

## The review of dissertation

Name of author: Ziad Saleh Ali Swedan

Title: The relationship between some kinematic parameters with the performance level of Egyptian high jumpers.

Reviewer: doc. Ladislav Čepička, Ph.D.

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### Structure of review:

1. Evaluation of the relevance of the topic and the importance of habilitation thesis in the field of Sport Science

The work deals with 3 dimensional analysis of human movement, namely the high jump at elite athletes. It is not a new topic but according to literature search there are not studies on athletes from North Africa. So the high jumpers from this region can be influenced by the findings of study. It is not easy to collect data from elite athletes because of their full schedule. That is why the case study are usually used. It implies that the importance of study also consists in feedback for the participating athletes. However, the results can also inspire another coaches and experts. If the results of the will be presented as a comparative study with the elite athletes in the world the results have some publication potential. In any case the findings should be presented in Egypt and Lybia.

2. The objective of study, problem solving procedure, the methods used to achieve aim of study.

The statement of problem is clear and unambiguous. It follows from the necessity to influence the performance of Egyptian high jumpers. Their results in competitions are not very good. The aim of study is to determine how the performance of the Egyptian high jumpers depends on the kinematic parameters of take-off phase. It is within the formulated problem. Also the scientific question is formulated according to problem of study. However, I have some recommendations on hypothesis. The first hypothesis supposes the different kinematic parameters on the Egyptian athletes in comparison with the World elite jumpers. It is very general statement because every athlete has his or her own approach to technique so there are differences among all jumpers. The hypothesis should more reflect the aim of study and should be focused just on take-off phase. The second hypothesis assumes differences in kinematic parameters between athlete 1 and athlete 3. My recommendation is very similar as the case of the first hypothesis. The hypothesis should be more specific. It is interesting that the author included in hypothesis only athlete 1 and athlete 3 and not athlete 2. The question is why the A2 was omitted.

As mentioned above the author cooperated with three athletes. The small number of participants always leads to the problems with quantification of outcomes. The methodology of case study which author selected for analysis is in accordance with conventional procedure. The data were collected through the 3 D analysis of movement which is standard procedure in this type of research. The procedure was perfectly fine. However, the question is why only the best attempt was analysed. It is obvious that even there is a some variability in technique of each jump. Because the author chose for analysis just take-off phase of jump it is necessary

to state why this phase is the most important for the performance of athlete. The design of study was divided into two parts - pilot study and basic study. As mentioned on the page 51 the basic study consist of two parts but only the first part is presented (which includes general characteristics, physical measurement and videotaping). But there is no second phase in the text.

The work has the following structure: Introduction, Literature review, Methodology, Results and discussion, Recommendations and Conclusions. Although the chapters have adequate content I have some comments. Is it necessary to include in the work the history of high jump technique? The content of the Introduction should be more relevant to the problem of work. On the page 13 author stated that performance in high jump depends on two main factors but four factors are analysed on following pages. There is nothing about high jump tactics in the chapter Technique and tactics on page 19. Some parts of text are repeated (e.g. compare pages 11 and 20, citations of Ismail and Hong). In addition, the sentence "Most of progressive nations ..." is cited just on page 20. There are four studies on the pages from 40 to 44 but none of them is cited. However, nothing from mentioned inaccuracies does not negatively influences on the content of the work in general way.

### 3. Conclusions and contribution

According to the title of the work author should analyse the relationship between kinematic parameters and performance level in high jumpers but the analysis is missing in the work. Also the conclusions on the hypotheses are not presented. However, the aim of study has been achieved and scientific question has been answered. Regarding the conclusions of this work, the author formulated finding concerning to the influence of take-off phase on the high jump performance. The conclusions are clear and in the very understandable form, so it can be considered as a recommendations for coaches and also for the athletes. However, most of the recommendations for practice are presented in a separate chapter. The main contribution of the dissertation lies mainly in providing feedback to the Egyptian high jumpers but very important are also findings about biomechanics of take-off phase.

### 4. Layout, language and graphic

The English language is not so good. There are many errors in vocabulary, sentence structure and typing errors in the work. For example, page 82: "The more experienced the jumper, the father away the take-off point should be."

Examples of typing errors:

- p. 13, small letter at the beginning of the sentence (see also pages 53 and 54),
- p. 14, different value of body height in the table and in the text at Kostadinova,
- p. 18, dot in the abbreviation C.M (see also page 29),
- p. 18, used the term center of gravity instead of CM (see also page 31). The abbreviation CM is used on the page 12 first time but there is no explanation.
- p. 63, Fusbery instead of Fosbery.

There are also many errors in cited literature:

- Ecker, 1997 (p. 10) is not on the list of references
- Ling, 1989 (p. 16) is not on the list of references
- IAAF, 2002 (p. 17) in the list of references is given in 2010

- Bourne, 1992 (p. 17) is not on the list of references
- Portno, 1983 (p. 18) in the list of references is Portnov
- Dapena, 1992 (p. 21) there are two Dapena's works in the list of references from this year.
- Bourne, 1990 (p. 24) is not on the list of references
- Jess, 1994 (p.28) is not on the list of references
- Pearson, 1996 (p. 34) is not on the list of references
- Holmberg, 2005 (p. 35) is not on the list of references
- McGinnis, 2005 (p. 36) is not on the list of references
- Ae et al, 2007 (p. 48) is not on the list of references
- Liboshi et al, 1991 (p. 58) in the list of references is given in 1993, the name is wrong typed liboshi
- Čoh & Supej, 2008 (p. 59 and 72) are not cited according to style
- Dapena, 2006 (p. 72) the name is wrong typed Dapean
- Dapena, 1990 (p. 78) the name is wrong typed Dapean

These references in the list of references are not cited in the text of the work:

- Printed references number 8, 10, 13, 15, 28
- Electronic references number 41, 43, 53, 61, 62

The graphic layout of the work is quite sufficient, all pictures are well done, the labels are legible

## 6. Conclusion

Despite all mentioned shortcomings, errors and misleading information the author in his dissertation demonstrated the ability to work independently and creatively. Work meets the standard requirements of the dissertation. That is why I recommend this work for the defence.

The questions for defence:

1. Why was analyzed only the best attempt?
2. Describe in detail your idea about analysis of relationship between two or more variables when  $n = 3$ .
3. The important indicators of choosing of high jumpers are mentioned on the page 13. Explain these indicators: rob shaped buttocks muscle, Zugong height, short toe and trim.

**Datum:** June 7, 2013

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reviewer's signature