

Problem-based Learning in Marketing Engineer Course: A Case Study from Industrial Engineering Curriculum

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Abstract. Problem-Based Learning (PBL) is an innovative and practical teaching approach in which students participate in real-world problems, which are complex and demanding. This approach offers a unique learning opportunity in an engineering curriculum and helps students apply their knowledge, develop critical-thinking and problem-solving skills, and work collaboratively. In a Marketing Engineer course, students can work on real-world marketing projects as part of PBL, where they apply the theories and concepts learned in the course to address a specific marketing challenge. The problem case study focuses on analyzing customer purchasing behavior based on student group selections. The students collect and analyze data, identify key segments, and design marketing strategies for a specific product or service through surveys and questionnaires. This practical learning approach allows students to understand the concept of customer loyalty programs while improving their critical-thinking, problem-solving, and teamwork abilities. The poster presentation provides a platform for students to showcase their learning and understanding of marketing engineering in practice that shows to analyze customer purchase behavior data, identify key segments, and marketing strategies. The effectiveness of PBL as a teaching approach in the Marketing Engineer course is analyzed using various data analytics methods. The results show that PBL can be a valuable approach for teaching marketing engineering and can lead to positive outcomes for students. The hands-on learning experience and the real-world projects provide students with a practical and engaging learning environment, which can have a lasting impact on their understanding of the subject. In conclusion, PBL is a valuable approach for teaching marketing engineering and can result in positive outcomes for students.

Keywords. Problem-based learning (PBL), Marketing engineering, Industrial engineering curriculum, Engineering education

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