External Examiner Review

PhD Candidate: Jakub Holický

Psychomotorický vývoj dětí v průských školách a dětských domovech

Overall Comments

First of all, Mr. Holický thesis is an impressive work in the field of psychomotor development of children and adolescents. The author gives an extensive overview about the current research in this field, and analysed for the first time in Czech Republic the psychomotor development of adolescents in different settings by using several research methods.

Introduction and theoretical background

The author starts in this second chapter with a short introduction about the motor development (chapter 2.1), and continues with several principles (laws) with regard to motor development. In my opinion this is an interesting approach to introduce into the chosen topic. But it would have been also thinkable to start with a description of the most common theories about motor development, or even to give a short historical overview about the research in motor development. In his thesis Mr Holický then describes the motor development in school age (children and adolescents) and the psychomotor development. In this chapter (2.1.4) the author shows, that he has a deep insight into the topic, because he uses many national and international references. After these “basic” chapters, Mr Holický introduces into the possible methods for assessing the motor development (diagnostics). It is commendable that the author describes and criticizes several test batteries, which were used in international studies in the last years. In my opinion Mr Holický involved the most common tests, but he missed to compare the test with respect to validity or reliability.

The thesis then begins to explain the motor abilities (strength, endurance, coordination etc.) and the difference between motor abilities and motor skills. These aspects are important and fundamental for the understanding of the dissertation, and the author describes them in a very short form. Very interesting is chapter (2.3) about the motor dysfunctions, because Mr Holický provides a good insight into the complexity of the human motor system and the possible problems that can arise, when parts of our body are malfunctioning. Maybe, that focussing only on some of the mentioned motor dysfunctions and discussing them in more detail would have been more gainful. After this, another basic chapter follows
about the body composition (2.4). Mr Holický begins with a short overview about the different models for understanding and describing the human body, and presents after that different methods (e.g. BMI, DEXA, BIA) for assessing the body composition. This method chapter can be seen as the completion of the basic aspects of the motor development. Altogether I was wondering, whether a different structure of these first chapters would have been clearer. For example, starting with the fundamental terms, concepts of motor development and the motor abilities/skills, and then going on with the different methods for assessing the motor development and the body composition. Another point is, that in some chapters the author gives a very broad and comprehensive insight into the aspects, with the objective showing the reader that he has knowledge in all dimensions of motor development. Thinkable is, to reduce the information and to deepen the main aspects.

After these general chapters, Mr Holický explains the system of the Czech orphanages, aiming to provide a deep understanding of the Czech culture and the ways children and adolescents are cared outside of families. Interesting is, that the author included in this chapter some selected studies of other countries. So, on can assume, that this is the paragraph “review of literature”. Of course, this paragraph does not meet the requirements of a systematic review of literature.

Methodology

In chapter 2.6 Mr Holický starts presenting the research methods he used in his thesis. It is an interesting approach to start this chapter with structural modelling, and the different test and indexes within this modelling. In very short paragraphs the author describes the most common tests (and indexes), but he does not explain or originate his choices. However, the author demonstrates that he has deep knowledge in the field of research methodology, and that he is able to use different methods in his own study (as demonstrated in the results chapter). But I have still problems in understanding the structure of this thesis, because in chapter four the author once again presents several aspects of research methodology (e.g. BOT-2). Between chapter two and four, there is a very short chapter three, that begins with the objective of the study and three hypotheses. As already mentioned the fourth chapter comprises further information about research methodology, e.g. the sample size, the motor test, and techniques of data analyses.

Results

In the results chapter, Mr Holický provides the main findings of his dissertation. He starts with the model fit of the BOT-2 and compares his own results with the results that are mentioned in the manual of the BOT-2. In general the model fit of this study is of good acceptance in the three age groups (4-7 years; 8-11 Years; 12-21). According to the age groups, I miss an explanation, why the oldest age group is of such a wide range. In international studies the age groups are often divided into children (0-10 years) and adolescents (11-13 years; 14-17 years). Anyway, this chapter is of high importance and well written with many scientific details. After calculating the model fit, the author compares the sample size between children and adolescents from Prague schools and Orphanages. Taken together the sample size is big enough and absolutely acceptable for a doctoral thesis. The results are then presented in tables and figures, in order to give the reader a broad as well as a deep overview of the findings. Mr Holický also checked, whether his sample size is normally distributed or not. After these general results, the author focuses on other aspects, such as body anthropometry and weight. For the reader it would have been more helpful, when for this relatively long chapter the author had provided subheadings. Another interesting way of building up this chapter is, that Mr Holický decided to combine the results with parts of the discussion. In conclusion one can follow the thoughts of the author more easily. What I am missing is the comparison or even the reference to the supposed objective and especially to the three hypotheses. I think, that is important to verify or falsify the proposed hypotheses in order to reflect, whether the own study did find answers to the main questions that arose in the theoretical part of this thesis.
Conclusions

In the final pages of the thesis, Mr Holicky discusses the three main objectives of his dissertation. He continues then with a summary of the main findings and shows how the research field in motor development could be enhanced. In this chapter, a critical discussion about the strengths and limitations of the own study is missing. But in my opinion it is absolutely necessary to reflect the own research.

Strengths and limitations

There are some minor errors in the structure and content of this thesis. First, it is hardly to understand why the author did not involve a systematic review of the international studies (review of literature), published in the chosen topic. The formulation of the hypotheses as well as the discussion of the results could have been better founded. Second, I miss the description of the most common theories about motor development. Third, the research methods are presented in several chapters of the dissertation. Maybe, that a consistent presentation would have been easier for the reader. Fourth, a clear reflection of the strengths and in particular the limitations it absolutely helpful in the research process. Therefore, the author should involve these aspects in case of publishing this dissertation.

In conclusion, Mr Holicky has conducted a valuable study in the field of motor development. He shows, that he is able to gain new findings and to work on a high methodological level. The author also confirms a breadth and depth of knowledge within his dissertation. In summary, Mr Holicky meets the requirements (criteria) of a doctoral thesis.

Prof. Dr. Filip Mess