

INSTITUTE OF EDUCATION

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**INSTITUTE
OF
EDUCATION
SINGAPORE**

**M Ed .
PROGRAMME**

CONTENTS

	Page
1 Introduction	2
2 The IE Academic Year	2
3 Governance	2
4 IE Council	2
5 IE Board of Studies	3
6 IE Board of Postgraduate Studies and Research	3
7 Library Facilities	4
8 Other Facilities	5
9 Application for the M Ed Programme	6
10 Full time, Part-time and Full-Part-time Schemes of Study	6
11 Fee for the M Ed Programme	7
12 Admission Requirements	7
13 Candidature	8
14 The Master of Education Programme	8
15 Part I Requirements	8
16 Part I Courses, Practicum and Seminars	9
17 Part II Requirements	10
18 Award of the M Ed Degree	10
19 Structure of the M Ed Programme	11
20 Annex	12

INTRODUCTION

The Institute of Education was established when the Institute of Education Act (1970) came into effect on 1 April 1973. The Institute is the only tertiary institution in Singapore engaged in teacher education. The 1970 Act empowers the Institute to conduct post-graduate courses leading to the award of degrees in the Master of Education (M Ed) and the Doctor of Philosophy (Ph D). Section 4(2) of the Act states that the Institute may

"provide for the examination, from time to time of students or other persons and to confer degrees and diplomas and grant certificates to successful candidates, and provide for the registration of the holders of such certificates."

The post-graduate degrees are awarded by the National University of Singapore (NUS).

THE IE ACADEMIC YEAR

Each academic year is made up of two semesters, each of which has two terms as follows:

July Semester 1982	Term I	5 Jul	—	4 Sep
	Term II	20 Sep	—	4 Dec
January Semester 1983	Term I	3 Jan	—	12 Mar
	Term II	21 Mar	—	28 May

GOVERNANCE

The governing body of the Institute is the Institute of Education Council whose members are from various public and quasi-government bodies for a period of three years. There is also an Institute Education Board of Studies which advises the Council on academic matters pertaining to the Institute. To oversee post-graduate academic matters, the Council sets up the IE Board of Postgraduate Studies and Research.

IE COUNCIL

Chairman	:	Mr Goh Kim Leong
Members	:	Dr Sim Wong Kooi

Members	:	Mr Boey Yim Thim Bro Joseph Kiely Dr Law Song Seng Mr F A Vasenwala Mr David Ma Mr John Yip Mr Koh Yong Guan Mr Tan Tai Wei Mr Dudley de Souza (Representative from NUS)
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IE BOARD OF STUDIES

Chairman	:	Dr Sim Wong Kooi
Secretary	:	Mr Lee Chee Yea (Ag)
Members	:	Mrs Lun Chor Yee Dr Ho Wah Kam Dr Tan Wee Kiat Mr Yap Boon Chuan Mr Chan Weng Cheong Mr Ng Kim Beng Dr Eng Soo Peck Dr Chin Long Fay Mrs Michelle Choong Mrs Wang-Chen Hsiu Chin

IE BOARD OF POSTGRADUATE STUDIES AND RESEARCH

Chairman	:	Dr Sim Wong Kooi
Secretary	:	Mr Lee Chee Yea (Ag)
Members	:	Dr Ho Wah Kam Dr Phua Swee Liang Dr Yeoh Onn Chye Dr Tan Wee Kiat Dr Chin Long Fay Dr Eng Soo Peck

The functions of the Board of Postgraduate Studies and Research are to:

- a) oversee and supervise postgraduate studies and research programmes in the Institute;
- b) initiate and promote research on education in Singapore in conjunction with the Ministry of Education;
- c) select and recommend applicants to the National University of Singapore for admission as higher degree candidates;
- d) determine the courses and syllabuses for postgraduate studies;
- e) recommend, for appointment by the National University of Singapore, the supervisors and examiners for higher degree candidates.

LIBRARY FACILITIES

The Library has a total collection of approximately 79,000 volumes in the four official languages and it subscribes to 365 periodical titles.

All materials are arranged on the open shelves by subject according to the Library of Congress Classification System. The Library maintains two separate catalogues for its collection: the Author/Title Catalogue and the Subject Catalogue.

The Loan Service Counter is the access point for all materials in the general collection as well as for reserve books identified in the essential reading lists of courses.

All students must register with the Library. Upon registration each student is given 6 library tickets: five for home reading for a period of 3 weeks, and one for borrowing Reserve Books, commonly known as red-spot books, on a two-hourly basis. Fines are charged for overdue loans.

The Reference Service serves as the centre of general information and assistance in using the library resources and facilities.

Interlibrary loans are available on request. Photocopying facilities and velobinding of student's projects are provided at a fee.

Hours of Operation:	Term — Time
	Monday — Friday 8.30 am — 6.00 pm
	Saturday 8.30 am — 5.00 pm

Vacation — Time

Monday — Friday	8.30 am — 5.00 pm
Saturday	8.30 am — 1.00 pm

OTHER FACILITIES

Lecture theatres

The Institute has one theatrette and seven lecture theatres. The biggest lecture theatre can accommodate about 250 students and the smallest about 150. The theatrette, which has a seating capacity of about 350, is used for seminars, talks, concerts, forums and the showing of films.

Other teaching facilities

The Institute is also equipped with Language Laboratories, a Computer Workroom, a Media Workroom for preparation of teaching aids and charts, a Photo-laboratory and two Video Studios. There are also tutorial rooms and special subject rooms.

Games facilities

At the moment the facilities for games include four tennis courts, basketball courts and football fields. The construction of the gymnasium is expected to be completed by the end of 1983. The gymnasium will have 3 badminton courts that could double up for use as volleyball and basket ball courts.

Canteens

There are two canteens on the campus. Canteen 1 is located on the first storey of the Students' Recreation Centre. This canteen is self-service and provides Chinese, Muslim and Indian food. It is open from 7.30 am to 5.00 pm on Mondays to Saturdays. Canteen 2 is located in House No 4 and serves a la carte style Chinese and Western food and a variety of hawker-type food. This canteen is open from 8.00 am to 4.30 pm on Mondays to Saturdays.

Sundry store

There is a sundry store located on the first storey of the Students' Recreation

Centre which sells newspapers, stationery, toiletries, etc.

Bookshop

There is a bookshop run by the National University of Singapore Multi-purpose Co-operative Society. It is located at the annex of House No. 4.

Cash-on-line facilities

There is a POSB automated teller machine installed on the first storey of the Students' Recreation Centre next to the sundry store.

APPLICATION FOR THE M Ed PROGRAMME

Application forms for enrolment in the M Ed programme are available from the Registrar's office at the Institute of Education, 469 Bukit Timah Road, Singapore 1025. As the M Ed programme begins in the first week of January, all completed application forms must reach the Registrar's Office by the last working day of September at the latest.

FULL-TIME, PART-TIME AND FULL-PART-TIME SCHEMES OF STUDY

To provide the widest opportunity for candidates who meet the requirements for registration for the M Ed degree, there are three schemes of study:

(a) Full-time study

All candidates who meet the M Ed registration requirements are eligible to register as full-time candidates for the M Ed degree. The full-time study scheme also caters for candidates under PSC sponsorship.

(b) Part-time study

For serving officers in the Education Service who, for one reason or another, may not find the full-time scheme of study viable, the Institute of Education will offer a part-time scheme of study leading to the award of the M Ed degree. To avoid disruption to the serving officer's teaching and other commitments to his work, courses will be run in the evenings (on Tuesday and Thursdays) and on Saturday mornings.

(c) Full-Part-time study

Serving officers in the Education Service who have served six years or more are eligible to apply for six months half-pay leave. Such officers may wish to register for full-time study for the Part I of the M Ed programme (taught courses) and to pursue Part II of the programme (research leading to the submission of the M Ed dissertation) as part-time students.

FEES FOR THE M Ed PROGRAMME

Fees payable by candidates enrolled in the M Ed programme are as follows:

University Registration Fee	S\$ 50
Supplementary Fees	S\$ 28 p.a.
Caution Fee	S\$ 50
Research Fee	
Singapore Citizen	S\$350 p.a.
Non-Citizen	S\$450 p.a.
Degree Fee (payable at the time of award of degree)	S\$ 50
Examination Fee (payable at registration for the examination)	S\$150

Caution fee is payable on admission and refundable on the successful completion of the M Ed or when the candidate leaves the programme (subject to satisfactory conduct).

The Institute reserves the right to change fees at short notice. All fees must be paid punctually as they fall due (during the first two weeks of each semester); failure to do so would incur the penalty of a late fee charge of \$10.00. Failure to pay fees beyond the third week of the semester would lead to suspension from the programme till all fees are paid.

ADMISSION REQUIREMENTS

For the degree of Master of Education, the candidate must have

- a good degree from the National University of Singapore or from universities approved by the Senate of the NUS;
- A Diploma in Education or its equivalent; and
- at least two years of working experience in the education service.

CANDIDATURE

For the M Ed degree the minimum period of candidature is twelve months and the maximum period is thirty six months from the date of registration.

THE MASTER OF EDUCATION PROGRAMME

The M Ed programme consists of two Parts: Part I comprises taught courses and graduate seminars, and Part II requires research leading to the submission of a dissertation.

PART I REQUIREMENTS

Part I of the M Ed programme requires the student to

- (a) take two compulsory courses, one on research methodology and one on educational statistics. (For MOE sponsored students, the other two compulsory courses are: Management & Organisation Theory and Personnel Management).
- (b) take five other courses to be selected from a list of courses under the rubric of Electives. The student will be required to select those courses related to his proposed field of study and research. Students who are required to submit a thesis based on empirical research are advised to choose Research Methodology II and Educational Statistics II. (MOE sponsored students are required to choose three electives).
- (c) participate in a research practicum.
- (d) attend and participate in invitational seminars.
- (e) submit a research proposal for the approval of a committee of three members to be appointed by IE's Board of Postgraduate Studies and Research.

The student is deemed to have successfully completed Part I of the M Ed programme when he completes the course work requirements to the satisfaction of IE's Board of Postgraduate Studies and Research and has his research proposal approved by the same Board.

PART I: COURSES, PRACTICUM AND SEMINARS*

Research Methodology and Educational Statistics Courses

- (a) Research Methodology I
- (b) Research Methodology II
- (c) Educational Statistics I
- (d) Educational Statistics II

Research Methodology I and Educational Statistics I are compulsory courses for all M Ed candidates.

Choice of Electives

The five other courses are to be chosen from the list of courses labelled Elective Courses. Students are required to choose two of the five courses in the student's proposed area of specialisation. The other three courses must be in the related area of the student's proposed area of specialisation. Choice of Electives is subject to the Academic Advisor's approval. For students who intend or are required to submit a thesis based on empirical research, they are advised to choose Research Methodology II and Educational Statistics II.

Fields of Study

Students will have a wide range of fields of study for specialisation subsumed under the general classification of (a) Educational Studies Specialisation and (b) Curriculum Studies Specialisation. Fields of study† under each are given below:

(a) Educational Studies Specialisation

- i) Educational Psychology
- ii) Educational Planning and Administration
- iii) Educational Evaluation and Testing
- iv) Comparative Studies in Education
- v) Pedagogical Studies

* See Annex for course description.

† See Annex for course descriptions of Electives.

(b) **Curriculum Studies Specialisation**

- i) Language Education
- ii) Science and Mathematics Education
- iii) Social Studies Education
- iv) Creative and Applied Arts Education
- v) Curriculum Inquiry

The Research Practicum

The Research Practicum is designed to help students learn the fundamentals of practical research. In the practicum, the different strands of thought and skills taught in the research methodology and statistics courses on the one hand, and the courses which bear in on the area of specialisation on the other are brought together into a meaningful whole as research questions are asked, analysed and critiqued in preparation for writing the research proposal. Also the practicum may take the form of participation in an on-going project, involving the construction of tests or measurement instruments, the validation of existing instruments, the collection of data using different techniques or even the analysis of data already collected. The thrust of the practicum is on skill learning and the integration of concepts and principles. It is designed to prepare the groundwork for the student's research required in Part II of the master's programme.

PART II: REQUIREMENTS

Part II requires the student to carry out his research based on the proposal approved by IE's Board of Postgraduate Studies and Research. The minimum period of candidature for Part II is six months from the time his research proposal has been accepted. Staff members will be appointed to supervise and guide the student in his research.

When submitting a dissertation for examination, the student should have given notice to the Registrar of the Institute of his intention to submit his dissertation for examination.

AWARD OF THE M ED DEGREE

On the successful completion of his dissertation, and on having satisfied all the degree requirements, the student will be recommended by IE's Board of Postgraduate Studies and Research to the Senate of the National University of Singapore for the award of the Master of Education degree.

STRUCTURE OF THE M ED PROGRAMME

The structure of the M Ed programme, for both full-time and part-time is presented schematically below.

STRUCTURE OF M ED PROGRAMME

Terms	Full – Time		Part – Time	
	Courses	Hours	Courses	Hours
First Term (Jan – Mar)	Ed Stats I	30	Res Meth I	30
	Res Meth I	30	Ed Stats I	30
	1st Elect	30		
	2nd Elect	30		
Second Term (Apr – Jun)	Ed Stats II/3rd Elect	30	1st Elect	30
	Res Meth II/4th Elect	30	2nd Elect	30
	5th Elect	30		
	Res Practicum	30		
	Presentation of Proposal for Approval			
JUNE VACATION				
Third Term (Jul – Sep)	Research begins terminating in submission of master's dissertation		Res Meth II/3rd Elect	30
			Ed Stats II/4th Elect	30
Fourth Term (Sep – Nov)	minimum time allowed for submission of dissertation : 6 months from date of proposal approval		5th Elect	30
			Res Practicum	30
			Presentation of Proposal for Approval	
DECEMBER VACATION				
First Term (Jan – Mar)			Research begins terminating in submission of master's dissertation	
Second Term (Apr – Jun)			minimum time allowed for submission of dissertation : 6 months from date of proposal approval	
	maximum time allowed for submission of dissertation : 3 years from date of registration for master's programme		maximum time allowed for submission of dissertation : 3 years from date of registration for master's programme	

ANNEX

COURSES IN THE M ED PROGRAMME

Research Methodology and Statistics

Course Code	Course Description	Staff
RM 401	<p>Research Methodology I (Compulsory)</p> <p>This course is designed to familiarise post-graduate students with the concepts, principles and procedures used in educational research and evaluation. The content and discussions will include the following areas:</p> <ol style="list-style-type: none"> The nature and purpose of research Basic methods of research ranging from case studies to true experimental research Internal validity and external validity considerations Formulation of a research strategy to investigate a problem indentified by the student. 	Dr F Perry
RM 402	<p>Research Methodology II</p> <p>In Research Methodology I the student is introduced to the principles of educational research and evaluation ranging from the case study to large scale surveys. In RM II the student will apply what he has learnt in RM I by proceeding to examine and critique specific examples of research and evaluation culled from literature and reviewed and Master's degree thesis in the social sciences and education. The student will also present a seminar on a topic of his own choice and the research methodology (hypotheses, design, data-gathering procedures, etc) to be used. This is aimed at helping the student to refine and define his research proposal before proceeding to carry out the actual research for his M Ed thesis.</p>	Dr F Perry Dr Elwyn Thomas Miss Joy Chew

Course Code	Course Description	Staff
RM 403	<p>Educational Statistics I (Compulsory)</p> <p>The aim of the course is to provide post-graduate students with a knowledge and understanding of the statistical methods commonly used in educational research and evaluation. The content and discussions of the course will include the following areas:</p> <ol style="list-style-type: none"> The nature of statistics – its uses and abuses The nature of numbers – nominal, ordinal, interval and ratio scales Measures of central tendency, dispersion, skewness and correlation Graphic representation of data Introduction to probability and sampling Hypothesis testing and inferential statistics <p>This course will provide a foundation for Educational Statistics II which will lead the student further into a study of inferential statistics using parametric and non-parametric measures, regression analysis, and multivariate analysis.</p>	Dr E Plant
RM 404	<p>Educational Statistics II</p> <p>ES II builds on what has been covered in ES I. Although some attention will be given to non-parametric tests the bias will be towards inferential statistics based on parametric distributions such as the z, t, X^2, F and T distributions. The statistical methods covered will include:</p> <ol style="list-style-type: none"> Univariate tests for one-sample, two-sample and multi-sample tests Two-way univariate analysis of variance Multivariate analysis of variance Regression analysis Computerized data processing <p>Attention will also be given to the analysis of data that students collected from their assignments in their elective courses.</p>	Dr E Plant Dr Tan Wee Kiat

ELECTIVES*

EDUCATIONAL STUDIES SPECIALISATION

Educational Psychology

Course Code	Course Description	Staff
ES 411	<p>The Psychology of Child Development</p> <p>This course aims to provide an overview on development in childhood and beyond by examining the theory of Piaget as well as that reformulated by Pascual-Leone. The implications of both the Piagetian and neo-Piagetian views will be discussed in the context of how learning takes place in the classroom. Students will demonstrate a working knowledge of the theories and applications discussed in the course by applying it in a case study of learner behaviour. They will observe children performing Piagetian tasks and then analyse and interpret the findings.</p>	<p>Dr Elwyn Thomas Miss Amy Leong</p>
ES 412	<p>Contemporary Issues in Educational Psychology</p> <p>This course builds upon what students learned in the Diploma in Education course. It focuses on current issues in educational psychology that are related to or have implications on learning and classroom teaching. Students taking the course will be introduced to selected topics such as intrinsic and extrinsic factors in motivation, teacher expectancy and pupil performance, aptitude treatment interaction... or others, depending on the availability of reference materials and group interest. Special attention will be given to review of literature, study of research design and interpretation of the research findings.</p>	<p>Dr Ko Peng Sim</p>

* Not all courses listed are available in any one term.

ES 413	<p>Guidance Services for the Exceptional Child</p> <p>Basic to the guidance service is the concept that every child should be assisted to attain his goals and develop his potentialities no matter what his capabilities or limitations may be.</p> <p>This course examines the ways in which guidance services can supplement the activities of the classroom in providing for the needs of the exceptional child, particularly the gifted child. The gifted child is seen as one with unusual talents and abilities not only academically but also in areas not identified with academic subjects such as art, music, speech and so on.</p>	<p>Mrs Esther Chua</p>
ES 414	<p>Principles and Practice of Pupil Personal Services</p> <p>This course is mainly a survey of guidance services and their application in educational settings, with special reference to the secondary school. Equal emphasis will be placed on the guidance role of the classroom teacher and the functions of the school counsellor.</p> <p>The course examines the guidance concept and its applications, the counselling process, different counselling theories and their techniques, diagnostic tools and recording procedures as well as educational and vocational guidance in schools.</p> <p>Upon completion of the course, the candidate should have the competency to serve as a guidance counsellor in the school or be the co-ordinator to plan, implement and evaluate a guidance programme in the secondary school setting.</p>	<p>Mrs Esther Tan</p>

Course Code	Course Description	Staff
ES 415	<p>Factors Affecting Memory in Learning</p> <p>Memory plays an important part in learning. This course attempts to investigate the various factors of memory and their effects on learning. Participants should have some basic knowledge in Research Methodology and Statistics to facilitate the carrying out of experiments/surveys/research in their area of study.</p>	Miss Lily Wong
ES 416	<p>Educational Studies in Language Acquisition and Learning</p> <p>This is a course that provides advanced studies in the acquisition of a first language by children from birth to 7 years and examines the implications for children learning second and subsequent languages in school.</p> <p>The studies will include such topics as:</p> <ol style="list-style-type: none"> Universals in language and cognitive development; Differences between acquiring a first language and learning second and/or subsequent languages; The sequence of development for native-speakers in the English linguistic systems (phonological, morphological, syntactic, semantic); Features of the developmental sequence for non-native speakers, with special reference to Singapore; Significant features affecting the successful learning of second and/or subsequent languages. 	Dr I Moynihan Mrs J Lucas

Course Code	Course Description	Staff
Educational Planning and Administration		
ES 421	<p>Personnel Management*</p> <p>This course aims at helping school executives to develop the human managerial skills required to stimulate and motivate staff in such a way that they achieve the maximum realisation of the organisation's goals.</p> <p>It includes such topics as:</p> <ol style="list-style-type: none"> adult motivation staff selection, deployment and development supervision of both teaching staff and middle management school climate and staff morale, and interpersonal relationship skills. <p>It uses methods of instruction which not only provide a theoretical understanding of the above topics but also give school executives practice in applying the skills.</p>	Mr John Ussher Miss Joy Chew, NUS
ES 422	<p>Management and Organisation Theory*</p> <p>This is a 30 hour course aimed at helping the educational leader assume four specific roles — that of an efficient business manager; an influential leader; a knowledgeable curriculum developer and a sensitive agent of organisational change and improvement.</p> <p>It includes such topics as:</p> <ol style="list-style-type: none"> the belief systems that school administrators hold and how these affect leadership styles and decision making the use of resources 	Mr John Ussher Miss Joy Chew, NUS

* These courses follow NUS terms and commence on the 22 Nov 82.

Course Code	Course Description	Staff
	c) programme development and planning. d) the nature of educational organisations e) administrative skills, including change strategies. It uses methods of instruction which not only provide theoretical understanding of the above topics but also requires the school executives to apply the knowledge gained to the administration of their own institutions.	
ES 423	The Social Organisation of Schools The conceptual framework for this course will be drawn from organisational theory literature and the literature about schools as formal organisations. In general, organisational theory addresses itself to the complex inter-relationships of groups of individuals structured around tasks or goals. The school as an organisation is seen broadly at two levels. At the macro-social level, the relationship between schools and learning is examined and at the micro-social level, what takes place in classrooms will be the focus of attention. School effects research, research in teacher effectiveness and models of school learning will be examined. In addition, the occupational characteristics of teachers, who form the adult social group in the school will be discussed from a sociological perspective.	Dr Ho Wah Kam Mr Ng Kim Beng
ES 424	The Economics of Human Resource Development Human Resource Development is a major concern of all nations whether developed or developing. This course will focus on the human capital concept and its uses, investments in human beings at school and at work, social versus private benefit-cost accounting, human capital in economic growth and the allocation of human resources in production.	Dr Eng Soo Peck

Course Code	Course Description	Staff
ES 425	Sociological Models in Education This course aims to present and examine some of the major sociological perspectives that have been developed to explain educational phenomena. The course will cover the three main perspectives ie systems approaches, interactionist models and critical theories. The works of Durkheim, Weber, the functionalists and developments in the 'new' sociology of education as exemplified by Young, Whitty and Becker will be studied. These models will then be examined by the work of the critical theorists. The perspectives and insights offered by these researchers will be used to develop a critical awareness of the issues involved in current educational controversies generally and specifically those which characterise the Singaporean education system.	Mr T Dammary, Mr A. Warren
ES 426	Curriculum Development: design, development and evaluation The course will consist of two parts Part I a) Foundations of Curriculum Development a study of current curriculum issues and problems will be undertaken. Any one particular issue or problem will be examined in three ways viz the philosophical, the psychological and the sociological factors affecting the curriculum issue. eg Equality of opportunity – a curriculum problem Is it a worthwhile aim? – philosophical question Is it an economic possibility? – sociological question How to cater for individual needs? – psychological question	Dr L E Massey, Mr A D Beck, Dr Then Lian Mee

Course Code	Course Description	Staff
	<p>b) Curriculum Design and Development – An examination of a variety of curriculum models will be undertaken.</p> <p>eg Tyler, Taba, Wheeler, Lanton, Skilbeck and Stenhouse</p> <p>The implementation of each model for the writing of objectives, learning theories, the structuring of content and evaluation will be examined.</p> <p>c) Curriculum Evaluation – A variety of evaluation techniques will be examined including both quantitative and qualitative procedures. Particular emphasis will be placed on systems of studying classroom interaction. Case studies of particular curriculum projects will be referred to.</p>	

Part II

Part two of the course will consist of a major piece of work which will be concerned with an analysis and critique of a curriculum innovation in the Singapore context.

Educational Evaluation and Testing

ES 431	<p>Testing and Measurement</p> <p>This course will build on the content and skills that students have acquired from the Educational Measurement course in the Dip Ed programme. It will lead the student to a deeper consideration of the following areas:</p> <p>a) Uses and abuses of testing in education</p> <p>b) Criteria for evaluating a test</p> <p>c) Item analysis, using item correlation and Rasch methods and item banks</p> <p>d) Familiarization with IE Test Collection (standardized tests)</p>	Dr Tan Wee Kiat
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Course Code	Course Description	Staff
	<p>e) The search for measures of intelligence, personality, attitudes, etc</p> <p>The course will be conducted through a series of lectures, seminars and workshops.</p>	
ES 432	<p>Evaluation in the School Setting</p> <p>The aim of this course is to take a macro-view of the broader aspects of evaluation as compared to ES 431 which tended to focus on the measurement of student performance. In the course the elements and issues of curriculum evaluation, evaluation of school projects, and school appraisal will be raised. The relevance of multi-criterion measures, beside student examination performance, such as environment, facilities, staff, etc as listed in the Metfessel-Michael paradigm will be discussed.</p>	Dr Tan Wee Kiat
ES 433	<p>Cognitive and Affective Measurement</p> <p>This course prepares the student for the conduct of empirical research in education that uses measures of pupil performance. Measurement in the cognitive and affective domains will be studied with reference to a sample of intelligence and achievement tests, personality inventories, and interest and attitude scales. The students will be guided in writing their own tests or scales.</p>	Mr Soh Kay Cheng
ES 434	<p>Psychological Testing</p> <p>This course aims at providing participants with a working knowledge of psychological testing. The course covers:</p> <p>a) History, Principles, and Ethics of Psychological Testing</p> <p>b) Categories of Tests: IQ Tests, Achievement Tests, etc</p> <p>c) Practicum in the use of common and less sensitive tests</p>	Mrs Katherine Yip

Course Code	Course Description	Staff
ES 435	<p>Advanced Studies in Language Testing</p> <p>Beginning with a review of the theory and practice of language testing, the course will examine in some detail the uses of language tests viz. to assess language aptitude, proficiency and achievement and to serve as a diagnostic instrument. Current trends and recent research in the field will be studied and participants will be required to do practical work in planning, constructing, pre-testing administering and analysing the results of language tests for specific purposes and levels.</p>	Mr Oliver Seet Mr E W Ash
Comparative Studies in Education		
ES 441	<p>Comparative Education Studies</p> <p>The course will first consider and discuss the nature, approaches and methods of comparative education. In this consideration, illustrative references will be made to (a) the works of comparative educationists who have contributed significantly to the defining of the field, and (b) selected cross-national studies for the purpose of exemplifying approaches and methods in comparative education. The second part of the course will study selected problems and issues in education. References to education in Singapore will form the focal points of cross-national comparison.</p>	Mr Tham Tuck Onn, Mr G D Balakrishnan, Miss Huang Shoo Ai
ES 442*	<p>Sociological Models in Education</p> <p>This course aims to present and examine some of the major sociological perspectives that have been developed to explain educational phenomena. The course will cover the three main perspectives, i.e., systems approaches,</p>	Mr T Dammary, Mr A Warren

* Course ES 442 is identical to Course ES425 offered under Educational Administration

Course Code	Course Description	Staff
	<p>interactionist models and critical theories. The works of Durkheim, Weber, the functionalists and developments in the 'new' sociology of education as exemplified by Young, Whitty and Becker will be studied. These models will then be examined by the work of the critical theorists. The perspectives and insights offered by these researchers will be used to develop a critical awareness of the issues involved in current educational controversies generally and specifically, those which characterise the Singaporean education system.</p>	
ES 443*	<p>The Economics of Human Resource Development</p> <p>Human Resource Development is a major concern of all nations whether developed or developing. This course will focus on the human capital concept and its uses, investments in human beings at school and at work, social versus private benefit-cost accounting, human capital in economic growth and the allocation of human resources in production.</p>	Dr Eng Soo Peck
ES 444	<p>Studies in Philosophy of Education</p> <p>Philosophical Analysis of the Aims, Matter and Manner of Education. The issues are to be analysed with reference to historical and contemporary writings.</p> <p>Moral Philosophy and Moral Education. An analysis of the nature and justification of morality and moral values, in relation to the question of moral education.</p> <p>Philosophy of Religion and Religious Education. An analysis of the nature of religious truth-claims, their justification, and their bearings on morality, in relation to the issue of religious instruction in the curriculum.</p>	Mr Tan Tai Wei

* Course ES443 is identical to Course ES424 offered under Educational Administration.

Course Code	Course Description	Staff
Pedagogical Studies		
ES 451	<p>Computer-assisted Instruction</p> <p>Researchers have been carrying out studies exploring the use of computers in classroom teaching. Computer-assisted instruction is an application which has received much attention. CAI programmes have been implemented at different levels in some countries. The main aims of this course are to introduce the theoretical aspects of CAI and to provide an opportunity for practical work so as to enable students to develop computer-assisted instructional programmes in subjects relevant to their fields of specialisation. The theory section deals with topics such as individualized instruction, programming techniques, multi-media approaches to CAI development, commercial software and CAI systems implemented in other countries. The practical section involves students in designing, developing, testing and implementing, on a small scale, a CAI system constructed by the students themselves.</p>	Mr Chong Tian Hoo
ES 452	<p>Studies in Educational Technology</p> <p>Studies in Instructional Media takes one away from the skill oriented based course structure often associated with instructional media and concentrated at the pre-service level. The course covers literature search on media education, analysis of research and developments in the field of educational communications and technology, psychology and media, audio visual systems, selection and evaluation of instructional materials, advance media design and production, the theory and application of instructional design, and a discussion into possible areas of research in the field of instructional media.</p>	Mdm Yeap Lay Leng

Course Code	Course Description	Staff
ES 453	<p>The Psychology and Education of Slow Learners</p> <p>This course discusses the psychological and educational problems of children of limited learning capacity who are generally referred to as slow learners. It proposes that slow learners must be identified, diagnosed and instruction adjusted at an early stage if permanent adverse effects are to be prevented or alleviated. After defining the slow learner, understanding the factors that influence slow learning and discussing his abilities and disabilities, special emphasis is given to the building up of a comprehensive instructional programme for him in the school.</p>	Mrs Quah May Ling
ES 454	<p>Diagnosis and Remediation of Reading Difficulties of Primary School Children</p> <p>In this course, students will examine the fundamentals of remedial reading ie, theories and related research, diagnostic materials, and instructional strategies. The course will consist of three major components:</p> <ol style="list-style-type: none"> lecture and seminar discussion independent review of research with a summary to be presented in the seminar, and clinical application of diagnostic and instructional procedures in the Remedial Clinic. Assessment will be based on seminar participation, research summary presentation, and report of clinical experience. 	Mrs C Sullivan
ES 455	<p>Studies in Creative Teaching</p> <p>This course will examine the psychological, philosophical and historical background to the teaching of the arts. Emphasis will be placed on the developmental aspects of artistic teaching and the relevance of this approach</p>	Mr C Linke, Mr R C Scharenguivel

Course Code	Course Description	Staff
	to the current educational situation.	
	Problems of implementing the teaching of the arts will be examined, together with different approaches in methodology which reflect varying aims in the teaching of the arts.	
CURRICULUM STUDIES SPECIALISATION		
Language Education		
CS 411	<p>The Principles of Language Study</p> <p>The course is intended to be an overview of different aspects of language study. It will provide a general outline of the following areas and relate particular models to language teaching: the sounds of language (phonetics and phonology), the structure of language (syntax), meaning (semantics and pragmatics), language and interaction, and language and the mind (psycholinguistics and language acquisition)</p>	Mr C A Fry, Mr A Wharton, Mr T A Kirkpatrick
CS 412	<p>Language planning and bilingualism</p> <p>This course will examine the processes by which language policy is evolved in multi-lingual and/or multi-varietal societies through the interaction of linguistic and extra-linguistic factors. Studies in the nature and description of bilingualism will accompany the examination of policy-making and of the educational implementation of language policies.</p>	Mr A Wharton, Mr C A Fry, Mr T A Kirkpatrick
CS 413	<p>The analysis of students' English in Singapore Schools</p> <p>This course will enable participants to examine the performance of Singaporean students in oral and written situations. It will review research relating to interlanguage, language transfer and the communicative</p>	Mr C A Fry, Mr T A Kirkpatrick, Mr A Wharton

Course Code	Course Description	Staff
	strategies adopted by second language learners. It will also review the models and methods for collecting data.	
CS 414	<p>Materials Development and Syllabus Design</p> <p>The course will consider the principles of syllabus design and the problems faced by syllabus designers. Current syllabuses will be examined.</p> <p>The course will also enable students to evaluate materials for their suitability for language teaching and require students to develop language teaching materials of their own.</p>	Mr T A Kirkpatrick, Mr C A Fry, Mr A Wharton
CS 415	<p>Fundamental Issues in Literature Education</p> <p>The course would include lectures, seminars and tutorials sessions on:-</p> <ol style="list-style-type: none"> The role and function of literature in the context of education, The relationship between literature learning and affective/cognitive development, Achievement in literature and the school curriculum, The principles behind the teaching of the different genres of literature, The assumptions behind current text selection procedures, Current thinking on evaluation procedures related to response to literature and The development of hypotheses concerning individual differences in literary response. 	Mr D P de Souza, Mr Goh Soo Tian
CS 421	<p>Studies in Readability</p> <p>Candidates will study the rationale of readability tests and the various means by</p>	Mr T P Dwyer

Course Code	Course Description	Staff
	which such tests are constructed. The course will include practical work done in selected schools to assess how well current textbooks match the reading levels of Singapore pupils. There will also be some exploratory work regarding the establishment of reading norms for Singapore children.	
CS 422	Children's Literature : Research, Reading and Curriculum Planning The course will have three basic components: understanding the implications of research on extended reading; curriculum planning and evaluation and extensive reading of children's literature. a) Research — A review of the research on the role that reading and the development of children's literature programs have had on children's language development particularly in the areas of vocabulary, grammar and reading comprehension. (This component is necessary as a rationale for literature programs in Singapore schools). b) Curriculum Planning and Evaluation — This will include planning and evaluation of classroom and school literature programs (both Primary and Secondary), designing appropriate learning environment and the extension of literature programs through creative activities. c) Reading — The course will require extensive reading in all the literary genre appropriate for children (Pre-primary through Secondary). The approach will be developmental and all candidates will be expected to be knowledgeable of the stages of children's development and the literature appropriate at the various stages by the end of the course.	Mrs J Lucas

Course Code	Course Description	Staff
CS 423	Studies in Young Adults' Literature The course includes a) literature search into young adults' literature b) analysis of research and developments in the field of young adults' literature c) bibliographical and selection tools of young adults' literature d) stages of young adults' reading development e) categories of young adults' literature with special emphasis on subliterate f) themes in young adults' literature eg sexism, racism, sexuality g) censorship h) local/Asean young adults' literature, the authors and their publications i) Contemporary young adults' literature authors and their publications j) the study of significant investigations and trends in the field of young people's reading k) the study into the relationship between reading materials used by young adults and the psychology of young adults l) a discussion into possible areas of research in the field of young adults' literature.	Mdm Yeap Lay Leng
CS 424	Reading in Secondary Classes The course is intended to provide teachers with special information and skills which relate to the development of reading at secondary levels. While a brief introduction to basic factors underlying the reading process will be given, the emphasis of the course will be on those skills and more specialised reading skills which are needed by more advanced readers.	Mr R Somerville Ryan

Course Code	Course Description	Staff
	The focus of the course will be on reading and language development; models of the reading process — taxonomic, behavioural and psycholinguistic views; diagnostic procedures; motivation; comprehension skills — the nature of comprehension, cultural factors in reading, discourse processing in comprehension; oracy/literature; reading problems in curriculum areas; recent strategies in the teaching of reading.	
CS 425	Reading : Theories and Problems This 30 hour course will focus on recent research into the theories related to the various models of "learning to read". There are many competing and controversial ideas in this field and student seminars will provide the starting point for class discussion on each topic. Attention will be given to the study of the etiology of the problem reader. Students will be expected to provide information and descriptive case study material for class discussion.	Mr Keith Boswell
CS 431	Methodology of Teaching Chinese Literature This course will examine the main thrusts of research in the teaching of Chinese Literature. An extensive review and critique of research papers will be undertaken. Finally, the teaching of Chinese Literature in Singapore's secondary and pre-university classes will be examined against the theoretical frameworks germane to the teaching of Chinese Literature.	Mr Chiu Leou Mann, Mr Neo Eng Guan, Mr Ong Yong Peng, Dr Leong Weng Kee
CS 432	Methodology of Teaching Modern Chinese Grammar This course aims at students who are interested in the research germane to the teaching of Chinese with specific reference to the teaching of Modern Chinese Grammar. It consists of	Mr Chew Cheng Hai, Mr Yip Hon Yuen

Course Code	Course Description	Staff
	<ul style="list-style-type: none"> a) An overview of research Literature related to teaching of Modern Chinese Grammar published in China, Taiwan, Hong Kong, Singapore and the Western countries b) Discussion on prominent books and articles regarding the teaching of Modern Chinese Grammar c) Methods of teaching Modern Chinese Grammar in the Singapore context. 	
Science & Mathematics Education		
CS 441	Issues in Mathematics Education The purpose of this course is to provide the student with as complete a background as possible in the field of Mathematics Education. Major curriculum development in mathematics will be reviewed including the work of CDIS in this area. Consideration will be given to the development of primary and secondary school syllabuses in mathematics and the major innovative movements and schemes that have influenced them. The psychology of learning mathematics will be given detailed consideration. In so far as they have affected curricula and methods of teaching, the nature of mathematics, its philosophy and historical development will be considered.	Mr K J Purbrick, Mr Wong Hee Sing, Dr E Plant
CS 442	Research in Mathematics Education The purpose of the course is to acquaint the student with the variety of research methods that are used to investigate the problems and nature of teaching and learning mathematics. Further, the student will be encouraged to develop his own ability to engage in research in this area and will be provided with appropriate background knowledge.	Dr E Plant, Mr Wong Hee Sing, Mr K Purbrick

Course Code	Course Description	Staff
CS 443	<p>Issues in Science Education</p> <p>The course will review and define the "frontier" of current developments and research practices in science education, identifying trends where possible. The course will have two main thrusts:</p> <p>a) What is happening now in science education, illustrated by on-going efforts in:— curriculum development projects in Singapore and abroad instructional models and processes, assessment and evaluation (both in cognitive and affective domains);</p> <p>b) Recent advances in other disciplines, such as the philosophy of science and educational psychology, which bear on science education.</p>	Dr M Underwood, Mr Chia Teck Chee, Dr Goh Ngoh Khang

CS 444	<p>Research in Science Education</p> <p>This course is intended primarily for students who specialise in science education. The aims of the course are to provide an opportunity to study research methods and findings in science education, their implications for instruction, as well as to prepare students for research in their fields of interest. This will be done through a critical analysis of selected recent research studies in a lecture-cum-seminar model.</p>	Dr Chin Long Fay, Dr Chia Lian Sai, Dr M Underwood
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Social Studies Education

CS 451	<p>Issues in Geography Education</p> <p>The course examines the development of geography as a school subject, problems in its teaching and learning. The ideas of Piaget and Bruner on curriculum in geography, the development of geographic concepts in children, techniques of testing and assessment</p>	Mr Yee Sze Onn, Mr A D Beck
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Course Code	Course Description	Staff
CS 452	<p>Issues in History Education</p> <p>The course will examine the nature and scope of History as a school subject, the problems and issues connected with its teaching and learning, the use of educational psychology in History education, the role of assessment and evaluation, the nature of historical evidence and the use of primary and secondary materials in research and project work.</p>	Dr Then Lian Mee, Mr W Jacob

Creative and Applied Arts Education

CS 461	<p>Studies in Art Education</p> <p>This course is mainly theoretical and academic. It covers three broad components, namely art education foundation, basic research trends, problem statement and investigation procedure.</p> <p>It provides a background knowledge for art education research and the skills to carry out simple and meaningful investigations.</p>	Mr Sim Tong Khern
CS 462	<p>A Qualitative Approach to Secondary School Art</p> <p>This course will initially examine what goes on in the classrooms of secondary schools where art is taught. It will deal with (a) the form of teaching that students are exposed to; (b) the kind of environment in which this teaching occurs; (c) the quality of the visual arts that students created.</p> <p>Based on the findings to the above 3 areas the course will proceed to formulate a strategy</p>	Mr Chia Wai Hon

Course Code	Course Description	Staff
	for a qualitative art programme. Evaluation as to what constitutes a qualitative art programme will be the main area of research. The art programmes of various countries will be studied for comparison.	
CS 463	Problems and issues in the teaching of music appreciation in secondary schools The course will examine the music preferences of secondary pupils, determine the musical and 'extra-musical' elements that contribute to music preferences, and construct listening modules including activity that will lead students towards a higher level of appreciation in Asian and Euro-American classical music literature.	Mr Leong Yoon Pin
CS 464	Music composition with special reference to music for young people This course proposes to examine the technique of music writing for young people through analysis of music sung and played by pupils up to secondary school level, and to provide essential harmonic and orchestrating skills in setting music to words, writing instrumental accompaniment for piano, guitar etc., and transcribing piano scores for string and wind ensembles.	Mr Leong Yoon Pin
CS 465	Physical Education — Curriculum construction and evaluation in physical education This course presents the student with two components in the area of curriculum development in physical education. The first component discusses the theories, concepts and principles related to curriculum planning and design in physical education. The second component relates curriculum planning and design to the process of evaluation in physical education. Both components will be fully treated followed by practical application to	Mr Yap Boon Chuan, Miss Ong Siong Ngo, Mr Lawrence Hoh

Course Code	Course Description	Staff
	selected physical education activities. The ultimate aim of this course is to equip the student with the knowledge and skills to design, implement and evaluate appropriate learning experiences in physical education.	
CS 466	The Physical and Psychomotor Domains in Physical Education The physical and psychomotor domains of learning invariably receive special treatment when the subject under discussion is physical education. As such, the primary concern of this course is to attempt to examine the activities, theories, concepts, principles and practices underlying learning experiences in these two domains. In attempting to adequately cover an otherwise broad area of specific content matters, elements relevant to a treatment that is more general than specific, components in the areas of motor-learning, exercise physiology, conditioning methods, tests and measurements will be brought into sharp focus.	Mr Yap Boon Chuan, Miss Ong Siong Ngo, Mr Lim Hock Han, Mr Lawrence Ho
Curriculum Inquiry		
CS 471*	Curriculum Development : Design, Development and Evaluation The course will consist of two parts	Dr L Massey, Mr A D Beck
	Part I	
	a) Foundations of Curriculum Development a study of current curriculum issues and problems will be undertaken. Any one particular issue or problem will be examined in three ways viz the philosophical, the psychological and the	

* Course CS 471 is identical to course ES 425 offered under Educational Administration.

Course Code	Course Description	Staff
	<p>sociological factors affecting the curriculum issue</p> <p>eg Equality of opportunity – a curriculum problem</p> <p>Is it a worthwhile aim? philosophical question</p> <p>Is it an economic possibility? sociological question</p> <p>How to cater for individual needs? psychological question</p> <p>b) Curriculum Design and Development – An examination of a variety of curriculum models will be undertaken.</p> <p>eg Tyler, Taba, Wheeler, Lanton, Skilbeck and Stenhouse</p> <p>The implementation of each model for the writing of objectives, learning theories, the structuring of content and evaluation will be examined.</p> <p>c) Curriculum Evaluation – A variety of evaluation techniques will be examined including both quantitative and qualitative procedures. Particular emphasis will be placed on systems of studying classroom interaction. Case studies of particular curriculum projects will be referred to.</p> <p>Part II</p> <p>Part two of the course will consist of a major piece of work which will be concerned with an analysis and critique of a curriculum innovation in the Singapore context.</p>	
CS 472	Curriculum Development: Models and Modules	Dr Then Lian Mee
	<p>This course will examine selected models of curriculum development, the different phases and procedures involved as well as the nature of curriculum development in Singapore. In the practical part of the course, students</p>	

Course Code	Course Description	Staff
	<p>will learn and practise the skills required for those aspects of curriculum development in which the teacher is involved, eg construction of the syllabus, course outlines, etc. They will also learn how to produce certain instructional materials such as resource packages, modules and multi-media kits.</p>	
CS 473	Curriculum Evaluation: Some Questions and Answers	Dr Sim Wong Kooi
	<p>This course will encourage students to think convergently on crucial questions and divergently on alternative answers in the evaluation of curriculum. For example, the basic question of how, when, where and why, who should evaluate what, for whom to make what decisions based on which criteria for whose benefit would be examined. Models of and models for curriculum evaluation would then be developed in respect of the methodology, timing, sampling, rationale, the evaluator, objectives, the decision maker, decision criteria and target individuals associated with evaluation.</p>	



**INSTITUTE
OF
EDUCATION
SINGAPORE**

**POSTGRADUATE
STUDIES
HANDBOOK
1984**

CONTENTS

Page

1	Introduction	1
2	Application for the Postgraduate Programme	1
3	Admission Requirements	1
4	Candidature	1
5	Full-time, Part-time and Full-Part-time Schemes of Study	2
6	The Master of Education Programme	3
	Part I Requirements	3
	Part II Requirements	3
7	Fields of Study	4
8	The Research Practicum	4
9	Invitational Seminars	4
10	Assessment of Coursework	5
11	Award of the M Ed Degree	5
12	Structure of the M Ed Programme	5
13	Fees for the Postgraduate Programme	7
14	Library Facilities	8
15	Other Facilities	9
16	Academic Terms	10
17	Courses in the M Ed Programme	11
18	Educational Psychology	13
19	Educational Planning and Administration	16
20	Educational Evaluation and Testing	19
21	Comparative Studies in Education	21
22	Pedagogical Studies	23
23	Language Education	25
24	Science and Mathematics Education	29
25	Social Studies Education	31
26	Creative and Applied Arts Education	32
27	Curriculum Inquiry	34

26 AUG 1983

INSTITUTE OF EDUCATION
LIBRARY, SINGAPORE.

With the Collaboration of
the Director
Institute of Education
Republic of Singapore

Handbook compiled by
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INTRODUCTION

The Institute of Education was established on 1 April 1973 under the Institute of Education Act (1970). The Institute is the only tertiary institution in Singapore engaged in teacher education. The 1970 Act empowers the Institute to conduct postgraduate courses leading to the award of the Master of Education (M Ed) and the Doctor of Philosophy in Education (Ph D). Section 4(2) of the Act states that the Institute may

"provide for the examination, from time to time of students or other persons and to confer degrees and diplomas and grant certificates to successful candidates, and provide for the registration of the holders of such certificates".

The postgraduate degrees are awarded by the National University of Singapore (NUS).

APPLICATION FOR THE POSTGRADUATE PROGRAMME

Application forms for enrolment in the M Ed and Ph D programme are available from the office of Head/Student Affairs, 3rd Storey, Institute of Education, 469 Bukit Timah Road, Singapore 1025. Coursework for the programme begins in the first week of January.

ADMISSION REQUIREMENTS

For the degree of Master of Education, the candidate must have

- (a) a good degree from the National University of Singapore or from universities approved by the Senate of the NUS;
- (b) a Diploma in Education or its equivalent; and
- (c) at least two years of working experience in the education service.

For the degree of Doctor of Philosophy in Education, the candidate must have

- (a) satisfied the requirements for admission into the M Ed programmes as listed above, and
- (b) a master's degree from universities approved by the Senate of NUS.

CANDIDATURE

A candidate for the degree of Doctor of Philosophy in the field of education must pursue an approved course of advanced study and research. A thesis on a research topic approved by the Institute of

Education Board of Postgraduate Studies and Research must be submitted within sixty months from the date of his admission as a candidate for the degree.

For the M Ed degree the minimum period of candidature is twelve months and the maximum period is thirty-six months from the date of registration.

A candidate may be required to present himself for an oral examination on the subject matter of the thesis and areas germane to his area of specialisation. The candidate may also be required to take a written examination.

FULL-TIME, PART-TIME AND FULL-PART-TIME SCHEMES OF STUDY

To provide the widest opportunity for candidates who meet the requirements for registration for the M Ed degree, there are three schemes of study:

(a) Full-time study

All candidates who meet the M Ed registration requirements are eligible to register as full-time candidates for the M Ed degree. The full-time study scheme also caters for candidates under Ministry of Education sponsorship.

(b) Part-time study

For serving officers in the Education Service who, for one reason or another, may not find the full-time scheme of study feasible the Institute of Education will offer a part-time scheme of study. To avoid disruption to the serving officer's teaching and other commitments to his work, courses will be run in the evenings (on Tuesdays and Thursdays) and on Saturday mornings, where possible.

(c) Full-Part-time study

Serving officers in the Education Service who have served six years or more are eligible to apply for six months half-pay leave. Such officers may wish to register for full-time study for Part I of the M Ed programme (course work) and to pursue Part II of the programme (research) as part-time students.

THE MASTER OF EDUCATION PROGRAMME

The M Ed programme consists of two parts: Part I comprises taught courses and graduate seminars, and Part II requires the student to carry out research leading to the submission of a thesis.

PART I REQUIREMENTS

Part I of the M Ed programme requires the student to

- (a) take two compulsory courses, one on research methodology and one on educational statistics. (For MOE-sponsored students, the additional compulsory courses are Management and Organisation Theory, and Personnel Management.)
- (b) take five other courses to be selected from a list of elective courses. The student will be required to select those courses related to his proposed field of study and research. (MOE-sponsored students are required to choose three electives.)
- (c) participate in a research practicum
- (d) attend and participate in invitational seminars
- (e) submit a research proposal for the approval of the IE Board of Postgraduate Studies and Research.

The student is deemed to have successfully completed Part I of the M Ed programme when he completes the course work requirements to the satisfaction of IE's Board of Postgraduate Studies and Research and has his research proposal approved by the same Board.

PART II REQUIREMENTS

Part II requires the student to carry out his research based on the proposal approved by IE's Board of Postgraduate Studies and Research. The minimum period of candidature for Part II is six months from the time his research proposal has been accepted. Staff members will be appointed to supervise and guide the student in his research.

When submitting a thesis for examination, the student should give 3 months' notice of his intention to submit his dissertation for examination.

FIELDS OF STUDY

Students will have a wide range of fields of study for specialisation broadly classified under (a) Educational Studies Specialisation and (b) Curriculum Studies Specialisation. Fields of study under each are given below.

(a) Educational Studies Specialisation

- i) Educational Psychology
- ii) Educational Planning and Administration
- iii) Educational Evaluation and Testing
- iv) Comparative Studies in Education
- v) Pedagogical Studies

(b) Curriculum Studies Specialisation

- i) Language Education
- ii) Science and Mathematics Education
- iii) Social Studies Education
- iv) Creative and Applied Arts Education
- v) Curriculum Inquiry

Elective courses are offered in the various fields. Students are required to choose courses related to their proposed area of specialisation. The choice of electives is subject to approval. Students who intend to submit a thesis based on empirical research are advised to choose Research Methodology II and Educational Statistics II.

THE RESEARCH PRACTICUM

The Research Practicum is designed to help students learn the fundamentals of empirical research. In the practicum, the different strands of thought and skills taught in the research methodology and statistics courses on the one hand, and the courses which bear on the area of specialisation on the other are brought together into a meaningful whole as research questions are asked, analysed and critiqued in preparation for writing the research proposal. Also the practicum may take the form of participation in an on-going project, involving the construction of tests or measurement instruments, the validation of existing instruments, the collection of data using different techniques or the analysis of data already collected. The thrust of the practicum is on skill learning and the integration of concepts and principles. It is designed to prepare the groundwork for the student's research required in Part II of the master's programme.

INVITATIONAL SEMINARS

From time to time, seminars will be conducted by members of IE staff and by visiting scholars concerning their research work. Postgraduate students are expected to attend these seminars so as to broaden their knowledge of the content and methodology of research in education.

ASSESSMENT OF COURSEWORK

Assessment is by formal assignments or their equivalent. The paper submitted for assessment must be between 3,000 and 5,000 words (approximately 10 to 15 double-spaced typewritten A4 sheets).

Assignments for courses taken in any particular term must be submitted to course tutors by the end of the fourth week following that particular term.

AWARD OF THE M ED DEGREE

On the successful completion of his thesis and on having satisfied all the degree requirements, the student will be recommended to the Board of Postgraduate Studies of the NUS and the Senate of the University for the award of the Master of Education degree.

STRUCTURE OF THE M ED PROGRAMME

The structure of the M Ed programme for both full-time and part-time students is presented schematically in the diagram on the next page.

STRUCTURE OF M ED PROGRAMME

Term	Full-Time	Part-Time																
First Term (Jan - Mar)	<table><tr><th>Courses</th><th>Hours</th></tr><tr><td>Ed Stats I</td><td>30</td></tr><tr><td>Research Meth I</td><td>30</td></tr><tr><td>1st Elective</td><td>30</td></tr><tr><td>2nd Elective</td><td>30</td></tr></table>	Courses	Hours	Ed Stats I	30	Research Meth I	30	1st Elective	30	2nd Elective	30	<table><tr><th>Courses</th><th>Hours</th></tr><tr><td>Research Meth I</td><td>30</td></tr><tr><td>1st Elective</td><td>30</td></tr></table>	Courses	Hours	Research Meth I	30	1st Elective	30
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1st Elective	30																	
Second Term (Apr - Jun)	<table><tr><td>Ed Stats II/3rd Elect</td><td>30</td></tr><tr><td>Res Meth II/4th Elect</td><td>30</td></tr><tr><td>5th Elective</td><td>30</td></tr><tr><td>Research Practicum</td><td>30</td></tr><tr><td colspan="2">Presentation of Proposal for Approval</td></tr></table>	Ed Stats II/3rd Elect	30	Res Meth II/4th Elect	30	5th Elective	30	Research Practicum	30	Presentation of Proposal for Approval		<table><tr><td>Ed Stats I</td><td>30</td></tr><tr><td>2nd Elective</td><td>30</td></tr></table>	Ed Stats I	30	2nd Elective	30		
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Research Practicum	30																	
Presentation of Proposal for Approval																		
Ed Stats I	30																	
2nd Elective	30																	
J U N E V A C A T I O N																		
Third Term (Jul - Sep)	Research on topic of master's dissertation	Res Meth II/3rd Elect 30 Ed Stats II/4th Elect 30																
Fourth Term (Sep - Nov)	Minimum time allowed for submission of dissertation: 6 months from date of proposal approval	5th Elective 30 Research Practicum 30 Presentation of Proposal for Approval																
D E C E M B E R V A C A T I O N																		
First Term (Jan - Mar)		Research on topic of master's dissertation																
Second Term (Apr - Jun)		Minimum time allowed for submission of dissertation : 6 months from date of proposal approval																
	Maximum time allowed for submission of dissertation : 36 months from date of registration for Master's programme	Maximum time allowed for submission of dissertation : 36 months from date of registration for Master's programme																

FEES FOR THE POSTGRADUATE PROGRAMME

All fees must be paid punctually as they fall due (during the first two weeks of each semester); failure to do so will incur a late fee charge of \$10. Failure to pay fees beyond the third week of the semester will lead to suspension from the programme till all fees are paid. The Institute reserves the right to revise fees at any time.

Fees payable by candidates are as follows:

	<u>M Ed</u>	<u>Ph D</u>
University Registration Fee	\$50	\$50
Fees For Research and Tuition		
Course Fee		
Full-time 1st year	\$800 p.a. (\$1100 p.a.)	-
Part-time 1st & 2nd year	\$400 p.a. (\$550 p.a.)	-
Research Fee		\$425(\$500) p.a.
Full-time 2nd year	\$350 p.a. (\$450 p.a.)	-
Part-time 3rd year	\$350 p.a. (\$450 p.a.)	-
Supplementary Fee	\$28 p.a.	\$28 p.a.
Examination Fee	\$150 (payable at the time the candidate submits his thesis for examination or at the time he sits any written examination in connection with his candidature - whichever is the earlier)	\$200 (payable at the time of submission of thesis or published works)
Caution Fee	\$50 (Caution fee is payable on admission and refundable on the successful completion of the programme or when the candidate leaves the programme, subject to approval)	\$50
Degree Fee	\$50 (Payable at the time of award of degree)	\$50

Figures in brackets indicate the fees payable by persons who are not citizens or permanent residents of Singapore. Where no such indication is given, all will pay the same fees. All fees quoted are in Singapore dollars.

LIBRARY FACILITIES

The Library's total stock consists of 93,800 books in the four official languages, 450 periodical subscriptions, and a growing collection of educational and psychological tests and microtext material. The books and bound periodicals are arranged on the open shelves by subject according to the Library of Congress Classification System. The tests and microtext material are kept in the Reference Section.

The Library provides loan, information and reference services to all students and staff of the Institute as well as school principals and teachers in Singapore.

All students must register with the Library. Upon registration each M. Ed. student is given ten library tickets : nine for borrowing general books for a period of 1 month and one for borrowing Reserved Books on a two-hourly basis. Fines are charged for overdue loans.

The Reference Service Section serves as the centre of general information and assistance in using the library resources and facilities.

The Inter-library loan service is available for staff and higher degree students engaged in thesis research. Photocopying facilities are also provided.

The opening hours are as follows:

During term :	Monday to Friday	8.30 am - 6.00 pm
	Saturday	8.30 am - 5.00 pm
During vacation:	Monday to Friday	8.30 - 5.00 pm
	Saturday	8.30 - 1.00 pm

Further information on the IE library is available in the Library Handbook which is distributed to all students on enrolment.

OTHER FACILITIES

Lecture theatres

The Institute has one theatrette and seven lecture theatres. The biggest lecture theatre can accommodate about 250 students and the smallest about 150. The theatrette, which has a seating capacity of about 350, is used for seminars, talks, concerts, forums and the showing of films.

Other teaching facilities

The Institute is also equipped with Language Laboratories, Science Laboratories, Computer Workroom, a Media Workroom for preparation of teaching aids and charts, a Photo-laboratory and two Video Studios. There are also tutorial rooms and special subject rooms.

Games facilities

At the moment the facilities for games include four tennis courts, basketball courts and football fields. The construction of a gymnasium is expected to be completed by mid-1984. The gymnasium will have 3 badminton courts that can double up for use as volleyball and basketball courts.

Canteens

There are two canteens on the campus. Canteen 1 is located on the first storey of the Students' Recreation Centre. This canteen is self-service and provides Chinese, Muslim and Indian food. It is open from 7.30 am to 5.00 pm on Mondays to Saturdays. Canteen 2 is located in House No 4 and serves a la carte style Chinese and Western food and a variety of hawker-type food. This canteen is open from 8.00 am to 4.30 pm on Mondays to Saturdays.

Sundry store

There is a sundry store located on the first storey of the Students' Recreation Centre which sells newspapers, stationery, toiletries, etc.

Bookshop

There is a bookshop run by the National University of Singapore Multi-purpose Co-operative Society. It is located at the annex of House No. 4.

Cash-on-line facilities

There is a POSB automated teller machine installed on the first storey of the Students' Recreation Centre next to the sundry store.

ACADEMIC TERMS

The Institute of Education academic terms for 1984 are as follows:

January 1984 Semester

Term I : 3 Jan 84 - 10 Mar 84 (10 weeks)
 Recess : 11 Mar 84 - 18 Mar 84 (1 weeks)
 Term II : 19 Mar 84 - 26 May 84 (10 weeks)
 Vacation : 27 May 84 - 1 Jul 84 (5 weeks)

July 1984 Semester

Term I : 2 Jul 84 - 1 Sep 84 (9 weeks)
 Recess : 2 Sep 84 - 16 Sep 84 (2 weeks)
 Term II : 17 Sep 84 - 1 Dec 84 (11 weeks)
 Vacation : 2 Dec 84 - 1 Jan 85 (4 weeks)

COURSES IN THE M ED PROGRAMME*

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
RM 401	<p>Research Methodology I (Compulsory)</p> <p>This course is designed to familiarise postgraduate students with the concepts, principles and procedures used in educational research and evaluation. The content and discussions will include the following areas:</p> <ol style="list-style-type: none"> The nature and purpose of research Basic methods of research ranging from case studies to true experimental research Internal validity and external validity considerations Formulation of a research strategy to investigate a problem indentified by the student. 	Dr Tan Wee Kiat
RM 402	<p>Research Methodology II</p> <p>In Research Methodology I the student is introduced to the principles of educational research and evaluation ranging from the case study to large scale surveys. In RM II the student will apply what he has learnt in RM I by proceeding to examine and critique specific examples of research and evaluation culled from literature review and Master's degree theses in the social sciences and education. The student will also present a seminar on a topic of his own choice and the research methodology (hypotheses, design, data-gathering procedures, etc) to be used. This is aimed at helping the student to define and refine his research proposal before proceeding to carry out the actual research for his M Ed thesis.</p>	Dr Tan Wee Kiat

* The Institute reserves the right to make changes to any course in whole or in part.

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
RM 403	<p>Educational Statistics I (Compulsory)</p> <p>The aim of the course is to provide post-graduate students with a knowledge and understanding of the statistical methods commonly used in educational research and evaluation. The content and discussions of the course will include the following areas :</p> <ol style="list-style-type: none"> The nature of statistics, it uses and abuses The nature of numbers - nominal, ordinal, interval and ratio scales Measures of central tendency, dispersion, skewness and correlation Graphic representation of data Introduction to probability and sampling Hypothesis testing and inferential statistics <p>This course will provide a foundation for Educational Statistics II which will lead the student further into a study of inferential statistics using parametric and non-parametric measures, regression analysis, and multivariate analysis.</p>	<p>Dr E Plant Mr Toh Kok Aun</p>
RM 404	<p>Educational Statistics II</p> <p>ES II builds on what has been covered in ES I. Although some attention will be given to non-parametric tests the bias will be towards inferential statistics based on parametric distributions such as the z, t, chi-square, F and T distributions. The statistical methods covered will include:</p> <ol style="list-style-type: none"> Univariate tests for one-sample, two-sample and multi-sample tests Two-way univariate analysis of variance Multivariate analysis of variance Regression analysis Computerized data processing. <p>Attention will also be given to the analysis of data that students have collected from their assignments in elective courses.</p>	<p>Dr E Plant Mr Toh Kok Aun</p>

<u>ELECTIVES</u>		
EDUCATIONAL STUDIES SPECIALISATION		
<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
ES 411	<p>The Psychology of Child Development</p> <p>This course aims to provide an overview on development in childhood and beyond by examining the theory of Piaget as well as that reformulated by Pascual-Leone. The implications of both the Piagetian and neo-Piagetian views will be discussed in the context of how learning takes place in the classroom. Students will demonstrate a working knowledge of the theories and applications discussed in the course by applying it in a case study of learner behaviour. They will observe children performing Piagetian tasks and then analyse and interpret the findings.</p>	<p>Dr Elwyn Thomas Mrs Amy Fam</p>
ES 412	<p>Contemporary Issues in Educational Psychology</p> <p>This course builds upon what students learned in the Diploma in Education course. It focuses on current issues in educational psychology that are related to or have implications on learning and classroom teaching. Students taking the course will be introduced to selected topics such as intrinsic and extrinsic factors in motivation, teacher expectancy and pupil performance, aptitude treatment interaction... or others, depending on the availability of reference materials and group interest. Special attention will be given to review of literature, study of research design and interpretation of the research findings.</p>	<p>Dr Ko Peng Sim</p>

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
ES 413	Guidance Services for the Exceptional Child	Mrs Katherine Yip
	<p>Basic to the guidance service is the concept that every child should be assisted to attain his goals and develop his potentialities no matter what his capabilities or limitations may be.</p> <p>This course examines the ways in which guidance services can supplement the activities of the classroom in providing for the needs of the exceptional child, particularly the gifted child. The gifted child is seen as one with unusual talents and abilities not only academically but also in areas not identified with academic subjects such as art, music, speech and so on.</p>	
ES 414	Principles and Practice of Pupil Personnel Services	Mrs Esther Tan
	<p>This course is mainly a survey of guidance services and their application in educational settings, with special reference to the secondary school. Equal emphasis will be placed on the guidance role of the classroom teacher and the functions of the school counsellor.</p> <p>The course examines the guidance concept and its applications, the counselling process, different counselling theories and their techniques, diagnostic tools and recording procedures as well as educational and vocational guidance in schools.</p> <p>Upon completion of the course, the candidate should have the competency to serve as a guidance counsellor in the school or be the co-ordinator to plan, implement and evaluate a guidance programme in the secondary school setting.</p>	

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
ES 415	Factors Affecting Memory in Learning	-
	<p>Memory plays an important part in learning. This course attempts to investigate into the various factors of memory and their effects on learning. Participants should have some basic knowledge in Research Methodology and Statistics to facilitate the carrying out of experiments/surveys/research in their area of study.</p>	
ES 416	Educational Studies in Language Acquisition and Learning	-
	<p>This is a course that provides advanced studies in the acquisition of a first language by children from birth to 7 years and examines the implications for children learning second and subsequent languages in school.</p> <p>The studies will include such topics as :</p> <ol style="list-style-type: none"> Universals in language and cognitive development; Differences between acquiring a first language and learning second and/or subsequent languages; The sequence of development for native-speakers in the English linguistic systems (phonological, morphological, syntactic, semantic); Features of the developmental sequence for non-native speakers, with special reference to Singapore; Significant features affecting the successful learning of second and/or subsequent languages. 	

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
<u>Educational Planning and Administration</u>		
ES 421	<p>Personnel Management</p> <p>This course examines the theory and practice of Personnel Management relevant to the school setting, with particular attention to:</p> <p>(a) <u>The Personnel Function</u></p> <p>How personnel work relates to total organizational operations; nature and scope of personnel administration; roles performed by personnel manager.</p> <p>(b) <u>Motivation and Communication</u></p> <p>Importance of behavioral topics of motivation and communication; nature or causes of individual and group behaviours, communication flows and systems; uniqueness of each and every human being in regard to motivation and communication patterns; teamwork.</p> <p>(c) <u>Organization Climate and Leadership</u></p> <p>Causes for concern; relationship to productivity; measurement; superior - subordinate relationships. Approaches to the analysis of leadership; managerial philosophies and leadership styles.</p> <p>(d) <u>Personnel Administration</u></p> <p>Human resource planning, staffing and appraisal; training and development.</p>	Dr Wee Joo Liat
ES 422	<p>Management and Organisation Theory</p> <p>This course is arranged for senior education officers. They may want to review and present their own professional roles,</p>	Mr Chong Keng Choy

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<p>purposes and functions in a more meaningful way. Given their wealth of experience, they may learn much from a study of theory and practice in other organizational settings. Course participants are, therefore, encouraged to examine methods, techniques and skills which are relevant to carrying out the main tasks of management in the education service. The major topics include : current approaches to management and organization; congruence and similarity of educational management with other management; environment and accountability; the managerial functions; notions of leadership; objectives, planning and controlling; decision making, strategies and policies; delegation of authority and decentralization; management of knowledge, conflicts, attention and change; systems approach, with emphasis on the notions of contingencies and situations.</p>	
ES 423	<p>Management Training and Development</p> <p>This course aims at developing in the School Executives the administrative skills required to run their Schools, Department or Organisation more effectively. It is a practical programme which applies the theoretical insights gained in other components of the M Ed course (particularly "Personnel Management" and "Management and Organisation Theory").</p> <p>The methods of instruction are designed in such a way as to provide the School Executive strategies which they can use in developing instructional and administrative skills in their colleagues, eg. workshops, role play, in-basket exercise, simulations.</p> <p>It includes such topics as</p> <ul style="list-style-type: none"> - improving school climate and staff morale - human relationships skills - adult motivation - developing a training environment (eg. Clinical Supervision, the PDC cycle) 	Mr John Ussher

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<ul style="list-style-type: none"> - types of training programmes for middle managers - training techniques - evaluation of training and development programmes. 	
ES 424	<p>The Economics of Human Resource Development</p> <p>Human Resource Development is a major concern of all nations whether developed or developing. This course will focus on the human capital concept and its uses, investments in human beings at school and at work, social versus private benefit-cost accounting, human capital in economic growth and the allocation of human resources in production.</p>	Dr Eng Soo Peck
ES 425	<p>Sociological Models in Education</p> <p>This course aims to present and examine some of the major sociological perspectives that have been developed to explain educational phenomena. The course will cover the three main perspectives ie systems approaches, interactionist models and critical theories. The works of Durkheim, Weber, the functionalists and developments in the 'new' sociology of education as exemplified by Young, Whitty and Becker will be studied. These models will then be examined by the work of the critical theorists. The perspectives and insights offered by these researchers will be used to develop a critical awareness of the issues involved in current educational controversies generally and specifically those which characterise the Singaporean education system.</p>	Mr S Gopinathan
ES 426	<p>Curriculum Development: Models, Issues and Tasks</p> <p>The course is primarily to enable the student to have a better understanding of the nature of curriculum development, contemporary patterns, trends and issues and his involvement in curriculum tasks. As teachers and administrators are expected to make decisions on matters relating to the curriculum and perform curriculum tasks,</p>	Dr Then Lian Mee

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<p>the course has been designed to equip them with the knowledge and skills required for these purposes.</p> <p>The course will introduce students to selected models of curriculum and curriculum development and explore various curriculum issues. It will also examine the change process and factors crucial to success in curriculum innovations. Finally the nature of the curriculum tasks of teachers and administrators and the requirements and implications will be discussed.</p>	
ES 427	<p>The Social Organisation of Schools</p> <p>The conceptual framework for this course will be drawn from the literature about schools as formal organisations. The school as an organisation is seen broadly at two levels. At the macro-social level, the relationship between schools and learning is examined and at the micro-social level, what takes place in classrooms will be the focus of attention. Research on schools, models of school learning and the occupational characteristics of teachers as a group will be discussed.</p>	Dr Ho Wah Kam Ng Kim Beng
<u>Educational Evaluation and Testing</u>		
ES 431	<p>Testing and Measurement</p> <p>This course will build on the content and skills that students have acquired from the Educational Measurement course in the Dip Ed programme. It will lead the student to a deeper consideration of the following areas :</p> <ul style="list-style-type: none"> a) Uses and abuses of testing in education b) Criteria for evaluating a test c) Item analysis, using item correlation and Rasch methods and item banks d) Familiarization with IE Test Collection (standardized tests) e) The search for measures of intelligence, personality, attitudes, etc <p>The course will be conducted through a series of lectures, seminars and workshops.</p>	-

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
ES 432	<p>Evaluation in the School Setting</p> <p>The aim of this course is to take a macro-view of the broader aspects of evaluation as compared to ES 431 which tended to focus on the measurement of student performance. In the course the elements and issues of curriculum evaluation, evaluation of school projects, and school appraisal will be raised. The relevance of multi-criterion measures, beside student examination performance, such as environment, facilities, staff, etc as listed in the Metfessel-Michael paradigm will be discussed.</p>	-
ES 433	<p>Cognitive and Affective Measurement</p> <p>This course prepares the student for the conduct of empirical research in education that make use of measures of pupil performance. Measurement in the cognitive and affective domains will be studied with reference to a sample of intelligence and achievement tests, personality inventories, and interest and attitude scales. The students will be guided in writing their own tests or scales.</p>	Mr Soh Kay Cheng
ES 434	<p>Psychological Testing</p> <p>This course aims at providing participants with a working knowledge of psychological testing. The course covers :</p> <ol style="list-style-type: none"> History, Principles, and Ethics of Psychological Testing Categories of Tests : IQ Tests, Achievement Tests, etc Practicum in the use of common and less sensitive tests 	Dr Seng Seok Hoon
ES 435	<p>Advanced Studies in Language Testing</p> <p>Beginning with a review of the theory and practice of language testing, the course will examine in some detail the uses of language tests</p>	-

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<p>viz. to assess language aptitude, proficiency and achievement and to serve as a diagnostic instrument. Current trends and recent research in the field will be studied and participants will be required to do practical work in planning, constructing, pre-testing administering and analysing the results of language tests for specific purposes and levels.</p>	
<u>Comparative Studies in Education</u>		
ES 441	<p>Comparative Education Studies</p> <p>The course will first consider and discuss the nature, approaches and methods of comparative education. In this consideration, illustrative references will be made to (a) the works of comparative educationists who have contributed significantly to the defining of the field, and (b) selected cross-national studies for the purpose of exemplifying approaches and methods in comparative education. The second part of the course will study selected problems and issues in education. References to education in Singapore will form the focal points of cross-national comparison.</p>	<p>Mr Tham Tuck Onn Mr G D Balakrishnan Miss Huang Shoo Ai</p>
ES 442*	<p>Sociological Models in Education</p> <p>This course aims to present and examine some of the major sociological perspectives that have been developed to explain educational phenomena. The course will cover the three main perspectives ie systems approaches, interactionist models and critical theories. The works of Durkheim, Weber, the functionalists and developments in the 'new' sociology of education as exemplified by Young, Whitty and Becker will be studied. These</p>	Mr S Gopinathan

* Course ES 442 is identical to Course ES 425 offered under Educational Administration

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	models will then be examined by the work of the critical theorists. The perspectives and insights offered by these researchers will be used to develop a critical awareness of the issues involved in current educational controversies generally and specifically those which characterise the Singaporean education system.	
ES 443*	The Economics of Human Resource Development Human Resource Development is a major concern of all nations whether developed or developing. This course will focus on the human capital concept and its uses, investments in human beings at school and at work, social versus private benefit-cost accounting, human capital in economic growth and the allocation of human resources in production.	Dr Eng Soo Peck
ES 444	Studies in Philosophy of Education Philosophical Analysis of the Aims, Matter and Manner of Education. The issues are to be analysed with reference to historical and contemporary writings. Moral Philosophy and Moral Education. An analysis of the nature and justification of morality and moral values, in relation to the question of moral education. Philosophy of Religion and Religious Education. An analysis of the nature of religious truth-claims, their justification, and their bearings on morality, in relation to the issue of religious instruction in the curriculum.	Mr Pang Ah Kaw

* Course ES 443 is identical to Course ES 424 offered under Educational Administration

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
<u>Pedagogical Studies</u>		
ES 451	Computer-assisted Instruction Researchers have been carrying out studies exploring into the use of computers in classroom teaching. Computer-assisted instruction is an application which has received much attention. CAI programmes have been implemented at different levels in some countries. The main aims of this course are to introduce the theoretical aspects of CAI and to provide an opportunity for practical work so as to enable students to develop computer-assisted instructional programmes in subjects relevant to their fields of specialisation. The theory section deals with topics such as individualized instruction, programming techniques, multi-media approaches to CAI development, commercial software and CAI systems implemented in other countries. The practical section involves students in designing, developing, testing and implementing, on a small scale, a CAI system constructed by the students themselves.	Mr Chong Tian Hoo
ES 452	Studies in Educational Technology Studies in Educational Technology takes one away from the skill oriented based course structure often associated with instructional media and concentrated at the pre-service level. The course covers literature search on media education, analysis of research and developments in the field of educational communications and technology, psychology and media, audio visual systems, selection and evaluation of instructional materials, advanced media design and production, the theory and application of instructional design, and a discussion into possible areas of research in the field of educational technology.	Mdm Yeap Lay Leng
ES 453	The Psychology and Education of Slow Learners This course discusses the psychological and educational problems of children of limited learning capacity who are generally referred to as slow learners. It proposes that slow learners must be identified, diagnosed and instruction adjusted at an early stage if permanent adverse	-

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	effects are to be prevented or alleviated. After defining the slow learner, understanding the factors that influence slow learning and discussing his abilities and disabilities, special emphasis is given to the building up of a comprehensive instructional programme for him in the school.	
ES 454	Diagnosis and Remediation of Reading Difficulties of Primary School Children In this course, students will examine the fundamentals of remedial reading ie, theories and related research, diagnostic materials, and instructional strategies. The course will consist of three major components : a) lecture and seminar discussion b) independent review of research with a summary to be presented in the seminar, and c) clinical application of diagnostic and instructional procedures in the Remedial Clinic. Assessment will be based on seminar participation, research summary presentation, and report of clinical experience.	-
ES 455	Studies in Creative Teaching This course will examine the psychological, philosophical and historical background to the teaching of the arts. Emphasis will be placed on the developmental aspects of artistic teaching and the relevance of this approach to the current educational situation. Problems of implementing the teaching of the arts will be examined, together with different approaches in methodology which reflect varying aims in the teaching of the arts.	Mr C Linke

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
CURRICULUM STUDIES SPECIALISATION		
Language Education		
CS 411	The Principles of Language Study The course is intended to be an overview of different aspects of language study. It will provide a general outline of the following areas and relate particular models to language teaching: the sounds of language (phonetics and phonology), the structure of language (syntax), meaning (semantics and pragmatics), language and interaction, and language and the mind (psycholinguistics and language acquisition)	-
CS 412	Language Planning and Bilingualism This course will examine the processes by which language policy is evolved in multi-lingual and/or multi-varietal societies through the interaction of linguistic and extra-linguistic factors. Studies in the nature and description of bilingualism will accompany the examination of policy-making and the educational implementation of language policies.	-
CS 413	The Analysis of Students' English in Singapore Schools This course will enable participants to examine the performance of Singaporean students in oral and written situations. It will review research relating to interlanguage, language transfer and the communicative strategies adopted by second language learners. It will also review the models and methods for collecting data.	-
CS 414	Materials Development and Syllabus Design The course will consider the principles of syllabus design and the problems faced by syllabus designers. Current syllabuses will be examined.	Mr T A Kirkpatrick

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	The course will also enable students to evaluate materials for their suitability for language teaching and require students to develop language teaching materials of their own.	
CS 415	Fundamental Issues in Literature Education	Mr D P de Souza Mr Goh Soo Tian
	The course will include lectures, seminars and tutorial sessions on :	
	a) The role and function of literature in the context of education,	
	b) The relationship between literature learning and affective/cognitive development,	
	c) Achievement in literature and the school curriculum,	
	d) The principles behind the teaching of the different genres of literature,	
	e) The assumptions behind current text selection procedures,	
	f) Current thinking on evaluation procedures related to response to literature, and	
	g) The development of hypotheses concerning individual differences in literary response.	
CS 421	Studies in Readability	Mr T P Dwyer
	Candidates will study the rationale of readability tests and the various means by which such tests are constructed. The course will include practical work done in selected schools to assess how well current textbooks match the reading levels of Singapore pupils. There will also be some exploratory work regarding the establishment of reading norms for Singapore children.	

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
CS 422	Children's Literature : Research, Reading and Curriculum Planning	-
	The course will have three basic components: understanding the implications of research on extended reading; curriculum planning and evaluation, and extensive reading of children's literature.	
	a) <u>Research</u> - A review of the research on the role that reading and the development of children's literature programmes have had on children's language development particularly in the areas of vocabulary, grammar and reading comprehension. (This component is necessary as a rationale for literature programmes in Singapore schools.)	
	b) <u>Curriculum Planning and Evaluation</u> - This will include planning and evaluation of classroom and school literature programmes (both primary and secondary), designing appropriate learning environment and the extension of literature programmes through creative activities.	
	c) <u>Reading</u> - The course will require extensive reading in all the literary genre appropriate for children (pre-primary through secondary). The approach will be developmental and all candidates will be expected to be knowledgeable about the stages of children's development and the literature appropriate at the various stages by the end of the course.	
CS 423	Studies in Young Adults' Literature	Mdm Yeap Lay Leng
	The course includes	
	a) literature search into young adults' literature	
	b) analysis of research and developments in the field of young adults' literature	
	c) bibliographical and selection tools of young adults' literature	
	d) stages of young adults' reading development	

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<ul style="list-style-type: none"> e) categories of young adults' literature with special emphasis on subliterate f) themes in young adults' literature eg sexism, racism, sexuality g) censorship h) local/Asean young adults' literature, the authors and their publications i) contemporary young adults' literature authors and their publications j) the study of significant investigations and trends in the field of young people's reading k) the study into the relationship between reading materials used by young adults and the psychology of young adults l) a discussion into possible areas of research in the field of young adults' literature. 	
CS 424	<p>Reading in Secondary Classes</p> <p>The course is intended to provide teachers with special information and skills which relate to the development of reading at secondary levels. While a brief introduction to basic factors underlying the reading process will be given, the emphasis of the course will be on those skills and more specialised reading skills which are needed by more advanced readers. The focus of the course will be on reading and language development; models of the reading process - taxonomic, behavioural and psycholinguistic views; diagnostic procedures; motivation; comprehension skills - the nature of comprehension, cultural factors in reading, discourse processing in comprehension; oracy/literature; reading problems in curriculum areas; recent strategies in the teaching of reading.</p>	-
CS 431	<p>Methodology of Teaching Chinese Literature</p> <p>This course will examine the main thrusts of research in the teaching of Chinese Literature. An extensive review and critique of research papers will be undertaken.</p>	<p>Mr Neo Eng Guan Mr Ong Yong Peng Dr Leong Weng Kee</p>

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	<p>Finally, the teaching of Chinese Literature in Singapore's secondary and pre-university classes will be examined against the theoretical frameworks germane to the teaching of Chinese Literature.</p>	
CS 432	<p>Methodology of Teaching Modern Chinese Grammar</p> <p>This course is aimed at students who are interested in the research relevant to the teaching of Chinese with specific reference to the teaching of Modern Chinese Grammar. It consists of</p> <ul style="list-style-type: none"> a) An overview of the research literature related to the teaching of Modern Chinese Grammar b) Discussion of prominent books and articles regarding the teaching of Modern Chinese Grammar c) Methods of teaching Modern Chinese Grammar in the Singapore context. 	<p>Mr Chew Cheng Hai Mr Yip Hon Yuen</p>

Science & Mathematics Education

CS 441	<p>Issues in Mathematics Education</p> <p>The purpose of this course is to provide the student with as complete a background as possible in the field of Mathematics Education. Major curriculum development in mathematics will be reviewed including the work of CDIS in the this area. Consideration will be given to the development of primary and secondary school syllabuses in mathematics and the major innovative movements and schemes that have influenced them.</p> <p>The psychology of learning mathematics will be given detailed consideration. In so far as they have affected curricula and methods of teaching, the nature of mathematics, its philosophy and historical development will be considered.</p>	<p>Dr Ong Sit Tui Dr E Plant Mr Wong Hee Sing</p>
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<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
CS 442	<p>Research in Mathematics Education</p> <p>The purpose of the course is to acquaint the student with the variety of research methods that are used to investigate the problems and nature of teaching and learning mathematics. Further, the student will be encouraged to develop his own ability to engage in research in this area and will be provided with appropriate background knowledge.</p>	<p>Dr Ong Sit Tui Dr E Plant Mr Wong Hée Sing</p>
CS 443	<p>Issues in Science Education</p> <p>The course will review and define the "frontier" of current developments and research practices in science education, identifying trends where possible. The course will have two main thrusts :</p> <p>a) What is happening now in science education, illustrated by on-going efforts in:-</p> <p>curriculum development projects in Singapore and abroad, instructional models and processes, assessment and evaluation (both in cognitive and affective domains);</p> <p>b) Recent advances in other disciplines, such as the philosophy of science and educational psychology, which bear on science education.</p>	<p>Dr Chia Teck Chee Dr Goh Ngoh Khang Miss Jane Singham</p>
CS 444	<p>Research in Science Education</p> <p>This course is intended primarily for students who specialise in science education. The aims of the course are to provide an opportunity to study research methods and findings in science education, their implications for instruction, as well as to prepare students for research in their fields of interest. This will be done through a critical analysis of selected recent research studies in a lecture-cum-seminar model.</p>	<p>Dr Chin Long Fay Dr Chia Lian Sai Dr Diong Cheong Hoong Mr Toh Kok Aun</p>

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
CS 445	<p>Studies in Science Curriculum and Instruction</p> <p>The course is directed at research studies that examine the various factors which influence the effectiveness of science curriculum intervention programmes in the classroom. These are examined against the background of the intended philosophies, curricular framework and paradigm for science instruction at the primary and secondary levels. The critical review and analysis of the studies will take into account the influences of the context for science instruction and the variety of roles of science learning activities and practical investigations in conjunction with the use of the text and other related media in the process of concept formation and attainment. Existing curricular materials are evaluated with the view to relate the underlying components of the instructional design to the methods and techniques of teaching and inquiry learning that have been built into the use of the curriculum and instructional materials. The intention of the course is to lead into the formulation and synthesis of a researchable problem that sets out to manipulate and test the effects of selected antecedent and intervening variables on science teaching and learning outcomes. A strong background in one of the sciences is necessary and a knowledge of research methodology and statistical analysis would be an advantage.</p>	<p>Dr Yeoh Oon Chye</p>

Social Studies Education

CS 451	<p>Issues in Geography Education</p> <p>The course examines the development of geography as a school subject, problems in its teaching and learning. The ideas of Piaget and Bruner on curriculum in geography, the development of geographic concepts in children, techniques of testing and assessment in geography including problems of research design in geography education. Current trends in Geography and their implications for curriculum development and teaching will also be examined.</p>	-
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<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
CS 452	Issues in History Education The course will examine the nature and scope of History as a school subject, the problems and issues connected with its teaching and learning, the use of educational psychology in History education, the role of assessment and evaluation, the nature of historical evidence and the use of primary and secondary materials in research and project work.	Dr Then Lian Mee Mr W Jacob Mrs Moo Swee Ngoh

Creative and Applied Arts Education

CS 461	Studies in Art Education This course is mainly theoretical and academic. It covers three broad components, namely, art education foundation, basic research trends, problem statement and investigation procedures. It provides a background knowledge for art education research and the skills to carry out simple and meaningful investigations.	Mr Sim Tong Khern
CS 462	A Qualitative Approach to Secondary School Art This course will initially examine what goes on in the classrooms of secondary schools where art is taught. It will deal with (a) the form of teaching that students are exposed to, (b) the kind of environment in which this teaching occurs (c) the quality of the visual arts that students have created. Based on the findings to the above 3 areas the course will proceed to formulate a strategy for a qualitative art programme. Evaluation as to what constitutes a qualitative art programme will be the main area of research. The art programmes of various countries will be studied for comparison.	Mr Chia Wai Hon
CS 463	Problems and Issues in the Teaching of Music Appreciation in Secondary Schools The course will examine the music preferences of secondary pupils, determine the musical and extra-musical elements that contribute to	Mr Leong Yoon Pin

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	music preferences, and construct listening modules including activity that will lead students towards a higher level of appreciation of Asian and Euro-American classical music literature.	
CS 464	Music Composition with Special Reference to Music for Young People This course proposes to examine the technique of music writing for young people through analysis of music sung and played by pupils up to the secondary school level, and to provide essential harmonic and orchestrating skills in setting music to words, writing instrumental accompaniment for piano, guitar etc., and transcribing piano scores for string and wind ensembles.	Mr Leong Yoon Pin
CS 465	Physical Education - Curriculum Construction and Evaluation in Physical Education This course presents the student with two components in the area of curriculum development in physical education. The first component discusses the theories, concepts and principles related to curriculum planning and design in physical education. The second component relates curriculum planning and design to the process of evaluation in physical education. Both components will be fully treated followed by practical application to selected physical education activities. The ultimate aim of this course is to equip the student with the knowledge and skills to design, implement and evaluate appropriate learning experiences in physical education	Mr Yap Boon Chuan Miss Ong Siong Ngo Mr Lawrence Hoh
CS 466	The Physical and Psychomotor Domains in Physical Education The physical and psychomotor domains of learning invariably receive special treatment when the subject under discussion is physical education. As such, the primary concern of this course is to attempt to examine the activities, theories, concepts, principles and practices underlying learning experiences in these two	Mr Yap Boon Chuan Miss Ong Siong Ngo Mr Lim Hock Han Mr Lawrence Hoh

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	domains. In attempting to cover adequately an otherwise broad area of specific content matters, elements relevant to a treatment that is more general than specific, components in the areas of motor-learning, exercise physiology, conditioning methods, tests and measurements will be brought into sharp focus.	
<u>Curriculum Inquiry</u>		
CS 471	Curriculum Development: Models, Issues and Tasks	Dr Then Lian Mee
	The course is, primarily, to enable the student to have a better understanding of the nature of curriculum development, contemporary patterns, trends and issues and his involvement in curriculum tasks. As teachers and administrators are expected to make decisions on matters relating to the curriculum and perform curriculum tasks, the course has been designed to equip them with the knowledge and skills required for these purposes.	
	The course will introduce students to selected models of curriculum and curriculum development and explore various curriculum issues. It will also examine the change process and factors crucial to success in curriculum innovations. Finally the nature of the curriculum tasks of teachers and administrators and the requirements and implications will be discussed.	
CS 472	Curriculum Development: Procedures and Materials	Dr Then Lian Mee
	The course has two main aims, firstly to help the student perform effectively the more practical tasks relating to the curriculum that the teacher or administrator has to carry out in school, and secondly to prepare him for leadership roles in curriculum development in his school. The student will acquire a knowledge of the procedures for curriculum development to enable him to carry out his curriculum tasks effectively. Among the main emphases	

* Course CS471 is identical to course ES426 offered under Educational Administration

<u>Course Code</u>	<u>Course Description</u>	<u>Staff</u>
	in the course are the development of certain types of instructional materials for teachers, the planning and designing of syllabuses and course guides, and the initiation and implementation of school-based curriculum projects	
	It is presumed that the student taking the course has a basic knowledge of curriculum issues and curriculum development as well as some experience at school with curriculum tasks. The course is intended as a follow-up of CS 471 on 'Curriculum Development: Models, Issues and Tasks' which deals with more basic and general aspects of curriculum development.	
CS 473	Curriculum Evaluation: Some Questions and Answers	Dr Sim Wong Kooi
	This course will encourage students to think convergently on crucial questions and divergently on alternative answers in the evaluation of curriculum. For example, the basic question of <u>how, when, where and why, who</u> should evaluate <u>what, for whom</u> to make <u>what decisions</u> based on <u>which criteria</u> for whose benefit would be examined. Models of and models for curriculum evaluation would then be developed in respect of the <u>methodology, timing, sampling, rationale, the evaluator, objectives, the decision maker, decisions, criteria and target individuals</u> associated with evaluation.	
CS 474	Studies in Science Curriculum and Instruction	Dr Yeoh Oon Chye
	The course is directed at research studies that examine the various factors which influence the effectiveness of science curriculum intervention programmes in the classroom. These are examined against the background of the intended philosophies, curricular framework and paradigm for science instruction at the primary and secondary levels. The critical	

* Course CS 474 is identical to course CS 445 offered under Science and Mathematics Education

Course Code

Course Description

Staff

review and analysis of the studies will take into account the influences of the context for science instruction and the variety of roles of science learning activities and practical investigations in conjunction with the use of the text and other related media in the process of concept formation and attainment. Existing curricular materials are evaluated with the view to relate the underlying components of the instructional design to the methods and techniques of teaching and inquiry learning that have been built into the use of the curriculum and instructional materials. The intention of the course is to lead into the formulation and synthesis of a researchable problem that sets out to manipulate and test the effects of selected antecedent and intervening variables on science teaching and learning outcomes. A strong background in one of the sciences is necessary and a knowledge of research methodology and statistical analysis would be an advantage.



Institute
of
Education
Singapore

POSTGRADUATE STUDIES HANDBOOK

PREFACE

This handbook is intended to serve as a guide to the rules, regulations and procedures pertaining to postgraduate studies in the Institute of Education. These rules, regulations and procedures are subject to change at any time. Likewise, the courses described in the handbook may be added to, amended or deleted without prior notice.

DR TAN WEE KIAT
HEAD
POSTGRADUATE STUDIES PROGRAMME

JANUARY 1986

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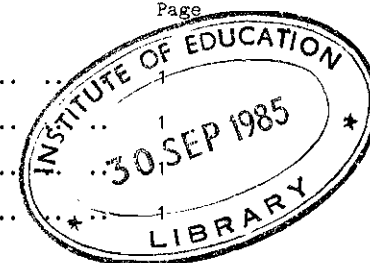
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CONTENTS

	Page
1 Introduction	1
2 Application for the Postgraduate Programme	1
3 Admission Requirements	1
4 Candidature	1
5 Full-time, Part-time and Full-Part-Time Schemes of Study	2
6 The Master of Education Programme	2
Part I Requirements	3
Part II Requirements	3
7 Fields of Study	3
8 The Research Practicum	4
9 Invitational Seminars	4
10 Assessment of Coursework	5
11 Prescribed Length of Thesis/Dissertation	5
12 Award of the M Ed Degree	5
13 Schedule of the M Ed Programme	6
14 M Ed Programme Structure	7
15 Fees for the Postgraduate Programmes	8
16 Library Facilities	9
17 Courses in the M Ed Programme	10
Conceptual Models in Education	10
Research in Educational Psychology	14
Issues in Educational Psychology	16
Research and Issues in Educational Measurement: I: Cognitive Domain	20
Research and Issues in Educational Measurement: II: Affective Domain	22
Research in the Sociology of Education	24
Issues in the Sociology of Education	26



Research in Teacher Education	28
Issues in Teacher Education	30
Curriculum Inquiry	32
Research in Language Education	35
Issues in Language Education	38
Research in Mathematics Education	41
Issues in Mathematics Education	43
Research in Science Education	46
Issues in Science Education	49
Research in History Education	53
Issues in History Education	56
Research in Geographic Education	60
Issues in Geographic Education	62
Educational Statistics I	65
Educational Statistics II	67
Introduction to Statistical Analysis System (SAS)	69
Research Methodology I	72
Research Methodology II	75
Management and Organization Theory	78
Personnel Management	80
The M Ed Practicum	84
Appendix 1: Submission of requests to collect data from schools	87
Appendix 2: A Proposed Workplan for The M Ed Course of Study	88
Appendix 3: Format of Thesis/Dissertation	89
Appendix 4: M Ed Research Proposal Presentation - A Brief	92

INTRODUCTION

The Institute of Education was established on 1 April 1973 under the Institute of Education Act (1970). The Institute is the only tertiary institution in Singapore engaged in teacher education. The 1970 Act empowers the Institute to conduct postgraduate courses leading to the award of the Master of Education (M Ed) and the Doctor of Philosophy in Education (Ph D). Section 4(2) of the Act states that the Institute may

"provide for the examination, from time to time, of students or other persons and to confer degrees and diplomas and grant certificates to successful candidates, and provide for the registration of the holders of such certificates".

The postgraduate degrees are awarded by the National University of Singapore (NUS).

APPLICATION FOR THE POSTGRADUATE PROGRAMME

Application forms for enrolment in the M Ed and Ph D programmes are available from the office of Head/Student Affairs, 3rd Storey, Institute of Education, 469 Bukit Timah Road, Singapore 1025. Coursework for the programme begins in the first week of January.

ADMISSION REQUIREMENTS

For the degree of Master of Education, the candidate must have

- (a) a good degree from the National University of Singapore or from universities approved by the Senate of the NUS;
- (b) a Diploma in Education or its equivalent; and
- (c) at least two years of working experience in the education service.

For the degree of Doctor of Philosophy in Education, the candidate must have

- (a) satisfied the requirements for admission into the M Ed programme as listed above, and
- (b) a master's degree from universities approved by the Senate of NUS.

CANDIDATURE

A candidate for the degree of Doctor of Philosophy in the field of education must pursue an approved course of advanced study and research. A thesis on a research topic approved by the Institute of

Education Board of Postgraduate Studies and Research must be submitted within sixty months from the date of his admission as a candidate for the degree.

For the M Ed degree the minimum period of candidature is twelve months and the maximum period is thirty-six months from the date of registration.

A candidate may be required to present himself for an oral examination on the subject matter of the thesis and areas germane to his area of specialisation. The candidate may also be required to take a written examination.

FULL-TIME, PART-TIME AND FULL-PART-TIME SCHEMES OF STUDY

To provide the widest opportunity for candidates who meet the requirements for registration for the M Ed degree, there are three schemes of study:

(a) Full-Time study

All candidates who meet the M Ed registration requirements are eligible to register as full-time candidates for the M Ed degree. The full-time study scheme also caters for candidates under Ministry of Education sponsorship.

(b) Part-Time study

For serving officers in the Education Service who, for one reason or another, may not find the full-time scheme of study feasible the Institute of Education will offer a part-time scheme of study. To avoid disruption to the serving officer's teaching and other commitments to his work, courses will be run in the afternoons and on Saturday mornings, where possible.

(c) Full-Part-Time study

Serving officers in the Education Service who have served six years or more are eligible to apply for six months half-pay leave. Such officers may wish to register for full-time study for Part I of the M Ed programme (course work) and to pursue Part II of the programme (research) as part-time students.

THE MASTER OF EDUCATION PROGRAMME

The M Ed programme consists of two parts: Part I comprises taught courses and graduate seminars, and Part II requires the student to carry out research leading to the submission of a dissertation.

Replacement of Page 3

PART I REQUIREMENTS

Part I of the M Ed programme requires the student to

- (a) take a compulsory integrated combination comprising Research Methodology, Educational Statistics, Practicum I (Computer Usage) and Practicum II (Proposal Preparation).
- (b) take two elective courses related to the proposed area of research and one elective course in relevant field; MOE-sponsored candidates must include Management and Organisation Theory, and Personnel Management as their elective courses.
- (c) submit a research proposal for the approval of the IE Board of Postgraduate Studies and Research.
- (d) attend and participate in invitational seminars

The student is deemed to have successfully completed Part I of the M Ed programme when he completes the course work requirements to the satisfaction of IE's Board of Postgraduate Studies and Research and has his research proposal approved by the same Board.

PART II REQUIREMENTS

Part II requires the student to carry out his research based on the proposal approved by IE's Board of Postgraduate Studies and Research. The minimum period for submission of dissertation is six months from the time his research proposal has been accepted.

When submitting a dissertation for examination, the student should give 3 months' notice of his intention to submit his dissertation for examination.

FIELDS OF STUDY

Students will have a range of fields of study for specialisation broadly classified under (a) Educational Studies Specialisation and (b) Curriculum Studies Specialisation. Fields of study under each are given below.

(a) Educational Studies Specialisation

Issues and Research in Educational Psychology
Issues and Research in Educational Measurement
Issues and Research in Sociology of Education
Issues and Research in Teacher Education

Replacement of Page 4

(b) Curriculum Studies Specialisation

Issues and Research in Language Education
Issues and Research in Mathematics Education
Issues and Research in Science Education
Issues and Research in Social Studies Education

(c) Educational Administration

Personnel Management
Management and Organisation Theory
(Prescribed courses for MOE-sponsored candidates. Also available for other candidates.)

THE RESEARCH PRACTICUM

In the proposal phase, the different strands of thought and skills taught in the research methodology and statistics courses on the one hand, and the courses which bear on the area of specialisation on the other are brought together into a meaningful whole as research questions are asked, analysed and critiqued in preparation for writing the research proposal.

INVITATIONAL SEMINARS

From time to time, seminars will be conducted by members of IE staff and by visiting scholars concerning their research work. The seminars on IE research projects will be conducted during the orientation period. Postgraduate students are expected to attend these seminars so as to broaden their knowledge of the content and methodology of research in education.

ASSESSMENT OF COURSEWORK

Assessment is by formal assignment or its equivalent. The paper submitted for assessment must be between 3,000 and 5,000 words (approximately 10 to 15 double-spaced typewritten A4 sheets).

Assignments for courses taken in any particular term must be submitted to course tutors by the end of that particular term.

PRESCRIBED LENGTH OF THESIS/DISSERTATION

The maximum number of words prescribed for a thesis or dissertation (including footnotes but excluding appendices, bibliography, maps, charts, statistical tables, graphs, illustrations, etc.) are as given below:

(a) For Master's degree

40,000 words except for a thesis written in Chinese, in which case, 60,000 characters.

(b) For Doctor's degrees

Ph. D. in the field of Education. 80,000 words except for a thesis written in Chinese, in which case, 100,000 characters.

AWARD OF THE M ED DEGREE

On the successful completion of his dissertation and on having satisfied all the degree requirements, the student will be recommended to the Board of Postgraduate Studies of the NUS and the Senate of the University for the award of the Master of Education degree.

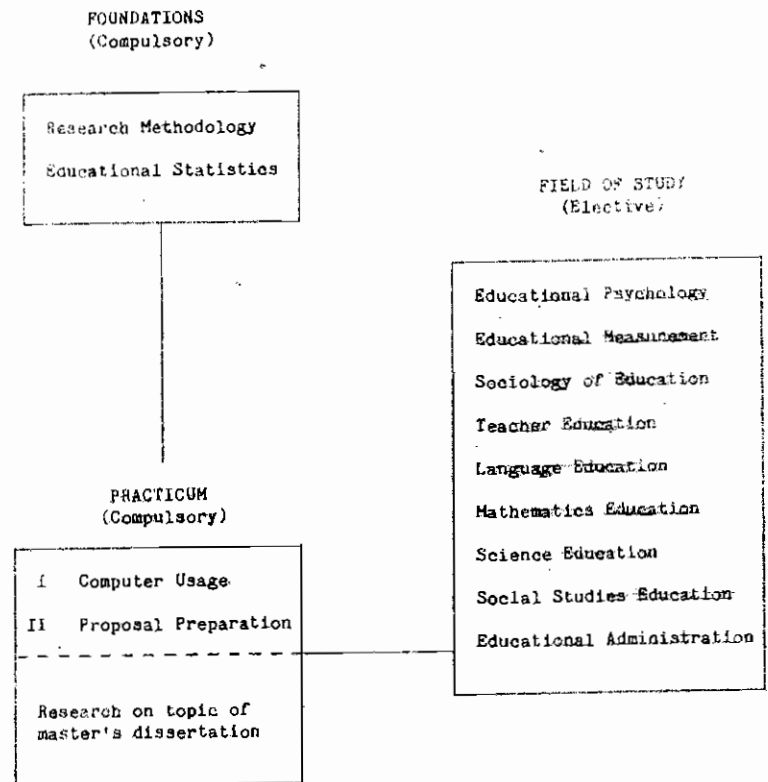
SCHEDULE OF THE M ED PROGRAMME

The schedule of the M Ed programme for both full-time and part-time students is presented schematically in the diagram on the next page.

SCHEDULE OF M ED PROGRAMME

Term	Full-Time	Part-Time
First Term (Jan - Mar)	<u>Courses</u> Orientation Seminars - Research Methodology 30 Ed Statistics 30 Practicum I 30 (Computer Usage) Field of Study: Course I 30	<u>Courses</u> Orientation Seminars - Research Methodology 30 Ed Statistics 30 Practicum I 30 (Computer Usage)
Second Term (Apr - Jun) (July)	Field of Study: Courses II & III 60 Practicum II 30 (Research Proposal) PRESENTATION of Proposal for Approval	Field of Study: Courses I & II 60
J U N E V A C A T I O N		
Third Term (Jul - Sep)	Research*	Field of Study: Course III 30 Practicum II 30 (Research Proposal) PRESENTATION of Proposal for Approval
Fourth Term (Sep - Nov)	Research (Continued)	Research*
D E C E M B E R V A C A T I O N		
First Term (Jan - Mar)	Research (Continued)	Research (Continued)
Second Term (Apr - Jun)	Research (Continued)	Research (Continued)

* Minimum time allowed for submission of dissertation: 6 months from date of proposal approval. Maximum time allowed for submission of dissertation: 36 months from date of registration for Master's programme. However, full-time candidates are expected to complete the programme within 18 months and part-time candidates within 24 months.

M ED PROGRAMME STRUCTURE

FEES FOR THE POSTGRADUATE PROGRAMMES

All fees must be paid punctually as they fall due (during the first two weeks of each semester); failure to do so will incur a late fee charge of \$10. Failure to pay fees beyond the third week of the semester will lead to suspension from the programme till all fees are paid. The Institute reserves the right to revise fees at any time.

Fees payable by candidates are as follows:

	<u>M Ed</u>	<u>Ph D</u>
University Registration Fee	\$50	\$50
Fees For Research and Tuition		
Course Fee		
Full-time 1st year	\$800 p.a.(\$1100 p.a.)	-
Part-time 1st & 2nd year	\$400 p.a.(\$550 p.a.)	-
Research Fee		\$425(\$500) p.a.
Full-time 2nd year	\$350 p.a.(\$450 p.a.)	-
Part-time 3rd year	\$350 p.a.(\$450 p.a.)	-
Supplementary Fee	\$28 p.a.	\$28 p.a.
Examination Fee	\$150 (payable at the time the candidate submits his thesis for examination or at the time he sits any written examination in connection with his candidature - whichever is the earlier)	\$200 (payable at the time of submission of thesis or published works)
Degree Fee	\$50 (Payable at the time of award of degree)	\$50

Figures in brackets indicate the fees payable by persons who are not citizens or permanent residents of Singapore. Where no such indication is given, all will pay the same fees. All fees quoted are in Singapore dollars.

LIBRARY FACILITIES

The Library's total stock consists of 113,616 books in the four official languages, 660 periodical subscriptions, and a growing collection of educational and psychological tests and microtext material. The books and bound periodicals are arranged on the open shelves by subject according to the Library of Congress Classification System. Tests and some microtext material are kept in the Reference Section. A Resource Room is located opposite to the Reference Library. It houses all of the lending copies of A/V (ranging from video cassettes to charts) and instructional materials together with microformat readers and reader/printers.

The Library provides loan, information and reference services to all students and staff of the Institute as well as school principals and teachers in Singapore.

All students must register with the Library. Upon registration each M. Ed. student is given six library tickets : five for borrowing general books for a period of 1 month and one for borrowing Reserved Books on a two-hourly basis. Fines are charged for overdue loans.

Each M. Ed. student will be credited with 200 dollars for on-line searching on topics approved by the supervisor. This can be used by students throughout their candidatures irrespective of whether or not they are fee or non-fee paying students.

The Information Desk in the library foyer serves as the centre of general information and assistance in using the library resources and facilities.

The Inter-library loan service is available for staff and higher degree students engaged in thesis research. Photocopying facilities are also provided.

The opening hours of the Library are as follows:

During term	:	Monday to Friday	8.30 am - 6.00 pm
		Saturday	8.30 am - 5.00 pm
During vacation	:	Monday to Friday	8.30 am - 5.00 pm
		Saturday	8.30 am - 1.00 pm

Further information on the IE library is available in the Library Users' Guide which is distributed to all students on enrolment.

COURSES IN THE M ED PROGRAMME

(The Institute reserves the right to add to, amend or delete courses listed.)

COURSE TITLE : Conceptual Models in Education

COURSE CODE : MED/PS-01

DURATION : 30 hours

LECTURER : Dr Chen Ai Yen

RATIONALE : This course is designed as an introduction to a systematic, rounded, and wide-ranging yet specific inquiry into the fundamental conceptual frameworks in education. The students will be exposed to two key paradigms or traditions of science that have influenced both the content and the methodology of educational research. These are: the mechanistic or deterministic paradigm and the holistic or organismic paradigm. Models of the two world views and the assumptions upon which they have been built will be examined. They will be studied in relation to four areas of inquiry, namely, educational sociology, educational psychology, educational measurement and teacher education. The parallel models, if any, in the four areas will be discussed in relation to the major systems of philosophical thought.

OBJECTIVES : The students will be able to:

- 1 understand the basic conceptual frameworks of education: their assumptions, principles and procedures
- 2 identify and classify conceptual models in education
- 3 identify and/or formulate their own perspectives on education
- 4 select and formulate research problems that are related to their own perspectives on education, instruction or learning
- 5 appreciate the basic conceptual frameworks that undergird Singapore's education system and teacher education.

COURSE CONTENT : 1 Divergent conceptions of educational purposes and values,

- 1.1 Western conceptions: perennialism, essentialism, instrumentalism (progressivism or experimentalism), social reconstructionism, and existentialism (neo-humanism)
- 1.2 Eastern conceptions: essentialism and traditional scholasticism.

2 The deterministic and organismic world views

- 2.1 Sociology - positivistic vs interpretive; structural-functionalism vs radical humanism
- 2.2 Psychology - behaviourism vs cognitivism
Teacher Education - product vs process
paradigm machine vs cognitive structure.

3 Leading proponents of the different models, their basic assumptions, their views about the learner, the teacher, the curriculum, the method and the resultant social policy:

- 3.1 state systems vs master-discipline systems;
- 3.2 educology, pedagogy, andragogy and synergogy

4 Types of educational systems and classroom practices that are based on the different models:

- 4.1 lecture method, discussion method, tutorial method;
- 4.2 role play, simulation and games;
- 4.3 computer-assisted instruction;
- 4.4 computer-based learning;
- 4.5 mastery learning.

5 Types of educational research that are based on the different perspectives and world views.

MODE OF ASSESSMENT : 1 Review of 5 articles (1 page each) or 2 books (2 pages each).

- 2 Critique of one classroom practice based on a specific educational perspective.

RECOMMENDED READING : Bruner, Jerome. (1985). Models of A Learner. Distinguished Educator Award Address at the Annual meeting of the American Educational Research Association, Chicago, April 1985. (Sound Tape).

Carroll, J.B. (1963). A Model of School Learning. Teachers College Record, 64 (8), 723-733.

Gage, N.L. (1963). Paradigms for research on teaching. Handbook of Research on Teaching. First Edition, Chicago: Rand McNally. 94-141.

Kaplan, Abraham. (1963). The Conduct of Inquiry. New York: Harper and Row. (Read chapters on concepts, models, theories, explanation and values.)

Schaffler, Israel. (1971). The Language of Education. 8th Printing. Springfield, Illinois: Charles C. Thomas. (LB 19 SCH)

Shulman, Lee. (1985). Research Programs for the Study of Teaching. The 84th Year Book of the National Society for the Study of Education (NSSE). Chicago: University of Chicago Press. (To be published August, 1985).

Soltis, J.F. (1968). An Introduction to the Analysis of Educational Concepts. Reading, Massachusetts: Addison-Wesley.

Steiner, Elizabeth. (1978). Logical and Conceptual Analytic Techniques for Educational Research. Washington D.C.: University Press of America.

FURTHER READING : Combs, A.W., Blume, R.A., Newman, A.J., Wass, H.L. (1974). The Professional Education of Teachers: A Humanistic Approach to Teacher Preparation. Boston: Allyn and Bacon.

Charting A New Course for Teacher Education, KAPPAN Special Issue, September 1982. (Read Gideonse's article: The necessary resolution in teacher education and the responses.)

Gage, N.L. (1977). The Scientific Basis of the Art of Teaching. New York: Teachers College Press.

Goldstein, M.A. (1976). Durkheim's sociology of education: An interpretation of social change through education. Educational Theory. Summer, 26 (2), 2613-2617.

Kuhn, Thomas S. (1970). The Structure of Scientific Revolution. Second Edition. International Encyclopedia of Unified Science. Chicago: University of Chicago Press.

Lave, Charles A. and March, James. (1975). An Introduction to Models in the Social Sciences. New York: Harper and Row.

Peterson, P.L. and Walberg, H.J. (1979). Research on Teaching: Concepts, Findings and Implications. Chicago: McCutchan.

Pugh, R.C., Gliessman, D.H., Hutchins, T.F., Dowden, D.E. (1985). A Synthesis of Research on Methods of Training in Teacher Education. A paper presented at the Annual Meeting on the American Educational Research Association (AERA), Chicago, 1985.

Reitman, S.W. (1981). Education, Society and Change. Boston: Allyn and Bacon. (LC 191.4 Rei)

Spraggins, J.R. (1984). Whitehead's Educational Ontology. Educational Theory. 34 (4). Fall, 373-378.

Whitehead, A.N. (1950). The Aims of Education. London: Williams and Horgate. (LB 875 Whi)

COURSE TITLE : Research in Educational Psychology

COURSE CODE : MED/EP-01

DURATION : 30 hours

LECTURER : Dr Ko Peng Sim

RATIONALE : This course is designed for M Ed students who wish to familiarise themselves with current research in the field of educational psychology. As a parallel course to Course EP2 (tentative code), it provides the students with information and evidence from research relevant to the topics and issues to be examined. Hence, the course would best be taken together with Course EP2. However, for those who do not intend to study the issues, this course can be taken as an independent course.

OBJECTIVES : The main objective of the course is to introduce students to selected topics in educational psychology which are applicable to teaching and learning. Special reference will be given to research concerning issues which were much discussed in recent years and problems associated to the study of such issues. It is hoped that at the end of the course, the student will be able to choose an area of interest from the various topics being examined and to do an in-depth study of this topic through review of pertinent literature.

COURSE CONTENT : 1 Early experience and human development

1.1 Mother-child relation and its effect on later development

1.2 Early intervention and special pre-school programmes

2 Interpersonal relations in the classroom

2.1 Patterns of teacher-pupil interaction

2.2 Classroom climate and leadership style

2.3 Small and large group processes

3 Personality and perceived control

3.1 Locus of control and achievement-related behaviour

3.2 Attribution and self-perception

4. Human variation and methods of instruction

4.1 Studies in individual differences

4.2 Studies in methods of instruction

4.3 Studies in aptitude-treatment interaction

MODE OF ASSESSMENT : Students are expected to submit, by the end of the course, one of the following assignments:

- 1 a research review of a selected topic (or area) covered in the course,
 - 2 a critique of a published paper from a local or international journal,
- OR
- 3 a proposed plan for conducting a study in a particular topic (or area) relevant to the topics (or areas) discussed in the course.

RECOMMENDED READING: Donaldson, M., Grive, R. and Pratt, C. (eds.). (1983). Early Childhood Development and Education. The Guildford Press. (BF 723 Cog.E)

Douglas, T. (1983). Groups: Understanding People Gathered Together. Tavistock Publishers. (HM 131 Dou)

Bass, B.M. (1981). Stogdill's Handbook of Leadership: A Survey of Theory and Research. The Free Press. (HM 141 Sto)

Lefcourt, H.M. (1982). Locus of Control: Current Trends in Theory and Research. Lawrence Erlbaum Associates, Publishers. (BF 532.5 Lef)

Entwistle, N. (1981). Styles of Learning and Teaching: An Integrated Outline of Educational Psychology for Students, Teachers and Lecturers. John, Wiley and Sons. (LB 1051 Ent)

Cronbach, L.J. and Snow, R.E. (1977). Aptitudes and Instructional Methods. Irvington Publishers, Inc., (LB 3051 Cro)

COURSE TITLE : Issues in Educational Psychology

COURSE CODE : MED/EP-02

DURATION : 30 hours

LECTURERS : Dr Ko Peng Sim
Dr Agnes Chang Shook Cheong
Mrs Tay-Koay Siew Luan
Miss Frances Lee Moi Fah

RATIONALE : This course is offered to M Ed students who are interested in the contemporary issues in educational psychology, particularly those concerning teaching and learning. The course will be conducted in the form of a forum in which a number of suggested issues and questions will be raised for discussion. No special prerequisites are required for students who opt to attend the course but those who intend to do so are advised to take MED/EP-01 as well, as it deals mainly with research and studies that are relevant to these issues.

The suggested topics are chosen on the basis of their relevance to teaching and learning and implications to classroom instruction. Being current issues they are subject to change when general concerns change.

OBJECTIVES : The main objective of this course is to provide an opportunity for students who are concerned with classroom instruction to share with others their views and ideas concerning teaching and learning. It is hoped that those attending the course will leave with a better understanding of the various issues being discussed.

COURSE CONTENT : 1 Intelligence, cognitive development, and academic achievement

1.1 Which has a greater influence on a person's cognitive development: heredity or environment?

1.2 Is the stage of cognitive development truly invariant?

1.3 Can cognitive growth be accelerated through intervention and special learning programmes?

1.4 Can future academic achievement be predicted from scores in intelligence tests and school examinations?

- 2 Classroom management and learning environment
- 2.1 Is punishment an effective way to cope with behavioural problems?
- 2.2 Will extrinsic rewards destroy intrinsic interest?
- 2.3 Can creativity be taught in a structured learning environment?
- 2.4 Should democracy be practised in the classroom?
- 3 Teacher expectation and its effect on students
- 3.1 Should teachers form expectations about their students?
- 3.2 Do teacher expectations function as self-fulfilling prophecies?
- 3.3 Will streaming affect a teacher's expectation and hence the students' self-perception?
- 4 Human variation and problems in adjustment
- 4.1 How could teachers cope with individual differences in ability to learn?
- 4.2 Should there be a match between teacher's and student's learning styles?
- 4.3 Will a mismatch between teacher's and student's personality lead to adjustment problems?

MODE OF ASSESSMENT : Students are expected to submit, at the end of the course, a written paper on one of the topics discussed.

RECOMMENDED READING: Unit 1. Intelligence, cognitive development, and academic achievement

Eysenck, H.J. and Kamin, L. (1981).
Intelligence: The Battle of the Mind. Multimedia Publications Inc. (BF 431 Eys)

OR

Eysenck, H.J. and Kamin, L. (1981).
The Intelligence Controversy. John Wiley and Sons. (BF 431 Eys)

- Sternberg, R.J. (1984). How can we teach intelligence. Educational Leadership, September, 38-48.
- Duckworth, E. (1979). Either we're too early and they can't learn it or we're too late and they know it already: the dilemma of "Applying Piaget". Harvard Educational Review, August, 49, 3, 297-313.
- Bloom, B.S. and Sosniak, L.A. (1981). Talent development vs schooling. Educational Leadership, November, 86-94.
- Sternberg, R.J. (1984). Testing intelligence without IQ tests. Phi Delta Kappan, June, 65, 10, 694-698.
- Gardner, H. (1984). Assessing intelligence: a comment on "Testing intelligence without IQ tests". Phi Delta Kappan, June, 65, 10, 699-700.

Unit 2. Classroom management and learning environment

- Clarizio, H. (1981). Punishment: a new look. In H.F. Clarizio, R.C. Craig, and W.A. Mehrens. Contemporary Issues in Educational Psychology. Allyn and Bacon. (LB 1051 Cla)
- Greene, D. and Lepper, M.R. (1981). Intrinsic motivation - how to turn play into work. In H.F. Clarizio, R.C. Craig and W.A. Mehrens. Contemporary Issues in Educational Psychology. Allyn and Bacon. (LB 1051 Cla)
- Perkins, D.N. (1984). Creativity by design. Educational Leadership, September, 18-25.
- B.M. Bass (ed.) (1981). Stogdill's Handbook of Leadership: A Survey of Theory and Research. The Free Press. Chapter 18. Democratic vs Autoeratic Leadership. (HM 141 Sto)

Unit 3. Teacher expectation and its effect on students

- Dworkin, N. and Dworkin, Y. (1979). The legacy of pygmalion in the classroom. Phi Delta Kappan, June, 712-718.
- Smead, V.S. (1984). Self-fulfilling prophecies in the classroom: dead end of promising beginning? The Alberta Journal of Educational Research, June, 1984, Vol XXX, 2, 145-156.
- Kulik, C-L., C. and Kulik, J.A. (1982). Research synthesis on ability grouping. Educational Leadership, May, 619-621.
- Herbert, W.M. and Parker, J.W. (1984). Determinants of student self-concept: is it better to be a relatively large fish in a small pond even if you don't learn to swim as well? Journal of Personality and Social Psychology, 47 (1), 213-231.

Unit 4. Human variation and problems in adjustment

- Ridley, D.R. and Novak, J.D. (1983). Sex related differences in high school science and mathematics enrolments: do they give males a critical headstart toward science and mathematics-related careers? The Alberta Journal of Educational Research, Vol XXIX, 1, Pg. 1-14.
- Stanley, J. (1981). On mathematically talented youth: a conversation with Julian Stanley. Educational Leadership, November, 101-106.
- Paradise, L.V. and Block, C. (1984). The relationship of teacher-student cognitive style to academic achievement. Journal of Research and Development in Education, 17 (4), 57-61.
- Spaulding, R.L. (1983). A systematic approach to classroom discipline. Phi Delta Kappan.

- Part 1. September, 48-51.
Part 2. October, 132-135.

COURSE TITLE : Research and Issues in Educational Measurement:
I. Cognitive Domain

COURSE CODE : MED/TG-01

DURATION : 30 hours

LECTURER : Dr Tan Wee Kiat

RATIONALE : In the system of education in Singapore, cognitive measures play a vitally important role. Postgraduate students who are likely to be involved in decision-making involving cognitive measures need to acquire theoretical knowledge in this regard to intelligently contribute and assist in the decision-making process. Postgraduate students whose dissertations require measurement in the cognitive domain need the practical skills in developing and adapting suitable tests for data collection.

OBJECTIVES : This course is therefore designed to enrich the students' professional competency in cognitive measurement in terms of both conceptual understanding and the necessary techniques. In addition, the students will be introduced to current issues in cognitive measurement.

COURSE CONTENT : RESEARCH AREAS

- 1 Taxonomy of educational objectives - cognitive domain
- 2 Standardized tests in content areas
- 3 The testing of intelligence
- 4 The testing of special aptitudes
- 5 Uses and abuses of tests
- 6 Test development and adaptation (1): Considerations and procedure
- 7 Test development and adaptation (2): Item analysis and item selection
- 8 Test development and adaptation (3): Ensuring reliability and validity
- 9 Test development and adaptation (4): Various forms of scores and norms

ISSUES

- 1 Criterion-referenced vs norm-referenced tests
- 2 Minimum competency testing
- 3 Test bias and item bias
- 4 Classical model vs latent trait models
- 5 Item banking
- 6 Social and legal aspects of testing

MODE OF ASSESSMENT : The student is expected to submit for assessment one of the following:

- 1 Critique on a cognitive test
- 2 Try-out report for a cognitive test
- 3 Review of literature pertaining to a selected aspect of cognitive measurement

RECOMMENDED READING: Anastasi, Anne (1982). Psychological Testing, 5th ed. New York: Macmillan. (BF 431 Ane)

Cronbach, Lee J. (1984). Essentials of Psychological Testing, 4th ed. New York: Harper and Row. (BF 431 Cro)

Roid, Gale H. and Haladyna, Thomas M. (1982). A Technology of Test-Item Writing. New York: Academic Press. (LB 3060.32 Cri.R)

Thorndike, Rober I. (1982). Applied Psychometrics. Boston: Houghton Mifflin. (BF 39 Tho)

Wigdor, A.K. and Garner, W.R., eds. (1982). Ability Testing: Uses, Consequences and Controversies. Parts I and II. Washington: National Academy Press. (LB 3051 Abi)

COURSE TITLE : Research and Issues in Educational Measurement:
II. Affective Domain

COURSE CODE : MED/TG-02

DURATION : 30 hours

LECTURER : Dr Soh Kay Cheng

RATIONALE : Affective factors, both as antecedents and outcomes of education, have been much neglected though their importance has been recognized. Postgraduate students who are likely to be involved in decision making using pupil performance need to acquire knowledge of typical performance of pupils; such knowledge will complement their knowledge of cognitive measures, for a more balanced and complete understanding of educational achievement in both cognitive and affective domains. Postgraduate students may also require the use of affective measures for their research dissertations.

OBJECTIVES : The course is therefore designed to introduce to the students various techniques of developing and adapting instruments for measurement in the affective domain, together with their underpinning concepts and theories. Moreover, the students need to be aware of the current issues in affective measurements which have implications for the use of such devices and educational decision-making.

COURSE CONTENT : RESEARCH AREAS

- 1 Taxonomy of Educational Objectives - Affective Domain
- 2 Pupil typical performance as antecedents and outcomes of schooling
- 3 Academic interest and achievement motivation
- 4 Attitudes towards subjects and the school
- 5 Self-concept, locus of control, personality
- 6 Values and interests
- 7 Scaling (1): Types of scales
- 8 Scaling (2): Considerations and procedure
- 9 Scaling (3): Item analysis

10 Scaling (4): Checking the reliability and validity

ISSUES

- 1 Traits vs types
- 2 The question of dimensions
- 3 Test anxiety

MODE OF ASSESSEMENT: The student is expected to submit for assessment one of the following:

- 1 Critique on an affective measuring instrument
- 2 Try-out report for an affective measuring instrument
- 3 Review of literature pertaining to a selected aspect of affective measurement.

RECOMMENDED READING: Anastasi, Anne (1982). Psychological Testing, 5th ed. New York: Macmillan. (BF 431 Ane)

Cronbach, Lee J. (1984). Essentials of Psychological Testing, 4th ed. New York: Harper and Row. (BF 431 Cro)

Henderson, Marlene E. et al. (1982). How to Measure Attitudes. Beverly Hills: Sage. (BF 323 Att.H)

McIver, John P. and Carmines, E.G. (1981). Unidimensional Scaling. Beverly Hills: Sage. (HA 29 Qua)

Lefcourt, Herbert M. ed. (1981). Research with the Locus of Control Construct, Volume 1: Assessment Methods. New York: Academic Press. (BF 611 Res)

COURSE TITLE : Research in the Sociology of Education

COURSE CODE : MED/CS-01

DURATION : 30 hours

LECTURERS : Dr Pauline Chan

RATIONALE : This course aims to provide an introduction to the contemporary debates in the Sociology of Education. Increasingly, decisions on educational matters such as school organization, teacher's roles, curriculum content and the like are supported by sociologically oriented research. This course will help the students to recognize the complex interrelationship between educational research and policy-making, and also provide the opportunity for specialization in an area of sociological research.

OBJECTIVES : This course intends to

- 1 acquaint students with the major areas of sociological enquiry.
- 2 enable students to formulate an interpretive framework for linking educational theory and policy with practice.
- 3 select one aspect of sociology or an area of professional interest for further investigation.

COURSE CONTENT : 1 The Distribution of Educational Achievement

- 1.1 Social factors influencing school performance
- 1.2 Influence of the home on the child's career in school
- 1.3 Ability and opportunity in school

2 The Organization of the School

- 2.1 Features of the school that affect pupil performance
- 2.2 Streaming and the labelling theory
- 2.3 Educational provision and its bearing on educational attainment

- 3 The Changing Role of the Teacher
 - 3.1 Pedagogical roles in the classroom
 - 3.2 Conflict in the teacher's role
 - 3.3 The ethnography of classrooms
- 4 Values and Learning
 - 4.1 Interaction of value systems
 - 4.2 Cultural transmission and social reproduction
 - 4.3 Schooling and the learning of norms

MODE OF ASSESSMENT : An essay of not less than 2,000 words is to be submitted on a chosen area of contemporary research. It should include the following:

- 1 review of relevant literature
- 2 critique of the related problem(s)
- 3 suggestions on possible areas of further research in that area

RECOMMENDED READING: Bidwell, C.E. (1977). Alternative Research Perspectives on the Effect of School Organization and Social Context, Report No. 232, Johns Hopkins University, Center for Social Organization of Schools.

Brumer, A., et al. (1978). Sources of Difference in School Achievement, London: NFER Publishing Company.

Coleman, J.S. (1975). Methods and Results in the IEA Studies of the Effects of School on Learning, Review of Educational Research, 45, 335-86.

Douglas, J.B., et al. (1961). All Our Future: A Longitudinal Study of Secondary Education, London: Peter Davis.

Eggleston, J., ed. (1974). Contemporary Research in the Sociology of Education, London: Harper and Row. (LC 203 Egg)

Jencks, C., et al. (1972). Inequality: A Reassessment of the Effect of Family and Schooling in America, New York: Basic Books.

Rutter, M., et al. (1979). Fifteen Thousand Hours: Secondary Schools and their effects on Children, London: Open Books. (LA 635 Fit)

COURSE TITLE : Issues in the Sociology of Education

COURSE CODE : MED/CS-02

DURATION : 30 hours

LECTURERS : Dr Pauline Chan

RATIONALE : The aim of the course is to provide a forum for discussion and critical analysis of common issues relating to schooling, teaching and learning. Students are encouraged to engage in the on-going construction and exploration of problematic issues. This will enable them to gain insight into the social phenomena and to examine educational problems in the wider perspective.

OBJECTIVES : This course intends to help students to

- 1 acquire an understanding of the nature of the relationship between school and society.
- 2 develop the skills and attitudes distinctive of sociological discourse.
- 3 select a topic of study related to a proposed research project.

COURSE CONTENT :

- 1 Aspects of Social Stratification and Social Selection
 - 1.1 How are social class, social mobility being conceived?
 - 1.2 Meritocracy and equality of educational opportunity.
 - 1.3 Concept of 'educability' - Does streaming inevitably recreate the inequality of opportunity that it is designed to avoid?
- 2 The Agencies of Socialization
 - 2.1 The link between home and school.
 - 2.2 The hidden curriculum and school language.
 - 2.3 Technology, education and work.

- 3 Changes in the Status and Role of the Teacher
 - 3.1 Do teachers and schools have any significant causal influence on educational opportunities, experiences and achievement of the children?
 - 3.2 Accountability and teacher's autonomy.
 - 3.3 Teacher as researcher.
- 4 The Sociology of the Classroom
 - 4.1 Nature of teacher-pupil interaction.
 - 4.2 Communication in the classroom.
 - 4.3 A case for mixed ability teaching.

MODE OF ASSESSMENT : Students are required to submit an assignment of not less than 2,000 words on an educational issue relating to local context. It should include the following:

- 1 historical background of the problem
- 2 systematic analysis
- 3 proposed solutions

RECOMMENDED READING: Cohen, L. and Manion, L. (1981). Perspectives on Classrooms and Schools. London: Holt.

Douglas, J.B. (1964). The Home and the School. London: McGibbon and Kee.

Ford, J., et al., (1969). Social Class and Educational Opportunity. London: Heinemann.

Flanders, N.A. (1970). Analysing Teacher-Behaviour. Reading, Mass. Addison-Wesley.

Grace, G.R. (1972). Role Conflict and the Teacher. London: Routledge.

Karabel, J. and Halsey, A.H., ed. (1977). Power and Ideology in Education. New York: Oxford University Press. (LC 191 Kar)

Lawton, D. (1968). Social Class, Language and Education. London: Routledge. (LB 1138 Lan.L)

Meighan, R. (1981). A Sociology of Educating. London: Holt.

Plowden Report. (1967). Children and Their Primary Schools. London: HMSO.

COURSE TITLE : Research in Teacher Education

COURSE CODE : MED/CS-11

DURATION : 30 hours

LECTURER(S) : Dr S Gopinathan

RATIONALE : The goal of this course is to acquaint students with the wide diversity of research in the field of teacher education. It will seek to provide for reading in and discussion of the crucial concerns in the area of teacher education and an effort will be made to present a sampling of work from different theoretical traditions.

OBJECTIVES : The specific objectives of this course are to introduce students to selected topics in teacher education. At the end of the course students will be knowledgeable about the major research concerns in teacher education and be able to recognise the theoretical perspectives from which studies are undertaken.

COURSE CONTENT : 1 Models/Paradigms of Teacher Education

2 Curriculum of Teacher Education: Comparative Perspective

3 Pre-service and In-service Education

4 Teacher Profiles e.g Academic Qualifications, Home Background (SES), Personality, Gender, Motives

5 Role and Status of Teachers

6 Teacher Supply and Demand

7 Teacher and Teaching Effectiveness

8 Problems of Theory and Practice

9 Innovations and Trends in Teacher Preparation

MODE OF ASSESSMENT : The assessment will consist of a critique of a particular topic in teacher education with the literature for the critique where applicable drawn from a variety of theoretical perspectives.

RECOMMENDED READING: Gage, N.L. (1985). Hard Gains in the Soft Sciences: The Case of Pedagogy. Indiana: Phi Delta Kappan. (Forthcoming)

Howey, K.R. (1983). The Education of Teachers: A Look Ahead. New York: Longman Inc. (LB 1715 How)

Shulman, L. (1985). Paradigms and Research Programs in the Study of Teaching in Wittrock, M.C. (ed), Handbook of Research on Teaching (3rd Edition), New York: MacMillan. (Forthcoming).

Taylor, W. (1978). Research and Reform in Teacher Education, London: NFER Publishing Co. Ltd. (LB 1723 Tay)

Taylor, W. (1981). Teacher Education in Singapore: Report of a Follow-up visit, Singapore: Institute of Education. (R LB 1727 Sin.T)

Turney, C. et al. (1985). A New Basis for Teacher Education: The Practicum Curriculum, New South Wales: Sydnac Academic Press. (LB 2157 New)

Wragg, E.C. (1982). A Review of Research in Teacher Education, Windsor: NFER-Nelson Publishing Co. Ltd. (LB 1715 Wra)

COURSE TITLE : Issues in Teacher Education

COURSE CODE : MED/CS-12

DURATION : 30 hours

LECTURER(S) : Dr S Gopinathan

RATIONALE : The goal of this course is to acquaint students with the wide range of issues and questions in the field of teacher education. While the course is intended to be self-contained, students will benefit more if they have also done the Research in Teacher Education course.

OBJECTIVES : The specific objectives of this course are to introduce students to selected issues in teacher education. At the end of the course students will be knowledgeable about the major research issues in teacher education. The course will hopefully provide students with an appreciation of research topics requiring further investigation.

COURSE CONTENT : 1 Teacher Education: Whose Responsibility?

2 Should Teachers Be Well Educated or Highly Skilled?

3 Would Extended Teacher Education Produce More Competent Teachers?

4 Teacher Stress: Myth or Reality?

5 Is Teaching a Profession?

6 Teacher Selection: Validity of Criteria e.g. Interview, Academic Qualifications, Personality Assessment.

7 Does a Teacher's Expectations and Intentions Influence Classroom Performance? - Implications for Teacher Education

8 Should Teaching Practice Be Graded? - The Why and How of Supervision

9 Which is More Effective: Teacher Apprenticeship or Campus-based Teacher Education?

10 Is Teaching an Art or Science?

MODE OF ASSESSMENT : The assessment will consist either of a critique of a particular research issue in teacher education or of a proposal for further investigation.

RECOMMENDED READING: Hall, G. et al. (1980). Exploring Issues in Teacher Education: Questions for Future Research. Texas: R & D Centre for Teacher Education. (Forthcoming)

Myers, D. and Reid, F. (1974). Educating Teachers: Critiques and Proposals. Toronto: Ontario Institute for Studies in Education. (LB 1715 Edu)

Shulman, L. (1985). Paradigms and Research Programs in the Study of Teaching in Wittrock, M.C. (ed), Handbook of Research on Teaching, (3rd Edition). New York: MacMillan. (Forthcoming).

Taylor, W. (1980). Teacher Education in Singapore 1980: The Role of the Institute of Education. Singapore: Institute of Education. (R LB 1727 Sin.T)

Taylor, W. (1981). Teacher Education in Singapore: Report of a Follow-up visit. Singapore: Institute of Education. (LB 1727 Sin.T)

Theory into Practice. Vol 22, No 1, Winter 1983, Ohio: Edpress. (L 11 TIP)

Singapore Journal of Education. (1983). Theme Issue on Research and Teacher Education. July, 5 (2). Singapore: Institute of Education.

COURSE TITLE : Curriculum Inquiry

COURSE CODE : MED/SV-01

DURATION : 30 hours

LECTURER : Dr Then Lian Mee

RATIONALE : The course is intended to be an exploration of, or investigation into, the area of the curriculum. It will examine the nature of curriculum inquiry: what is of concern to curriculum specialists and practitioners, the questions asked, the issues and the implications for research and action. The course will focus on the clarification of thinking about the curriculum and related curriculum matters, and familiarisation with concepts, criteria and procedures in the study of the curriculum. Curriculum inquiry as proposed will provide the broad context from which further study or more specialised study into specific aspects of the curriculum can proceed.

OBJECTIVES : The course will enable the students to:

- 1 understand the nature and process of curriculum inquiry
- 2 examine the key concepts used in curriculum inquiry
- 3 examine selected curriculum models and the basis for the construction of these models
- 4 distinguish between curriculum as content and curriculum as process
- 5 identify trends and issues in curriculum research

COURSE CONTENT : 1 Nature, scope and process of curriculum inquiry

- 2 Concept of the curriculum and related concepts
- 3 Approaches to curriculum inquiry
 - rational, scientific paradigm
 - naturalistic approach
 - search for new paradigms
- 4 Values and curriculum theory
- 5 Curriculum, culture and ideology

- 6 Curriculum as content:
 - prescriptions for content
 - philosophical assumptions
 - issues
- 7 Curriculum as process - schema/models, activities, problems:
 - curriculum implementation
 - curriculum development
 - curriculum evaluation
 - curriculum change
- 8 Curriculum research:
 - nature
 - trends
 - implications

MODE OF ASSESSMENT : The assessment will be by assignment, which will be a paper based on the student's selection of an issue in curriculum inquiry for study. The student will attempt to clarify the nature of the issue and suggest alternative ways to approach the study of the issue.

Alternatively, the student will select a problem in curriculum practice and discuss how elements from theory can be utilized to clarify the nature of the problem and influence thinking on solutions to the problem.

- RECOMMENDED READING: Beauchamp, George, A. (1981). Curriculum Theory. 4th ed. Ithaca, Illinois: Peacock. (LB 1570 Bea)
- Goodlad, John and others. (1979). Curriculum Inquiry: The Study of Practice. New York: McGraw-Hill. (LB 1570 Cur)
- Lawn, Martin and Barton, Len, eds. (1981). Rethinking Curriculum Studies. London: Croom Helm. (LB 1564 Gre.R)
- Molnar, Alex and Zahorik, John A., eds. (1977). Curriculum Theory. Washington, D.C.: ASCD. (LB 1570 Mil)
- Reid, William A. (1978). Thinking about the Curriculum: The Nature and Treatment of Curriculum Problems. London: Routledge and Kegan Paul. (LB 1570 Rei)

Taylor, Philip H., ed. (1979). New Directions in Curriculum Studies. Lewes, Sussex: The Falmer Press. (LB 1570 New)

Journal of Curriculum Studies. (LB 1570 JCS)

Curriculum Inquiry. (LB 1570 CI)

Journal of Curriculum Theorizing.

COURSE TITLE	: Research in Language Education
COURSE CODE	: MED/ES-01
DURATION	: 30 hours
LECTURERS	: Dr Ho Wah Kam Mr Oliver Seet Miss Sally Low
RATIONALE	: Over the last twenty years, language education research has made a significant contribution to understanding those aspects of language teaching and learning in the classroom that are amenable to scientific analysis. The findings are diverse and the procedures for data collection and analysis varied. M Ed students preparing to undertake their own research in this area should be exposed to the nature of classroom-centred language research and the methodologies available. The focus of this course will be the design of language education research and the methodological issues pertinent to such research. In practice, research studies will be examined with reference to the kind of research questions posed and the methodology and statistical analyses used. In this and other ways, students will be prepared for the formulation of their own research proposals.
OBJECTIVES	: The objectives of this course are to: <ol style="list-style-type: none"> 1 provide students with an overview of classroom-centred language education research; 2 help students understand the nature of and the process in language education research; 3 examine possible designs for language education research; and 4 highlight the methodological issues in language education.
COURSE CONTENT	: 1 An Overview of Classroom-centred Language Education Research. <ol style="list-style-type: none"> 1.1 Process-product studies 1.2 Experimental studies 1.3 Observational studies 1.4 Language acquisition studies

- 2 Studies Accounting for Differences in Achievement among Language Learners.
 - 2.1 Social and Cognitive Factors and Language Achievement.
 - 2.2 Motivational Factors and Attitude.
 - 2.3 Language Learning Environments and Language Achievement.
 - 2.4 Model Specification and Methodological Issues.
- 3 Research in Language Learning and Acquisition.
 - 3.1 Research in Developmental Language Acquisition.
 - 3.2 Language Learning Strategies.
- 4 Research in Language Teaching Methodology.
 - 4.1 Comparative Studies in Language Teaching Methodology.
 - 4.2 Research in the Teaching of Reading, Listening Comprehension and Writing.
 - 4.3 Research in the Teaching of Grammar.
- 5 Research in Language Testing and Evaluation.
 - 5.1 Concepts and Research in Language Testing.
 - 5.2 Review of the Types of Language Tests and Methodological Issues.
 - 5.3 Evaluation of Language Programmes.

MODE OF ASSESSMENT : Each course member will write a critique of a selected piece of language education research or review the research literature of a topic in language education.

RECOMMENDED READING: Dulay, Heidi et al. (1982). Language Two. New York: Oxford University Press. (P 53 Dul)

Gentile, Lance M.; Kamil, Michael L. (1983). Blanchard, Jay S. (eds.) Reading Research Revisited. Columbus, Ohio: Merrill. (LB 1050 Rea)

Gingras, Rosario C. (ed.). (1978). Second Language Acquisition and Foreign Language Teaching. Washington, D.C: Centre for Applied Linguistics. (P 51 Sec)

Hatch, Evelyn and Farhady, Hossein. (1982). Research Design and Statistics For Applied Linguistics. Rowley, Mass: Newbury House Inc. (P 53 Hat)

Mosenthal, Peter et al. (eds.). (1983). Research On Writing: Principles and Methods. N.Y., Longman. (PE 1404 Res)

Oller, Jr, John W. and Perkins, Kyle. (eds.) (1978). Language in Education: Testing the Tests. Rowley, Mass: Newbury House Pub. (LB 1575.8 Lan)

Oller, Jr, John W. and Jack C. Richards. (eds.) (1973). Focus on the Learner. Rowley, Mass: Newbury House Publishers Inc. (P 51 Oll)

COURSE TITLE : Issues in Language Education

COURSE CODE : MED/ES-02

DURATION : 30 hours

LECTURERS : Miss Amy Sobrielo
Mr Robert Yeo
Miss Phyllis Chew

RATIONALE : Language Education in any country is influenced by psycholinguistic and sociolinguistic factors and theories. Certain language policies result and certain approaches to language teaching are adopted. These are all reflected in the language environment, the language syllabuses, the textbooks, and the language teaching methods used in the classroom. Language theories, language policies, approaches to language teaching and the results of such teaching differ widely, offering to the language researcher a vast field for study and investigation. This course will introduce the participants to this field and will help narrow it down by focussing on the more crucial issues in language education pertinent to the Singapore situation. The course will adopt a seminar approach through which participants will be able to discuss and examine the main aspects and factors contributing to and affecting language education today.

OBJECTIVES : The students will be able to

- 1 understand the linguistic theories underpinning language education;
- 2 discuss the issues and controversies in conflicting theories and realise their implications for language education;
- 3 develop their own philosophy with regard to language education;
- 4 identify an area for a dissertation research study.

COURSE CONTENT : A Psycholinguistic Theories and Language Education

- 1 Language Theory
 - which theory of language to adopt?
 - the status of Transformational-generative Grammar?
- 2 Language Learning and Language Acquisition (L1 and L2)
 - acquisition or learning?
 - language teaching and language learning - any relationship?
 - attitude and aptitude
 - IQ and language achievement
 - language learning strategies

B Approaches to Language Teaching and Methodology

- 3 Teaching Approaches and the Language Syllabus
 - Prescriptive vs descriptive (grammatical/structural syllabus; situational/notional/functional syllabus.)
- 4 Which approach to Language Teaching?
 - comprehension approach
 - approaches to the provision of a rich acquisition environment
 - approaches to the provision of a rich learning environment
 - an eclectic approach
 - using L1 to teach target language?
 - cross-cultural differences in language education.
- 5 Language Testing
 - competence vs performance
 - discrete-point tests vs integrative tests

C Sociolinguistic Factors and Language Education

6 Societal Factors in Language Education

- issues in bilingualism
- varieties of the target language
- interlanguage
- motivation: instrumental or integrative?

MODE OF ASSESSMENT : One written assignment, reflecting an in-depth study of one of the issues discussed.

RECOMMENDED READING: Atkinson, Martin. (1982). Explanations in the Study of Child Language Development. Cambridge: Cambridge University Press. (P 118 Atk)

Brown, H. Douglas. (1980). Principles of Language Learning and Teaching. Englewood, N.J. : Prentice Hall. (P 51 Bro)

Brumfit, Christopher J. (1983). A Short Introduction to Language and Language Teaching. London: Batsford. (P 118 Bru)

Corder, S. Pit. (1981). Error Analysis and Interlanguage. Oxford: Oxford University Press. (P 53 Cor)

Hatch, Evelyn M. (1983). Psycholinguistics: a Second Language Perspective. Rowley, Mass: Newbury House. (P 37 Hat)

Krashen, Stephen D. (1982). Principles and Practice in Second Language Acquisition. Oxford: Pergamon Press, 1982. (P 53 Kra)

Richards, Jack C. (1978). Understanding Second and Foreign Language Learning: Issues and Approaches. Rowley, Mass: Newbury House. (P 51 Und)

COURSE TITLE : Research in Mathematics Education

COURSE CODE : MED/MC-01

DURATION : 30 hours

LECTURERS : Dr Eric Latimer Plant
Dr Lesley Booth

RATIONALE : This course is designed to acquaint the students with the wide range of research questions and the variety of research methods in mathematics education. The students will be encouraged to identify potential research problems and develop the necessary research knowledge and skills.

OBJECTIVES : This course aims to:

- 1 familiarize the students with the various research areas and methodologies in mathematics education.
- 2 enable the students to plan and implement a small scale research project in mathematics education.

COURSE CONTENT : Research in mathematics education is currently undergoing a major change in emphasis. From a concentration on such aspects as the classification of errors in mathematics, the testing of attainment in different topic areas, and the effects of specific teaching procedures on short-term attainment, the focus in mathematics education research is now shifting to such questions as:

- 1 What is the nature of mathematical thinking, and how can children be best taught to think mathematically?
- 2 What procedures and concepts in mathematics do children actually use (and how do these differ from the 'formal' view)?
- 3 What difficulties surround the acquisition of symbolic understanding, and how can these be best dealt with?
- 4 What is the role of language in the development of mathematical understanding?
- 5 What do we mean by mathematical 'understanding', and how can it be attained?

- 6 What is the role of motivational and attitudinal factors in learning mathematics and what are the implications of differences in 'cognitive style'?
- 7 What contributions to mathematical learning might the computer make, and how can computers be used to the greatest benefit?

Within each area of investigation, two major issues demand attention: What are the implications of the investigations for teaching and curriculum development, and what are their implications for a theory of mathematical learning?

This course will examine these issues via a detailed consideration of recent research projects relevant to the questions outlined above. In addition, the research designs adopted will be examined with reference to the kind of research question posed by each study, and particular aspects of methodology and analysis will be discussed.

MODE OF ASSESSMENT : A written assignment delimiting a research study in mathematics education with its proposed method of investigation.

- RECOMMENDED READING: Begle, E. G. (1979). Critical Variables in Mathematics Education. Washington, D.C.: NCTM. (QA 11 Beg)
- Bell, A. W., Costello, J. and Kuchemann, D. E. (1983). A Review of Research in Mathematics Education, Part A: Research on Learning and Teaching. Windsor: NFER-NELSON. (QA 11 Bel)
- Booth, L. R. (1984). Algebra: Children's Strategies and Errors, A Report of the Strategies and Errors in Secondary Mathematics Project. Berkshire: NFER-NELSON. (QA 159 Boo)
- Fennema, E. (ed.) (1981). Mathematics Education Research: Implications for 80's. Virginia: NCTM. (QA13 Mat)
- Hart, K. M. (ed.) (1981). Children's Understanding of Mathematics: 11-16. London: John Murray. (QA 14 Gre.C)
- Shumway, R. J. (ed.) (1980). Research in Mathematics Education. Virginia: NCTM. (QA11 Res)

- COURSE TITLE : Issues in Mathematics Education
- COURSE CODE : MED/MC-02
- DURATION : 30 hours
- LECTURERS : Dr Lesley Booth
Dr Ong Sit Tui
- RATIONALE : Among some of the most fundamental issues in mathematics education are questions which concern what mathematics to teach, when, how, and to whom. Contemporary psychological theory has provided frameworks to guide views of how children learn and how instruction may proceed. Research has provided evidence about children's development of mathematical concepts, the difficulties children have in learning mathematics, and the effectiveness of various teaching strategies. Above all, the introduction of computers into the school context has raised further questions concerning the nature of mathematical activity and the kind of content which may be most appropriate for mathematics curricula of the future. This course will set out to examine these issues and their implications for curriculum development in mathematics.
- OBJECTIVES : The students will be able to investigate
1. the issues of the nature of mathematical content and mathematical activities and their implications for mathematics education;
 2. the question of mathematics curriculum content appropriate in a computer age;
 3. the possible contributions of psychological theory to mathematics curriculum design.
- COURSE CONTENT : 1. Views on the nature of mathematics:
- 1.1 What is mathematics?
 - 1.2 The historical perspective.
 - 1.3 Why teach mathematics?
 - 1.4 Aims and objectives of contemporary mathematics curricula.
 - 1.5 The impact of computers.

- 2 Views on the psychology of learning mathematics:
 - 2.1 Piaget and the role of cognitive development.
 - 2.2 The neo-Piagetians: does our information-processing capacity limit what we can learn.
 - 2.3 Bruner and the spiral curriculum.
 - 2.4 Ausubel and the notion of 'meaningful learning'.
 - 2.5 Skemp's 'instrumental' and 'relational' understanding.
 - 2.6 Gagne and the hierarchical nature of mathematics learning.
 - 2.7 Skinner and the role of practice and reinforcement.
- 3 Contemporary Mathematics Curriculum development:
 - 3.1 Major overseas projects (e.g. the U.K. Nuffield Project).
 - 3.2 Curriculum development in Singapore (e.g. the primary Monolingual Project, the Secondary Mathematics project).

In each case, the curriculum project will be examined in terms of the views of the subject and the nature of learning and instruction upon which the project is based.
- 4 Mathematics education in the 21st century:
 - 4.1 Changing needs.
 - 4.2 The role of the computer.

MODE OF ASSESSMENT : A written assignment investigating a pertinent issue in mathematics education.

RECOMMENDED READING: Committee of Inquiry into the Teaching of Mathematics in Schools (1982). Mathematics Counts (The Cockcroft Report). London: HMSO. (QA 14 Gre. G)

- Copeland, R. W. (1979). How Children Learn Mathematics: Teaching Implications of Piaget's Research. New York: MacMillan. (QA135.5 Cop)
- Courant, R. and Robbins, H. (1978). What is Mathematics: An Elementary Approach to Ideas and Methods. Oxford: Oxford University Press. (QA37 Cou)
- Davis, J. D. and Hersh, R. (1981). The Mathematical Experience. Boston: Birkhauser. (QA8.4 Dav)
- Howson, G. and Keitel, C. (1978). Curriculum Development in Mathematics. New York: Cambridge University. (QA11 How)
- Kline, M. (1980). Mathematics: The Loss of Certainty. New York: Oxford University Press. (QA21 Kli)
- Krutetskii, V. A. (1976). The Psychology of Mathematical Abilities in School children. Chicago: University of Chicago. (R QA11 Kru)
- Lindquist, M. M. (ed.) (1980). Selected Issues in Mathematics Education. McCutchan. (QA11 Sel)
- Resnick, L. B. and Ford, W. (1981). The Psychology of Mathematics for Instruction. Hillsdale, N.J.: Lawrence Erlkbaun Associates. (QA 11 Res)
- Skemp, R. R. (1971). The Psychology of Learning Mathematics. Middlessex: Penguin. (Qa 11 Ske)

COURSE TITLE : Research in Science Education

COURSE CODE : MED/SE-01

DURATION : 30 hours

LECTURERS : Dr Chin Long Fay
Dr Chia Lian Sai
Dr Diong Cheong Hoong

RATIONALE : This course is designed to familiarise the students with the nature and scope of research in science education through a seminar approach. The domains of recent research in Science education will be identified and reviewed, and selected studies will be critically analysed to enable the students to gain insights into the designs and methodologies used.

OBJECTIVES : The objectives of the course will be

- 1 to explain to students the nature and scope of research in science education;
- 2 to familiarise them with the problems and issues of conducting research in this area;
- 3 to develop skills for critical analysis and evaluation of research studies in the area; and
- 4 to enable students to formulate research proposals in their areas of interest.

COURSE CONTENT : I Introduction to Research in Science Education

- 1 An overview of research in Science Education
- 2 The research literature in Science Education
 - 2.1 primary sources
 - 2.2 secondary sources
 - 2.3 research reviews

- 3 The domains of research in science education
 - 3.1 teaching and learning strategies in science
 - 3.2 evaluation in science
 - 3.3 concepts, processes and content of science
 - 3.4 teacher education and behaviour
 - 3.5 uses of media in science education
- 4 Research designs, methods and strategies in science education
- 5 Problems and issues in conducting research in science education

II Critiques of Research in Science Education

- 1 Factors affecting quality of research in science education
- 2 Criteria for evaluating research in science education
- 3 Research Critique 1 : A case study
- 4 Research Critique 2: A survey study
- 5 Research Critique 3 : A correlational study
- 6 Research Critique 4 : An experimental study
- 7 Research Critique 5 : An evaluation study

III Student Presentations

- 1 Research review in science education
- 2 Research proposal in science education

MODE OF ASSESSMENT : The performance of the student will be assessed by the following:

- 1 Oral presentation of research review and proposal (30%); and
- 2 Written research proposal in science education of not less than 3000 words (70%).

- RECOMMENDED READING: Research in Science Education. Current Issues.
Victoria: Australian Science Education
Research Association. (Q 181 RSE)
- Journal of Research in Science Teaching.
Current Issues. New York: The National
Association for Research in Science
Teaching. (181 JRST)
- Wollman, Waren. (1978). Developmental
Implications of Science Teaching: Early
Adolescence. Ohio: ERIC Clearinghouse for
Science, Mathematics and Environmental
Education. (ED 174 401)
- Connelly, F. Michael. (1974). Logical Reasoning
in Science Education. Ohio: ERIC
Information Analysis Centre for Science,
Mathematics and Environmental Education.
(ED 097 198)
- Studies in Science Education: Current Issues.
East Yorkshire: Centre for Studies in
Science and Mathematics Education,
University of Leeds. (Q 181 SSE)
- Science Education. Current Issues. New York:
John Wiley and Sons, Inc. (Q 181 SE)
- Isaac, Stephen, and Michael, William B. (1981).
Handbook in Research and Evaluation (2nd
ed.). San Diego: EdITS Publishers.
(RLB 1028 ISA).
- Cook, Thomas D., and Campbell, Donald T. (1979).
Quasi-Experimentation: Design and Analysis
Issues for Field Settings. Boston:
Houghton Mifflin Co. (H 62 COO)

- COURSE TITLE : Issues in Science Education
- COURSE CODE : MED/SE-02
- DURATION : 30 hours
- LECTURERS : Mrs Ruth Chellappah
Mrs Lam Yoke Yeen
- RATIONALE : This elective course is intended for participants who
have some experience in science education. The
course will examine and review the nature of science
in the historical, philosophical and sociological
perspective, identifying trends in current
developments where possible. It will be linked to
the relevance of recent developments in science to
modern curriculum and the use of new materials and
technology in school laboratories. Each session of
the course will consist of a lecture followed by a
seminar on assigned readings.
- OBJECTIVES : The course will enable the student to:
- 1 achieve a better appreciation of the wider
context of science education through the context
of language, philosophy, psychology, economics,
religion, society and education.
 - 2 study the interrelationships among science,
technology and society.
 - 3 compare and differentiate among concepts,
problems, interpretations of data and the nature
of evidence in the different definitions of
science disciplines.
- COURSE CONTENT : 1 Educational Context
- Changing views on the nature of educational
processes and provisions involving the:
- . Growth and development of science education
in the 19th and 20th centuries and into the
21st century.
 - . Curriculum changes and factors influencing
change in science education and teaching
styles.
 - . Content teaching versus concept teaching
and process skills approach.
 - . Science subject focused versus integrated
science approach.

2 Economic context

- . Science education in developing countries versus education for employment in developed countries plus education for leisure.
- . Growing demand for accountability in education with reference to work attitudes, knowledge, process skills, economic forces and political education.

3 Context of Language

Science education in the context of English as a first language versus a bilingual context.

4 Religious Context

- . Traditional world-views on science education and religion.
- . The creationist context versus the evolutionary theorists.

5 Theoretical Context

Range of scientific, psychological and sociological theories that influence educational practices and social interpretations involving the work of men like Popper, Kuhn, Ausubel, Gagne, Piaget and Bruner - with reference to the nature and development of scientific concepts, perceptions and attitudes; communication and assimilation of knowledge; interpretation of data and individual patterns of understanding in the development of curricular materials.

6 Social Context

Changes in society supporting educational institutions and practice in developing and developed countries.

- . Social aspects of science in school curriculum.
- . Pupil attitudes to science.
- . Social factors affecting pupil achievement.
- . Science education for girls, minorities and disadvantaged children.

- . Science education for all pupils.
- . Science teacher status in society.

7 Operation and Evaluation of Science Education

- . Organisation of school science curriculum.
- . Relationships between curriculum development and external examination.
- . Assessment of achievement in science education.
- . Science curriculum evaluation.

MODE OF ASSESSMENT : This course will be assessed by an essay of about 3000 words based on an aspect of the course syllabus.

RECOMMENDED READING: Wilson, B. (1981). Cultural Contexts of Science and Mathematics Education. Great Britain: Arthur Wilely and Sons Ltd. (Z 7405 Soc.W)

Gammage, P. (1982). Children and Schooling. Unwin.

Reid, I. (1978). Sociological Perspectives on School and Education. Open University Books. (LC 191 Rei)

Eraut, M, et al. (1975). The Analysis of Curriculum Materials. University of Sussex Education Area Occasional Paper. (LB 1564 Gre.E)

Kelly, A.V. (ed.) (1980). Curriculum Context. Harper and Row. (LB 1570 Cur)

MacDonald, B. (1976). Changing the Curriculum. London: Open Books. (LB 1570 Mac)

Stenhouse, Lawrence (1981). An Introduction to Curriculum Research and Development. Open University. (LB 1028 Ste)

Whitehead, A.N. (1950). Aims of Education and Other Essays. London: Williams & Norgate. (LB 875 Whi)

Association for Science Education. (1980). What is Science? Study series No 15. (Q 175 Ric)

Beveridge, W.I.B. (1964). The Art of Scientific Investigation. London: Mercury Books. (Q180 Bev)

- Kuhn, T.S. (1970). The Structure of Scientific Revolutions. 2nd edition. Chicago U.P. (Q 175 Kuh)
- Popper, K.R. (1972). The Logic of Scientific Discovery. London: Hutchinson (Q175 Pop)
- Ausubel, D.P. (1968). Educational Psychology. New York: Holt, Rinehart & Winston. (LB 1051 Aus)
- Bruner, J.S. (1966). The Process of Education. Cambridge, Mass.: Harvard U.P. (LB 41 Bru P)
- Gagne, R.M. (1970). The Conditions of Learning. 2nd edition. New York: Holt, Rinehart & Winston. (LB 1051 Gag)
- Gruber, Howard E. & J. Jacques Voneche (eds) (1977). The Essential Piaget. London: Routledge & Kegan Paul. (BF 723 Cog P)
- Piatelli-Palmarini, Massimo (ed.). (1980). Language and Learning. Cambridge, Mass.: Harvard U.P. (P 37 Lan)
- Shayer, M. & Adey, P. (1981). Towards a Science of Science Teaching. London: Heinemann. (Q 181 Sha)

- COURSE TITLE : Research in History Education
- COURSE CODE : MED/SV-01
- DURATION : 30 hours
- LECTURERS : Dr Then Lian Mee
Mr Wilson Jacob
Mrs Grace Tan
- RATIONALE : The course on research in history education is intended to make students aware of research concerns and issues in history education and how the research is carried out. Compared to other fields, research in this field is more limited; however, the actual research carried out in history education shows that there is much interest and progress. Students will thus be able to observe the trends and patterns of such research as well as the design and methodology of selected studies. Relevant examples from curriculum research and social studies research will also be examined as there are common areas of interest and methodological issues and as these studies can be replicated or adapted for research in history education.
- OBJECTIVES : The course will enable the students to:
- 1 identify areas of concern in the research in history education
 - 2 examine the design and methodology utilised in the research in history education
 - 3 explore avenues for the student's own research in history education
- COURSE CONTENT : The course content will comprise the following:
- 1 Overview of the research in history education
 - themes
 - design and methodology
 - problems
 - 2 Research in factors relevant to pupil progress
 - motivational factors
 - aptitude
 - successful classroom environment and types of students

- 3 Research in cognitive development and learning in history
 - thinking of adolescent students
 - formation of history concepts
 - language and communication and history learning
 - reading, readability and history materials
 - information processing capacity and historical understanding
- 4 Research in the learning of political behaviour
 - formation of political concepts
 - political development - children and adolescents
 - political attitude/change and political courses
- 5 Curriculum research
 - curriculum implementation
teacher and pupil perception of curriculum and curriculum materials (history and social studies)
goodness of fit - intentions and reality
 - curriculum change
framework for study of innovations
factors crucial to success in change
 - curriculum evaluation
evaluating curriculum projects
evaluating curriculum materials
- 6 Scope for research in history education in Singapore

MODE OF ASSESSMENT : Students may select an example from research in history education and write a critique of the research. Alternatively, they may select a research problem in history education and discuss the nature of the problem and possible ways to deal with the problem.

RECOMMENDED READING: This is the initial list for basic reading. There will be further references for specific topics discussed which will include research papers and journal articles.

Burgess, R.G., ed. (1984). The Research Process in Educational Settings: Ten Case Studies. London: Falmer. (LB 1028 Res)

- D'Arcy, P. (1980). "Curriculum Change: Product or Process?" in Galton, Maurice, ed. Curriculum Change: The Lessons of a Decade. Leicester: Leicester University Press. (LB 1564 Gre. C)
- Fullan, M. and Pomfret, A. (1977). "Research on Curriculum and Instruction Implementation", Review of Educational Research. (LB 1028 RER)
- Piper, K. (1979). Curriculum Style and Social Learning. Hawthorn, Victoria: Australian Council for Educational Research. (H 62 Pip)
- Schools Council. (1973). Evaluation in Curriculum Development: Twelve Case Studies. London: Macmillan. (LB 1570 Gre)
- Simon, A. and Ward, L. (1975). "Variables Influencing Attitudes to History among Comprehensive School Pupils", Teaching History. 4, 154-158. (D 16 TH)
- Stenhouse, L., ed. (1980). Curriculum Research and Development in Action. London: Heinemann. (LB 2362 Gre. C)

(Note: The books on curriculum listed above include chapters on research and projects in history education.)

COURSE TITLE : Issues in History Education

COURSE CODE : MED/SV-02

DURATION : 30 hours

LECTURERS : Dr Then Lian Mee
Mr Wilson Jacob

RATIONALE : It is assumed that students will bring a variety of experiences in teaching, in educational administration or in the development of curriculum materials to the course on issues in history education. Many of the students are not likely to be directly involved presently in history education at school. The intended course will help students familiarise themselves with contemporary developments in history education but with the focus on issues.

Students can benefit from the study of issues in different ways. They will be able to keep abreast of what is of concern to historians and history educators and be aware of what are considered as issues in history education.

By examining the value assumptions behind the debate on certain issues, students will be participating in the process of clarifying their own thinking on these issues. They will also see how the concepts, methodology and research findings from other areas such as psychology and sociology are utilised in the discussion of issues in history education.

OBJECTIVES : The course will enable the student to:

- 1 recognise the issues in history education
- 2 understand the assumptions about the pupil, education, learning or society, and the conceptual frameworks utilised in the discussion on issues
- 3 propose alternative frameworks for viewing or resolving these issues
- 4 examine implications for the teaching and learning of history.

COURSE CONTENT : The course content will comprise the following issues:

- 1 Issues concerning the nature and purpose of history
 - speculative versus critical philosophy of history
 - role of historians
 - implications for the nature and purpose of history education
- 2 Issues concerning objectives for history education
 - competing expectations for history education, e.g., engaging in inquiry or learning to be a citizen; learning about the past or learning what historians do, etc
 - assumptions about the pupil, education and society, and conceptual frameworks utilised
- 3 Political and moral issues in history education
 - question of desirability of history as a vehicle for political and moral education
 - issue of indoctrination
 - implications for the role of the history teacher
- 4 Issues concerning the content and organisation of history education
 - changing content
 - changing patterns of organisation of content
 - do the changes help or hinder?
- 5 Pedagogic issues
 - learning that ... and learning to ...
 - developments in pedagogy and implications for history education (e.g., conceptual teaching, inquiry approach, evidential history)
 - assessment
 - "teacher-proof" materials

6 Learning process in history education

- identifying problems, e.g., adult content of history, language and communication, concepts and time, problems of slow learners
- understanding development of formal historical thought in children and adolescents

MODE OF ASSESSMENT : Students can select one issue in history education and study it in the following manner:

- 1 Indicate first in what way it constitutes an issue.
- 2 Examine the assumptions and conceptual frameworks used by the exponents of their respective viewpoints.
- 3 Consider what may be brought in, e.g., concepts and criteria from relevant disciplines, recent research findings, etc, to clarify or resolve the issue.

RECOMMENDED READING: Adler, N. and Harrington, C. (1970). The Learning of Political Behaviour. Glenview, Illinois: Scott, Foresman and Co. (JA 76 Adl)

Atkinson, R.F. (1978). Knowledge and Explanation in History. London: Macmillan. (D 16.8 Atk)

Ballard, M. (1970). New Movements in the Study and Teaching of History. London: Temple Smith. (D 16.2 Bal)

Burston, W.H. and Thompson, D. (eds.) (1967). Studies in the Nature and Teaching of History. London: Routledge and Kegan Paul. (D 16.2 Bur)

Connell-Smith, G. and H.A. Lloyd. (1972). The Relevance of History. London: Heinemann Educational Books. (D 16 Con)

Crick, B. (1977). Essays on Political Education. Ringmer: Falmer. (LC 1090 Cri)

Dickinson, A.K. and Lee, P. (eds.) (1978). History Teaching and Historical Understanding. London: Heinemann. (D 16.2 Dic)

Lamont, W. (ed.) (1972). The Realities of Teaching History. London: Chatto and Windus. (D 16.2 Lam)

Rogers, J.P. and Adams, R.F. (1979). The New History - Theory in Practice. London: Historical Association, Teaching History Series, No. 44. (D 16.2 Tea)

Sloan, Douglas (ed.) (1980). Education and Values. New York: Teachers College Press. (LB 41 Edu)

Steel, I. (ed.) (1976). Developments in History Teaching. London: Open University. (D 16.4 Gre. S)

Walsh, W.H. (1967). An Introduction to Philosophy of History. London: Hutchinson. (D 16.8 Wal)

Watts, D.G. (1972). The Learning of History. London: Routledge and Kegan Paul. (D 16.2 Wat)

COURSE TITLE : Research in Geographic Education

COURSE CODE : MED/SV-11

LECTURERS : Mr George Teh
Mr Yee Sze Onn

DURATION : 30 hours

RATIONALE : A knowledge of research and research methodology especially in the field of geographic education is essential to the geography teacher to raise his level of competence and increase his effectiveness in the practice of geographic instruction.

OBJECTIVES : The objectives of this course are:

- . to provide the student with an overview of current research in geographic learning
- . to examine the findings of research in geographic education and their implications for curriculum development and the improvement of classroom practice

COURSE CONTENT :

- 1 The Nature of Research in Geographic Education
- 2 Methods of Research in Geographic Education
- 3 Current research in Geographic education
 - . Cognitive Studies in Geography
Studies in Spatial Perception
Children's thinking in Geography.
 - . Affective Studies in Geography
Interests and Attitudes
Values in Geographic Education
 - . Methodological Studies
Teacher styles and Geographic learning
Effectiveness of Teaching strategies
Role of computers in geographic instruction
 - . Evaluative Studies
Measurement in the Teaching of Geography
- 4 Curriculum Research and Geographic Education
- 5 Future Research needs in Geographic Education

MODE OF ASSESSMENT : Students will be assessed on the basis of

- a) Participation in discussion of readings in class (20%)
- b) Submission of a written critique of a research paper to be selected by the student (80%)

RECOMMENDED READING: Boardman, D. (ed.) (1985). New Directions in Geographical Education. Philadelphia, Falmer Press. (G 73)

Graves, N.J. (ed.) (1984). Research and Research Methods in Geographical Education. Commission on Geographical Education.

Naish, M.C. (1972). "Some Aspects of the Teaching of Geography in Britain: A Review of Recent British Research." Teaching Geography. No 18, Sheffield, Geographical Association. (G 76.5)

Saveland, R.N., and Pannell, C.W. (1978). Aspects of Geography in the U.S.A. Review of Current Research 1965 - 1975. Sheffield, The Geographical Association. (G 76.5)

Stoltman, J.P. (ed.) (1978). International Research in Geographic Education: Spatial Stages Development in Children and Teacher Classroom Style in Geography. Western Michigan University. (G 76.5)

COURSE TITLE : Issues in Geographic Education

COURSE CODE : MED/SV-12

DURATION : 30 hours

LECTURERS : Mrs Christine Loh
Mr Yee Sze Onn

RATIONALE : In recent years, questions have been raised about the relevance of Geography and its role in a society that is making rapid advances in science and technology. Much rethinking about the nature and purpose of Geography has taken place and has resulted in recommendations for various approaches and changes in the content, objectives, teaching strategies and evaluation of school Geography. This course is intended to help practitioners to be aware of the issues and problems in Geographical education and to have a clear understanding of what these issues involve.

OBJECTIVES : The objectives of this course are:

- To provide students with an opportunity to reflect upon the various views about the nature and purpose of Geography and its implications for school Geography
- To familiarise students with current issues in the field of geography teaching and learning

COURSE CONTENT : 1 Perspectives on the nature of Geography and its implications for school Geography

- 1.1 Changing outlooks in Geography, major paradigms and influences on school Geography
- 1.2 Benefits and costs of a quantitative revolution in the 1970's
- 1.3 Behavioural and Humanistic Geography and Geographical Education
- 1.4 Towards a Geography of Social well-being

- 2 Integration and the Geography Curriculum
 - 2.1 Geography versus Social Studies in the school curriculum
 - 2.2 Integrative approaches towards Human and Physical Geography
 - 2.3 Integrating Geography with other disciplines like Mathematics and Science
- 3 Decision-making process in Geography curriculum change and syllabus reconstruction
 - 3.1 Syllabus reconstruction: Who decides and on what criteria. Pressures of External Examining Boards (Cambridge)
 - 3.2 Syllabus implementation and change in the schools
 - 3.3 Curriculum Development processes and models: British Schools Council Geography Projects (14 -18, 16 - 19, Geography for the young school leaver), American High School Project, Secondary Schools Geography Project (CDIS)
- 4 Methodological issues
 - 4.1 The persistence of the recitation
 - 4.2 Innovative Teaching Approaches: how innovative and effective are they?
 - 4.3 Teaching Approaches and Teacher Style and personality
 - 4.4 The place of Computers and other technologies in the Geography classroom
 - 4.5 Towards a new generation of teacher technologists
- 5 Problems in Geographic learning
 - 5.1 Spatial concept development in children and primary school mapwork with reference to CDIS Social Studies materials.
 - 5.2 The problem of motivation and attitudes of students towards the subject

6 Issues in evaluation: of student achievement, of teachers and Geography programmes.

6.1 The place of diagnostic testing

6.2 Examinations: the responsibility of teachers and examiners

6.3 The effective Geography teacher

6.4 Evaluation and accountability in Geographic Education

MODE OF ASSESSMENT : Students will be assessed on the basis of

- 1 participation in discussion of readings in class (20%)
- 2 submission of an essay of 5000 words on an issue of interest to the student (80%)

RECOMMENDED READING: Boardman, D. (ed). (1985). New Directions in Geographical Education. Philadelphia: Falmer Press. (G 73)

Huckle, J. (ed.). (1983). Geographical Education: Reflection and Action. Oxford: Oxford University Press. (G 73 Huc)

Wiegand, Patrick and Orrell, Keith (ed). (1981). New Leads in Geographical Education. Sheffield: Geographical Association. (G 73 Lea)

Rawling, Eleanor. (1981). Geography into the 1980's. Sheffield: Geographical Association. (G 76.5 Gre. G)

COMPULSORY COURSE

TITLE : Educational Statistics I

COURSE CODE : MED/MC-11

DURATION : 30 hours

LECTURERS : Dr Eric Plant
Mr Toh Kok Aun

RATIONALE : As this is the only compulsory course in statistics, it is likely that some candidates may not be exposed to any further statistical topics beyond this course. It is therefore considered that a basic course of statistical topics is necessary in this core to impart a package of minimum statistical content for an M Ed candidate. The following are the essential core topics for an introduction to Statistical Reasoning:

- 1 The nature of statistics - its uses and abuses
- 2 The nature of numbers, nominal, ordinal, interval and ratio scales
- 3 Measures of central tendency, dispersion, skewness
- 4 Graphical presentation of data
- 5 Introduction to probability and sampling
- 6 Hypothesis testing and inferential statistics
- 7 Consider in a practical (application) way these distributions:-
 - 7.1 Normal
 - 7.2 Binomial
 - 7.3 Student's 't'
 - 7.4 Chi-square
 - 7.5 'F' ratio
- 8 Calculate and interpret one-way analysis of variance

- 9 Graph a bivariate distribution as a scattergram. Calculate the regression of x upon y, and y upon x. Draw lines of "best fit" for the data. The relevance of the angle of intersection of the two lines.
- 10 Correlation Coefficients - Pearson, Spearman, Tetrachoric, Biserial.

MODE OF ASSESSMENT : An assignment based on descriptive and inferential statistics of simple univariate or bivariate data.

RECOMMENDED READING: Cohen, L. & Holliday, M. (1979). Statistics for Education and Physical Education. New York: Harper & Row. (LB 2846 Coh)

Ehrenberg, A.S.C. (1982). A Primer in Data Reduction: An Introductory Statistics Textbook. New York: John Wiley. (QA 276.12 Ehr)

Ferguson, G.A. (1971). Statistical Analysis in Psychology & Education. New York: McGraw Hill Book Co. (HA 29 Fer)

Spiegel, M.R. (1979). Theory and Problems of Statistics. Schaum Outline series. New York: McGraw-Hill. (QA 276.2 Spi)

TITLE	: Educational Statistics II
COURSE CODE	: MED/MC-12
DURATION	: 30 hours
LECTURERS	: Dr Eric Plant Mr Toh Kok Aun
RATIONALE	: To build on and extend what has been covered in Educational Statistics I. Although some attention will be given to non-parametric tests, the emphasis will be to enable students to understand the further basis of inferential statistics with specific reference to multivariate parametric distributions. Emphasis will be given to the application of multivariate statistical techniques.
OBJECTIVES	: The following will be introduced to assist students in their data analysis. <ol style="list-style-type: none"> 1 Estimation of population parameters, and use of confidence limits. 2 Chi-Square Tests and Contingency Table 3 A study of multivariate statistical methods which will include consideration of: <ol style="list-style-type: none"> 3.1 Two-way ANOVA and Interaction Effects 3.2 Analysis of covariance 3.3 Multiple Correlation and Partial Correlation 3.4 Multiple Regression including Full and Reduced Models 4 Review the "least squares method" of fitting a straight line and residual analysis. This is to lead to a consideration of fitting a plane to 3 variables and to the contribution provided by beta coefficients in regression. 5 Factor Analysis - Exploratory and Confirmatory Factor Analytic Methods 6 Non-parametric statistics

MODE OF ASSESSMENT : An assignment based on data collected and analysed by some multivariate technique or techniques.

- RECOMMENDED READING: Bennett, S. and Bowers, D. (1977). An Introduction to Multivariate Techniques for Social and Behavioral Sciences. New York: MacMillan. (HA 33 Ben)
- Draper, J. & Smith, H. (1981). Applied Regression Analysis. New York: John Wiley. (QA 278.2 Dra)
- Ferguson, G.A. (1971). Statistical Analysis in Psychology & Education, 5th Edition. New York: McGraw-Hill. (A 29 Fer)
- Kerlinger, F.N. and Pedhazur, E.J. (1978). Multiple Regression in Behavioural Research. New York: Holt, Rinehart and Winston. (HA 31.3 Ped)
- Kim, J. and Mueller, C.W. (1978). Introduction to Factor Analysis: What It Is And How To Do It. Beverly House: Sage Publications.
- Maxwell, A.E. (1977). Multivariate Analysis in Behavioural Research. New York: John Wiley. (BF 39 Max)

- COURSE TITLE : Introduction to Statistical Analysis System (SAS)
- COURSE CODE : MED/MC-21
- DURATION : 30 hours
- LECTURERS : Chu Chiu Wai and Information Centre Staff, Computer Services Branch, Ministry of Education
- RATIONALE : The advances in computer technology have led to an information processing explosion in which massive amounts of data are being studied, analyzed and published. Thus, from this perspective, Masters in Education students should have the ability to utilize the computer in the application of statistical methods particularly those that involve a high degree of computational complexity. The Statistical Analysis System (SAS) is a package of standardized computer programs for multiple users to share the programs with different data.
- OBJECTIVES : To enable students to use the SAS package for the following purposes:
- 1 Editing a dataset in a form suitable for SAS to process.
 - 2 Sub-setting datasets and creating new variables.
 - 3 Use of SAS procedures for graphical displays, tabulation, describing distributions, measuring central tendency and dispersion.
 - 4 Use of SAS procedures for testing statistical differences of means and statistical linear relationships.
- Note: The SAS manuals will be referred to so that the students will ultimately be independent in locating additional SAS procedures which they may need.
- COURSE CONTENT : The course will focus on the following:
- 1 Defining numeric and alphanumeric variables.

- 2 Editing SAS datasets with the data entry editor and to save the datasets for SAS processing.
- 3 Creation of SAS jobs and to submit them for execution.
- 4 Use of DATA steps, IF-THEN, DO-END loop, etc. for subsetting datasets or to create new variables.
- 5 Use of the following procedures for displaying and summarizing data:
 - 5.1 SORT - Sorting of data by one or more variables.
 - 5.2 PRINT - Getting hard-copies of original or sorted datasets.
 - 5.3 FREQ - Getting frequency counts and cross-tabulations with percentages and Chi-squares.
 - 5.4 TABULATE - Getting tables in various ways.
 - 5.5 MEANS - Getting means, ranges, standard deviation, variances, skewness and kurtosis.
 - 5.6 SUMMARY - Summing of scores or frequencies column-wise.
 - 5.7 CHART/
PLOT - Getting pictorial representations like vertical and horizontal bar graphs, scattergrams, component bar graphs and pie-charts.
 - 5.8 RANK - For ranking numeric data.
- 6 Use of the following procedures for testing statistical differences:
 - 6.1 Tests of Means using MEANS, UNIVARIATE, T-TEST, ANOVA, GLM.
 - 6.2 Tests of Distributions using FREQ.

- 7 Use of the following for testing statistical relationships:
 - 7.1 CORR - Getting Pearson or Spearman correlation coefficients.
 - 7.2 REG/ - Getting regression for balanced GLM and unbalanced data. STEPWISE regression will also be included.

MODE OF ASSESSMENT : The assessment will be based on the application of SAS procedures for statistical data analysis.

RECOMMENDED READING: Lewis, Bruce R. and Ford, Richard K. (1983). Basic Statistics using SAS. Minnesota: West Publishing Company. (Red spotted)

SAS Introductory Guide. (1982). Cary, North Carolina: SAS Institute. (Red spotted)

SAS User's Guide : Basics. (1982). Cary, North Carolina: SAS Institute. (Red spotted)

SAS User's Guide : Statistics. (1982). North Carolina: SAS Institute. (Red spotted)

COURSE TITLE : Research Methodology I

COURSE CODE : MED/EP-11

DURATION : 30 hours

LECTURERS : Dr Elwyn Thomas
Dr Seng Seok Hoon

RATIONALE : This course is designed as a basic component of an integrated course to link up the principles of educational research methodology, data analysis and computer studies in the context of selected research activities. The students need to be introduced to the skills and knowledge of research methodology, data analysis and computer work, for the purpose of solving simple research problems in education. Provision is made for the students to acquire these basic skills necessary to select, plan, organise and pose research questions for a dissertation proposal. In addition this course is planned so that students can view research as a total process.

OBJECTIVES : The student will be able to:

1. select and formulate research problems.
2. identify steps in planning a research investigation.
3. consider the appropriate use of research tools.
4. explore possible methods of data analysis and computerisation.
5. select and formulate different research design strategies.
6. appreciate the basic principles and issues of measurement and collection of research data.
7. view the research process as a totality.
8. develop a positive attitude and study habits towards postgraduate work.

COURSE CONTENT :

1. Types of Research and the Nature of Educational Enquiry
- 2 Planning Research
 - 2.1 Selecting Variables of Educational Research
 - 2.2 Stating the Research Problem and Formulating Hypotheses
- 3 Designing Research
 - 3.1 Fundamental Processes in Research Design
 - 3.2 Fundamental Issues for Decision-making in Research Design
 - 3.3 Threats to External and Internal Validity in Experimental Research Design
 - 3.4 Types of Experimental Research Design
 - 3.5 Decisions in the Designing of Surveys
 - 3.6 Organisation and Planning of a Survey
- 4 Sampling
 - 4.1 Basic Concepts and Types of Sampling
 - 4.2 Issues in Making Decisions concerning sampling
- 5 Measurement and Data Collection
 - 5.1 Principles and Kinds of Measurement
 - 5.2 Reliability and Validity
 - 5.3 Variability of Data
 - 5.4 Test Score Theory
 - 5.5 Hypotheses and Significance Testing
- 6 Viewing the Research Process
 - 6.1 Appraising Educational Research
 - 6.2 Research Article Evaluation

MODE OF ASSESSMENT : 1 Work File 20%
2 Written Assignment 80%

The written assignment will be designed to assess the students' ability to draw up a research proposal using the knowledge and skills acquired in the integrated course.

RECOMMENDED READING: Borg, W.R. and Gall, M.D. (1979). Educational Research. London: Longman. (LB 1028 BOR).

Burroughs, G.E.R. (1974). Design and Analysis in Educational Research. Educational Monograph, No. 8. Birmingham: University of Birmingham Press. (LB 1028 BUR).

Campbell, D.T. and Stanley J.C. (1966). Experimental and Quasi- Experimental Designs for Research. Chicago: Rand McNally and Co. (LB 1028 Sec)

Cohen, E., Mannion E. (1980). Research Methods in Education. London: Croom Helm. (LB 1028 COH).

Huck, S.W., Cormier W.H. and Bounds, W.G. (1974). Reading Statistics and Research. New York: Harper and Row. (HA 29 HUC)

Isaac, S. (1977). Handbook in Research Evaluation. Edits San Diego. (LB 1028 ISA).

Open University. (1973). Methods of Educational Enquiry

Block 1: The Nature of Educational Research
Block 2: Research Design
Block 3: Data Collection
Block 4: Data Analysis
Block 5: Experiment in Educational Research
Block 6: Evaluational Assessment in Educational Research

Milton Keynes. (LB 1028 Ope)

Open University. (1979). Research Methods in Education and the Social Sciences.

Selected Blocks 1-8. Milton Keynes. (LB 1028 Ope)

Youngman M.B. (1980). Rediguides: Guides in Educational Research 1-31. University of Nottingham, Maidenhead University. (LB 1028 Red).

COURSE TITLE : Research Methodology II

COURSE CODE : MED/EP-12

DURATION : 30 hours

LECTURERS : Dr Elwyn Thomas
Dr Seng Seok Hoon

RATIONALE : This course is planned to give students the opportunity to build on the work covered in RM1 and to treat certain areas such as measurement and relationships between data in more depth. The focus will be a practical one utilising case studies and practical exercises to help students to develop further their research skills and knowledge.

OBJECTIVES : The student will be able to:

- 1 examine in depth the main principles and issues of educational research.
- 2 study through actual class practical and field studies, skills and techniques of data collection, data measurement and analysis.
- 3 examine alternative research methodologies that can be used in Educational Research.

COURSE CONTENT : 1 Data Collection Procedures

- 1.1 The Nature of Data - Experimental data
Survey data
Ethnographic data
Methods of data collection
- 1.2 Methods and Strategies of Survey Research - Observation and Recording
Interviewing
Questionnaires
Less Structured Techniques
Projected Methods
- 1.3 Ethnographic Research - Naturalism
Secrecy
Field Techniques
Participant Observation
Documents and Interviews

2 Measurement

- 2.1 Process of Relative Measurement
- 2.2 Tasks in Assessing Subjective Perception
- 2.3 Measures of Proximity
- 2.4 Unidimensional Methods
- 2.5 Clustering

3 Data Relationships and their Analysis

- 3.1 Patterns of Data and their Analysis
- 3.2 Analysing Experimental and Ethnographic Data

4 Other Research Methodology

- 4.1 Historical Research
- 4.2 Comparative Educational Research
- 4.3 Descriptive Sociological Methodology
- 4.4 Case Study Approaches
- 4.5 Correlational Study

5 Research Proposal Writing and Oral Presentations

An extra session will be set aside for students to brain-storm and present "dummy" proposals to the group

MODE OF ASSESSMENT : This will include two assignments:

- 1 Construction of an instrument to measure a form of behaviour selected by the student.
50%
- 2 Examination of several data sets; producing decision strategies for interpretation and further analysis of the data.
50%
- 3 Work File.

RECOMMENDED READING: Bailey, K.D. (1982). Methods of Social Research. New York: Free Press. (HM 24 Bal)

Borg, W.R. and Gall M.D. (1979). Educational Research. London: Longman. (LB 1028 BOR).

Burroughs, G.E.R. (1974). Design and Analysis in Educational Research, Educational Monograph No. 8. Birmingham: University of Birmingham Press. (LB 1028 BUR).

Campbell, D.T. and Stanley, J.C. (1966). Experimental and Quasi- Experimental Designs for Research. Chicago: Rand McNally and Co. (LB 1028 Sec)

Cohen, L., Mannion L. (1980). Research Methods in Education. London: Crom Helm. (LB 1028 Coh).

Cook, T.D., Campbell, D.T. (1979). Quasi Experimentation, Design and Analysis Issues for Field Settings. USA: Houghton Mifflin. (H 62 Co)

Dunn-Rankin, P. (1983). Scaling Methods. USA: Lawrence Erlbaum Pub. (BF 39 Dun)

Huck, S.W., Cormier, W.H., Bounds W.G. (1974). Reading Statistics and Research. New York: Harper and Row.

Isaac, S. (1977). Handbook in Research and Evaluation. Knapp, Diego. (LB 1028 ISA).

Lindsey, G., Aronson, E. (1969). Handbook of Social Psychology. Addison Wesley. (HM 251 Lin)

Open University. (1973). Methods of Educational Enquiry, Blocks 1-6, Milton Keynes. (LB 1028 OPE)

Open University. (1979). Research Methods in Education and Social Sciences, Blocks 1-8, Milton Keynes. (LB 1028 OPE).

Sigel, S. (1956). Non-Parametric Statistics for the Behavioural Sciences. New York: McGraw Hill.

Travers R.M.W. (1973). Second Handbook on Research on Teaching, Chicago: Rand McNally. (LB 1028 Rec)

TITLE : Management And Organization Theory

COURSE CODE : MED/AD-01

DURATION : 30 hours

LECTURERS : Miss Poh Chwee Sian
Mr John Ussher

RATIONALE : This course is arranged for senior education officers. In their training for the administrative roles, the course will examine and present their professional roles, skills and functions in a more systematic and meaningful way. Given their wide experience, they may learn much from a study of theory and practice in other organizational settings.

OBJECTIVES : At the end of the course, course participants will be aware of the knowledge and skills involved in the managerial transformation process. This includes roles in spanning organizational boundaries like boundary-maintaining, boundary expanding and constricting (conflict-resolution strategies), organization - environment linking, information processing and external presenting. In relation to these, participants are, therefore, encouraged to examine methods, techniques and skills which are relevant to carrying out the main task of management in the education service. Attention is given to critiques on concepts and conceptual frameworks suitable for application and research in Singapore. Questions dealt with are largely open-ended to encourage further research and exploration of viable alternatives. Case studies, role plays, discussions, presentations and self evaluations are some of the approaches used to encourage learning.

COURSE CONTENT : 1 Management and Organization in Education
Introduction to current approaches to study;
Special nature of educational organizations.

2 External Environment and Accountability
Education institutions with the economic, technological, social, political, legal, and ethical environment; accountability and education.

3 Planning Process and Ambiguity/Uncertainty
Managerial functions and managing by objectives;
school rolling plans; objectives, nature and purpose of planning, procedures, approaches etc; decision making, strategies, and policies.

4 Organizing The Organization and Decentralization
Nature and purpose of organizing and basic departmentation; delegation, decentralization and committees.

5 Organization Learning and Human Factor
Managing knowledge, conflict, attention and change.

6 Controlling Overall Performance and Effectiveness/Efficiency
System, process and techniques in ensuring effectiveness and efficiency; School Appraisal System; feedback and feedforward system.

MODE OF ASSESSMENT : The course participants will be assessed by an end-of-course assignment which should consist of an indepth analysis of a case study in management in the education service.

RECOMMENDED READING: Participants are encouraged to read the following book before attending the course.
Pugh, D.S., D.J. Hickson and C.R. Hinings.
(1983). Writers on Organizations,
(3rd Ed). Middlesex: Penguin Books.
(HD 131 Wri)

During the course, readings from books and journals will be recommended.

TITLE : Personnel Management

COURSE CODE : MED/AD-02

DURATION : 30 hours

LECTURERS : Dr Wee Joo Liat
Mr John Ussher

RATIONALE : Personnel management is concerned with promoting the optimal use and development of human resources within organisations. In the educational context, senior executives of the Ministry of Education, both in schools and junior colleges and at the Headquarters, require an understanding of a body of knowledge and skills in order to be more effective personnel managers.

OBJECTIVES : The objectives of the course are to

- 1 examine the fundamental principles governing good personnel practices in the educational organisation.
- 2 equip candidates with a basic knowledge of the human relations skills required for maximum utilisation of human resources within the educational organisation.

COURSE CONTENT : 1 The Personnel Function

Deals with the concept and practice of personnel management, ranging from task to people-centred orientation.

Definition of personnel management.
Evaluation of the personnel function.
Development of personnel management from an emphasis on task to a more people-centred style of management. Roles performed by top executives in the education enterprise.

2 Motivation and Communication

Emphasises the promotion of high level of staff motivation through the use of effective communication with good human relations skills that lead to the spirit of team building.

2.1 Motivation

Study of the major motivation theories, namely, Maslow (hierarchy of needs theory), McGregor (assumptions that managers hold about human motivation), Herzberg (the two-factor motivation-hygiene theory of motivation), McClelland (the three major needs in the work place : achievement, affiliation and power), Vroom (expectancy theory of motivation). An examination of motivation in practice.

2.2 Communication

Definition of communication. The Communication Process Model. Types of interpersonal communication. Networks of communication. Barriers to effective communication. Communication strategies. Guides to effective listening. Experiential exercises in communication skills.

2.3 Human relationship skills, involving giving credit, developing ideas, giving constructive feedback, handling conflicts.

2.4 Team-building.

3 Organisational Climate and Leadership

This Unit is concerned with enhancing the organisational climate and staff morale as a means for the exercise of appropriate leadership styles.

3.1 Climate

Definition of climate. Means of measuring climate: Teacher-Principal behaviour, open to closed. Managerial systems and climate : exploitative-authoritative to participative. Pupil control orientation and climate : custodial to humanistic. Environmental press and climate : developmental climate vs controlled climate. Implications for practice : clinical strategies and growth-centred strategies for improving school climate. Study of climate in Singapore schools and units of the Ministry of Education.

3.2 Morale

Definition of morale. Means of measuring morale : Interview techniques, Questionnaires (eg. Staff Morale Questionnaire); Implications for practice : using the clinical strategy to improve morale. Study of staff morale in Singapore schools.

3.3 Leadership

Definition of leadership. Meaning of leadership. Types of leadership. Theories of leadership : trait approach, situational leadership theory, contingency theory of leadership. The Managerial Grid.

4 Personnel Administration

Role of personnel administration is to ensure that members of staff do a good job by giving their best effort. This depends on the judicial use of staff development and staff appraisal.

4.1 Staff Development resulting from in-class supervision, such as establishing the relationship, planning the lesson, planning the observation strategy, observing in the classroom, analysis of the observation, planning for the conference, the conference, renewed planning and further contracting.

4.2 Staff Appraisal includes the use of performance appraisal, methods of appraisal, judging performance, areas for target setting, and the "open" appraisal system.

MODE OF ASSESSMENT : For assessment, candidates will complete a major assignment. The assignment is concerned with the review and utilisation of relevant readings and application of the learning and discussion from course work. It may take the form of a school-based action study to be conducted at a school/junior college or at the Ministry of Education.

RECOMMENDED READING: In order to give the candidates an overall view of what personnel management is before the course begins, the following book is recommended for pre-course reading :

Anantaraman V., et al. (eds). (1984). Human Resource Management: Concepts and Perspectives. Singapore: Singapore University Press. (HD 70 Sin.H)

During the course, readings from books and journals will be recommended.

THE M.ED PRACTICUM

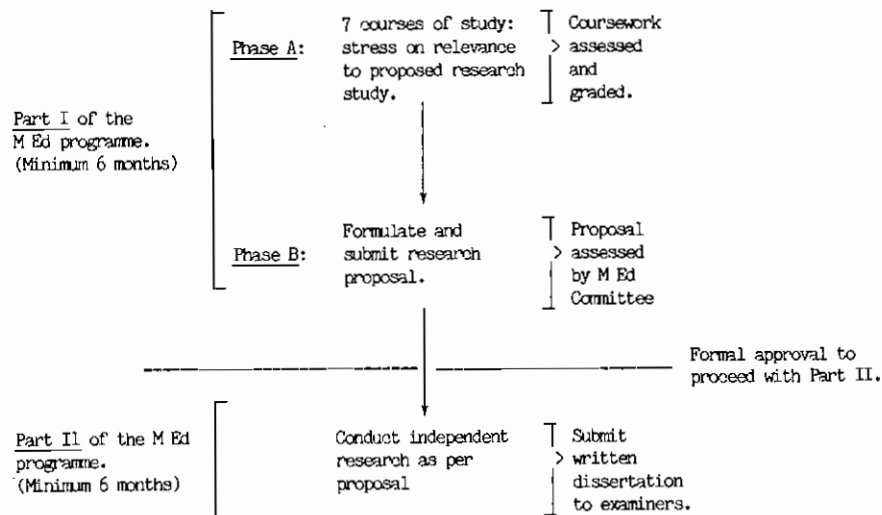
Concept of the Practicum

- 1 The Practicum is at the focus of the M. Ed programme whereby the courses of study are inter-related so that the learning experiences acquire a research and practice-orientation. The purpose is to facilitate the formulation and design of the proposed research study. The presentation and approval of the research proposal is evidence of the candidate's readiness to conduct an independent piece of research.
- 2 The Practicum thus begins with the application of the courses of study to the research problem. This in turn leads to the successful conduct of the study as planned, eventually leading to the submission of the written dissertation.

Structure of the Practicum

- 3 The nature of the practicum activities is summed up in the figure below.

The Structure of the M Ed Practicum



There are two phases in the Practicum to Part I, namely,

Phase A

In addition to the two compulsory research methods courses, the candidate should select the remaining five courses that are pertinent and relevant to their proposed research study. Each course of study should be made to contribute increasingly towards the explication and understanding of the research study. The practicum-intention of Phase A is therefore to apply the knowledge and research methodology derived from the coursework towards the preliminary planning and design of the research study.

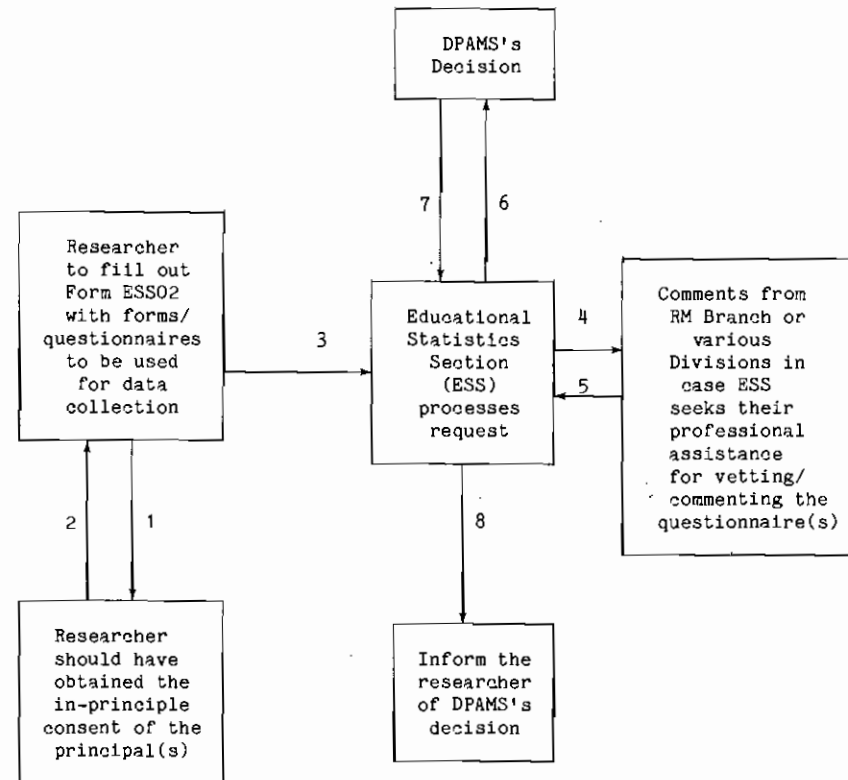
Phase B

- 4.1 Phase B is the natural consequence of Phase A, that is, the formulation of the research proposal begins early in Phase A and is therefore an integral part of Phase A. During Phase B, the candidate is required to formulate and design the research proposal with the guidance of the Supervisor(s).
- 4.2 The research study may include the candidate's participation in an on-going project, involving the construction of tests or other measures, the validation of existing instruments or the analysis of data already collected.
- 4.3 The candidate is reminded to ensure that the conduct of such a research study is feasible. For this reason, he is required to submit his request to collect data from schools (see Appendix 1) to the Computer Services Branch, MOE. Appended to the research proposal, he should also indicate a realistic Time-Frame or Schedule for the conduct and completion of the research study. The Schedule Form (see Appendix 2) is attached for reference.
- 4.4 The candidate is required to submit the written Research Proposal to the M. Ed Committee through the Supervisor. On the appointed date, the candidate will be required to make a presentation of the Proposal. The purpose is to help the candidate ensure that he is ready and able to conduct the study.
- 4.5 On his successful presentation of the proposal, the candidate will be notified in writing by the Head, Student Affairs that he has successfully completed Part I and that permission is granted to proceed with Part II as planned.

5 Part II of Research Practicum

- (a) This refers to the conduct of the research study (data collection, analysis) and the writing of the dissertation. Under normal circumstances, the conduct of the research study should be along the lines of the Research Proposal (as approved by IE), under the guidance of the Supervisor(s).
- (b) The conduct and progress of the dissertation shall be governed by the prevailing rules and regulations of the Senate, National University of Singapore. This includes the approval of the research topic and Supervisor(s) by the Senate and the final notification to NUS before the submission of the dissertation.
- (c) The successful completion of the M. Ed Practicum leads to the award of the degree which is based on the satisfactory completion of the dissertation and the course work as set out in Parts I and II of the programme.

SUBMISSION OF REQUESTS TO COLLECT DATA FROM SCHOOLS



SOURCE: MOE CSB COMMUNICATIONS NO. 3 (NOV 1983)

Note:

- 1 DPAMS refers to Director, Planning and Management Services Division.
- 2 Submit Form ESS02 with the sample data collection form (and survey questionnaire) to ESS at least 2 weeks before the proposed date of despatch to schools. (Principals' prior in-principle consent must be obtained.)
- 3 If request is approved, state the approval number ESS/x/xx in all data collection forms (and survey questionnaires).
- 4 It is advisable to submit applications much earlier than the minimum two weeks mentioned in item 2 above, in case complications should arise.

Appendix 2

A PROPOSED WORKPLAN FOR
THE M ED COURSE OF STUDY

Name: _____

Full-Time/Part-Time _____

Supervisor: _____

Area of Activities and Tasks	Time-Frame:				
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR
A Coursework					
1 _____					
2 _____					
3 _____					
4 _____					
5 _____					
6 _____					
7 _____					
B Research Proposal					
(a) Planning & Design _____					
(b) Title and Supervisor's name (exploratory) _____					
(c) Instrumentation & pilot testing _____					
(d) Final Draft _____					
(e) Submit Title, Supervisor to IE/NUS _____					
(f) Proposal Presentation _____					
(g) Clearance with CSB/MOE _____					
(h) NUS/IE approval _____					
C Data Collection & Analysis					
(a) Field testing (if any) _____					
(b) Training & Briefing of Research Assts. _____					
(c) Data collection _____					
(d) Data analysis _____					
(e) Draft thesis _____					
D Final Phase Activities					
(a) Appointment of Examiners _____					
(b) Notice for submission (3 months notice) to IE/NUS _____					
(c) Submission of Dissertation deadline _____					
E Any Other Activities					

Note: 1. The above tasks/activities are overlapping and not chronological
in linear sequence.

2. This is your contract for one to three years. Use a second sheet
if it is necessary.

Appendix 3

FORMAT OF THESIS/DISSERTATION

Six copies of a thesis or dissertation must be submitted.

Each thesis or dissertation must contain a summary of not more
than 500 words and in a form suitable for publication.

The summary must be written in English. If the thesis or
dissertation is written in a language other than English, an addi-
tional summary in that language must also be submitted.

Each copy must be cyclostyled or printed, bound in cloth with
stiff boards in international size A4.

Each page must have a margin of 3.7 cm to allow for binding.

The thesis or dissertation must be preceded by the following in
the order given: title page, acknowledgements, table of contents,
summary, all of which must be bound with the thesis/dissertation.

The title and author's name must be given in block letters on
the cover.

The title or an abbreviation thereof and the author's name must
be given on the spine of the thesis/ dissertation.

A thesis submitted on the basis of research for which course
work has not been prescribed should contain the following title page:

A THESIS SUBMITTED BY
[Name of candidate with degree(s)]
FOR THE DEGREE OF _____
NATIONAL UNIVERSITY OF SINGAPORE
198 ____

A dissertation submitted after successful completion of course
work and examination should contain the following title page:

A DISSERTATION SUBMITTED BY
[Name of candidate with degree(s)]
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF _____
NATIONAL UNIVERSITY OF SINGAPORE
198 ____

The thesis/dissertation should be bound in dark blue.

The thesis/dissertation proper should be numbered in arabic
numerals from 1 onwards. This sequence should include everything
bound in the volume, maps, diagrams, etc. and even blank pages

following the commencement of the thesis/dissertation proper. When a thesis consists of more than one volume, one sequence should be used for all; i.e. if volume I ends at p. 200, volume II should begin with p. 201.

All material preceding the thesis/dissertation proper may have a separate sequence of numbering, preferably in roman numerals. Plates, maps, plans, diagrams, tables, etc., which are not bound in with the text but which are either loose or in an end pocket, or separately bound, should also be given a separate sequence of numbering.

Published material submitted with a thesis, whether bound in with the thesis or not, should not be included in the pagination.

Photographic and other illustrations should be securely fixed, preferably by dry-mounting. Photograph album pockets or slits in the page are not adequate. In no circumstances should 'Sellotape' or a similar material be used for any purpose in a copy of the thesis.

Subsidiary papers and other loose material should be bound in wherever possible. If this is not possible, an adequately guarded pocket for each material should be provided at the end of the thesis. Any such loose material (and corrigenda sheets, if not bound in) should bear the candidate's name, initials and degree.

ABSTRACT OF THESIS/DISSERTATION

An abstract of the thesis/dissertation is not more than 150 words should be submitted to the Head/Student Affairs at the time the thesis/dissertation is submitted for examination. This abstract, which will be included in the University's booklet on 'Publications and Theses', must not be bound in with the thesis.

RECOMMENDED BINDERS

A candidate should have his thesis or dissertation bound by one of the following recommended binders:

Singapore National Printers Pte. Ltd
303, Upper Serangoon Road
Singapore 1334

Malayan Law Journal Pte. Ltd.
1302-1304, Shenton House
Singapore 0106

Baharuddin Vocational Institute
Stirling Road
Singapore 0314

Prisons Department
c/o Superintendent of Changi Prison

National University of Singapore
Multi-Purpose Co-operative Society Limited
Ground Floor, Central Library
Kent Ridge

Yam Brothers Book Binder
Block 24 Jalan Membina Barat #01-351
Singapore 0316

REFERENCE MATERIALS FOR PRESENTATION OF THESIS/DISSERTATION

Candidates are advised to consult one or more of the following publications relating to the presentation of their theses or dissertations:

Allen, G.R. (1976). The graduate student's guide to theses and dissertations; a practical manual for writing and research. (4th imprsn.). San Francisco: Jossey-Bass.

American Psychological Association. (1983). Publication manual of the American Psychological Association. (3rd ed.). Washington D.C.: Author.

Barrass, R. (1978). Scientists must write; a guide to better writing for scientists, engineers and students. London: Chapman and Hall.

British Standards Institution. (1972). Recommendations for the presentation of theses. London: Author.

Turabian, K.L. (1973). A manual for writers of term papers, theses and dissertations. (4th ed.). Chicago: University of Chicago Press.

Appendix 4

M ED RESEARCH PROPOSAL PRESENTATION - A BRIEF

Introduction

The approval of a research proposal, in addition to the successful completion of course work and attendance at invitational seminars, marks the completion of Part I of the M Ed programme requirements. Part II of the M Ed programme entails the implementation of the proposed research resulting in the submission of a dissertation for examination.

This brief describes the procedure for the presentation of the research proposal.

Procedure for Proposal Presentation

The candidate submits 8 copies of his research proposal to Head/Postgraduate Programme. Arrangements are then made to set a date, time and place for the presentation.

For the presentation, the candidate should be accompanied by a fellow-student who will act as a scribe and take notes of the proceedings. The use of a tape-recorder is allowed.

The actual presentation begins with the candidate outlining the main points of his proposed research. Comments and suggestions from the M Ed Committee members are noted by the candidate and his supervisor.

Although the presentation, is a formal process in that the approval of the M Ed Committee is being sought for the implementation of the proposed research, it is, at the same time, an opportunity for the candidate to avail himself of the collective experience of the Committee. The presentation is not intended to be a "defence"

of himself (or his supervisor). The whole process is meant to be helpful and educative for the candidate.

Post-presentation Follow-up

The candidate is required to submit, through his supervisor to Head/Postgraduate Programme, within one week of the presentation, the notes of the proceedings with the following inclusions:

- 1 suggestions made by the Committee that have been accepted by the candidate and his supervisor.
- 2 suggestions made but not accepted, after due consideration, by the supervisor and the candidate.
- 3 time-frame (in weeks) for the implementation of research, dissertation writing, and the expected date of submission to the examiners.

The candidate is also expected to deposit a copy of his proposal, with the notes of the meeting, to the IE Library.

General Remarks

A candidate who expects to make a research proposal presentation may request to sit in at the presentations of other candidates. It would also be useful for him to serve as a scribe for one presentation. Supervisors may also request to sit in at presentations by other candidates.