

JITKA ČIHOUNKOVÁ¹, MICHAL VÍT¹, LENKA BERÁNKOVÁ², JITKA KOPŘIVOVÁ²

¹ Faculty of Sport studies, Department of Gymnastics and Combatives

² Department of Health Support, Masaryk University, Brno (Czech Republic)

Multimedia Educational Support for Combatives with the Focus on Compensatory Effects

Submission: 14.10.2010; acceptance: 05.04.2011

Key words: physical education, combatives, compensatory exercises

Abstract

Introduction. Numerous exercises of medical character (breath, strengthening, developing the right habit of stance etc.) are used in training of a basic combative technique. These exercises can be employed as a fitness or medical preparation in non-combative sports as well as for the purposes of compensatory exercises in general.

Aim. We introduce a project with the aim to create multimedia educational support available online on e-learning portal of Masaryk University that combines visual record of a set of exercises, spoken commentary and inscribed objects emphasising the node points of the exercises.

Material and methods. The content of the exercise book shall be divided into three categories: 1. combative exercises developing in general, 2. combative exercises usable as compensatory for different kinds of stress and 3. non-combative exercises for compensation of stress caused by particular combative sports and martial arts. Besides the visual record the set of exercises shall be replenished with a description of a way and course of doing the exercises and their explanation from the point of view of functional anatomy. The target group of educational support is formed by students in a bachelor and master degree study programme. The primary target group is represented by students of the Faculty of Sport Studies – study programme Regeneration and Nutrition in Sport, secondary target group is represented by all other students of Masaryk University and also by the public.

Conclusions. On the basis of previous knowledge of this issue we await the practical education to become more effective and of better quality in the sense of concentration on consulting and preventing mistakes during the training. We further anticipate that with the help of the interactive study material we shall contribute to an increase of individual study activity of students. The students will be able to approach the exercises application also in other subjects taught at the Faculty of Sport Studies as well as in a professional practice.

Introduction

In training of the basic combative technique many exercises of medical character (breath, strengthening, developing the right habit of posture) are employed in various combative systems [Reguli, Knappova 2005]. However, these exercises are unknown for the public that is not aware of combatives, although the exercises can be employed as fitness or medical preparation even in non-combative sports or for purposes of compensatory exercises in general. On the other hand also the stress from combative systems has to be compensated and does not manage just with exercises that are in particular system directly included. For these purposes special exercises created on the basis of knowledge of functional anatomy and physiology

of human kinetic system should be employed. Canney [1996], Sprague [2005], Barua [2005] and Seabourne [1998] are more interested in this topic. We very often encounter certain insufficiency in this field. Compensatory exercises are very frequently chosen unsuitably and performed in an incorrect way. Číž [2009] showed the usability of isometric exercises with modern devices (BOSU, fitball, overball) for the purposes of development of power and stability in combative sports training. He also recommended a set of exercises. Bartík [1995, 2000] and Adamčák [2005, 2008] were dealing with development of motor skills (mainly the strength ones) by means of combatives in children's physical education at school. Importance of combatives employment in school physical education for the general development of pupils is also stressed by

Ďurech [1994]. The state of the art as well as theory background is well described in various works of Reguli [2004, 2005, 2008].

Aims

The aim of the project is a creation of multimedia educational support available on-line on e-learning portal of Masaryk University. The multimedia educational support is to be a combination of visual record of battery of exercises, spoken commentary and in-drawn objects emphasising the node points of training. The content is to be a battery of exercises in which the areas of combatives and health physical education will blend.

Due to the aims written above the following tasks were stated:

1. Choice of exercises according to individual groups
2. Consultation with professionals on health physical education
3. Video record of selected exercises
4. Elaboration of the video record (creation of descriptions, replenishing with in-drawn objects, etc.)
5. Publishing of educational support on el-portal of Masaryk University.

Methods

The target group is represented by students of bachelor and master degree study programme. The primary target group are students of the Faculty of Sport Studies - study programme Regeneration and Nutrition in Sport, for whom the subject is obligatory. Secondary target group is represented by all other students of the Faculty of Sport Studies or other faculties of Masaryk University who are interested in combatives, compensatory and health exercises. For these students the subject is offered as optional.

Results

The aim of the project is a creation of multimedia educational support available on-line on e-learning portal of Masaryk University. The multimedia educational support is to be a combination of visual record of battery of exercises, spoken commentary and in-drawn objects emphasising the node points of training. The content is to be a battery of exercises in which areas of combatives and health physical education will blend. The result will be a

cooperation of the Department of Health Support and Department of Gymnastics and Combatives.

Combative exercises generally developing

Non-combative exercises for compensation of stress from individual combative sports and martial arts

Compensatory combative exercises

The content of the exercise book will be divided into three categories:

1. Combative exercises generally developing
2. Compensatory combative exercises
3. Non-combative exercises for compensation of stress from individual combative sports and martial arts

Combative exercises generally developing

This group consists of all exercises stimulating development of individual motor skills and supporting development of physiological functions. These are the fitness exercises (for power, endurance and speed development) and coordinating (reaction, orientation, static and dynamic balance). Combative exercises are characteristic for emotional background in an effort to overcome the partner; the psyche is employed with motivation and the trainer performs more power than in fitness exercises repeated many times. This can be successfully employed in preparation of sportsmen, mainly children, who need some funny motivation during any action. The motivation in physical education is also stressed by Spittle and Byrne [2009] and Schneider [2009]. Exercises in this chapter will be divided according to their stimulation effect e.g. for strengthening of upper limbs, strengthening of lower limbs, trunk strengthening, total power endurance, etc.

Compensatory combative exercises

Here we will choose exercises peculiar to combatives that can be employed as compensatory for other than combative sports or for weakening caused by hypokinesia, a sedentary job [Epstein 2004; Biddle 2009] etc. These will be mainly fitness and stretching exercises with a partner, relaxation and breathing exercises. Compensatory combative exercises will be an intersection group of combatives and health physical education. Thus, for students of the study programme Regeneration and Nutrition in Sport they should represent a novel and enjoyable battery of exercises. In compensatory exercises the correct performance is a very important thing, so that a

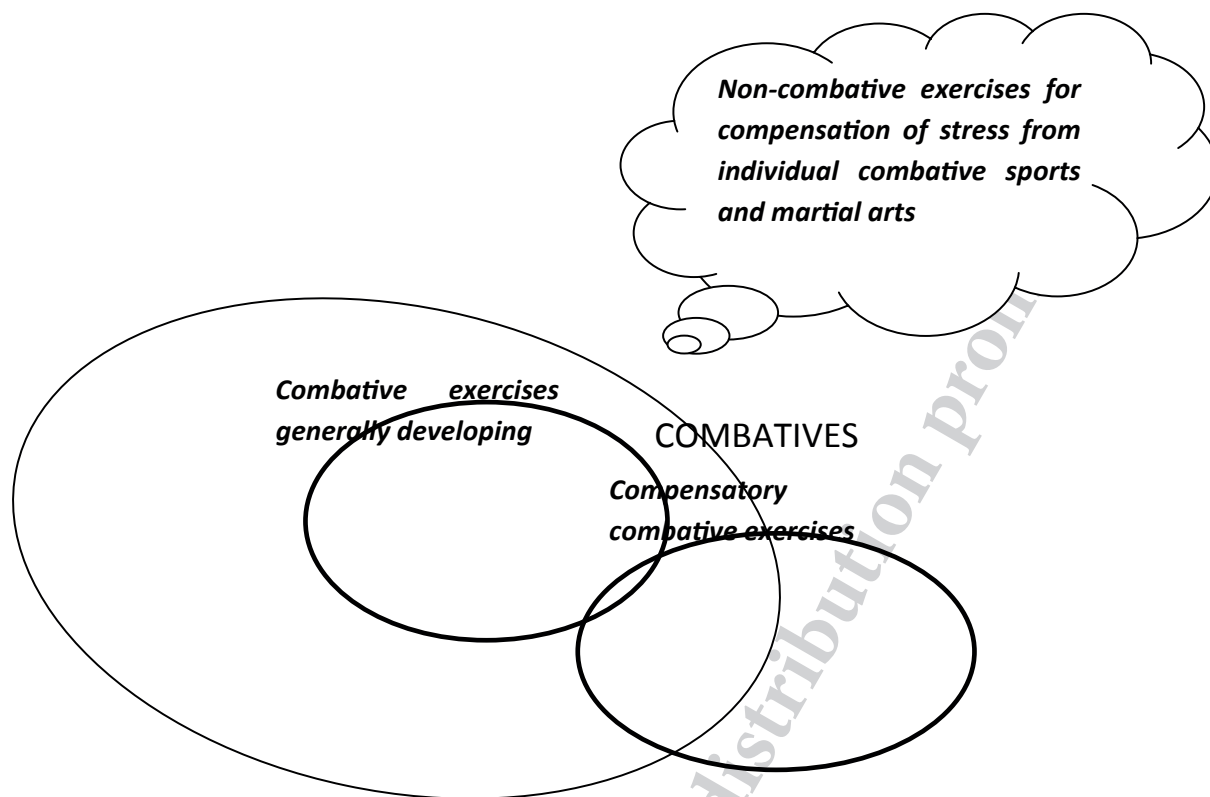


Fig. 1. The scheme of multimedia educational support - categories' relation

desirable effect was reached. Combative exercises offer beside health effect also emotional experiences from competing and contact work with other person. Similarly as a group 1 also the group of compensatory exercises will be divided into areas according to the type of weakness.

Non-combative exercises for compensation of stress from individual combative sports and martial arts

The 3rd group is represented by a specific choice of medical exercises compensating stress from individual combative systems. In various combative systems there are some already used exercises that for a particular type of sport have a particular meaning and develop a needed area in the concrete type of sport, however from the point of view of health effect on human body are not suitable. The expert team of health physical education of our faculty will offer by these exercises more suitable alternative in terms of health effect with comparable stimulating effect on an organism. The next theme of the third group of exercises is compensation of the stress from techniques of individual combative sports.

The set of exercises will be - besides the visual record - supplied by a description of a way and course of their performance and their explanation

from the point of view of functional anatomy, so that the textbook was not solely a battery of exercises listed according to particular criteria. The node points of the exercises will be emphasized through in-drawn objects into the visual record. Moreover, the anatomical connections will be in the visual record graphically illustrated. Thus the textbook will give overall information about the given issue from the combative, health and anatomical point of view.

Conclusions

The aim of the project is to create multimedia educational support available on el-portal of Masaryk University penetrating the fields of combatives and health physical education. Its content will be combative exercises of a generally developing character, combative exercises useful as compensatory for various kinds of sports and health weakness and non-combative exercises compensating the stress from combative systems.

In this way we await the practical education to become more effective and better quality, so that after self study of basic information it will be possible to concentrate more on consultations and elimination of mistakes in the exercises. We hope, thanks to the interactive study material, to contribute to self study activity of the students.

Students will be able to approach themselves to applications of the exercises even in other subjects taught at the faculty and in the practical life.

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Multimedialne wsparcie naukowe dla sportów walki ze szczególnym uwzględnieniem efektów kompensacyjnych

Słowa kluczowe: wychowanie fizyczne, elementy bojowe, ćwiczenia kompensacyjne

Abstrakt

Wstęp. Liczne ćwiczenia o charakterze medycznym (ćwiczenia oddechowe, wzmacniające, rozwijające właściwą postawę itp.) są używane w czasie treningu podstawowych elementów techniki walki. Ćwiczenia te mogą być zastosowane jako przygotowanie sprawnościowe lub medyczne w sportach niezwiązanych z walką, a także ogólnie w innych ćwiczeniach kompensacyjnych. **Cel.** Przedstawienie projektu mającego na celu stworzenie multimedialnego wsparcia edukacyjnego dostępnego online na e-learningowym portalu Uniwersytetu w Masaryk, który będzie łączył nagrania zestawu ćwiczeń, mówiony komentarz oraz rysunki określające najważniejsze etapy ćwiczeń.

Materiał i metody. Zawartość zeszytu ćwiczeń zostanie podzielona na trzy kategorie: 1. ćwiczenia bojowe ogólnorozwojowe, 2. ćwiczenia bojowe użyteczne jako ćwiczenia kompensacyjne w różnych rodzajach stresu oraz 3. niebojowe ćwiczenia kompensujące stres spowodowany przez poszczególne sporty bojowe i sztuki walki. Oprócz nagrań wizualnych, zestawy ćwiczeń zostaną uzupełnione o opis sposobu i przebiegu wykonywania ćwiczeń wraz z wyjaśnieniem z punktu widzenia anatomii funkcjonalnej. Grupa docelowa wsparcia edukacyjnego jest złożona ze studentów studiów licencjackich i magisterskich. Podstawowa grupa docelowa jest reprezentowana przez studentów z Wydziału Wychowania Fizycznego, których program studiów obejmuje obowiązkowy przedmiot - Regenerację i odżywianie w sporcie, drugorzędna grupa docelowa jest reprezentowana przez innych studentów Wydziału Wychowania Fizycznego oraz innych wydziałów Uniwersytetu w Masaryk, dla których wymieniony wcześniej przedmiot jest nieobowiązkowy.

Konkluzje

Na podstawie wcześniejszej wiedzy z tej dziedziny oczekujemy ich edukacja praktyczna stanie się bardziej efektywna i o lepszej jakości w kontekście koncentracji na konsultowaniu się zapobieganiu błędów w czasie treningu. Następnie oczekujemy, że pomoc interaktywnego materiału naukowego przyczyni się do wzrostu indywidualnej aktywności naukowej studentów. Studenci będą w stanie wykorzystać zastosowane ćwiczenia także w innych przedmiotach nauczanych na Wydziale Wychowania Fizycznego, a także w praktyce zawodowej.

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