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### **Abstract**

This study looks at three key concepts in 21st century e-education: MOOC-efficacy, meaningful learning, and gender among undergraduate students at Malaysian public universities. Its primary goal is to investigate the role of gender as a moderator in the relationship between MOOC-efficacy and meaningful learning. This study uses four criteria to define MOOC-efficacy (information searching, making queries, MOOC learning, and MOOC usability). Meanwhile, five dimensions are used to conceptualise meaningful learning (i.e., cooperative learning, active learning, authentic learning, constructive learning, and intentional learning). A cross-sectional survey design was used in this study. The data were collected using a 52-item questionnaire with reliability indices ranging from 0.822 to 0.890 for the dimensions. University students who volunteered to take part in the study and have prior experience using MOOCs make up the study's population. 603 students were chosen at random to represent the sample. Data analysis included the Structural Equation Modeling (SEM) test for moderation. The result indicates a change in the chi-square ( $\Delta X2$ ) value (0.779), which is lower than the chi-square (X2) critical value (3.841) at p < 0.05. This shows that gender did not emerge as a moderating factor of the relationship between MOOC-efficacy and meaningful learning among these students. An interesting finding includes the fact that males and females are provided an equal exposure and opportunity of education in Malaysia. There were no stereotyping and gaps in the educational treatment, opportunities and learning experience between gender. © 2022, Asian Journal of University Education. All Rights Reserved.

### **Author Keywords**

Gender; Massive open online course (mooc); Meaningful learning; Moderating effect; Mooc-efficacy

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