The heart of this study is an innovative method to improve the teaching of linear algebra course. The use of peer instruction in conjunction with a seminar strategy and supported by didactic engineering is proposed as a means to facilitate the mastery of abstract concepts, the undertaking of innovative research in problem solving, and the practical application of educational concepts. To assess the method’s effectiveness, the Students’ Evaluation of Educational Quality questionnaire was administered and assessed. In addition, to determine whether this new teaching approach leads to better learning results than the traditional method, a comparison between control and experimental groups was conducted. In sum, the proposed method has been proven to enhance student motivation and reflection, which are critical to a productive, collaborative learning environment that directly impacts academic retention and performance. (Received September 24, 2018)