

# The Impact of PBL In AI Education on The Academic Achievement of Non-Majors

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## Abstract

With the rapid progression of artificial intelligence (AI) technology, proficiency in AI has emerged as a critical skill, transcending the confines of computer science (CS) to become relevant across a diverse range of disciplines. This study aimed to assess the impact of a Project-Based Learning (PBL) AI training program on 160 young job seekers, all under 34 years of age, evenly divided between 80 majors (primarily from CS or related fields) and 80 non-majors. The six-week curriculum covered Python programming, AI and the Internet of Things (AIoT) integration, algorithmic foundations, as well as introductory and advanced concepts in machine learning/deep learning, computer vision, and natural language processing. Throughout the program, participants collaborated in teams to accomplish AI capstone projects. Evaluations of participants' academic achievements before and after the training were conducted to analyze the program's effectiveness across different educational backgrounds. The findings highlighted a notable improvement in academic performance, especially among non-majors, illustrating the PBL-based AI training program's capacity to enhance AI literacy irrespective of the participant's major.

**Keywords:** artificial intelligence; AI education; AI literacy; job seekers; project-based learning