

Engineering in STEAM Education: A Case Study of French Engineering School

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Abstract

The educators in higher education are facing several challenges due to diverse changes in the social systems that support the institutions. In this regards, numbers of higher education institutes have launched educational program including STEAM education to foster the creative leaders of our future.

Especially, engineering education is differentiated from others because it is taught only in higher education. Thus, this study is to review the engineering education programs in the perspective of STEAM learning and its similar programs in higher education, introduce the content of program, and propose the future direction for STEAM education.

We reviewed the engineering education program in Western countries which had lead the series of industrial revolution to understand the pedagogical philosophy for developing the general curriculum. And we will introduce the STEAM education in today's French Grandes Ecoles and comparative case study of CDIO and Japanese graduate schools.

To conclude, we give recommendations for faculty, researcher in engineering education field, and student for promoting STEAM learning.

Keywords: engineering education, STEAM education, French Grandes Ecole education