

学位論文の要旨 (論文の内容の要旨)  
Summary of the Dissertation (Summary of Dissertation Contents)

論 文 題 目

Dissertation title

Factor affecting Cambodian Upper Secondary School Female Students' Science, Technology, Engineering, and Mathematics (STEM) Careers Choice

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**Introduction:** Science, Technology, Engineering, and Mathematics (STEM) have been highlighted as growth programs to boost national economic and societal advancement, as specified in the Industrial Development Policy of Cambodia 2015-2025 (Ministry of Education, Youth and Sport, 2016). Gender inequality is frightening, particularly as STEM professions are frequently suggested as the professions of the upcoming day, pushing improvement, public wellbeing, comprehensive development, and sustainable growth. Throughout the past periods, many schools and higher education curricula have been created with the specific purpose of helping females in selecting majors focused on science. Regardless of these efforts, profession choice is still firmly based on gender stereotypes. In this study, researcher focused only on factors influencing female students' career choice with an academic of the last year of upper secondary school education (grade 12th). The specific purpose of this study was to answer two related research questions as follow:

*Research Question 1:* What are the factors influencing Cambodia upper secondary school students' STEM career choice?

*Research Question 2:* What are the most predictive factors influencing Cambodia upper secondary school female students' STEM career choice?

**Methods:** To tackle the problems of the first and the second objective, Binary Logistic Regression makes use of one or more predictor variables that may be either continuous or categorical to predict the target variable classes. To solve the problem, a block recursive model that makes specific assumptions about the causal order of individual, family, school and environment and sociological level variables was used. Particularly, the independent variables were entered into four "blocks". Other statistics analysis such as descriptive, factor analysis, Cronbach alpha and correlation was also employed in the study.

**Key findings:** To greatly be aware of the issue a surrounding the above-mentioned main purpose, the current study attempted to answer two research questions, the result could be concluded as below:

- Responding to Research Question 1 on Cambodian upper secondary school students' STEM careers choice, the study found that the individual factors, gender, and science stream affected students' STEM career choice.
- Responding to Research Question 2 on Cambodian upper secondary school female students' STEM career choice, the study found that the individual factors, science stream and interest in STEM career affected female students' STEM career choice.

**Conclusion and implication:** As the result of the current study, the most influential factors to predict students' STEM career choice is individual factor for both male and female students at Cambodia upper secondary school level. Therefore, we should pay more attention on the other indirect affect factor to help student to be aware of their decision making for major choice as well as career choice by giving a proper guideline or orientation. Once they make a wrong decision, it will ruin their future professional life. This study has revealed practical implication for notifying the relevant stakeholder, educators, career counseling, policy maker to know about the factors or barriers for Cambodia context and upper secondary education is time allow students to choose their higher education (the education stage to prepare for career), we need to investigate the factors influencing secondary both

male female students' career choice in Cambodia but as female students face more challenges in STEM field than male students, we should pay attention on female students in order to provide a right career advice or counseling to students. To increasing the attention of STEM career choice at secondary school level in Cambodia as well as other developing countries as we seek to provide career counseling or advice for secondary school students, students need to have a clearer plans and stronger view about their career choice, it could be the great advantage for them to choose the right track (science or social) at upper secondary schools and their major at higher education in response to their career choice in the future. Once they make a wrong decision in their education, it will ruin their future career. Moreover, parents should get involved in their children's school activities as well as their children's education.

備考 論文の要旨はA 4判用紙を使用し、4,000字以内とする。ただし、英文の場合は1,500語以内とする。

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