

Jittinan Satanimi 2007: Exploring the Genetics Concept of the Pre-cadets. Master of Arts in Teaching, Major Field: Teaching Science, Department of Education.

Thesis Advisor: Associate Professor Bupphachart Tunhikorn, Ph.D. 221 pages.

The objective of this study was to explore the genetics concept of the Pre-cadets. The subject consisted of 28 pre-cadets in one section of academic year 2006. The instrument for gathering data was based on open - ended questions which involved in genetics concept developing from event interview, instance interview and relational diagrams.

The data were analyzed using percentage to determine the Pre-cadets' sound understanding, partial understanding, partial understanding with a misconception, specific misconception and no understanding in concepts.

The result showed that more than 50 percents of Pre-cadets had scientific conception about chromosome numbers, autosome genes, genetic inheritance, the relationship among cell, nucleus, chromosome and gene. However, less than 50 percentage of pre-cadets had scientific conception in these topics: chromosome structure, functions and significations gene, genetic material, genotype phenotype, X-linked gene inheritance and mutation.

It could be concluded that lots of Pre-cadets had misconception about genetic especially the conception about structure of genetic material such as chromosome and gene structure. And few of Pre-cadets had scientific conception about genetic as prior knowledge and concrete conception such as heredity and chromosome number.

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