

## Abstract

Wiki, which means “quick! quick!” in Hawaiian aboriginal dialect, has now become a popular name of an online collaborative writing platform. Wikipedia, an encyclopedia on the network written by internet surfers all around the globe, is the most outstanding and successful example. Both the authoritativeness and the number of entries and articles in Wikipedia are challenging those of the Encyclopedia Britannica. Wiki is considered to be the best supporting platform in collaborative learning. The appearance of Wikipedia shows two important enlightenments in education. 1) It is the achievement of sharing and collaboration of study groups through learning. More than that, it can also be used as a scaffold by other groups of learners to reach a high level. 2) The process of production itself is the process of learning. It is believed that most learners acquire some knowledge through the accomplishment of tasks. Some educationists have pointed out that learning becomes more effective through sharing and cooperation.

Mathematics is a major subject in high school education. It is the foundation of all scientific subjects. In recent years, students seem not to be patient enough to seek to understand mathematics thoroughly, they are eager to find solutions briefly rather than do operations themselves. They recite formulae without knowing how to use or explicate them. They seem to be gradually losing interest in the subject. One purpose of this research is trying, like the mode of Wikipedia, to boost the writing of a complete, dynamic and diversified learning diary through the collaboration between teachers and students, and thus enhance students' learning interest and improve their results. The other purpose of this research is trying to find out if, under the Wiki-like learning environment, are there significant co-relationships between students' amount

of contribution and learning achievement in the learning of mathematics? Is a student's amount of contribution the main factor that really affect his achievement in the study of mathematics?

Through data analysis, this is a research trying to find out the relations between students' amount of contribution and learning achievement. Besides, the researcher tries to find, via questionnaires, if students' learning attitude can be improved in such kind of open learning environment. Results show that: 1) There are remarkable co-relations between students' amount of contribution and their learning achievement in Mathematics. 2) Students' learning attitude seemed to have improved in this open, co-operative learning environment, but not to a significant degree. 3) Grouping by sex, the amount of contribution between boys and girls did not show much difference. The coefficient of girls' contribution and learning achievement in mathematics was slightly higher than that of boys, but not remarkable. 4) Grouping by the ranking of high, medium and low learning ability, students from high- marks group contributed the most, over 60%, of the total amount. 5) A student's contribution has been proved to be the key factor of his achievement in learning mathematics, but it is not the only factor. 6) Students' main purpose of taking part in the writing of this network diary is hoping to see the process of calculation of their counterparts, so as to improve their ability in learning and writing of mathematics diary.

Keywords: Wiki, Mathematics learning achievement, Correlation, Collaborative learning