



**Journal Title**

Universal Journal of Educational Research

**Manuscript Title**

Improving Mechanical Engineering Student's Achievement in Calculus Through Problem-Based Learning

**Abstract**

This research aims to evaluate the effectiveness of problem-based learning (PBL) approach to improve mechanical engineering student's learning achievement. As for the research sample, it consisted of 56 engineering students selected by cluster random sampling which were grouped into the experimental class and the control class. The instrument used is in the form of a description test used to measure student's learning achievement. T-test and N-Gain test were used to analyze research data, while student mastery learning was presented in quantitative descriptive. The results of this research concluded that PBL is effectively applied in the learning process for mechanical engineering students because the learning achievements of students who get PBL learning are better than the learning achievements of students who get conventional learning, the majority of students complete their mastery learning and there is an increase in student's achievement of high categories.

**Keywords**

Problem-based learning, conventional learning, learning achievement

**Copyright**

Yes

**History Records**

Date	Latest Status	Editor Comment
2019-12-01	Final Publication	Your manuscript has been published and the electronic version is available online.
2019-11-11	Accepted for Publication	Your manuscript has been accepted for publication. Please complete the payment following the Payment Instructions sent by Daniel Anderson (comment.hrpub@gmail.com) within 2 weeks.
2019-10-25	Revision Requested	The review report of your paper has been sent to your mailbox. If you fail to receive it, please contact Daniel Anderson(comment.hrpub@gmail.com) . Or you can download the report by clicking the "Review Report(s)" at the right column. Please send the revised paper to Daniel Anderson.
2019-10-09	Under Peer Review	Your manuscript meets the general criteria for the journal and has been sent out for peer review. Usually, it takes 50 days or so to complete the peer review. The report will be sent to you by Daniel Anderson (comment.hrpub@gmail.com). Report is also downloadable by clicking the "Review Report(s)" at the right column.
2019-10-06	Initial Screening	Your manuscript has been assigned to editors for initial screening. The outcome of initial screening will be sent to you by Mark Robinson (preview.hrpub@gmail.com) within 5 business days.
2019-10-06	Submit Success	

# Peer Review Report

## Notes

Please return the completed report by email within 21 days;

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## Manuscript Information

Manuscript ID: **19514169**

Manuscript Title: **Improving Mechanical Engineering Student's Achievement in Calculus Through Problem-Based Learning**

## Evaluation Report

General Comments: **An alternative approach adding to a perennial debate. The outcome is not surprising, but of course it is course content dependent. In engineering this is an issue that has been debated for decades.**

Advantage & Disadvantage: **The approach and analysis may be of interest to some, but the conclusions appear to generalize the results thereby suggesting this is the panacea to the world's education issues (unfortunately it is not and this fact needs to be highlighted). Also there should be some detail about the content delivered with PBL.**

How to improve: **See above as well as reference this statement (2.3.2) "Students are said master learning if they get achievement at the value of 70, and mastery learning is classically met if at least 83% of all students complete the research". Needs more details on the testing material.**

Please rate the following: (1 = Excellent) (2 = Good) (3 = Fair) (4 = Poor)

Originality: **1**

Contribution to the Field: **1**

Technical Quality: **2**

Clarity of Presentation : **2**

Depth of Research: **2**

## Recommendation

Kindly mark with a ■

<input type="checkbox"/> Accept As It Is	
<input checked="" type="checkbox"/> Requires Minor Revision	
<input type="checkbox"/> Requires Major Revision	
<input type="checkbox"/> Reject	

**Return Date: October 24, 2019**