

UNIVERSITI TEKNOLOGI MARA

**ENCODING SPECIFICITY PRINCIPLE (ESP) IN
ENHANCING MOTOR MEMORY PERFORMANCE
SKILLS**

Muhammad Hafeez Basri

Dissertation submitted in partial fulfillment of the requirements
for the degree of
Master of Sports Science

Faculty of Sports Science and Recreation

April 2011

DECLARATION

This dissertation report attached was prepared and submitted by Muhammad Hafeez bin Basri (2006610734) as impartial fulfillment of the requirement for Master in Sports Science (SR770) of the Faculty of Sports Science and Recreation and is hereby accepted.

.....

Muhammad Hafeez B.Basri

ABSTRACT

Purpose

This research studies the relationship between transfer of learning and motor movement on how a skill can be transferred, retained and produce consistency in performance by applying the theoretical principle in Encoding Specificity Principle (ESP).

Methodology:

Subjects selection based on the convenient sampling method. This method was used, as subjects in Universiti Pendidikan Sultan Idris (UPSI) were the least experience group in netball compared to other universities in Malaysia, thus satisfies the specific criteria that the researcher had set. Subjects was interviewed and involved in a shooting test before the researcher determines the grouping. Subjects were $n= 40$ (female) with age ranged between 20 – 25 years old, heights between 1.50m – 1.75m and weights between 40kg – 75kg. To ensure that useful and reliable data are collected, certain procedures are necessary in the collecting the data. The procedures was strictly adhered during the entire course of the study and classified as an experimental research. Subject was asked to perform two (2) tests. Pre and post-tests was conducted on every subject to determine their performance. The tests are specific visual aid training vs no specific visual aid training and specific verbal training instruction vs no verbal training instruction. The experimental group undergoes training (with a pre-determined training procedures) prior to the post-tests while the control group was not undergoing any pre-determined training procedures.

Results

Paired Sample T-Test results showed that there was a significant difference in achievement for the treatment tests. In Test 1 (specific visual aid training test), the result was p-value (0.00), medium effect size (ES) of 0.5 and omega squared at 80%. In Test 2 (specific verbal training instruction test), the result was p-value (0.00), low effect size (ES) of 0.1 and omega squared at 80%. Therefore, all of the tests null hypotheses were rejected without creating Type 1 and Type 2 error.

Findings

The findings indicated that ESP had affected the performance of the subjects. These finding was consistent with the past studies, which indicates the transfer of learning principles in ESP were consistently able to show successful transfer rate. However, for future study purpose, studies in this area need to be conducted on athletes at high competitive level.

Table of Content

Declaration	i
Acknowledgement	ii
Abstract	iii
Table of Contents	iv
List of Figures	vii
List of Tables	vii
CHAPTER ONE	
Introduction	1
Transfer of Learning and Skill Development	2
Transfer of Learning and Memory Structures	3
Past Studies in Encoding Specificity Principles	4
Problem Statement	7
Objectives	8
Hypotheses	9
Significance	9
Limitation	10
Delimitation	11
Definitions / Keywords	11
Assumption	13
CHAPTER TWO	
Introduction	14
Theoretical Concept	15

Memory	17
Biological Bases of Memory	18
Types of Memory Test	19
Benefits of Understanding Memory Ability	20
Methods to Enhance Motor Memory Performance	20

CHAPTER THREE

Introduction	27
Research Study Flowchart	28
Conceptual Framework	29
Research Design	29
Pilot Study	30
Sampling Technique	31
Instrumentation	32
Test Protocols	38
Data Analysis	39

CHAPTER FOUR

Introduction	41
Descriptive Statistic	42
Inferential Statistics	
- Result of Hypotheses One	43
- Result of Hypotheses Two	47

CHAPTER FIVE

Discussion	51
------------	----