This study was carried out to study the effects of brain-based learning on the physics academic achievement and learning atmosphere of the ninth grade students in Bhutan. The research design used was 2 groups, pretest-posttest experimental design. The subjects were randomly assigned to the experimental and control groups based on their pretest ranked scores. Achievement test and observation forms were used to collect the data. The experiment was carried out for six consecutive weeks.

Prior to the experimentation, validity and reliability of research instruments were established. The instruments were found to be valid with an IOC range of 1.00. The reliability of the instruments using KR-20 was 0.89.

Descriptive statistics and independent-samples t-test were used to analyze the data. When applying independent-samples t-test, the academic achievement and the learning atmosphere of the students experiencing BBL when compared to that of conventional teaching method was found statistically significant at 0.05 levels. It could be concluded that BBL was effective in increasing the academic achievement as well as enhancing the learning atmosphere.