

THESIS TITLE : AN ANALYSIS OF ALTERNATIVE CONCEPTIONS ABOUT  
THE GREEN WORLD OF MUTHAYUMSUKSA I STUDENTS

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## ABSTRACT

The objectives of this study were : 1) to analyse alternative  
conceptions about the Green World of Muthayumsuksa I students.

2) to compare students' alternative conceptions in science by sex.

The population of this study was 103 Muthayumsuksa I students  
in Hnongsungwittayayon School, Kaengkhro Amphur , Chaiyaphum Province,  
in the second semester of academic year 1993.

The instruments were composed of:

1) a test of concepts about photosynthesis and translocation  
of water and mineral of plant. The difficulty level of the test  
ranged from 0.212-0.750 and the discrimination power ranged from  
0.212-0.484. Its reliability was tested by using Cronbach's alpha  
coefficient giving a value of 0.833

2) interview test.

The data was analysed by using SPSS/PC<sup>+</sup>.

The statistics used were percentages and chi-square test.

The research findings were as follows :

1. Alternative conceptions of students.

1.1 Alternative conceptions about photosynthesis.

There were high alternative conceptions on the role of Carbondioxide in photosynthesis ( 57.28 % ), but low alternative conceptions on the role of leaves in photosynthesis ( 10.67 % ).

1.2 Alternative conceptions in translocation of water and mineral of the plant. There were high alternative conceptions on the function of leaves in transpiration (52.42 %), but low in diffusion (27.18 % ).

2. There was no significant difference at the .05 level of alternative conceptions between male and female students , except the concepts of the role of leaves in transpiration which female students had (63.46) more than male students (41.17 % ).