

THE ROLE OF LABORATORY-BASED PRACTICAL EXERCISES IN THE THEORETICAL CONCEPTS LEARNING

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Besides to equip the students to perform, analyze and interpret laboratory investigations and to demonstrate familiarity with handling and using laboratory instrumentation, the laboratory-based practical exercises expect to integrate theoretical concepts and practical skills. This work is a preliminary study to investigate the relationship between the concepts learned in the lectures and the concepts applied in the lab classes. Firstly we compared the students grades obtained in the exams with their grades in the laboratory exercises reports. It shows a non-significance correlation (Spearman) between the exams and reports grades. In a second moment we compared the students grades obtained in a pre-selected exam question with the grades obtained in the related laboratory exercise report. In this case, we could observe a significant correlation between the exams and the reports grades. This preliminary study held with 82 biology students suggests that the top scored students in the exams are not necessary the same top scored students in the laboratory exercises reports, but the students who have the higher scores in the laboratory exercises reports have also the higher scores in the questions related to the laboratory exercise asked in the exam. These results suggest that the laboratory classes have an important role in the theoretical concepts learning.