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**NOTE-TAKING AND THE INTERNATIONAL ISLAMIC
UNIVERSITY MALAYSIA LAW STUDENTS'
ACHIEVEMENT**

BY

MOHAMED ISHAK ABDUL HAMID

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF EDUCATION**

**KULLIYAH OF EDUCATION
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ABSTRACT OF THE THESIS

Effective note-taking is positively related to academic achievement, but many students record too few notes to benefit fully from note-taking activities. This study presents the development in note-taking research and the need for a formal instructional program to be introduced to educators and students. In this study, 250 Law students from the International Islamic University Malaysia were selected using the systematic random sampling technique, seeking students' attitude towards (i) lecturers' notes, (ii) students' own notes and (iii) lecturers' involvement with students' notes. The data collected were analyzed descriptively and inferentially using the multiple regression analysis. The results showed that (i) students' attitude towards lecturers' notes and CGPA was significant, but negatively related, (ii) students' attitude towards own notes, CGPA and mind-mapping (with notes) was significant and positively related, and (iii) the relationship between lecturers' involvement with students' notes and mind-mapping (with notes) was positively significant, but lecturers' involvement with students' notes and CGPA was insignificant.

ملخص

يرتبط أخذ الملاحظات إيجابيا الإنجاز الأكاديمي، ومع ذلك فإن كثيرا من الطلاب لا يأخذون إلا الترتيب من الملاحظات مما يجعل الفائدة من وراء هذا النشاط محدود. تستعرض هذه الدراسة التطورات الأخيرة في أبحاث أخذ الملاحظات والحاجة إلى إدخال برنامج تعليمي رسمي للمربين والطلاب. شارك في هذه الدراسة ٢٥٠ طالبا من كلية القانون في الجامعة الإسلامية العالمية ماليزيا.

وقد تم اختيارهم بأسلوب انتفاء العينة العشوائية المنتظمة. وقد تم تقصي اتجاهات المشاركين نحو:

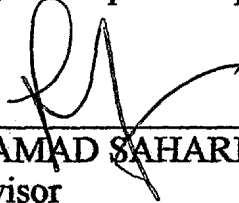
(١) ملاحظات المحاضرين (٢) ملاحظات الطلاب (٣) تدخل المحاضرين في ملاحظات الطلاب.

تم تحليل البيانات باستخدام الإحصاء الوصفي. كما استخدم تحليل الانحدار المتعدد وهو من الإحصاء الاستنتاجي. أظهرت النتائج أن (١) اتجاهات الطلاب نحو ملاحظات المحاضرين كانت مرتبطة سلبا مع معدلهم التراكمية، ولكنه ارتباط ذو دلالة إحصائية. (٢) اتجاهات الطلاب نحو ملاحظاتهم الخاصة، ومعدلهم التراكمية والخرائط الذهنية كانت مرتبطة إيجابيا ارتباطا ذا دلالة. (٣) العلاقة بين تدخل المحاضرين في ملاحظات الطلاب وخرائطهم الذهنية كانت ذات دلالة، فيما كان تدخل المحاضرين في ملاحظات الطلاب والمعدل التراكمي غير ذي دلالة.

أكدت الدراسة نتائج دراسات سابقة حول العلاقة الإيجابية بين النشاطات الوراذهنية في أخذ الملاحظات وبين الإنجاز الأكاديمي.


APPROVAL PAGE

I certify that I have read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Education.



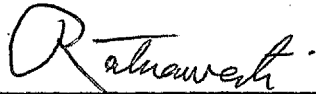
MOHAMAD SAHARI NORDIN
Supervisor
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KHATHIJAH ABDUL HAMID
Examiner
Date: 20/7/2000

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RATNAWATI MOHD ASHRAF
Postgraduate Coordinator
Date: 20/7/2000

This thesis was submitted to the Kulliyah of Education and was accepted as partial fulfillment for the degree of Master of Education.



ROSNANI HASHIM
Dean
Kulliyah of Education
Date: 20/7/2000

DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references and a bibliography is appended.

Name: Mohamed Ishak Abdul Hamid

Signature: 

Date: 15 / 7 / 2000

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Note-Taking and The International Islamic University Malaysia Law Students'
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TABLE OF CONTENTS

Abstract (English)	ii
Abstract (Arabic)	iii
Approval Page	iv
Declaration	v
Acknowledgements	vi
List of Tables	x
CHAPTER 1 : INTRODUCTION	1
Background	1
Statement of the Problem	2
Research Questions	3
Significance of the Study	4
Definition of Terms	5
CHAPTER 2 : REVIEW OF THE RELATED LITERATURE	7
Introduction	7
Historical Development In Note-Taking Research	7
Theoretical Framework	11
Non-Generative Processing	12
Information Processing	12
Knowledge Construction	13
Levels of Processing	14
Generative Processing	15
An Integrative Framework	16
Note-Taking Techniques And Strategies	20
Note-Taking Techniques	20
Note-Taking Strategies	22

Outlines.....	22
Graphic Organizer.....	23
Implications For Research.....	24
Role of Educators	25
Providing Full Notes.....	25
Providing Partial Notes	26
Segmenting Lectures.....	27
Cuing	28
Rate of Presentation	29
Segmentation	29
Organization of the Presentation	30
Conclusion	33
CHAPTER 3 : METHODS	34
Research Methodology	34
The Population.....	35
Sample Size	35
Instrumentation	37
Research Procedure	40
Data Analysis	41
CHAPTER 4 : PRESENTATION AND ANALYSIS OF DATA	43
Students' Note-Taking Behaviors	43
Attitude Towards Note-Taking	49
Achievement, Background Characteristics and Students' Attitude Towards Note-Taking	52
Students' Attitude Towards Lecturers' Notes	54
Students' Attitude Towards Own Notes	55
Students' Attitude Towards Lecturers' Involvement with Students' Notes	57

Types of Note-Taking Behaviors	59
Achievement, Background Characteristics and Students' Attitude Towards Note-Taking	61
Recommendations	64
Instructional Practices	64
Implications for Research	67
References	70
Appendix A	77
Appendix B	82

LIST OF TABLES

Table No.		Page
1	Distribution of Respondents According to Background Characteristics	36
2	Percentage Distribution of Responses to Metacognitive Activities in Note-Taking When No Notes Were Given	44
3	Percentage Distribution of Responses to Metacognitive Activities in Note-Taking When Notes Were Given	46
4	Percentage Distribution of Responses to Other Metacognitive Activities in Note-Taking.....	48
5	Students' Attitude towards Lecturers' Note	49
6	Students' Attitude towards Own Notes	50
7	Students' Attitude towards Lecturers' Involvement with Students' Notes	51
8	Summary Statistics for the Regression Model of Students' Attitude towards Lecturers' Notes	55
9	Summary Statistics for the Regression Model of Students' Attitude towards Own Notes	56
10	Summary Statistics for the Regression Model of Students' Attitude towards Lecturers' Involvement with Students' Notes	57

CHAPTER ONE

INTRODUCTION

Background

The pursuit of educational excellence calls for an effective transformation of the teaching-learning processes. For this to materialize, several combinations of proactive cognitive strategies, such as information processing, knowledge construction, levels of processing and generative processing, need to be activated by the learner. Regardless of the strategies adopted, the learner still needs to be engaged in the kinds of note-taking activities that would lead to learning and also use them for examination purposes. In spite of the advent of modern technology, note-taking activities are irreplaceable and will be relied upon by learners for time immemorial.

Many researchers have conducted research on the subject (e.g., Anderson & Armbruster, 1986; Bretzing & Kulhavy, 1979; Carter & Van Matre, 1975; Crawford, 1925; Di Vesta & Gray, 1972; Einstein, Morris & Smith, 1985; Fisher & Harris, 1974; Henk & Stahl, 1985; Howe, 1970; Hult, 1984; Kiewra, 1983; Kiewra & Benton, 1988; Ladas, 1980; Pauk, 1978 & Sahari, 1995,1999). In spite of their different emphasis in their note-taking research, they nevertheless, concluded that effective note-taking facilitated learning and produced better academic performance. From these research findings, educators have, from time to time, adopted them to help improve their students' learning outcomes. However, such development is scarce in Malaysia. Casual observations indicated that our students need help with their notes. In the absence of any formal instructional program in note-taking strategies and techniques, our students' note-taking behaviors remain idiosyncratic. The

situation is further exacerbated by the possibility that our lecturers are not conversant with note-taking strategies and techniques themselves. In view of the above expositions and the positive research findings that effective note-taking is positively correlated with academic achievement, it is submitted that there is a need to bridge the gap in such an area that we find wanting in our local context.

Against that background, the present study was conducted on the students of the International Islamic University Malaysia to identify and analyze their note-taking behaviors and the effects on their learning outcome.

Statement of Problem

Much of students' knowledge acquisition and learning come from lectures. There are several methods available, but students tend to record the information that lecturers disseminate to them by note-taking activities. In most situations, students rely on their notes to prepare for examinations. However, casual observation shows that students generally face difficulties in taking notes effectively, thus failing to select and record critical lecture ideas. They either take notes verbatim, or record only the phrases that seem important to them or catch their attention or simply listen and take no notes at all. Overall their note-taking behaviors are erratic and lack organization. Lecturers' lack of awareness or due to their inadvertent ignorance or lacking in pedagogical knowledge on their students predicament do not help to overcome these shortcomings.

Considerable research findings provided evidence indicating that students generally produce notes that are incomplete and ineffectively organized (Bretzing & Kulhary,

1985; Kiewra & Benton, 1988); while others have concluded that effective note-taking is positively correlated to academic achievement (Kiewra & Benton, 1988). Pursuant to the above and the fact that there is an absence of research on the said subject matter conducted locally, it becomes imperative that similar research be conducted so as to provide directions for the authority to design a formal instructional program on specific aspects of metacognition in note-taking strategies and techniques. These efforts would serve to advise the educators and students accordingly, hence helping to improve their academic achievement.

The purpose of this study is to identify and analyze the note-taking behaviors of students at the International Islamic University Malaysia. The researcher's interest will be focused on the students' metacognitive note-taking activities, namely, on the types of students' note-taking behaviors, the students' attitude towards lecturers' notes, their own notes and lecturers' involvement with students' notes, and their relationship with students' academic achievement.

Research Questions

The proposed study investigates metacognitive processes of students' note-taking activities and their relationship with the students' academic achievement. This effort is based on the assumption that the improved systematic notes recorded would allow better metacognitive activities to be engaged for evaluation purposes; when combined with generative and information processing would lead to facilitate better learning and enhance academic performance. Given this assumption, the proposed study will focus on three sets of questions:

- 1) What are the types of note-taking behaviors reported by students from lectures?

- 2) What are the students' attitude towards lecturers' notes, students' own notes and lecturers' involvement with students' notes?
- 3) Is there any relationship between students' background, achievement and note-taking activity and attitude?

Significance of the Study

The presumption that educators believe that students have the knowledge of good note-taking ability and are able to record most of the important contents of their lectures is a myth. This presumption can be counter-productive to the teaching-learning processes, and outcomes from research findings provided evidence that students need help in their note-taking activities. For generations, students have attended lectures, taking notes and depending on those notes to acquire knowledge and obtain good results, with the hope that their potentials can be developed to serve them in their future endeavors – academic pursuits, career development and community service. However, in the absence of any formal instruction in note-taking strategies and techniques, these noble ideals may not be maximized.

There is, therefore, a need to address these shortcomings by the relevant authority. The Ministry of Education Malaysia and educators are in a position to offer a significant role to remedy this situation. The role of educators is crucial as they are the agents who transmit knowledge, skills and values to the students. They are responsible to ensure that students acquire a holistic education by seeing that students are taught effective note-taking to maximize their potentials. Most research findings have shown that there is a positive correlation between effective note-taking and the learners' academic achievement. Therefore, learners must be taught how to take

effective notes. The present study helps to expound the importance of metacognitive activities in note-taking, note-taking functions, techniques and strategies, and their effects and implications on students' academic performance and educators' instructional practices. In addition, it also helps to sensitize policy-makers on the needs to introduce formal instructional program for educators and learners.

Definition of Terms

Academic achievement : Refers to scholarly ability as measured by the Cumulative Grade Point Average (CGPA).

Encoding : The cognitive activities that allow the learners to transcribe whatever subjective associations, inferences and interpretations occurred to them while listening to make them meaningful to facilitate learning.

External storage : The behavioral activities of recording information as a resource for further study or reference by the learners.

Generative processes: The learner actively engaged in generating relations among parts of the learning material and one's prior knowledge which produces greater learning.

Review : The cognitive activities that allow the learner to engage in the ability to retain and transform information to perform higher order cognitive activities : application, analysis and synthesis.

Note-taking: Refers to both the overt and covert learners' reported behavioral activities of recording information from lectures, lecture notes and other reference materials.

Attitude towards note-taking: The act of perceiving the usefulness of (i) lecturers' notes, (ii) students' own notes and (iii) lecturers' involvement with students' notes for academic achievement.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

Introduction

The main purpose of this chapter is to provide a broad perspective on the history and nature of note-taking research, and to review the related literature on note-taking behaviors, functions, techniques and strategies and their effects and implications on students' academic achievement.

Since the present study is among the first of its kind in Malaysia, the literature specifically relevant to the study is rather limited. This was discovered by the researcher after exhaustive search was conducted locally. As such much of what is reviewed in this chapter relates to studies carried out in other countries, namely, the United States of America and the United Kingdom. It is hoped that such a review will provide directions for specific aspects to be investigated and also to generate criteria which may be used to evaluate metacognition in note-taking behaviors among Malaysian students and their relationship to their academic achievement.

Historical Development In Note-Taking Research

Since the dawn of civilization, human beings have inscribed their experiences and findings on any available material. From the discoveries of ancient artifacts and documents, carvings on caves' walls, stones, scrolls and parchments, human knowledge and wisdom grew and their civilizations flourished. All these note-taking activities were well preserved for future storage and review. The benefits are evident today, in that humankind's progress into the modern age of science and

technology owed much to the note-taking activities of the past works of ancient civilizations, governments, administrators and scholars. One of the revered legacies of note-taking activities can be found in the religious scriptures of the major world's religions. For example, the Al Quran and As Sunnah were excellently documented. All the disciplines of knowledge and wisdom are entrenched in these documents. Humans have unceasingly reviewed these texts endeavoring to encode the patent and latent meanings, metaphors, knowledge and wisdom contained therein hoping to unfold the treasures. Following these precedents, researchers have experimented with and documented note-taking activities, in their attempt to discover the effects of note-taking on the learning outcomes.

The research development in note-taking can be based on two views: the behaviorist and the cognitivist. The behaviorist from the onset attempted to discover the effects of note-taking on recall ability, while the cognitivist concentrated on the encoding ability and the function of review on the learner's performance. The behaviorist trend of research in note-taking started when C.C. Crawford began his studies in 1925, where he sought to verify his observation that there was a positive correlation between analyses of college students' lecture notes and their grades on subsequent quizzes. He concluded that taking notes was better than not taking notes, that reviewing notes was a key to their impact, and that organizing notes effectively contributed to improved performance on tests. The importance of reviewing notes was mentioned briefly by Crawford in 1925.

After a lull in note-taking research, Ash and Carlton (1953) worked with instructional films and concluded that films lacking necessary pauses and repetitions led to note-

taking attempts which actually interfered with listening comprehension and learning. McClendon (1958) used taped lectures and concluded that note-taking did not interfere with listening, that no particular note-taking method is best, and that students might as well record as much as possible during note-taking.

Howe (1970) in his research concluded that students were seven times more likely to recall information one week after it was presented if the information had been recorded in their notes. He argued that "the activity of note-writing per se makes a contribution to later retention..." (p.63). Di Vesta and Gray (1972) observed that "note-taking and rehearsal function as learning aids facilitate learning" (p.134). The period from mid 1920s to early 1970s recorded that most note-taking research attempted to measure the impact of note-taking on recall as measured by tests, but as from the late 1970s there was an increasing emphasis on cognitive analyses by the cognitivists. Fisher and Harris (1974) concluded that "note-taking serves both as an encoding function and as an external storage function for reviewing, with the latter being the more important" (p.324) and "that students perform better when they are allowed to encode in the way they prefer" (p.386) using notes or other strategies.

Carter and Van Matre (1975), in a report on their study which allowed students to review their notes immediately before a test, argued that the benefit of note-taking appeared to be derived from the review rather than from the act of note-taking itself. They suggested that reviewing notes may actually cue the student to reconstruct parts of the lecture not initially recorded in the notes.

Interestingly, there is growing evidence that note-taking combined with critical

thinking facilitates the retention and applications of information. Bretzing and Kulhavy (1979) compared note-taking that indicated in-process semantic processing (encoding) with verbatim note-taking and found that subjects who took verbatim notes scored lower on comprehension tests than those who processed information at a higher level while they took notes.

Over the years, researchers have tried to verify that note-taking helps students "encode" the information involved and that notes are valuable as materials for review (Ladas, 1980). Barnett, Di Vesta, Francis and Rogozinski (1981) found "strong support" for encoding function of note-taking but not for the value of using notes to review material.

Kiewra (1983) found that reorganizing notes while reviewing led to higher test achievement. The Cornell system of note-taking encourages this practice (King, 1984). The research findings on whether note-taking promotes encoding have been mixed. Hult (1984), for example, found that note-taking does involve semantic encoding; but Henk and Stahl (1985) found that the process of taking notes in itself does little to enhance recall. Einstein et al. (1985) found that successful college students engaged in greater integration processing during note-taking itself "enhances organizational processing of the lecture information" (p.522).

An interesting study by Kiewra (1985a), also endorsed the value of review, but not of student notes. He suggested that "teachers should be aware of students' relatively incomplete note-taking behaviors, and therefore, encouraged to provide learners with adequate notes for review" (p.77; emphasis added).

Anderson and Armbruster (1986) concluded that there is a benefit to students when the lecture environment permits deep processing while taking notes. Denver (1986) described a method of using "episodic organisers" – a kind of semantic web or map to provide a positive encoding effect when seventh grade subjects were reading complex narrative passages.

Kiewra and Benton (1988) studied the relationship between lecture note-taking behaviors and academic ability by using more global measures of ability such as GPA and predictive achievement test scores. In addition, they have considered (a) scores on an information-processing ability test, (b) analyses of notes taken during a designated lecture, (c) scores on a test based on a lecture, and (d) scores on a course exam covering several lectures. They concluded that the "amount of note-taking is related to academic achievement" and the "ability to hold and manipulate propositional knowledge in working memory is related to the number of words, complex propositions, and main ideas recorded in notes" (p.33).

THEORETICAL FRAMEWORK

Educational researchers have experimented and expounded many learning theories to study strategic behaviors that facilitate meaningful learning that enhance students' academic performance. In this connection, the research on knowledge construction can be viewed from several perspectives. The behaviorist attempted to examine the effectiveness of the non-generative processing as a strategy in note-taking to recall ability and the function of review in enhancing such skill. On the other hand, the cognitivist included cognitive strategies as found in information processing, knowledge construction, levels of processing and generative processing.

Non-Generative Processing

The non-generative processing to note-taking involves the learner copying, upgrading, maintaining, rehearsing or simply reading the already-generated material. This process is very mechanical and physical, lacking in generating relations or encoding among the parts of the learning material or between the learning material and one's prior knowledge.

Information Processing

The information processing perspective was portrayed as evolving top down from cognitive psychology. It aims to keep cognitive and affective aspects distinct, thereby neglecting the effect of the learning context on students' approach to learning. The good information processing perspective is that cognitive performance is a product of strategies, non-strategic knowledge, metacognition, motivation, and short-term capacity. None of these factors ever operates in isolation, but rather effective cognition is the product of these components in interaction. This perspective emphasizes that a learner's processing of information at the moment will determine his or her current performance on cognitive tasks: sometimes strategic processing will be more prominent in such cognition than other factors; other times relating new content to declarative prior knowledge will be the most salient mechanism; on still other occasions, there will be obvious reflections by the cogniver on the task demands and what he or she knows how to do in this particular situation or situations similar to it that have been encountered in the past (i.e., on some occasions, metacognition are more salient than other components in thinking); and then there will be situations when the thinker's motivation will be especially apparent, so that many observers would report that the individual succeeded simply by trying hard. All of these