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## **Review of Doctoral Thesis**

**Author:** Claudia Sortino  
**Title:** The role of emotion as transmitted by the use of cartoons and games in constructing milieu in negotiating mathematical knowledge in primary and lower secondary schools.  
**Reviewer:** Prof. RNDr. Ondrej Šedivý, CSc.

### **1. General description**

The thesis consists of six chapters, the presentation and the aim of thesis as the first part of thesis, the rich part is appendix (more than 40 pages and the bibliography. The thesis is written on 206 pages all together. The conclusion of the thesis author preformed in the fifth chapter. The sixth chapter is interesting theoretical introduction to the construction and description if the milieu.

The structure of thesis conforms to principles and requests to the structure of scientific thesis.

The author has studied and used appropriate number of bibliography sources used and quoted in the thesis. It is the evidence of the deep theoretical knowledge and very good orientation in the problem discussed in the thesis.

The word processing of the thesis is adequate. The using of different fonts and structure of the text is proper and helps the reader to better orientation in the text. Some pictures in the copy are not big enough to be readable (pg. 154 - 159). It is not ordinary custom to print the scientific work in two-sides format, too.

**The thesis fulfils the formal requests on good level.**

### **2. The topicality of the thesis**

Theory of mathematics education as the scientific discipline deals with many exciting topics today. A lot of reserchers precieve the elementary and primary level in teaching and learning mathematics as the most important level. It is the age of pupils when the basic attitude to the subject (matehmatics) is built and affect the relationship to the subject for the whole pupil's life. The role of emotions and the construction of theaching and learning milieu using cartoons and games, is new in our area in reaserch in Theory of mathematics education.

The author has performed good orientation and wide knowledge of different parts of theory of mathematics education considered in the thesis: theories of education, didactics of mathematics, semiotics, a-didactical situations,...ect. All these theoretical parts of the thesis showed the author's ability to perform the scientific work on the required level.

**The topic of thesis is current and relevant in the context of up-to-date research in theory of mathematics education.**

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### **3. Aims and methods of the thesis**

The research questions are performed in the Aim of thesis as well as the hypothesis of the research (pg.12 – 13).

Every of chapter 1-6 of the thesis is devoted to introduction or description the theoretical background concerning to the research topic and helped the author to prepare and to interpret the research in the action, which results are described in the end (conclusion) of the chapter.

The author presents two different interpretations of results in the thesis: description of situations observed during the experiment and the conclusions.

**The thesis is inspired from the theoretical point of view. The question of interpretation of the research in action and offering some general statements needs more precise research methods (sampling, randomizing, ...), but (according to the author terminology) generally we can say: the aims were fulfilled, methods of research work are appropriate to the aims and to the hypothesis formulated in the thesis.**

### **4. Results of thesis and their benefit**

From what was said above, it is clear that the author is able to organize and realize the research work in theory of mathematics education.

The theoretical background, both mathematical and didactical, and the active research work performed in the thesis of is benefit to existing materials and ideas in the research of theory of mathematics education on elementary and primary school level and in the active research with in service teachers.

### **5. Conclusion**

**In my opinion, the thesis written by Ms. Claudia Sortino fulfils the conditions for gaining the PhD. degree in Theory of Mathematics Education; therefore it is recommended to the defendig process.**

Nitra, December, 9, 2005

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