

PIECE VALUES AND PIECE EXCHANGE IN CHESS: INDIVIDUALIZED INSTRUCTION OF SCHOOLCHILDREN USING TESTS WITH THREE LEVELS OF DIFFICULTY

Martinovic D., Markovic I.

University of Belgrade, Teacher Training Faculty, Kraljice Natalije 43, 11000 Belgrade, Serbia

Written text comprehension is a common obstacle for many schoolchildren and solving equations and inequations is probably even more daunting from a child's perspective. Developing both skills is highly important with multiple ramifications and long-term effects throughout entire education.

One of the primary goals of Chess as an elective subject in Serbian primary schools is to provide correlations with other subjects and thus facilitate the implementation of their course syllabi in everyday classroom practice [1]. Individualized instruction approach allows each pupil to proceed at his/her own pace for optimal learning. Introducing examples with different levels of difficulty is usually considered "more limited by economic and practical constraints than by theoretical viewpoint" [2]. Tests with three difficulty levels proposed in this paper were thus designed to eliminate the said constraints while preserving the acknowledged positives at the same time.

Piece values and piece exchange are fundamental chess concepts taught during the first year of chess instruction in schools. In her recent work Dr. Alexey Root provides practical advice on how to associate these concepts with basic mathematical equations [3], and how to make the process of reinforcing reading comprehension skills both an integral part of chess teaching in schools and a building brick for a broader classroom literacy project [4].

The proposed tests consist of three levels with progressive difficulty, with emphasis on: (a) mathematical skills, (b) reading skills (decoding and comprehension), and (c) chess exercises. Preliminary testing in Belgrade primary school "Kreativno pero" has shown visible improvement in children skills in all the areas. The sample is too small to be statistically significant, thus further research is due to support or disprove these findings.

References.

1. *Marković, I., Vuksanović, S., Koprivica, V.* Novelties in Methods of Teaching Chess to Younger Schoolchildren // Conference Proceedings / International Scientific Conference "Theoretical, Methodology and Methodical Aspects of Physical Education" (Belgrade, December 11-12, 2008), 2009. Pp. 295-302.
2. *Romiszowski, A. J.* Designing Instructional Systems: Decision Making in Course Planning and Curriculum Design. – London: Kogan Page Ltd, 1981. 415 pages.
3. *Root, A. W.* Science, Math, Checkmate: 32 Chess Activities for Inquiry and Problem Solving. – Westport, CT: Libraries Unlimited/Teachers Ideas Press, 2008. 144 pages.
4. *Root, A. W.* Read, Write, Checkmate: Enrich Literacy With Chess Activities. - Westport, CT: Libraries Unlimited/Teachers Ideas Press, 2009. 128 pages.