EFFECTIVENESS OF WEB BASED INSTRUCTION IN LEARNING SCIENTIFIC SKILLS AMONG HIGHER SECONDARY STUDENTS

a thesis submitted by

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in partial fulfillment of the award of the degree of

DOCTOR OF PHILOSOPHY

under the supervision of

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DEPARTMENT OF EDUCATION

KARUNYA UNIVERSITY

(Karunya Institute of Technology and Sciences)
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DECLARATION

I, ANNAMMA GEORGE hereby declare that the thesis, entitled “Effectiveness of web based instruction in learning scientific skills among higher secondary students”, submitted to the Karunya University, in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Education is a record of original and independent research work done by me during the period 2008 – 2012, under the supervision and guidance of Dr. Mini Dejo Kappen, Principal, Al Azhar Training College. The work contained in this thesis has not been previously submitted to meet the requirements for a degree or diploma at this or any other higher education institution.

Annamma George.
BONAFIDE CERTIFICATE

Certified that this Thesis titled "Effectiveness of web based instruction in learning scientific skills among higher secondary students" is the bonafide work of ANNAMMA GEORGE who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other scholar.

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ABSTRACT

The study was intended to develop a Web Based Instruction Package to study its effectiveness on the Scientific Skills namely Reporting, Interpretation, Reasoning and Problem Solving Skills, among Higher Secondary Students. A quasi experimental method was employed for the study. The research design adopted was pre-test-post-test two group design. The sample for the experimental study comprised of 228 students at the Higher Secondary Level (Experimental Group – 114, Control Group – 114). Web Based Instruction Software (designed on the basis of the curriculum by the University) was followed. A Criterion referenced test was used. All the tools were developed by the investigator and were administered on the sample and the data thus collected were analyzed using appropriate statistical techniques like computation of means, critical ratios, analysis of variance and analysis of covariance. The study revealed that Web Based Instruction is an effective teaching strategy for developing scientific skills like Reporting, Interpretation, Reasoning and Problem Solving especially for the higher secondary students for their total achievement in physics.
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