

# The Relationship Between Naturalistic Intelligence and Biology Achievement of Grade 9 Students

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## Abstract

The main purpose of this study was to determine the relationship between naturalistic intelligence and biology achievement of Grade 9 students. Quantitative approach was used in this study. This study was conducted to investigate the different levels in naturalistic intelligence of Grade 9 students and to explore the differences in their biology achievement by gender, district and school. To examine the naturalistic intelligence of Grade 9 students, Naturalistic Intelligence Inventory developed by Moe Moe Naing, 2008 and to test students' biology achievement, Biology Achievement Researcher Made Test were used as research instruments. Naturalistic Intelligence Inventory ( $\alpha=0.657$ ) includes 22 dichotomous items. Biology Achievement Test ( $\alpha=0.914$ ) consists of 45 multiple choice items. The sample was chosen by using random sampling technique from selected 8 high schools of Yangon Region. A total of 700 students participated in this study. According to *t*-test result, there was no significant difference in naturalistic intelligence by gender. ANOVA results also showed that there was no significant difference in naturalistic intelligence by district. But, there was significant difference in naturalistic intelligence by school. School 6 was significantly different from School 5 and School 8 concerning naturalistic intelligence. Students from School 5 and School 8 had highest level in naturalistic intelligence among schools. The result of *t*-test by gender revealed that female students performed better than male students in biology achievement. ANOVA results by district and school revealed that there were significant differences in biology achievement. East district was significantly different from north district regarding biology achievement and students from east district best performed in biology. Concerning the school, there was significant difference in biology achievement at 0.001 level. Based on the results of this study, students from school with high naturalistic intelligence level had higher biology achievement than those from school with low naturalistic intelligence level. In addition, it was found that students from schools with adequate supporting of educational resources had high biology achievement. According to Pearson correlation result, naturalistic intelligence and biology achievement of Grade 9 students were positively significantly correlated.

**Key words:** naturalistic intelligence, biology academic achievement

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