

**Students' reflections: a case study on problem-based learning approach in  
Malaysia  
Abstract**

This paper concerned Malaysian undergraduate science physics students' and pre-service science teachers' perceptions of learning through Problem-based learning (PBL) delivered via online. Specifically, it required to ascertain whether students had positive perceptions of the intervention of PBL. Learning outcomes was the main focus. 50 students were involved in this study which consists of 30 students from the School of Science and Technology (SST, science student) and 20 students from the School of Education and Social Development (SESD, pre-service science teachers). Both programmes were from University Malaysia Sabah. Ten collaborative groups were then formed (4-6 students in each group). The students then followed all the PBL learning activities for sixteen weeks. In addition, online learning environment (i.e., learning management system, LMS) was used as the main medium to carry the full learning process throughout the second semester of 2008/2009 academic year. Data were gathered from an established open-ended questionnaire that administered after they completed with the learning activities at the end of the semester. Generally, students' reflection on PBL's specific features regarding to its learning outcomes were significant in every statement. In addition, after analysed separately, SST and SESD's students were also show that their expression were really positive and encouraging thus reflects that this new approach maybe has potential to be implemented fully in Malaysia's higher learning institution.