

UNIVERSITI PUTRA MALAYSIA

USE OF COMPUTER FACILITIES TO DEVELOP STUDENTS ENGLISH IN PETALING AND HULU LANGAT SECONDARY SCHOOLS

GWYNNETH DRABBLE

FPP 1988 5



It is hereby certified that we have read this thesis entitled "Use of Computer Facilities to Develop Students' English in Petaling and Hulu Langat Secondary Schools" by Gwynneth Drabble @ Rozana Abdullah, and in our opinion it is satisfactory in terms of scope, quality, and presentation as partial fulfilment of the requirements for the degree of Master of Science

ABDUL AZIZ IDRIS, Ph.D.
Associate Professor/Head,
Department of English Language,
Universiti Kebangsaan Malaysia,
Bangi, Selangor.
(External Examiner)

MOHD. ZAIN ALI, Ph.D.

Head, Department of Languages Faculty of Educational Studies Universiti Pertanian Malaysia (Internal Examiner)

KAMARIAH ABU BAKAR, Ph.D.
Deputy Dean,
Faculty of Educational Studi

Faculty of Educational Studies Universiti Pertanian Malaysia (Supervisor)



I certify that the Board of Examiners have met on November 4, 1988 to conduct a final examination of this candidate on her master's thesis in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981, and recommended that the candidate be awarded the relevant degree.

AHMAD MAHDZAN AYOB, Ph.D. Professor/Dean of Graduate School (Chairman Board of Examiners)



This thesis was presented to the Senate of Universiti Pertanian Malaysia and was accepted as partial fulfilment of the requirements for the degree of Master of Science.

Date: 1 5 DEC 1988

AHMAD MAHDZAN AYOB, Ph.D.

Professor/Dean of Graduate School



USE OF COMPUTER FACILITIES TO DEVELOP STUDENTS' ENGLISH IN PETALING AND HULU LANGAT SECONDARY SCHOOLS

by

Gwynneth Drabble

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Science in the Faculty of Educational Studies, Universiti Pertanian Malaysia.

UPM

ACKNOWLEDGEMENTS

It would not have been possible to complete this work without the help and cooperation of people, who have contributed with gifts of their time, experience, advice, and practical help. The writer owes a special debt to the following.

To my supervisors, especially Dr Kamariah Abu Bakar and Mohd. Majid Konting. Thank you for all the time you have spent reading my work, and the valuable and constructive criticisms and suggestions you made.

To the Director of the Computer Centre, Abdul Rahman Haji Bidin. Thank you for everything you have done for me. You suggested this topic of research to me. You guided me along the way, with your ideas, and suggestions based on your practical experience. You have done more than anyone to help me learn about computers in education. You have given me encouragement and advice. And you have given me practical help in dozens of ways, even offering to process my data and help me print this thesis. I am extremely grateful.

To the people who acted as judges for the proposal, and helped me along the way: especially to Dr John Augustin and Dr Sharifah Mohd Nor. Thank you for the many helpful comments and suggestions you have made.



To those who participated in this research, including the Principals of the schools which were included in the survey, and all the teachers and students who answered the questionnaires. Thank you for your time, honesty and assistance.

And finally to my husband, Zakaria Haji Musa. Thank you for giving me so much encouragement and support to start and finish this. Thank you for introducing me to the exciting world of computers. And thank you for giving me the time and materials I needed, to do this study.



TABLE OF CONTENTS

												Page
ACKNOWLEDO	GEMENIS	٠	•	•	•	•		•			•	ii
LIST OF TA	ABLES	•				•			•			ix
LIST OF F	IGURES	•	•		•	•						xi
LIST OF A	BBREVIAT	CONS	5	•		•	•					xii
LIST OF A	PPENDICES	5	•			•			•			xiii
ABSTRACI		•	•		•			•				xiv
ABSTRAK		•	•			3 4 12			•		•	xvi
CHAPTER 1	INTROL	DUCI	KOIT	ſ		•	•					1
Intro	oduction			•		•						1
State	ement of	Pro	ble	m	•		•	•			٠	. 2
Objec	ctives										•	4
Resea	arch Ques	stic	กร	•	•						•	4
Signi	ificance	of	the	St	udy	•		•		•	•	5
Assun	nptions			•	•		•			•	•	8
Limit	ations			•				•		•	•	9
Opera	ational [efi	nit	ior	ıs	•	•					11
	Technolo	gic	al	Ter	ms			•			•	11
	Some ter								ses			14



	Page
Sources of Software suitable for CALT	15
Types of Computer Exercise Suitable for CALT	18
Business Application Packages used in Educational Administration	20
CHAPTER 2 REVIEW OF RELATED LITERATURE	23
Computing Facilities Necessary	23
Hardware	23
Software	25
Organisation of Classes	29
Access to Computers	29
Computer Club Activities	31
Use of Computers to Teach English	32
Advantages of CALT	32
Uses of Programs	34
Class Organisation	41
Role of the Computer	44
Use with other Media	46
Problems	46
Problems involving Hardware	47
Problems involving Software	4 8
Attitudes of Pupils	50
Summary	52



	Page
CHAPTER 3 METHODOLOGY	55
Introduction	55
Research Approval Process	57
Preliminary Studies	58
Population and Sampling	59
The Instruments	62
Validation Procedures	63
Content Validity	63
Reliability	63
Method of Data Collection	64
Method of Data Analysis	65
CHAPTER 4 RESULTS	67
Findings of Preliminary Studies	67
Demographic Data	68
Respondents to Teacher Questionnaire	68
Respondents to Student Questionnaire	73
Findings for Research Question I	77
Hardware	77
Software	79
Findings for Research Question II	81
Access to Computers	81
Computer Club Activities	83
Findings for Research Question III	84
Student Use of English	84



	Page
Teacher Awareness of Programs	86
Class Organisation	87
Techniques used to Supplement Work done on the Computer	87
Findings for Research Question IV	88
Hardware	88
Software	90
Findings for Research Question V	94
CHAPTER 5 CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS	98
Suggestions for the Ministry of Education	98
Acquisition of Hardware	98
Distribution of Software	102
Status of Computer Clubs	103
Computer Club Activities	104
Specifications for Teacher Training	104
Suggestions for Teacher Trainers	105
Suggestions for Software Developers	109
Suggestions for Schools	113
Suggestions for Teachers	114
Suggestions for Computer Clubs	115
Suggestions for Further Research	116
Hardware	116
Software	117



									Page
	Teacl	her Tr	aini	ing					117
	Comp	uter C	lubs	5					117
BIBLICGRA	PHY		•					•	118
APPENDICE	S								123



LIST OF TABLES

Table		Page
1	NUMBER OF TEACHERS INVOLVED IN SCHOOL COMPUTER CLUBS	60
2	NUMBER OF TEACHER RESPONDENTS PER SCHOOL	69
3	ROLES IN COMPUTER CLUBS OF RESPONDENTS TO TEACHER QUESTIONNAIRE	70
4	TEACHERS' TRAINING AND EXPERIENCE IN TEACHING	70
5	TRAINING IN USING COMPUTERS	71
6	TEACHERS' KNOWLEDGE OF PROGRAMS AVAILABLE AND USED	72
7	SUBJECTS STUDENTS HAD STUDIED USING THE COMPUTER	73
8	STUDENT EXPERIENCE OF SOFTWARE	75
9	MARKS OF STUDENT RESPONDENTS IN ENGLISH TESTS	76
10	POSITIONS OF STUDENT RESPONDENTS IN ENGLISH TESTS	76
11	DISTRIBUTION OF COMPUTERS IN THE TARGET SCHOOLS	77
12	DIFFERENT TYPES OF COMPUTERS USED IN SCHOOL COMPUTER CLUBS	78
13	TYPES OF ENGLISH-BASED SOFTWARE USED IN SCHOOLS	80
14	TENDENCY OF TEACHER RESPONDENTS TO	81



Table		Page
15	FORM ONE AND TWO MEMBERSHIP IN THE TARGET CLUBS	82
16	TIME STUDENTS SPENT USING COMPUTERS EACH WEEK	83
17	TIME STUDENTS SPENT USING COMPUTERS AND READING ENGLISH	85
18	TENDENCY OF STUDENT RESPONDENTS TO NEED ENGLISH DURING COMPUTER CLUB SESSIONS .	85
19	TEACHERS' AWARENESS OF PROGRAMS USED .	86
20	STUDENT GROUPING DURING COMPUTER CLUB SESSIONS	87
21	TEACHING STRATEGIES USED TO DEVELOP STUDENTS' ENGLISH WHILE USING COMPUTERS	88
22	PROBLEMS INVOLVING HARDWARE	89
23	NUMBER OF SESSIONS FOR STUDENTS TO BECOME CONFIDENT USING COMPUTERS	90
24	FREQUENCY OF RECEIVING INFORMATION REGARDING SOFTWARE	91
25	APPROPRIACY OF SOFTWARE EXERCISES USED.	92
26	LEVEL OF ENGLISH IN SOFTWARE USED	93
27	STUDENT ATTITUDE TOWARDS LEARNING ENGLISH USING COMPUTERS	95
28	STUDENT ASSESSMENT OF SOFTWARE	96



LIST OF FIGURES

Figure		Page
1	TECHNOLOGICAL TERMS USED IN COMPUTING .	11
2	TERMS USED IN EDUCATIONAL COMPUTING .	14
3	SOURCES OF SOFTWARE FOR THE ENGLISH TEACHER	16
4	TYPES OF COMPUTER EXERCISE SUITABLE FOR CALT	18
5	BUSINESS APPLICATION PACKAGES	21
6	SOURCES OF EXISTING SOFTWARE SUITABLE FOR CALT	25
7	LANGUAGE AREAS WHICH CAN BE DEVELOPED	3/1



LIST OF ABBREVIATIONS

BASIC Beginner's All-Purpose Symbolic Instruction Code CAI Computer-Assisted Instruction CALT Computer-Assisted Language Teaching CALL Computer-Assisted Language Learning CIE Computers in Education **EPRD** Educational Planning and Research Division, Ministry of Education IBM International Business Machines **IPPN** Institut Pengurusan Pendidikan Negara, Ministry of Education MAMPU Malaysian Administrative Modernisation and Management Planning Unit, Prime Minister's Department TEFL Teaching English as a Foreign Language

Teaching English as a Second Language

Universiti Pertanian Malaysia

TESL

UPM





LIST OF APPENDICES

Appendix		Page
Α	QUESTIONS ANSWERED THROUGH INTERVIEW	123
В	TEACHER QUESTIONNAIRE	125
С	STUDENT QUESTIONNAIRE IN ENGLISH	133
D	STUDENT QUESTIONNAIRE IN BAHASA MALAYSIA	137
Е	LIST OF SCHOOLS SURVEYED IN PETALING AND HULU LANGAT	141
F	FORM TO APPLY FOR PERMISSION TO DO RESEARCH	144
G	LEITER OF PERMISSION	146
Н	DETAILS OF JUDGES	147
I	PRELIMINARY LETTER SENT TO SCHOOLS .	149
J	REPLY CARD	151
К	QUESTIONNAIRE GIVEN TO ENGLISH TEACHERS IN PERAK SURVEY, WITH RESULTS	152
L	QUESTIONNAIRE GIVEN TO FORM ONE AND FORM TWO STUDENTS IN PERAK STUDY, WITH RESULTS	155
М	LIST OF SCHOOLS IN PERAK STUDY	156
N	QUESTIONNAIRE FOR C.I.E. COURSE	157
()	ANALYSIS OF RESPONSES TO SELECTED QUESTIONS FROM APPENDIX N	163
P	LIST OF SCHOOLS INVOLVED IN SURVEY OF 45 SCHOOLS	168



Abstract of thesis presented to the Senate of Universiti Pertanian Malaysia in partial fulfilment of the requirements for the Degree of Master of Science.

USE OF COMPUTER FACILITIES TO DEVELOP STUDENTS' ENGLISH IN PETALING AND HULU LANGAT SECONDARY SCHOOLS

by

Gwynneth Drabble @ Rozana Abdullah

November 1988

Supervisor : Dr Kamariah Abu Bakar

Co-Supervisors: Mohd. Majid Konting and Jamalleah Hj Ismail

Faculty : Educational Studies

Malaysian schools are encouraged to acquire computers, and use them to teach English. However, most teachers have not been trained to do this, so computer-assisted instruction may not be taking place.

The interview and questionnaire techniques were used to survey the computer hardware and software available in computer clubs in government secondary schools in the Petaling and Hulu Langat districts of Selangor Darul Ehsan, and investigate how these facilities were used to develop students' English. Frequency counts were made, and the median was used to measure central tendency.



Ninety percent of the target schools had computer clubs, with a median of 9.5 computers per club. Most computers were Apple or IBM compatible. Few schools used software specifically written to teach English. However, several programs with language-teaching potential, such as content-free packages, and packages using English on the screen, were used.

Computing was a co-curricular activity so access to computers was gained through subscription to computer clubs. An average of about ten percent of Form (One and Two pupils, and three teachers, per school, belonged to these. The most common computer club activities were programming and word-processing. Common problems included lack of money, hardware, and space, and breakdown of equipment; and lack of information about software.

Students were interested in using the computer to learn English, and felt it could be an effective teaching aid. However, little deliberate attempt was made to use the computer to teach English. The writer concludes that school computer clubs will need to be reorganised, if computers are to be used to teach English and other subjects. Suggestions are made for a course to train teachers in using computers to teach English.



Abstrak tesis yang dimajukan kepada Senat Universiti Pertanian Malaysia bagi memenuhi sebahagian keperluan sebahagian daripada keperluan untuk Ijazah Master Sains.

PENGGUNAAN KOMPUTER UNTUK MENINGKATKAN PENGUASAAN BAHASA INGGERIS MURID-MURID DI SEKOLAH-SEKOLAH MENENGAH DI DAERAH PETALING DAN HULU LANGAT

oleh

Gwynneth Drabble @ Rozana Abdullah November 1988

Penyelia : Dr Kamariah Abu Bakar

Penyelia bersama: Mohd. Majid Konting dan Jamalleah Hj Ismail

Sekolah-sekolah di Malaysia digalakkan memperolehi komputer dan menggunakannya dalam pengajaran bahasa Inggeris.

Walau bagaimanapun, kebanyakan guru belum lagi dilatih untuk menggunakannya. Oleh itu pengajaran dengan bantuan komputer tidak dilaksanakan.

Teknik secara temuduga dan soalselidik telah digunakan untuk membanci bilangan perkakasan dan perisian komputer yang terdapat di kelab-kelab komputer di sekolah-sekolah menengah kerajaan di daerah Petaling dan Hulu Langat, Selangor Darul Ehsan, dan mengkaji bagaimana komputer digunakan untuk memperbaiki bahasa Inggeris para pelajar. Kiraan kekerapan telah dibuat dan nilai median telah digunakan untuk mengukur kecenderungan memusat.



Sembilan puluh peratus daripada sekolah sasaran telah menubuhkan kelab komputer dengan purata pertengahannya 9.5 komputer bagi setiap kelab. Kebanyakannya adalah jenis Apple atau IBM "compatible". Sebilangan kecil sekolah sahaja menggunakan perisian bertulis untuk mengajarkan bahasa Inggeris. Walaubagaimanapun, kebanyakan program yang mempunyai potensi mengajar bahasa seperti jenis 'content-free' dan yang menggunakan bahasa Inggeris di paparan komputer digunakan.

Penggunaan komputer merupakan suatu aktiviti ko-kurikulum.

Dengan demikian kemudahan menggunakan komputer diperolehi dengan cara menjadi ahli kelab komputer. Sepuluh peratus daripada murid Tingkatan Satu dan Dua, dan tiga orang guru, setiap sekolah, didapati termasuk dalam golongan ini. Kebanyakan aktiviti yang dijalankan oleh kelab komputer ialah pengaturcaraan dan pemprosesan perkataan. Masalah biasa yang dihadapi oleh kelab-kelab komputer ialah kekurangan kewangan, perkakasan, ruang tempat, kerosakan alatan, serta kekurangan maklumat tentang perisian.

Kebanyakan murid berminat belajar bahasa Inggeris dengan menggunakan komputer dan mereka merasakan bahawa komputer dapat dijadikan alat bantu mengajar yang berkesan. Walau bagaimanapun, sedikit sahaja usaha yang dibuat untuk menggunakan komputer dalam pengajaran bahasa Inggeris. Penulis berpendapat bahawa kelab komputer sekolah hendaklah disusun semula jika komputer hendak digunakan untuk mengajarkan bahasa Inggeris dan mata-mata



pelajaran lain. Dengan itu, cadangan dibuat supaya suatu kursus bagi melatih guru-guru menggunakan komputer dalam pengajaran bahasa Inggeris dapat diadakan.



CHAPTER 1

INTRODUCTION

Introduction

Over the past few years, computer hardware and software has become both cheaper and more sophisticated. This has made it more accessible, and at the same time more useful, to more and more people. As if to confirm the increasing role of the computer in modern life, it is becoming quite common to find computers in schools, in countries all over the world.

Different countries use computers in schools in different ways. In the United States of America "most schools have begun using computers in their instructional programs" (Becker, 1987, p. 149). For instance, at the grade equivalent to the Malaysian Forms One and Two, "there is substantial use in math and language arts (48%)" (Becker, 1987, p. 152). In the United States, most computer-assisted instruction (CAI) is done "with drill-and-practice or tutorial programs . . . (which) involves the computer . . . as an instructional medium" (Becker, 1987, p. 150). In a way, then, the computer substitutes for the teacher to teach selected items in the syllabus.



In the United Kingdom, on the other hand, the trend is towards using computers: "as educational tools, aiding in the teaching and learning process" (E, 1986, p. 12). The computer does not replace the teacher, it is simply a tool for the teacher to use, to stimulate groupwork and subsequent class discussion.

In Malaysia, computers were only introduced into schools in 1985. This was done in the absence of a clear policy, and so the patterns of computer usage are not generally known.

Statement of Problem

On the 17th September, 1985, the <u>New Straits Times</u> quoted Encik Ibrahim Mohamad Nor, the Ministry of Education's Assistant Director for Science and Mathematics, as saying that: "the Ministry of Education plans to provide at least five computers each in all secondary schools . . . next year". He then went on to say that: "initially the use of computers in schools will be limited to only English and Mathematics" (p. 2).

Following this announcement, many schools in Malaysia began to acquire computers. The number of schools with computer clubs increased very quickly: "from a quiet infancy - just 130 clubs as at November 1985 - computer clubs have grown to noisy puberty, numbering 500 in January this year" (Ranee, 1987, p. 12).



However, the sudden increase in the number of computers in schools does not reflect their use for specific educational purposes, thus illustrating the point made by Harvey and Wilson (1985):

the micro-computer bandwagon has not evolved from the field of education itself, but is the result of highly successful mass-marketing strategies employed by the manufacturers of hardware and software (p. 183-4).

Computers were introduced before teachers had been trained to use computer-assisted instruction (CAI). If teachers are not trained in CAI this could impede its successful implementation. As a result, it was decided to investigate how computers could be used to teach English in Malaysian schools.

Rubin says, "the language arts may well prove to be the area of the school curriculum in which computers can have the most dramatic impact" (quoted by Johnston, 1985, p. 198). This is because much computer software with educational potential uses English to communicate with the user. Other software with language teaching potential is content-free. Both of these types of software could be used to develop a range of language skills, including reading and writing. However, the extent to which such software is being used has yet to be determined.

