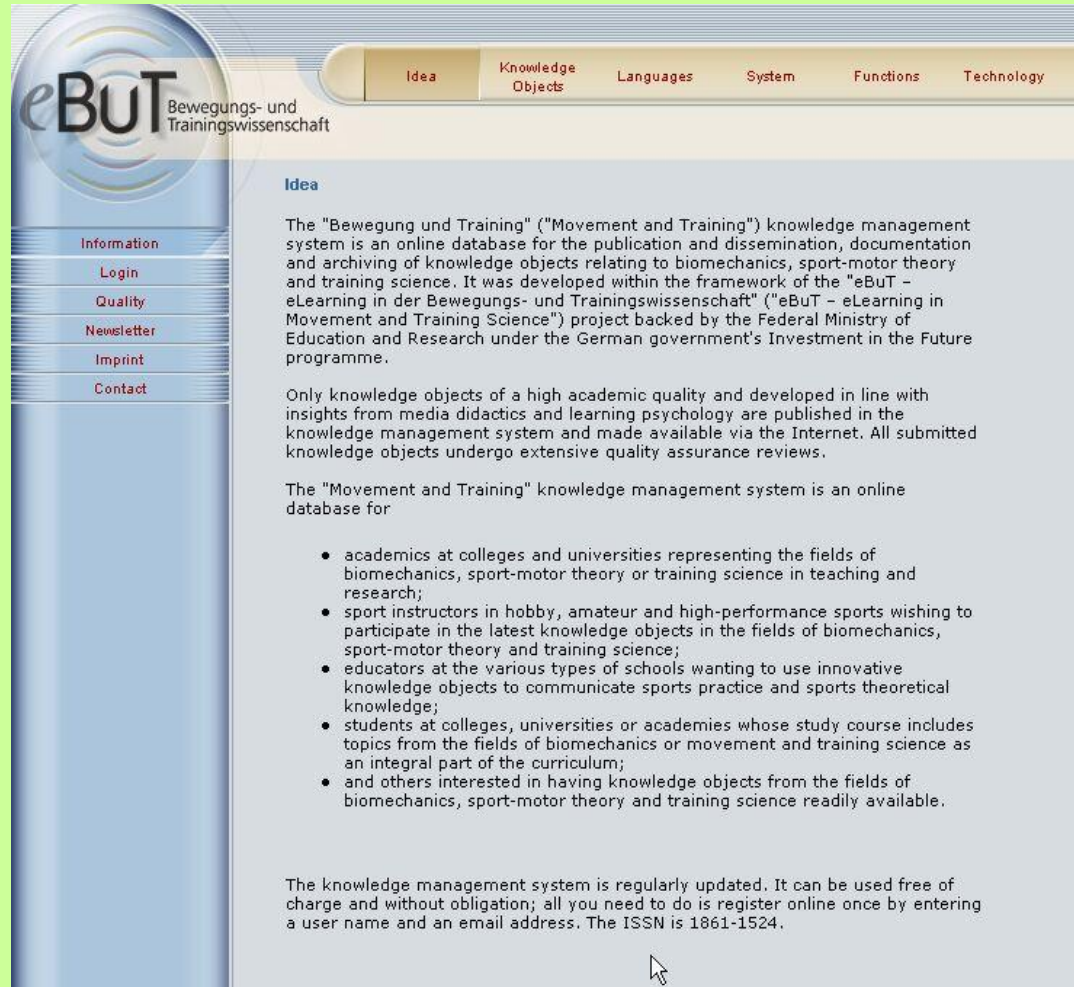
- Headwords should be selected that are either a part of sports science or are given a very special meaning in sport science.
- Exclusion of terminology from a comprehensive list according to certain criteria is easier than the expansion of a small list by taking on new terminology.
- All lexicographical work draws upon already existing monolingual or bilingual stocks of words.
- Source language terminology should not be translated stringently, but rather should correspond to equivalent terminology in the target language.
- The task of the translator/bilingual lexicographer is to establish this equivalency.
- Ideally, each target language entry should be documented with a source.
- Terminology from the source language that is (still) not documented in the target language may only be created with the help of a native speaker of the target language competent in the field.

**Terminology work within the  
“eLearning in Movement and Training Science”  
project (<http://www.ebut.de>) and the development of the**

***German-English Dictionary of Movement and  
Training Science (Wörterbuch Bewegungs- und  
Trainingswissenschaft Deutsch-Englisch)***



# eBUT: <http://www.bewegung-und-training.de>



The screenshot shows the eBUT website interface. The top navigation bar includes links for Idea, Knowledge Objects, Languages, System, Functions, and Technology. The left sidebar contains links for Information, Login, Quality, Newsletter, Imprint, and Contact. The main content area is titled 'Idea' and contains the following text:

**Idea**

The "Bewegung und Training" ("Movement and Training") knowledge management system is an online database for the publication and dissemination, documentation and archiving of knowledge objects relating to biomechanics, sport-motor theory and training science. It was developed within the framework of the "eBuT - eLearning in der Bewegungs- und Trainingswissenschaft" ("eBuT - eLearning in Movement and Training Science") project backed by the Federal Ministry of Education and Research under the German government's Investment in the Future programme.

Only knowledge objects of a high academic quality and developed in line with insights from media didactics and learning psychology are published in the knowledge management system and made available via the Internet. All submitted knowledge objects undergo extensive quality assurance reviews.

The "Movement and Training" knowledge management system is an online database for

- academics at colleges and universities representing the fields of biomechanics, sport-motor theory or training science in teaching and research;
- sport instructors in hobby, amateur and high-performance sports wishing to participate in the latest knowledge objects in the fields of biomechanics, sport-motor theory and training science;
- educators at the various types of schools wanting to use innovative knowledge objects to communicate sports practice and sports theoretical knowledge;
- students at colleges, universities or academies whose study course includes topics from the fields of biomechanics or movement and training science as an integral part of the curriculum;
- and others interested in having knowledge objects from the fields of biomechanics, sport-motor theory and training science readily available.

The knowledge management system is regularly updated. It can be used free of charge and without obligation; all you need to do is register online once by entering a user name and an email address. The ISSN is 1861-1524.

# Translation work – first step: Text translation

- The German teaching modules produced within the “eLearning in Movement and Training Science” project were translated into English taking into account the criteria and requirements of translation science and terminology theory.
- The German texts were rendered into English by a native English-speaking translator with a high German-language competence.
- The translations were checked by a sport-science terminology specialist.
- Poor translations of special sports terms were replaced by the correct English equivalents.
- German terms without equivalents in the special English-language literature were translated with English neologisms (newly invented terms) the approval of which was dependent on the native English translator’s feeling for the language.
- **Result:** A very accurate translation of the German source texts into English texts that would not be considered as artificial or culturally strange by English readers.

## Translation work – second step: Compilation of a list of terms

- It was the task of the sports terminology expert to compile a data-bank-based German-English list of terms to be accessed via the online portal of the educational eLearning in Movement and Training Science “Movement and Training” network.
- This list did not only include strictly sport-science terms but also terms from the “mother sciences” and related sciences.
- The list also included terms without a relation to sport science or any other related science because they were merely difficult to translate and were not included in available dictionaries.
- **Result:** A very disparate and unsystematic list of terms with either direct, indirect or no relation to sport science.

## Translation Work – third step: Compilation of the dictionary

For the transformation of the list of terms into the *Dictionary of Movement and Training Science* a more systematic procedure was required:

- (1) Deletion of many terms that were not directly related to sport science as well as of terms belonging to only one sport.
- (2) Inclusion of numerous other terms of movement and training science that could be found in standard texts of movement and training science but that did not occur in the texts produced within the „eLearning in Movement and Training Science“ project.
- (3) Inclusion of references which enabled terms consisting of more than one word to be searched from every direction possible (**Aim:** To make the print version of the dictionary as easily accessible as would be the case with an electronic dictionary).  
**Additional advantage:** All possible word fields remained intact.

# The German-English Dictionary of Movement and Training Science

Schriftenreihe der Zentralbibliothek der Sportwissenschaften  
der Deutschen Sporthochschule Köln

Jürgen Schiffer / Heinz Mechling / Christoph Igel

## Wörterbuch Bewegungs- und Trainingswissenschaft

Deutsch – Englisch



SPORTVERLAG *Strauß*



Schriftenreihe der Zentralbibliothek der Sportwissenschaften  
der Deutschen Sporthochschule Köln

Band 6



**Dr. Jürgen Schiffer**, 1975–1993 Studium der Sportwissenschaft und Anglistik an der Universität Bonn; 1980 Erstes Staatsexamen für das Lehramt am Gymnasium; 1983 Magisterexamen; 1985 Zweite Philologische Staatsprüfung; 2001 Promotion an der Humboldt Universität zu Berlin mit einer Arbeit zur sportwissenschaftlichen Lexikographie; 2006 Prüfung zum Master of Library and Information Science (MALIS) ebenfalls an der Humboldt Universität zu Berlin; 1986 bis Anfang 2002 Dokumentar und schließlich Referatsleiter im Bereich Literaturdokumentation des Bundesinstituts für Sportwissenschaft; seit Februar 2002 stellvertretender Leiter der Zentralbibliothek der Sportwissenschaften an der Deutschen Sporthochschule Köln.



**Univ. Prof. Dr. Heinz Mechling** studierte von 1969–1975 Sportwissenschaft und Anglistik an der Universität Heidelberg. Nach Stationen am Bundesinstitut für Sportwissenschaft (BISp), an den Universitäten Osnabrück und Bonn ist er seit 2004 Inhaber des Lehrstuhls für „Sport und Alter“ und Direktor des „Instituts für Bewegungs- und Sportgerontologie“ der Deutschen Sporthochschule Köln sowie Direktor des „Instituts für Sportwissenschaft und Sport“ der Universität Bonn. Seine Arbeitsschwerpunkte liegen in der Motorkforschung, dem Motorischen Lernen, der Bewegungsdiagnostik und im Alterssport. Er ist langjähriges Mitglied der Sektionen Sportmotorik und Trainingswissenschaft der DVS, stellvertretender Vorsitzender der AG „Sport der Älteren“ des LSB-NRW und seit 2006 Präsident der EGREPA.



**Dr. Christoph Igel**, 1989–1996 Studium der Sportwissenschaft, Geschichte, Politikwissenschaft und Erziehungswissenschaft an der Universität des Saarlandes; 2000 Promotion; 1998–2003 Mitarbeiter des EU-Projektes „ITES – Information Technologies in European Sport and Sport Science“; 2001–2004 Leitung des BMBF-Projektes „eBUT – eLearning in der Bewegungs- und Trainingswissenschaft“; seit 2002 Leitung des universitären Competence Center „Virtuelle Saar Universität“; seit 2005 Vizepräsident Finanzen und Medien der Deutschen Vereinigung für Sportwissenschaft.

### Inhalt:

Das vorliegende *Wörterbuch Bewegungs- und Trainingswissenschaft: Deutsch-Englisch* hat seinen Ausgangspunkt in der englischen Übersetzungsarbeit im Rahmen des vom Bundesministerium für Bildung und Forschung im Zukunftsinvestitionsprogramm der Bundesregierung von 2001 bis 2004 geförderten Projekts „eLearning in der Bewegungs- und Trainingswissenschaft (eBUT)“ (Förderkennzeichen 08NM153). Das im Rahmen dieses Projekts erstellte Glossar wurde für das vorliegende Wörterbuch um zahlreiche weitere Termini der Bewegungs- und Trainingswissenschaft, die in einschlägigen Standardtexten vorkommen, erweitert. Das Wörterbuch enthält ca. 5.300 deutsche Hauptlemmata, wovon ca. 1.750 verwiesen werden, und ca. 4.800 englische Nebenlemmata, auf die mithilfe des englischen Index gezielt zugegriffen werden kann. Von daher handelt es sich also um ein in beide Suchrichtungen verwendbares Wörterbuch. Von existierenden sportwissenschaftlichen Wörterbüchern unterscheidet sich das *Wörterbuch Bewegungs- und Trainingswissenschaft* hauptsächlich dadurch, dass sein Lemmabestand auf einem klar definierten englischen Textkorpus basiert, der sich aus den im Rahmen des „eBUT“-Projektes erstellten Texten, ergänzt durch ausgewählte Literaturquellen, zusammensetzt.

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# ***The German-English Dictionary of Movement and Training Science***

- Includes about 5,300 German headwords (about 1,750 of which are referred to other preferred headwords) and about 4,800 English sub-headwords.
- Both the German headwords and English sub-headwords are arranged alphabetically.
- The English translations of the German headwords can be accessed via the English index.
- As far as its basic approach is concerned, the *Dictionary of Movement and Training science* differs from existing sport-science dictionaries to the extent that the headwords included stem from a clearly defined corpus of English sport-science texts developed within the “eLearning in Movement and Training Science” project and supplemented by terms taken from selected standard texts of movement and training science.

# The German-English Dictionary of Movement and Training Science (selection of entries and reference technique)

**A**

- abbremsen**  
to decelerate; to slow down
- Abbremsung**  
braking
- Abbruchkriterien [des Tests]**  
criteria for stopping the test
- Abdruck**  
push-off
- abdrücken, sich**  
to push off
- Abdruckphase**  
push-off phase
- Abduktion**  
abduction
- Abfall [der Leistung]**  
Siehe: Leistungsverlechterung
- abfangen, extreme Kraftspitzen**  
Siehe: extreme Kraftspitzen abfangen
- Abfluggeschwindigkeit**  
release velocity; velocity of release
- Abflughöhe**  
height of release; release height
- Abflugschnelligkeit**  
release speed; speed of release
- Abflugwinkel**  
angle of projection; angle of release; angle of trajectory; release angle
- abgeben, Energie**  
Siehe: Energie abgeben
- abhängige Messungen**  
dependent measures
- abhängige Variable**  
dependent variable
- Abrollen des Fußes**  
rolling off the foot
- Absichten**  
intentions
- absolute Ausdauer**  
absolute endurance
- absolute Rückkopplungsfrequenz**  
absolute feedback frequency
- absolute Trainingsintensität**  
absolute intensity of training
- absoluter Fehler**  
absolute error
- absoluter Trainingsumfang**  
absolute training volume; absolute volume of training

- Auftreffgeschwindigkeit**  
Siehe: Aufprallgeschwindigkeit
- Auftreffkraft**  
Siehe: Aufprallkraft
- Auftrieb**  
buoyancy; lift (hydrodynamic)
- Aufwärmen**  
warm-up
- Aufwärmverlust**  
warm-up decrement
- Aufwärtsbewegung**  
upward movement
- Auge-Hand-Koordination**  
eye-hand coordination
- Auge-Kopf-Hand-Koordination**  
eye-head-hand coordination
- Äugigkeit [Seitigkeit]**  
eyedness
- Ausbelastung**  
Siehe: Maximalbelastung
- Ausbildung, vielseitig-athletische**  
Siehe: vielseitig-athletische Ausbildung
- Ausbildungsetappen, sportliche**  
Siehe: sportliche Ausbildungs-etappen
- Ausdauer**  
endurance; stamina
- Ausdauer, absolute**  
Siehe: absolute Ausdauer
- Ausdauer, aerobe**  
Siehe: aerobe Ausdauer
- Ausdauer, allgemeine**  
Siehe: allgemeine Ausdauer
- Ausdauer, anaerob-alkalotazide**  
Siehe: anaerob-alkalotazide Ausdauer
- Ausdauer, anaerobe**  
Siehe: anaerobe Ausdauer
- Ausdauer, anaerob-laktotazide**  
Siehe: anaerob-laktotazide Ausdauer
- Ausdauer, dynamische**  
Siehe: dynamische Ausdauer
- Ausdauer, lokale**  
Siehe: lokale Ausdauer
- Ausdauer, motorische**  
Siehe: motorische Ausdauer
- Ausdauer, muskuläre**  
Siehe: lokale Ausdauer
- Ausdauer, relative**  
Siehe: relative Ausdauer
- Ausdauer, spezielle**  
Siehe: spezielle Ausdauer

- Ausdauer, spezifische**  
Siehe: spezifische Ausdauer
- Ausdauer, sportartsspezifische**  
Siehe: sportartsspezifische Ausdauer
- Ausdauer, statische**  
Siehe: statische Ausdauer
- Ausdauer, wettkampfspezifische**  
Siehe: wettkampfspezifische Ausdauer
- Ausdauerbeanspruchungen**  
endurance demands
- Ausdauerbelastung**  
endurance load
- Ausdauerdisziplinen**  
endurance disciplines; endurance events
- Ausdauergrenze**  
Siehe: Dauerleistungsgrenze
- Ausdauerkomponente**  
endurance component
- Ausdauerkraft**  
endurance strength
- Ausdauerleistung**  
endurance performance
- Ausdauerleistung, motorische**  
Siehe: motorische Ausdauerleistung
- Ausdauerleistungsfähigkeit**  
endurance ability; endurance capacity; endurance fitness
- Ausdauerneiveau**  
endurance level
- Ausdauersport**  
endurance sport
- Ausdauersportarten**  
endurance sports
- Ausdauersportler(in)**  
endurance athlete
- Ausdauertraining**  
endurance training; stamina training; training for endurance; training of endurance; training for stamina; training of stamina
- Ausdauertraining, aerobes**  
Siehe: aerobes Ausdauertraining
- Ausdauertraining, anaerobes**  
Siehe: anaerobes Ausdauertraining
- Ausdauertraining, langes, langsames**  
Siehe: langes, langsames Ausdauertraining
- Ausdauertraining, langes, schnelles**  
Siehe: langes, schnelles Ausdauertraining
- Ausdruck**  
expression

# Future plans

A source-based online dictionary of sport science that can be accessed via the homepage of the Central Library of Sports Science is currently being developed (<http://www.zbsport.de> —> Sportwörterbuch).



**This presentation is available at:  
<http://esport.dshs-koeln.de/107/>**

**Thank you for your  
attention!**



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