RESEARCH RESULTS INFORMATION

Thesis title: ORGANIZING STEM EDUCATION ORIENTED SCIENTIFIC DISCOVERY ACTIVITIES FOR 5-6 YEAR-OLD PRESCHOOLERS

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# Summary of dissertation content

The dissertation consists of 5 chapters with with the contents of the overview research of the organizing STEM education-oriented scientific discovery activities for 5-6-year-old preschoolers, theoretical framework for organizing STEM education-oriented scientific discovery activities for 5-6-year-old preschoolers, the current status of organizing STEM education oriented scientific discovery activities for 5-6-year-old preschoolers in Ho Chi Minh City, building and experiment the process of STEM education oriented scientific discovery activities for 5-6-year-old preschoolers.

Organizing STEM education-oriented scientific discovery activities is considered one of the advanced educational approaches for developing learners’ competencies. With the goal of determining the scientific and practical bases for organizing STEM education oriented scientific discovery activities for preschoolers in kindergartens, this thesis focuses on analyzing, evaluating, and developing a theoretical framework for organizing the STEM education oriented scientific discovery activities for preschoolers in kindergartens; proposes the process for organizing STEM education oriented scientific discovery activities for preschoolers; determines the objectives, contents, methods, forms, means, evaluation criteria and conditions for organizing STEM education oriented scientific discovery activities for preschoolers. Given that background, the thesis author then conducted a survey and made an analysis and assessment of the actual situation of organizing STEM education oriented scientific discovery activities for preschoolers at 27 kindergartens in 22 districts in Ho Chi Minh City. The author then carried out

experiments in applying the proposed process of organizing STEM education oriented scientific discovery activities for 5-6-year-old preschoolers in two educational establishments in HCMC namely TT kindergarten (District Binh Tan) and VA Kindergarten (District 10)

# New contributions of dissertation

Organizing STEM education oriented scientific discovery activities for 5-6 year old preschoolers is considered one of the advanced approaches that foster the dynamic educational reform in the education system and help children develop their abilities and competencies in vital aspects in life from a very early stage. The dissertation has developed a theoretical framework for the research problem: Literature review to find out the inheritance theories and gaps in the researches. The thesis has contributed theoretical framework for organizing STEM education oriented scientific discovery activities for preschoolers, including key concepts be used in the thesis (such as: scientific discovery activities, scientific discovery competency, STEM education orientation, organization of stem education-oriented scientific discovery activities for 5 – 6 year-old children). The thesis clarified some theories about organizing scientific discovery activities, STEM education, organizing STEM education oriented scientific discovery activities for preschoolers, appreciation of STEM education in scientific discovery activities. The thesis proposes the process of organizing STEM education oriented scientific discovery activities for 5 – 6 year-old preschoolers, including 4 stages with 3 learning phases (Discovery, Find out, and Design) and can be used in practice.

The current status results of the thesis have stated an overview of the actual level of scientific discovery competency of 5-6-year-old preschoolers; the current status of organizing STEM education-oriented scientific discovery activities in 27 kindergartens in Ho Chi Minh City: advantages and limitations.

From the results of theoretical and practical research, STEM education oriented scientific discovery activities for preschoolers the design thesis illustrates the application of the STEM education-oriented scientific organization process with two topics: Animal hospital, Baby fire safety and rescue training center, which can be used as a reference for teachers.

PhD Student Bui Thi Giang Huong