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## 論文審査の要旨及び審査員

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論文審査の要旨 (2000 字程度)

This thesis is entitled “Study on the Influence of Interactive Learning Materials on Self-Regulated Learning for the Professional Development of Primary School Teachers in Mongolia” and consists seven chapters.

**Chapter 1-Introduction:** This chapter reviews the global trend of ICT in education and refers to Mongolian policies project implementations on teachers’ development to promote quality education. It also covers justification and significance of the study.

**Chapter 2-Literature review:** This chapter has two sub-sections covering 1) self-regulated learning theory, and 2) the emergence of interactive learning materials and its relation with self-regulated learning. Self-regulated learning theory explains the process of planning and cyclically adapting self-generated thoughts, feelings, and actions to influence one’s learning outcome. Self-regulation processes comprise motivation and learning strategies and is concerned with how learners activate and sustain their motivation and learning strategies to attain the learning objectives, hence influencing one’s learning outcome. The chapter then explains how self-regulated learning theory is used to understand the effectiveness of interactive materials in facilitating self-learning.

**Chapter 3-Development of interactive materials:** This chapter explains how interactive materials were developed in three Mongolian primary school subjects. Teacher training guidelines and videos were utilized to develop learning contents in quiz format and were converted into the interactive materials. There are 107 quizzes in different types that were locally verified and translated for distribution. Local verification was conducted with teachers and education experts.

**Chapter 4-Methodology:** This chapter lays out the study design, preparatory data analysis, and the research questions and hypotheses. This study employed the two-group experimental design where experimental and control group were formulated in the Gobi region of Mongolia, involving 285 primary school teachers. Exploratory factor analysis and reliability analysis were applied on the data collected. As a result, five self-regulation processes were identified together with learning satisfaction and intention to apply learning contents measuring the learning outcome. Based on the identified variables, three research questions and eleven hypotheses were formulated with literature support. Finally, the data analysis methods to answer research questions are introduced, which are regression analysis, T-test and U-test, and moderation analysis.

**Chapter 5-Data analysis:** This chapter explains three research questions. First, three factors were found to affect learning satisfaction, namely, internal motivation, planning and organizing skills, and critical and positive thinking skills. In terms of interactive materials, it was found that teachers using interactive materials had statistically significantly higher level of motivation for better assessment and learning satisfaction. Further, it was found out that: 1) the internal motivation has stronger influence on learning satisfaction for teachers using interactive materials, and 2) the motivation for better assessment has an influence on learning satisfaction for teachers using interactive materials although degree of influence is minimal.

**Chapter 6-Discussion:** This chapter discusses the study result with the discussion in the current literature and qualitative data collected in the field. This study result agrees with the discussion in the current literature in the following three areas. First, learning motivation and the use of learning strategies are significant in promoting learning satisfaction for teachers’ professional development. Second, interactive materials are beneficial in promoting learning motivation and learning outcome. Third, interactive materials moderate the relationship between learning motivation and learning outcome. Interviews and focus group discussions with local teachers and educational experts provided details and examples that could interpret how self-regulation processes affect learning satisfaction and the role of interactive materials in teachers’ self-development.

**Chapter 7-Conclusion:** This chapter summarizes the study context, research objective, the important findings. Finally, the research and practical implications, as well as limitations and further research are discussed.

This study is considered important contribution identifying effect of ICT for self-regulated learning for teachers in Mongolia, and thus is considered sufficient as a fulfillment of requirement for the degree of Doctor of Engineering.

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