

Individual Laboratory Report

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Abstract. This paper investigates the effect of individual laboratory report toward better learning. For this purpose, different parts of report were marked. Finally, the marks from students are presented in result section. The students' feedbacks proved that using team work method was more popular compare to individual one. Based on the students mark performing in theoretical part rather than analytical was easier for them.

Keywords: Laboratory, Report, Individual

1. Introduction

According to Opdecam et al report published report ,however, the new circumstances in higher education inhibit the active engagement of students in the learning process (Braxton, Milem, & Sullivan, 2000; Kelly et al., 2005). The situation in higher education has changed considerably during the last two decades as the massification of higher education has emerged (Trow, 1999; Tynjälä, Välimaa, & Sarja, 2003). Massification in higher education has resulted in an expansion of the student population (Tynjälä et al., 2003) and increased academic heterogeneity (Schoenecker, Martell,& Michlitsch, 1997). Furthermore, considering increased faculty workload, a cost-effective learning method is needed. Cooperative learning provides a potential solution because it can implement active learning in a large group setting (Sand-Jecklin, 2007). Team learning is a specific type of cooperative learning that requires an acceptable investment of time and energy from the instructor while inducing active learning in students. The core issue in team learning is that people learn not only from their own experiences but also from colleagues' experiences (Ickes & Conzales, 1994). The massification of higher education has resulted not only in an expansion of the student population but also in a growing diversity of the student population (Trow, 1999). Therefore, today's students attend university with a variety of instructional preferences and educational needs.(Chegenizadeh and Nikraz, 2012)

The aim of this paper is to present a feedback on individual laboratory reports effects on student learning in geotechnical laboratory class. Guidline to provide the lab report given to students and students put their efforts toward solving analytical and theoretical problems. The results are presented in this study.

2. Report Parts

Reports were designed systematically to examine feedback from students. Different types of tasks are as follows:

1) Analytical part

This part included a series of analytical approach by applying the principles and asking students to put their own calculations toward the final answer.

2) Theoretical part

This assignment included solving different theoretical questions and asking student to put their mathematical principles together to achieve final equations.

3) Conclusion part

Each student was asked to provide a full discussion on the results and errors they encountered in running the test.

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3. Marking feedback

The reports were given to students individual assessments, so that the students could give proper feedback for choosing the better types of reports for next year class.

The following sections were marked and evaluated:

- Analytical assignment
- Theoretical assignment
- Discussion assignment

Next section focuses on feedbacks from the students marking.

4. Results

The marking results are presented in Table 1. The results showed that students mark for theoretical background was higher than the other parts and analytical marks and discussion marks were afterward. The table shows that 120 students have got 80-100 % of allocated mark to theoretical part .The table also shows that 76 students in discussion part are between 50-80% of allocated mark.

Table 1: Marking Range

Report parts	80-100% of allocated mark	50-80 of allocated mark	0-50 of allocated mark
Analytical part	74	55	24
Theoretical Part	120	23	10
Discussion part	50	76	27

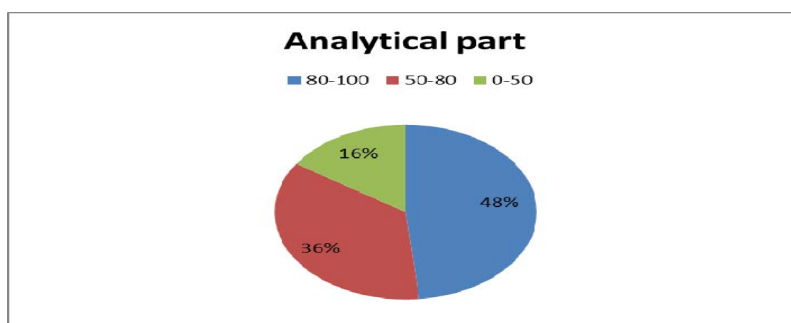


Fig.1: Analytical Part evaluation

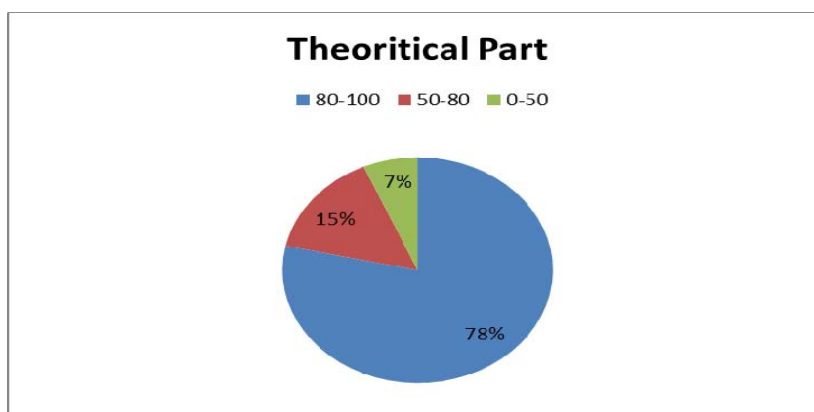


Fig.2: Theoretical Part evaluation

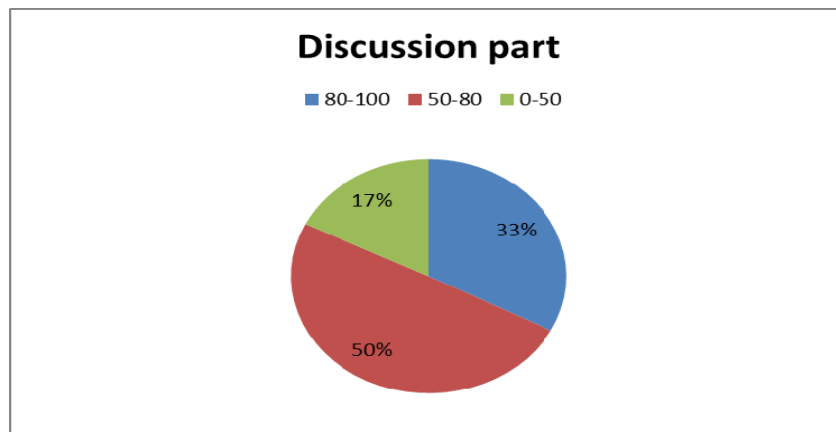


Fig.3: Discussion Part evaluation

5. Conclusion

This paper focused on investigation on usage of different types of assignments on laboratory report of student. Different methods of submission were allowed (i.e. team work and individual). The paper reflects mark of students for each tasks. The results proved that:

- Students preferred team work rather than individual work
- Students performed better in theoretical work rather than other parts
- Discussion parts had the lowest marks among the others

6. References

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