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ABSTRACT

The third in a series on distance learning, this volume presents 11 exemplar instructional packages which are the output of a process of evaluation and selection in accordance with guidelines developed by the Technical Working Group at the Pakistan Meeting. It reflects an awareness of issues in the development, use, and renewal of distance learning materials for teacher education in the different socio-cultural contexts of Australia, India, Indonesia, Maldives, New Zealand, Pakistan, Philippines, Sri Lanka, and Thailand. Materials are classified in 5 categories: correspondence course materials, self learning materials, programmed text, radio, and television. Topics addressed are human development, education for disadvantaged groups--education for girls in India, teaching child psychology, planning research, maternal training of preschoolers, how a teacher should ask questions, tutoring at a distance, systems orientation, nation building, how to teach meaning of incomplete sentences, and education management in Thai society (welfare education). For each example, critical notes of the working group are included. Materials were revised in accordance with the group's comments. (LMM)

ASIAN PROGRAMME OF EDUCATIONAL INNOVATION FOR DEVELOPMENT **APEID**



# DISTANCE LEARNING FOR TEACHER EDUCATION

Report of a Technical Working Group Meeting, Islamabad, Pakistan, 4-16 November 1981



## Volume III: Exemplar Materials



UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND THE PACIFIC
Bangkok, 1982

APPEID Technical Working Group Meeting on Distance Learning for Teacher Education, Allama Iqbal Open University, Islamabad, Pakistan, 9–16 November 1981.

*Distance learning for teacher education: report.* Bangkok, Unesco, 1982.

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Allama Iqbal Open University, Islamabad

and

Asian Centre of Educational Innovation for Development
Unesco, Bangkok

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## PREFACE

In this publication are eleven exemplar materials on distance learning which are the output of a process of evaluation and selection in accordance with certain guidelines developed by the APEID Technical Working Group on Distance Learning Materials for Pre-service and In-service Teacher Education from 4 to 16 November, 1981 at the Allama Iqbal Open University, Islamabad, Pakistan.

The urgent demands for the development of materials on distance learning felt not only by member countries of APEID but others in Asia and the Pacific call for a portfolio of existing materials that have been tried out or in the process of development by institutions in the region.

The exemplars may not be a representative sample of the total range of distance learning materials in the Region of Asia and the Pacific but they do however represent efforts arising from an awareness and problems on the development, use and renewal of distance learning materials with reference to the core curriculum of teacher education in the different socio-cultural contexts of the participating countries.

The contributions of nine participating countries, namely: Australia, India, Indonesia, Maldives, New Zealand, Pakistan, Philippines, Sri Lanka and Thailand made possible a rich reservoir of distance learning materials from which was drawn the exemplars constituting this publication.

The materials are classified into five categories, namely:

1. Correspondence course materials;
2. Self learning materials;
3. Programmed text;
4. Radio; and
5. Television.

Of significant interest to those concerned with distance learning materials may be the section on critical notes of the working group which are included for each of the exemplars. From these may be drawn alternative ideas and models to stimulate new efforts on distance learning geared toward the attainment of the national development goals of member countries of APEID.

## SELECTED EXEMPLAR MATERIALS

The Technical Working Group reviewed, discussed and improved the materials based on the suggestions given. Table 1 shows the five categories into which the exemplars are classified the subject/topic, target audience which comprizes student teachers, teacher and teacher educators, and others; application in terms of pre-service and in-service education and country of origin.

Each of the revised exemplar material is presented in this chapter with general introduction to the material, background on their development and use, the target audience, proposed adaptation for use, renewal and critical notes on their limitations. The order of presentation follows the categories of the materials as per country of origin as shown in Table 1.

Table 1

| *Category* | *Distinguishing characteristics* | | | | | *Country of Origin* |
|---|---|---|---|---|---|---|
| | *Subject/Topic* | *TARGET Audience* | | | *Application* | |
| | | *Student Teachers* | *Teacher and Teacher Educator* | *Others* | *Pre-service* / *In-service* | |
| 1. Correspondence course materials | Human development | ✓ | ✓ | ✓ | ✓ ✓ | New Zealand |
| | Education for disadvantaged groups - Education for girls in India | | ✓ | | ✓ | India |
| | Teaching psychology - child as a person. | ✓ | ✓ | | ✓ | Sri Lanka |
| | How should a teacher plan a research? | ✓ | ✓ | | | Pakistan |
| 2. Self-learning materials | Self-learning integrated module for mothers to increase their capability in training their preschoolers. | | ✓ | ✓ | ✓ | Philippines |
| | How should a teacher ask questions? | | ✓ | | ✓ | Maldives |
| | Tutoring at a distance | | ✓ | | ✓ | Australia |
| 3. Programmed text | Systems orientation | | ✓ | | ✓ | Thailand |
| 4. Radio | Group discussion in nation building | | ✓ | | ✓ | Philippines |
| | How to teach meaning of in-complete sentences. | | ✓ | | ✓ | Indonesia |
| 5. Television | Education management in the Thai society – welfare education. | | ✓ | ✓ | ✓ ✓ | Thailand |

## SECTION I

CORRESPONDENCE COURSE MATERIALS

## NEW ZEALAND

Subject: Human Development (Study Guide 3) from Massey University.

Reported by: Professor Donald Bewley.

Introduction: The exemplar is selected from within a 'study-guide' (two of the four topics) from a series of eight study guides that constitute the course. The course is one of 21 such courses that together make up a bachelor degree that internal students complete in three years; distance learners may take many years longer. Massey's 'extramural' (i.e. distance learning) courses are versions of courses taught to internal students (the integrated model) by the same academic staff, following the same prescription and assessed in the same way at the same time. These points of similarity enable students to mix internal and distance learning credits in the same degree programme.

Background to materials and target audience: Distance learning in New Zealand is already well appreciated. The distinguished work of the NZ Correspondence School and the Technical Correspondence School means that there is an expectation that university study and teacher education should be provided in the distance learning mode, as it is.

The 'Human Development' course is taken by teachers in training in teachers colleges whose students would not otherwise get degree credit for their college studies; and by established teachers whose earlier training gave them no degree credit and who now seek a degree in mid-career. It is also a course in the mid-career programme for nurses, for training social workers and for general education. It attracts many beginner distance learners returning to study after many years and helps initiate them into the skills they need for further study.

Development of Materials: Courses are designed to permit small enrolments. To give wide choice (in 1981 there were 270 such courses) in a country with a small population means that many courses will have few students. Production methods must be economical for this situation. Courses therefore rely on off-set printing supplemented by audio-cassettes and short-term, often voluntary, attendance at campus or off-campus meetings; no broadcasting components are included as audiences would be too small; arrangements for local support are unsystematic although students are encouraged to form their own study groups.

Courses undergo annual revision. The production system allows the academic responsible for the course until a month before the despatch of materials to finalize his study guide. Only sufficient copies for the current years enrolment are printed. The exemplar has been offered every year for 21 years and has undergone several major revisions based on informal feedback (voluntary questionnaires and student and tutor comment) rather than formal evaluation techniques. The senior author, Mr. Brian Shaw, was for many years a distance learner himself; his co-author Mrs. Kathy Broadley also has experience as a distance learner as have some local tutors.

Critical limitations of the materials: The 'study-guide' adopts a personal writing style that invites students to respond to suggestions for various activities, challenging their presumed experience of child development, asking them to engage in study groups,

attend meetings with tutors and send suggestions to the course authors. But is the 'interactive' enough? Comments suggested that although the writing style was friendly, responses that could be positively measured should have been included to give assurance that interaction had occurred.

The material is essentially print material that has a mixture of reading text, cartoons, references to two prescribed textbooks and to follow-up readings, some provided. This mix was appreciated but the limitations of a single-medium approach were pointed out. The link to a textbook led to questions of the relationship of the guide to the textbooks, whether it repeated material available elsewhere or provided a sufficient critique of the prescribed reading. It was noted that some of the supplementary reading had the function of adapting textbooks from another culture to the New Zealand cultural and multicultural setting.

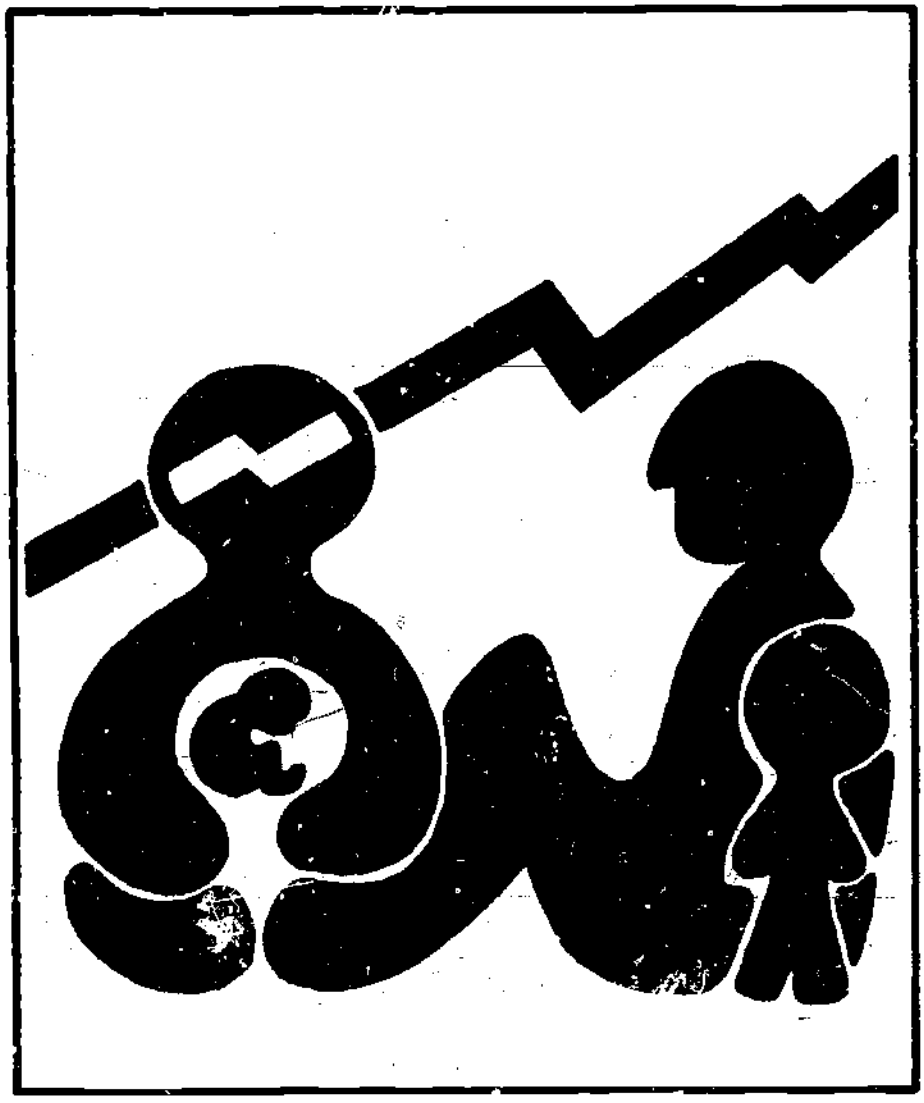
The material is one of a series of study-guides. Stronger linkages to preceding materials were suggested. More structural elements that could allow students to find their way through the guide were suggested.

The question of how much formative and summative evaluation might occur within this component of a course was discussed. What was not apparent from the guide was whether there were other relevant exercises in the 'Assignment Programme' that might support its learning processes and therefore, deserved reference.

*New Zealand*

**36-102**

# Human Development



study guide 3

DEPARTMENT OF EDUCATION MASSEY UNIVERSITY

## Noticeboard

Tutors All students should have received notice by now of the name and address of their tutor. It has not been possible to place all students with a local tutor. Please write to Mr. N. Whatman, Education Department, if you have not received notice.

Extensions for essays Please note that extensions will be granted *for exceptional circumstances only.* If your essay will be more than 5 days late, you should drop that topic and transfer your efforts to the *next topic.*

The first two study guides provided an introduction to the study of human development, and an account of four major aspects of growth and development. This study guide will deal with four more major developmental themes ) moral development, play, socialization, and developmental tasks.

B Shaw
K Broadley

Acknowledgements

– Cover design by Shirley Corkill.

We wish to thank the pupils and staff of Parkland School for the photographs and Murray Ball for permission to use his cartoons in this study guide.

Themes – play, socialization, and developmental tasks.

TOPIC 9 PLAY

*"It is through their own activity that children learn."*

Objectives:

After studying Topic 9 you should at least be able to:

1. discuss the functions that play fulfils from birth to old age,
2. describe the kinds of play that children typically engage in at various ages, discussing these in relation to physical, social, cognitive and moral development,
3. write concise notes on the following concepts.

Concepts:

Group play, parallel play, team play, social dimensions of play.

Required Reading:

Page referenced sections of

Turner, J. and Helms, D. *Life Span Development.* Saunders. Philadelphia, 1979.

and

Newman, B.M. and Newman, P.R. *Development Through Life,* Dorsey, Illinois, Revised edition, 1979.

Smart, R.C. and Smart, M.S. 'Complexity of Pre adolescent Social Play and Games' from *N.Z.J.E.S.*, 15, 1, May, 1980, 81-92. (Appendix I)

Functions of Play

Children are active, and enjoy their activity. Such activity reminds an adult of his own relaxation activities. These activities the adults sees as essentially different from his work, in that they are enjoyable and engaged in freely. Clearly the child's activity is also enjoyable and engaged in freely. Therefore the adult calls the child's activity 'play' -- the term he uses for his own activities which have similar characteristics. However, the use of 'play' to describe the activities of young children leads to many misconceptions. The adult distinction between play and work has no meaning for the

young child. He is active because he enjoys activity; this activity is freely chosen; this activity also contributes towards his development. It is activity – neither play nor work in adult terms, but at the same time both.

*"The childs' activity is enjoyable and engaged in freely."*

The origin of play has been given variously as the release of surplus energy, an intuitive preparation for life, an instinctive tendency, an innate biological stimulus to growth, a recapitulation or re-enactment of the physical activities of our primitive ancestors, and so on. These explanations depend often on an adult interpretation of the play, and there are objections to each of them (though it must be appreciated there is also some truth in some of them). Another approach is to ask why children play. However, this question also leads to imprecise and at times confusing answers, interpretations depending on the psychological beliefs of those asked. It seems much more profitable to ask instead what children gain from play. What do children gain from their activity? Clearly it is through their own activity that children develop. Through physical activities they develop physical skills and agilities; through interaction they develop socially; through experiencing objects in their world they learn intellectually about it and develop concepts; they learn to cope with their own problems and emotions by acting them out; in all areas it is the active involvement of the individual child which brings about the developmental advance. Children develop through play.

Read Turner and Helms, pages 115-119, 186-190 and 250-255

It needs to be clearly stated that very often play is not fun. Anyone who watches the concentration, effort, and possible frustration involved in such a simple skill as learning to hop (an ability which seems to give many preschoolers a sense of superior status) could not possibly think the child was continuing because of the enjoyment being obtained. The preschool footballer may be kicked, and dissolve into tears, but will still be back in the fray while the tears are still on his cheeks. It isn't 'fun', but he's still got to go on. Why? The answer varies, but in many cases the activity is probably more accurately

*"Very often play is not fun."*

classified as mastery behaviour – activity designed to achieve mastery over objects or skills. Even for the adult, mastery behaviour is not fun – it is only after basic level of mastery has been achieved that the individual can relax sufficiently with the object or skill to enjoy it, to play with it. The need to master aspects of the environment is particularly strong when the development of Erikson's senses of autonomy, initiative, and industry is of most importance.

Developmental Trends

> Read Newman and Newman, pp. 129-32, 189-91 and 285-37.

It is, of course, true that play activities differ during the different developmental stages of childhood, and that play at each stage has typical characteristics. Thus play in the earliest months of life is sensorimotor; play in middle childhood concentrates on physical skills and on team games; play in adolescence has definite social and sex-role connotations. However, such generalizations are also dangerous because they are over-simplifications. Play at any stage performs many functions. Individuals differ in their play preferences at all stages of development.

In all aspects of play, certain trends are evident. There are processes of biological maturation involved so that the individual has increasing skill available to him. As each aspect of play evolves it becomes more elaborate combining into more complex events in which several resources are used together. The properties of the materials immediately available become less deterministic as play comes increasingly under the control of plans and ideas. As the child's world expands to include more people and situations these tend to be incorporated in his play.

Although very young children may play together the nature of their games is frequently 'parallel" rather than social. They play side by side but do not interact. Some

primitive social aspects are present since they apparently prefer to be with the other child, but aspects of cooperation are not yet included. In Turner and Helms return to the box on page 186 for trends in preschoolers' play, and to pages 125-129 for reconsideration of the motor skills involved in much play activity.

Play continues past the years of early childhood. Organized play with games appears around the time of entry to primary school. The emerging abilities of the school child to engage in sustained cooperation (or competition) and to exercise the necessary self-control to cope with conventions and restrictions is necessarily involved. Team games assume considerable importance in our culture in later childhood. Read the Smarts' study in the Appendix for some New Zealand research on play.

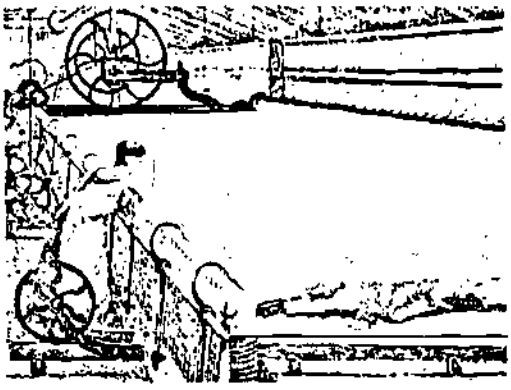
*"Co-operative play emerges during middle childhood."*

Play also continues into adulthood. Consider the following statement from Brian and Shirley Sutton-Smith's *How to Play With Your Children* (and when not to), Hawthorn, 1974:

> "For centuries we have believed that playful people were wasting their time. They were wasting our time too. There was work to be done on the farm, and there was work to be done in the factories – hard, grinding work. If we couldn't keep slaving sixty hours a week, we could hardly expect to survive. No wonder we were impatient with idlers, jokers, clowns, and players – that is, unless they could turn their clowning into money, unless they could entertain us. And we certainly are hungry for some release from our own dull, routine lives."

But automation is changing our lives. The machine has become our slave, and now we can afford to be more interesting people ourselves. We no longer have to be bits of a human machine. Actually it is not just that we can afford to be more interesting; it is more compelling than that. If we are not interesting, we cannot get a job. If we do not have new ideas about how to make vast information culture work, we are not of much use.

*"If we couldn't keep slaving sixty hours . . ."*



*"The European-American society which discovered the Protestant Ethic turned work and play into opposites, something that could not have been understood by the Medieval craftsman. The 19th-Century inner-directed man felt that he should work in order to 'make a living.' Then, paradoxically, he succeeded in making such a good living that he produced an economy of abundance in which his grandson is no longer able to work all his life, but must spend some of his years in retirement, although he still believes that work is a good thing in itself, and he is suspicious of play. "Thus we are now faced with the fundamental question – Can men be happy in any other way than in work?"*

ROBERT J. HAVIGHURST, "The Nature and Values of Meaningful Free-Time Activity"

Every branch of politics, government, business, and education needs versatile people. Everywhere the cry is raised, "If only we had more versatile leadership, if only those at the top could think of new ways of handling old problems, instead of repeating the same mistakes, or making new mistakes. Why can't they come up with answers that will cover all the variables in complex problems?"

This is another reason why we need more play. We know that those who play more are more versatile. We know that versatile people are in high demand and will be in even higher demand in the future,"

In adulthood we do tend to separate the play or leisure activities quite clearly from the work activities. The effects of increased time in which to undertake leisure activities as the life cycle of adulthood proceeds can have a considerable effect on adjustment, happiness, and fulfilment.

## TOPIC 10 SOCIALIZATION

Objectives:-

After studying Topic 10 you should at least be able to:

1. describe the development of attachment in infancy.
2. discuss family and peer influences on socialization of the child and adolescent.
3. describe and discuss the ways important events in adulthood affect socialization during the second two-thirds of life.
4. discuss the process of sex-role acquisition.
5. write concise notes on the following concepts.

Concepts:-

Identification, attachment, sex-typing, peer group.

*"What is appropriate . . . "What is acceptable . . ."*

Required Reading

McDonald, G. 'Maternal Deprivation — Facts or Fallacy', in *Delta 21*, Massey University Education Department, 1977.

Ritchie, J. and Ritchie, J. 'Sex Roles Development in the New Zealand. Family',

in Psychology Research Series No. 5, 1977, University of Waikato, Hamilton, New Zealand, Appendix to this Study Guide.

Stewart, R.A.C. 'Adolescence in New Zealand', in *Delta 21*, Massey University Education Department, 1977.

Page referenced sections of

Turner, J. and Helms, D. *Life Span Development*, Saunders, 1979.

and

Newman, B.M. and Newman, P.R. *Development Through Life*, Dorsey, Revised ed. 1979.

Socialization is the process of becoming a social being. It includes all the processes by which an individual acquires his personality, characteristics, motives, values, opinions and beliefs in a social environment. Obviously it continues throughout life. As the individual ages he must learn, then adapt, attitudes and behaviours to fit ideas of what is 'appropriate' and 'acceptable' in his own social situation. What is 'appropriate' and 'acceptable' will vary according to the cultural or subcultural setting. However, it seems that the processes through which these are acquired are universal. The precise contribution made by each factor is a matter of theoretical controversy, but most theorists agree that learning is involved and is achieved through the mechanisms of reward, punishment, imitation and identification. Each of these mechanisms contributes to the shaping of an individual within his particular society. It is sometimes held that reward and punishment are the dominant mechanisms during the early years of life, but it is also clear that infants imitate those around them, and identification is manifested in the actions of toddlers. In fact, many adults lament the efficiency of imitative learning and the relative inefficiency of reward and punishment in children — they always repeat the one word or gesture they were not even supposed to notice.

The young human is dependent for many years on caretakers for survival. Neurologically he is more immature at birth than other species, and also compared to other species he must learn more to survive. Through this learning he develops techniques for acceptance and survival — he is socialized. This early socialization typically occurs within a nuclear family in our society. Social development is a major theme of *Development Through Life*, (pp. 491-93) and in various parts of the book (e.g. 335-37, 373, 474) is related to personality development.

Basic to the socialization process is the development of the special bond between an infant and its caretaker. The concept of attachment received detailed consideration in Turner and Helms (94-102) and Newman and Newman (86-88, 101-103, 110-113) including some various theoretical viewpoints and some animal research. It is from this basic bond that the child is able to learn culturespecific information about acceptable behaviours and to broaden his horizons socially to include other human beings.

Now read McDonald, G, 'Maternal Deprivation — Fact or Fallacy'.

## ACQUISITION OF SEX-ROLE

Each individual must learn his sex, and learn to feel and act as a member of that sex. This process takes place over the first few years of life, toddlers starting to show a pre-

ference for behaviours of their appropriate sex. The third and fourth years of life are though by some to be a sensitive period for this learning to take place, and by around the age of six years the individual is firmly fixed in his sex identity. How does the child learn his sex identity? An important process is identification, with same-sex adults, particularly parents, being of great importance.

> Turner & Helms, pp. 158-163 treats this point comprehensively. How far has New Zealand gone in changing sex-role stereotypes? Consider the last paragraph of page 162.

It is now widely recognised that males and females have differing life expectancies perhaps it is not so widely known that differences have been noted throughout the whole of the life span. Before reading the Appendix article, *Men: Not So Great Expectations*, you should, if male, check whether you carry enough life insurance, or if female and married, whether the premiums are paid up. *Now read the article, Appendix III).*

**Developmental Aspects**

As well as the family, other persons are involved in socializing the child, and as the child becomes adolescent and finally adult these wider social horizons increase in significance. Socialization to adulthood will include breaking family ties in the sense of emotional dependence and moving beyond the family group. Even the adult is continually adapting behaviours and values according the life style currently operating for him. Consider, for example, the way in which the arrival of a first child socializes the family into parenthood, the effect of the death of a spouse on the remaining partner, or the possible effect of birth order. The peer group and the school are considered in Turner & Helms in the chapters on Early and Middle Childhood and Adolescence. Part 3 of chapters 7, 8 and 9 all take the family as their theme, from the perspective of the *adults* in the family.

The effects of socialization on the individual are described in relation to *self-concept* in sections of the texts detailed in their indices. Read them now.

## DISCUSSION POINTS FOR TOPICS 8, 9, 10, AND ELEVEN

1. What could be the effects of 'paternal deprivation' (ie the absence of the father from the home)?
2. Relationships within the nuclear family may be either vertical (parent-child) or horizontal, (between parents or between siblings). Consider how these alliances affect development. Are any of these relationships predominant at different stages of development?
3. What would you consider to be good day-care for children?
4. Examine one developmental task (as proposed by Newman and Newman) for each of infancy, middle school age, and middle adulthood. What is their origin? How might successful achievement affect later tasks? What are the possible consequences of failure?

5. Propose any *special* development tasks for middle childhood in New Zealand. Is it better to draw up separate lists for boys and girls?
6. Consider:
   (i) What is conscience? How does it develop?
   (ii) What child rearing practices might be expected to assist in development towards post-conventional morality?
   (iii) Why might there be a weak link between moral judgement and moral behaviour?
7. Might the use of drugs be evidence of evolving (or established) developmental tasks which many adolescents and adults are working on? What developmental tasks might young persons be striving to achieve through the use of 'narcotics'? And adults through nicotine and alcohol?

**SUMMARY OF CONCEPTS FROM TOPIC 8-11 STUDY GUIDE THREE**

| | |
|---|---|
| pre conventional moral reasoning<br>conventional moral reasoning<br>post conventional reasoning. | TOPIC 8 |
| group play<br>parallel play<br>team play<br>social dimensions of play | TOPIC 9 |
| identification<br>attachment<br>sex-typing<br>peer group | TOPIC 10 |
| developmental task | TOPIC 11 |

Further, more specialized reading

Codd, J. 'Moral Development and Moral Education' in *Delta 16*. Education Department Massey University, June, 1975.

Opie, I & Opie, P. *The Lore and Language of School Children*, OUP, 1950.

Sutton-Smith, B. *The Games of New Zealand School Children*. University of California Press, 1959.

Clausen, J. 'Perspectives in Childhood Socialization' in Weiner I B and Elkind D, *Readings in Child Development*, Wiley, NY, 1972.

Henderson, R & Bergan, J., *The Cultural Context of Childhood*, Merrill, 1976.

Herzog, E & Sudia, C.E. 'Fatherless Homes: A Review of Research' in Weiner I B and Elkind D, *Readings in Child Development*, Wiley, NY, 1972.

Kohlberg, L. 'The Child as a Moral Philosopher' in *Readings in Developmental Psychology Today*. Second Edition, CRM, Random House, 1977.

Munro, R F & Munroe, R H *Crosscultural Human Development*, Brooks/Cole, 1975, Chapters 3 and 7.

Neville, R.J.W. and O'Neill, C.J. (eds) *The Population of New Zealand: Interdisciplinary Perspectives*. Longman Paul, Auckland, 1980.

Piaget, J *Play, Dreams and Imitation in Childhood* (1951) Routledge and Kegan Paul Ltd, London (Reprinted Third Impression 1972).

Ritchie, J & J *Growing Up in New Zealand*, Allen & Unwin, 1978.

Add below any other source materials you have found to be particularly useful in this area. *Please send a duplicate copy to the lecturers in this course.*

# COMPLEXITY OF PRE-ADOLESCENTS' SOCIAL PLAY AND GAMES

Russell C. Smart and
Mollie S. Smart
*University of Rhode Island*

## Introduction

The functions of play and games are many. The history of theories of play and games is summarized and synthesized by Sutton-Smith and his co-workers (Avedon and Sutton Smith, 1971; Herron and Sutton-Smith, 1971). The present study stems from an interest in children's development through play and games, particularly the acquisition of social competencies basic to achievement of high positions of power and authority. The Women's Movement has stimulated questions as to why so few women occupy top management positions in business and industry and positions of authority in politics and academic life. Lever (1978) points to evidence that managerial skills may be learned through the games boys play, especially team games. Typical girls' games, she suggests, probably develop empathic and nurturing skills rather than managerial. In her study of sex differences in play she found boys, more often than girls, experiencing high levels of complexity in play and games.

Our impression in 1971-72 of New Zealand girls and women was that they took part in games and sports to a much greater extent than did their counter-parts in the United States, but that New Zealand females less frequently occupied positions of power and eminence in their society. Place (1977) has confirmed our impression of the small proportion of women in top-level positions. In 1976 there were 414,560 in the New Zealand labour force, 32 per cent of the total labour force. Fourteen per cent of the employers were women; 18 per cent of the self-employed were women. Two per cent of employed men were managers; 0.3 per cent of employed women were. In the secondary schools 20 per cent of teachers were women; in the training colleges, 20 per cent; in the universities, 8.5 per cent. Of the 365 professors in the universities, 6 were women. Among public servants in New Zealand 30 per cent were women, 0.4 per cent in high executive positions on the permanent staff; 13.3 per cent were women on the permanent staff. It also seemed to us that boys and men in New Zealand participated in games and sports more than males in the United States, and so perhaps a sex difference in game participation might exist in New Zealand, as well as in the United States. Even though the female participation in New Zealand is higher than in the United States, the male participation might be so much higher that the boys would still get more social experience in complexity than would girls. The aim of the study is to compare New Zealand boys and girls in complexity of social play and games.

In 1972 Lever studied boys and girls aged 10 and 11 in Connecticut, using observation of schoolyards, semi-structured interviews, written questionnaires, and a diary record of leisure activities (1978). She found 136 play activities that involved interpersonal skills. These play activities were rated on six dimensions of complexity: [1] Role differentiation (High = 3 or more distinct games roles are present); [2] Play interdependence (High = each player's move greatly affects the other's); [3] Size of play group (High = 4 or more children);[2] [4] Explicitness of goals (High = a predetermined end point, simul-

taneous with the declaration of a winnner or winners); [5] Number and specificity of rules (High = numerous well-established rules. Low = play never has rules); [6] Team formation (High = 3 or more persons working collectively toward a common goal). The resulting Complexity Scores for play and games ranged from 0 to 5.

Table 1 summarizes Lever's Table 1. Examples of activities with a Complexity Score of 0 are bike-riding, climbing trees, flying kites. Rated 1 are such activities as cheerleading practice, catch, pool. A score of 2 is given to jumprope, hide-and-seek, simple card games. Checkers and board games like Monopoly are rated 3, Capture the Flag is rated 4, and baseball, ice hockey, and punch ball, 5. More girls than boys engaged in the activities rated 0 while the team games rated 5 comprised 30 per cent of the boys' activities but only 19 per cent of the girls'. Lever also assigned a complexity score to each child. This score was the average complexity score for each subject, based on the entire week's social play report. In this scoring the size of the play group was included so that the scale ranged from 0 to 6, instead of 0 to 5. Seventy per cent of the boys had average complexity scores of 3.0 or higher, but only 36 per cent of the girls' average scores reached that level. Therefore, whether the unit of analysis was the activities engaged in, or the complexity score for each child, the boys in this American sample were having more experience with activities of high complexity.

New Zealand has a rich literature on children's play, although complexity of play has not been analysed statistically and related to sex, race, and parental involvement. Sutton-Smith (1959, 1972) has described children's games in detail and has analysed changes in games over the past century. Although he does not give any counts of games played by the two sexes, it is clear that, at least until 1950, girls played games of lower complexity than boys. Studies of intermediate and high school children, although not directly comparable in age to the present study, are of some interest. Kerr (1971) found Maori and Pakeha high-school students participating equally in team sports. Maori players were more successful in team sports and Pakeha in individual sports. Dalzell (1962) using diaries, analysed a total week of time for Form 2 students. Of those who engaged in sports, amounts of time spent were about equal, but more girls than boys engaged in no sporting activities. Patterson (1969), studying intermediate school children, observed that boys were more interested than girls in activities involving strenuous physical effort.

In summary, New Zealand investigators have noted sex differences in children's play, but they have not calculated complexity of play by the method to be used in this study. Sex differences noted in intermediate and high school students may not exist in 10- and 11-year-olds. There may also be time-related changes in sex differences, which would be consistent with the changes over time that Sutton-Smith has delineated for the years between 1850 and 1950. We would expect boys and girls to increase in equality of opportunity because of the Women's Movement. For several years, liberated parents of both sexes have been trying to minimize the impingement of sex stereotypes upon their children. In the present study, we have tried to find out whether boys and girls participate equally in complex play and whether they have the opportunities for doing so. We also compare sex differences in complexity of play with Lever's findings on a United States sample.

**Methodology**

The time available to us for collecting data from school children was in November, 1978. With the advice of members of the Education Department of Massey University, we chose four schools in Palmerston North, a city of about 60,000 population. The schools, we were told, would among them draw on a representative cross-section of the city. The educational level of adults in Palmerston North may be somewhat higher than in other cities of its size in New Zealand because of the presence not only of the University, but also a Teachers College, a Technical Institute, and two government-financed research institutes.

Each school had two Fourth Standard classes, comprising 10- and 11-year-olds, with a few 9-year-olds in one class. Each class included boys and girls. One of the classes was away from the city on a two-day trip to a wilderness camp; there were therefore seven classes available to us. Before we began to collect the data, we met with the teachers in each school, explaining our purpose, and giving them copies of the forms we would be using. The diary forms and questions we asked were adapted from those used by Lever. As we began to prepare the forms, we secured the cheerfully given services of five boys and girls ranging in age from 8 to 14 in checking the vocabulary for unfamiliar North American terms and substituting a New Zealand vocabulary where necessary.

We went to each school first on a Wednesday, asking the children to recall what they had done between the letting out of school on Tuesday and their going to bed, omitting their meal, but using the evening meal as the dividing time period. For the time before the meal they wrote in the name of each activity, the number or names of those they were with, and the beginning and ending time of the activity. Each child wrote a sentence about what he or she did between the meal and bedtime. (As we observed the children filling in the times and when we came to tabulate the data we realized that in many cases the time intervals were unrealistic. We therefore do not report on the timings of the activities.) On each of the first three days, after the diary forms were filled in, there were one or two pages of questions, with space for writing in answers, or for checking appropriate items. At the conclusion of the writing we engaged in informal conversation with the children, ending with the statement that we would be back the next day with more forms to fill in. On Monday the diary gave the record for Friday after school, for Saturday, and Sunday; on Tuesday only the diary for Monday afternoon and evening. During the week in which records were kept a local theatre group presented matinee and evening performances of a well-received pantomime. Several children reported attending a performance. It also happened that a windy rainstorm began on Friday afternoon and continued unabated until late on Sunday. Although this kind of storm is not unusual in Palmerston North in November, it means that the records do not include the number and variety of outdoor activities that would have been reported on a weekend with pleasant weather. (The week reported in Dalzell's study (1962) also included a rainy weekend.) On a find Saturday during any part of the year the many and large playing fields in Palmerston North are crowded with games and sports of all kinds, played by both boys and girls.

Only those children who completed seven diary records became subjects of the study. In preparing the diary data for the computer, repetitions of the same activity within one day's record were ignored. Thus, if a child played chess between school and

the evening meal, and again before he or she went to bed, chess was counted only once for that day; several periods of watching television became one entry of TV. The number of others with whom the child reported he engaged in play or games was entered as part of the activity name. Sometimes, for instance, a child reported that he or she played cricket with one other; at another time the same child might report that a team played with him, or any number of others.

An alphabetical printout of all the social play activities engaged in by the children for the seven days was generated. Each of them was rated on the five characteristics used by Lever in her Complexity Score scale, yielding scores ranging between 0 and 5, inclusive. In a sample list of activities, the authors agreed in 93 per cent of the play and games, and later resolved the differences. The Synonym part of the Famulus programme substituted these scores for the play and games recorded for each child, generating a printout for each child giving for each day the Complexity Score(s) 'earned' by the child. The highest scores for each of the seven days were summed, yielding a theoretical range between 0 and 35. The sum of the scores is called the Child's Complexity Score. If the score for the week is zero, it indicates that the child had not employed the kinds of skills required by complex play and games. A score of 35 indicates that for some period of time each day the child had practised those skills, in an activity rated 5.

The Index part of the Famulus programme generated a printout giving the case numbers of the children who earned each of the six Complexity Scores. From this printout it was possible to determine the number of activities at each complexity level engaged in by the total group and by various sub-groups. Counts were also made of the number of days on which each child reported he or she had watched television at least once, on which housework was done (defined as cooking, doing dishes, making bed, tidying, etc.), yardwork (mowing lawns, gardening, outdoor housework), wandering (going to the creek or the river, walking in the park), pets (feeding or playing with household pets), church or Sunday school attendance. From the questionnaires answered on three of the report days, tabulations were made of the child's ordinal position, parental participation with the child in play or games, parental prohibitions of certain sports (if any).

## Results

Table 1 shows frequencies of play incidents at each level of play complexity, according to sex and ethnicity. Complete records were available for 75 Pakeha girls, 86 Pakeha boys, 7 Maori girls and 16 Maori boys. Most were 10 or 11 at their last birthday, although a very few were nine. The Maoris were 12 per cent of the total group. Ten per cent of the Maori girls' scorable activities and 9 per cent of the boys' activities were given a Complexity Score of 5; 4 per cent of the Pakeha girls' activities and 6 per cent of the Pakeha boys' were given that score; combining the two groups, 4.8 per cent of the girls' and 5.9 per cent of the boys'. These percentages are much lower than those Lever found for American children's activities. Applying the Kolmogorov-Smirnov two-tailed test to the New Zealand data, the distributions of the boys' and girls' participation frequencies were not quite significantly different at the .05 level for all boys vs. all girls, Maori girls vs. Pakeha girls, or Maori boys vs. Pakeha boys, but were significant at the .025 level for all Maori vs. all Pakeha. The largest differences in the distributions of participation frequencies were at the complexity level of 1, where the Pakeha girls, total girls, and total Pakehas had a greater concentration than the contrast group. The Pakeha

Table 1

Participation in Social Play Diary Activities of 6 Levels of Complexity by 10- and 11-Year-Olds

| Complexity Score | American* | | | New Zealand | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Girls | Boys | Total | Maori | Girls Pakeha | Total | Maori | Boys Pakeha | Total | Grand Total |
| 0 | 179 | 126 | 305 | 26 | 331 | 357 | 69 | 392 | 461 | 818 |
| 1 | 30 | 56 | 86 | 9 | 170 | 179 | 33 | 134 | 167 | 346 |
| 2 | 131 | 71 | 202 | 15 | 118 | 133 | 32 | 193 | 225 | 358 |
| 3 | 35 | 70 | 105 | 13 | 98 | 111 | 16 | 97 | 113 | 224 |
| 4 | 9 | 5 | 14 | 1 | 10 | 11 | 7 | 20 | 27 | 38 |
| 5 | 43 | 140 | 183 | 7 | 33 | 40 | 16 | 57 | 73 | 113 |
| Total | 427 | 468 | 895 | 71 | 760 | 831 | 173 | 893 | 1066 | 1897 |

* Adapted from Table 1 in Lever (1978).

Table 2

Means of Children's Complexity Scores by Race and Sex

| Sex | Race | | |
|---|---|---|---|
| | Maori | Pakeha | Total |
| Boys | 17.8 | 15.9 | 16.2 |
| Girls | 18.1 | 16.2 | 16.4 |
| Total | 17.9 | 16.0 | 16.3 |

Analysis of Variance: Sex, Race (N = 184)

| Source | ss | df | ms | F | p |
|---|---|---|---|---|---|
| Total | 7830.44 | 183 | | | |
| Sex | 1.62 | 1 | 1.62 | 1 | |
| Race | 69.87 | 1 | 69.87 | 1.6 | ns |
| Interaction | 74.51 | 1 | 74.51 | 1.7 | ns |
| Within | 7684.44 | 180 | 42.69 | | |

boys had a lower concentration at level 1 than did the Maori boys, but greater at level 0. The Pakeha girls also had lower percentages of scores at levels 3 and 5.

Table 2 gives means derived from individual children's scores. The highest-scoring activity by each child was recorded for each day. The sum of the seven days' scores is the Complexity Score for the child. The Maori girls' mean, 18.1, was the highest of the

four groups, followed by the Maori boys', 17.8; Pakeha girls', 16.2; and Pakeha boys', 15.9. None of the differences is significant at the .05 level.

*Ordinal Position*

Because there were only five singletons, they were eliminated in analysing the effect of ordinal position on the Children's Complexity Scores. The children were grouped, each sex separately, into Older of two or Oldest of three or more, Middle of three or more, and Younger of two or Youngest of three or more. The Middle and Young groups were further subdivided into sibships headed by a female or by a male. The mean Complexity Scores are given in Table 3, by sex and by the 5 groupings. Girls' complexity scores differ significantly according to ordinal position; boys' do not. Middle girls' mean score is lower than oldest girls'. Youngest girls' is lower than middle girls'. The lowest mean is that of youngest girls with a girl for her oldest sibling. This score, however, just misses statistical significance in being lower than that of youngest girl with a boy for oldest sibling. No noteworthy differences are evident in comparisons between other positions.

**Table 3**

**Means of Children's Complexity Scores by Ordinal Positions and Sex**

| | *Sex* | |
|---|---|---|
| *Ordinal Position* | *Boys* | *Girls* |
| Oldest | 15.6 | 18.9 |
| Middle of 3 or more | 17.4 | 17.7 |
| Oldest a female | 17.5 | 18.1 |
| Oldest a male | 17.2 | 17.1 |
| Youngest of 2 or more | 15.6 | 12.5 |
| Oldest a female | 14.5 | 10.3 |
| Oldest a male | 17.6 | 13.6 |
| Oldest sib a female | 16.0 | 15.8 |
| Middle | 17.5 | 18.1 |
| Younger or youngest | 14.5 | 10.3 |
| Oldest sib a male | 17.4 | 15.5 |
| Middle | 17.2 | 17.1 |
| Younger or youngest | 17.6 | 13.6 |

*Other Experiences within the Family*

The questionnaires explored some experiences within the family that might influence the children's participation in social games and sports. One question asked which of the child's sibs he or she most often played with. There were no differences in the subjects' Complexity Scores related to the sex or age of the favourite sibling playmate.

Another series of questions had to do with the parents' encouragement, or lack of it, to participate in sports and outdoor games, whether or not each parent sometimes

played games or sports with the child, and if there were any sports or games each parent did not want the child to play. Parental involvement showed no relation to complexity of play. Children's scores were influenced neither by reported parental encouragement nor by reported prohibition from one or more sports. Wide parental participation was reported. Seventy-four per cent of the boys, 70 per cent of the girls said that their fathers sometimes played games and sports with them, 58 per cent of the boys, 63 per cent of the girls reported their mother's participation; about 50 per cent of both sexes reported that both their parents played with them. Table 4 shows mean Complexity Scores by play participation or parents. Although differences suggest positive relationships between parent play (especially father) and complexity of children's play, the differences were not significant.

**Table 4**

**Mean Activity Scores of Children from Two-Parent Families, by Parent Participation in Games and Sports, and Sex of Children**

| | *Sex of Children* | | | | |
|---|---|---|---|---|---|
| | *Girls* | | *Boys* | | *Total* |
| *Parent Participation* | *Father Plays* | *Father Does Not Play* | *Father Plays* | *Father Does Not Play* | |
| Mother Plays | 17.1 | 14.3 | 17.5 | 14.3 | 17.1 |
| Mother Does Not Play | 17.5 | 16.4 | 15.3 | 14.0 | 15.7 |
| Total | 17.2 | 16.0 | 16.8 | 14.1 | 16.3 |

When asked if there were any games that mothers and fathers did not want them to play, boys saw 23 per cent of fathers as prohibiting one or more games, and 30 per cent of mothers (Pakeha fathers 24 per cent, mothers 32 per cent; Maori fathers 18 per cent, mothers 24 per cent). Rugby was the main target of prohibitions. Among Pakeha boys, 13 per cent said that their fathers did not want them to play rugby, and 24 per cent of their mothers. Maori boys saw rugby as disapproved by 6 per cent of their fathers and 12 per cent of their mothers. Girls reported prohibitions by 14 per cent of their fathers and 16 per cent of their mothers. Girls reported 7 per cent of fathers and 6 per cent of mothers as opposed to their playing rugby. Although most parents were not seen as opposing any game or sport, of the small number who opposed any game, most of the parents, except for the fathers of the Maori boys, opposed rugby as a sport for their children.

*Organized Opportunities for Complex Games and Sports*

Three opportunities for complex play were compared for participation by boys and girls during the seven days the diaries were kept. There were no sex differences in numbers taking part in sports after school on school grounds. Participants included 77 per cent of boys and 76 per cent of girls. Members of teams playing against other teams included 81 per cent of boys and 76 per cent of girls. There was no significant sex difference in the numbers of children who belonged to clubs, 74 per cent of boys and 68

per cent of girls. Several belonged to more than one club, bringing the mean number of clubs per boy club member to 1.3, the corresponding figure for girls being 1.4.

*Participation in Other Activities during the Week*

Although not the major focus of this study, out-of-school activities other than play and games are also significant in the lives of children. Extent of participation in work, reading television, and church are therefore reported. Seventy-two per cent of the Maori girls' records, 92 per cent of the Pakeha girls', 75 per cent of the Maori boys', and 90 per cent of the Pakeha boys' included doing dishes, cleaning, or one of the other activities classified as housework. From day to day the number varied, from none of the Maori boys on Wednesday to about half of the Pakeha girls on Saturday, when a third of the Pakeha boys also did some housework. Some of the children did housework daily.

Reading was a daily activity for a minority. Frequencies varied from day to day. Overall 65 per cent of the children reported doing some reading during the week. On some days some children did nothing but watch television from the time they came home from school until bedtime, interrupted, perhaps, by eating the evening meal. Two children, one Pakeha boy and one Pakeha girl, did not include watching television in their diaries; the rest watched at least once during the week, and some every day. Saturday was the day on which television-watching was reported most often, 161 of the 184 (88 per cent) of the children. (Recall that it rained most of the day, and that Saturday also included housework for a sizeable percentage of the children). On Sunday 15 children (12 Pakeha girls, one Maori boy, and two Pakeha boys) reported having gone to church, 8 per cent of the total group. Sixteen (one Maori girl, 10 Pakeha girls, five Pakeha boys) reported Sunday school.

Recent research on sibling interaction gives no clue as to how to explain the ordinal position progression in girls' complexity scores. Schacter's (1959) classic study on college women indicated a greater 'need for affiliation' among first borns. If a similar dynamic operates in New Zealand pre-adolescents today, it would explain oldest girls joining activities in which several children took part. Schacter suggested that later-born children were more willing to be alone because they have had to learn to wait for assistance and attention.

*Organized Opportunities for Complex Games and Sports*

Three-quarters of the boys and girls took advantage of the well-equipped school playgrounds outside of school hours. This staying on at school, or gravitating back to the open space, is part of the New Zealand ideology of vigorous outdoor play for all ages. A similar number, perhaps the same children plus a few others, are members of teams playing team games against other teams. Club membership, which would bring opportunities for taking part in social interaction with peers, is also part of the lives of about three-quarters of the boys and girls. The club most often mentioned was Scouts, although a number of other organizations were named. If a child belonged to one club, he or she was likely to belong to more than one.

*Participation in Housework and Other Activities during the Week*

The reports of doing housework are compatible with the stereotypes of participation by females and avoidance by males. However, one in three Pakeha boys reported doing

housework on Saturday; most often during the week they helped with the drying of dishes. On the rainy Saturday morning, there were sizable numbers of both boys and girls who said that they had cleaned or tidied their rooms, and another group who reported cooking, usually making fudge, or doing some other kind of 'recreational' cooking. Fifteen per cent of the Pakeha boys reported having done yardwork during the week, and 6 per cent of the Maori boys (and a few girls of both races). So approximately 9 out of 10 Pakehas reported having contributed something to the running of their households, and three out of four Maoris did.

Some of the children reported reading on every day covered by their diaries. The most usual time for reading was before going to sleep. Thirty-seven (43 per cent) of the Pakeha boys never included reading in their diaries; 22 (29 per cent) of the Pakeha girls never reported reading. One in four of the Maori children never mentioned reading. We did not ask the children to tell what they had read. But it appears that for one-third of the Pakeha children and one-quarter of the Maoris, reading is something you do only in school, where it is required of you. Very few children reported doing homework during the week.

We do not know the incidence of televisions sets in Palmerston North homes, but on the day when the most television-watching was done 88 per cent of the children included it in their diaries. On three days of the week all of the Maori boys reported viewing. On three other days (was there a difference in programmes on those days?) all of the Maori girls watched for some time. No more than 9 out of 10 Pakehas watched on any one day. However, there is no doubt that television was very much a part of the lives of our group of subjects.

Religious activities, attendance at church services and Sunday school, at least during this week, were very low. Evidently the participation in church activities plays only a minor part in the lives of these pre-adolescents. A personal communication from Marie Clay and Ronald Oates indicates that our findings on religious participation agree with what they found in a nationalwide sample, 'Round about Twelve'.

## Discussion

Boys and girls did not differ in participation in complex play, as shown by two methods. No significant sex differences can be demonstrated, but Maori children were higher than Pakeha. Table 1 represents an attempt to compare our data with Lever's (1978). Sex differences are apparent in her American sample, more boys than girls taking part in level 5 activities, and more girls than boys participating at level 2. The two parts of the table are not directly comparable, because our use of the scale from 0 to 5 was not the same as Lever's. Although she had developed 6 criteria for scoring complexity, she omitted the criterion *number of players* (or, we think she did) when constructing her Table 1. For example, if a child reported he played baseball with one other person (as, indeed, some of our subjects did), Lever gave a rating of 5, as she would have if the report was of playing with 17 other children. In our scale of 0 to 5, the number of children is taken into consideration; 'baseball' with one other was given a rating of 2, but baseball with several others was rated 5. This scoring criterion may account for the much smaller percentage of activities rated 5 for the New Zealand children than for the American.

Even though we found no sex difference in complexity of activities, we tested for difference again, using another method of scoring. For each child, we took the score of the most complex activity for each day, and summed scores for seven consecutive days, to give a week's complexity score. The means of the four groups shown in Table 2 are close together. An analysis of variance of the scores shows that neither, race, sex, nor interaction contributed significantly to the variance of the group. Therefore we conclude that boys and girls participated in complex play to about the same degree. Maori exceed Pakeha significantly in the first analysis and non-significantly in the second. Maori children participated less often than Pakeha in reading, helping with housework, and going to church or Sunday school. They seem to have made more time available for playing games. Our first and most important question about New Zealand pre-adolescents' play is answered. The trend that Sutton-Smith noted for the years from 1850 to 1950 has apparently continued into the present, when sex differences are not demonstrable, in at least one dimension of children's play. Girls are just as fortunate as boys in opportunities for complex play. Source of differences in adult work roles will have to be sought elsewhere!

The total line in Table 1 shows incidence of social play. Our sample reported 1897 incidents of social play during a week. The mean per week per child is 10.1, and per day per child, 1.4. The American children's means are 4.9 per week and .7 per day. Our method of counting incidents may not be directly comparable to Lever's, but if not, its error is on the side of too few. Our subjects were not able to tell us exactly when they started and stopped activities. We could not measure the length of time spent in an activity, nor could we evaluate intermittent activity. Therefore, each named activity was counted only once in each day. The picture that comes through in Table 1 is of the New Zealand children playing a large number of games of moderate complexity, boys and girls participating about equally.

Although our main purpose was achieved in our inquiry into sex differences in level of play complexity, we also looked for correlates of play complexity in the child's family relationships and in organized opportunities for sports and games. Scores according to ordinal position and sibships are shown in Table 3. Ordinal position was found to be related to girls' complexity scores, but not to boys'. Eldest girls were highest, youngest lowest. The ordinal differences could not be explained by any of the data concerning parental play and attitudes towards the child's play. Complexity scores, arranged according to parental play, show no significant differences, as can be seen in Table 4. Only small and non-significant differences appear in numbers of parents playing with oldest, middle, and youngest girls. Because most parents were reported to play games with their children, it was not possible to compare sibship groups for parents playing and not playing. A more finely tuned measure of parental participation might indeed have shown some relation between complexity scores and parents' play. Similarly with parents' encouragement of playing games, and prohibitions against games, the encouragement was so frequently reported, and the prohibition so seldom, that the ordinal position differences cannot be related to encouragement and prohibition. The high level of parent involvement in play is consistent with the high parent involvement we noted in an earlier study of New Zealand pre-adolescents and their reports of parent behaviour (Smart and Smart 1973).

## Conclusions

Overall, the children we met were active in the company of others, often in an organized way and not often in solitude. They were taking part in the friendly, gregarious, physically active New Zealand culture. If the experience during childhood in complex social play and games prepares individuals for teamwork and contingency planning in their later years, these boys and girls were getting equal training. If, with equal childhood experience, New Zealand women do not emerge in managerial positions in business and industry, the explanation for their absence lies elsewhere than in that childhood experience. We observed that New Zealand women employ their managerial skills in extensive voluntary work. With their equality of opportunity in childhood, women and men may be equally able to function as executives, but their fields of application differ, at least for the time being.

## Notes

1. As we were finishing writing up the results of the study, we read Bronfenbrenner's *The Ecology of Human Development* (1979). One of the points he makes in this important book is that there has been little research in the United States regarding play, fantasy, and games of children. Lever's study, published in 1978, doubtless appeared while Bronfenbrenner's book was in press, Her study, and ours which is based on Lever's, can be viewed as investigations of variety and complexity of play and games of 10- and 11-year-old children.
2. Lever did not include this dimension in her ratings of complexity.
3. We wish to thank the school principals, Mr. Bowers, Mr. Edwards, Mr. Gregory, and Mr. Peach, and the teachers, Mr. Boniface, Mr. Burgess, Mrs. Duncalfe, Mr. Green, Mr. Ibell, Mr. McInnis, and Miss Ogle, for giveing us their time and the time of their pupils for collecting information from them.
4. We wish to thank Michael Morgan, Claire and Elizabeth Wall, and Kathryn and Peter Bates for their help in this phase of our research.
5. We wish to thank Dr. John Kirkland and Michael Brennan for adapting the Famulus programme to our diary entries.

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# SEX ROLE DEVELOPMENT IN THE NEW ZEALAND FAMILY

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In the 1970 report we accepted at face value the answers that the mothers gave to our enquiry concerning any conscious differences which they might make in the treatment of little girls as opposed to little boys. Generally, the mothers were not aware of such differences. Accepting this, we reported that differences were unlikely to be very significant. However, in 1974, with our generally increased interest in and awareness of the significance of set role stereotyping we decided to take a second look at our original data. We therefore collated the information on the 180 variables of the original study building up simple frequency distributions for interviews conducted concerning male children and interviews conducted concerning female children separately. When tested with Chi-square relatively few differences approach high levels of confidence but taken overall the differences, though small in any particular case, reveal consistent and interpretable trends and it is these that we will report. We will survey some of the major areas of child rearing covered in the Sears interview (Sears, Maccoby, and Levin, 1957) and describe how each of these areas is handled in a different way for boys and for girls.

## INFANT CARE:

Though the amount of crying between boys and girls appear to be the same, mothers are more attentive to crying if the child is a girl. Girls are breast fed on average for a slightly longer time than boys, and the scheduling of feeding was less rigid for girls than for boys. Mothers of girls seem to have less anxiety about beginning toilet training and leave its commencement to slightly later than mothers of boys. Though they start later little girls are trained earlier than little boys. Throughout the literature on child training, the variable of initial warmth and affection has received much attention and proved to be an aspect which is of considerable significance – more so than specific techniques such as the mode of feeding or toilet training. It is not surprising in the light of the facts above that we found mothers to have more affectionate interaction with their daughters than do the mothers who are rearing sons. They not only attend more to crying but they also sing and talk to their children more, hold them more, cuddle them more, engage in affectionate interaction to a higher degree.

## SEX TRAINING:

Of the questions relating to this area in the interview we found only three showed differences: modesty, attitude towards masturbation, and the mother's overall rating on sex anxiety. Since the last of these was the result of a rating by our raters over a wide variety of questions relating to sexuality, it is a stronger indicator than the ratings of any one question. The questions concerning modesty related to permissiveness for nudity in

the house and around the house. In this matter the mothers of little girls were more rigid than the mothers of little boys. They exert more pressure on girls than do the mothers of little boys. Already by the time they are four years of age, girls are being shaped into a proper lady-like discretion about nudity. Implicitly one might also guess that this would involve the beginnings of the training of girls to be more attentive to neatness and tidyness and general appearance in dress.

Boys not only masturbate more than girls but they are also permitted more masturbation than are little girls. Here one sees the foundation of the double standard which permits greater expression of sexuality and acceptance of it, for boys than for girls. On the overall rating the mothers of girls showed more sex anxiety than did the mothers of boys. This means, generally, that there will be many more restrictions placed on little girls and that their play activities will be more carefully supervised.

## DEPENDING AND ATTENDING

Again from the literature we know that the way in which the mothers handle dependency has a great deal to do with the general climate and emotional contexts of child rearing. (Sears, Maccoby, Levin, 1957). Girls at four years of age show many more signs of dependency on their mother than do the boys, they hang around their mother in closer proximity, cling to her skirts and seek more attention. The mothers of girls report more anxiety and disturbance in the child when separated from her, than do the mothers of boys. When asked how the mothers handled this situation we found out the mothers of girls are more permissive and tolerant of dependent behaviours. Indeed they might be said to encourage the little girls to be dependent more frequently than did the mothers of little boys. Here we see the beginnings of the passive, dependent, clinging, attention-seeking female stereotype.

## PRESSURES, RESTRICTIONS AND FREEDOMS:

There is just no doubt about it. It is going to stay a man's world if things go on the way they are! Boys are allowed to wander further from the house than are girls, the mothers check on their whereabouts much less frequently, they make more noise both inside the house and outside. It is very clear that boys will be boys because their mothers are going to train them that way. Perhaps it is better not to say train but to say that the natural exuberance, the noisiness, the activity, the exploratory enquiring behaviour is more tolerated, supported and rewarded in the case of boys than girls.

## HOUSETRAINING:

From what has been said above one might expect that the little boys will have an easier time of things because they are less bound to the house than are the little girls. This is actually far from the case. Boys, generally, find it harder to reach the standards which the mothers apply, fairly they think, to both boys and girls for such things as table manners and neatness and orderliness around the house. The greater pressure simply results from the fact that boys are less socialised to the mother's standards, less well attended to by her, and less in her company. Both boys and girls are restricted inside the house but in at least one area the restrictions on girls are tighter than they are on boys, namely, the care of furniture and the general household property. This means that there

is more permission for little boys to jump on the furniture or to use the house as they please than there is for little girls.

OBEDIENCE:

The mothers of girls hold much higher standards of obedience than do the mothers of boys. They tolerate less deviation – boys are allowed to be both more rebellious and more defiant of parental authority. There would seem to be implicit sanctions and supports for boys in this behaviour. But at the same time, and undoubtedly this is confusing for the boys themselves, the mothers report that disobedience on the part of the boys is more of a problem. When boys are obedient they tend to be praised far more than is the case for girls, who in general, are expected to be obedient and when they are so the matter requires no further attention. Boys, therefore, are more likely to be praised when they are obedient and more likely to be punished when they are disobedient. The data on this matter are somewhat confusing but this may very well be because the attitudes of mothers in this matter are themselves confused.

AGGRESSION:

Boys are allowed to be more aggressive and are, more often than girls, encouraged to stick up for themselves and fight back. Whilst overall it is not acceptable to show aggression towards parents the standard is more rigidly applied to little girls than to little boys; that is to say, girls are more often punished for showing aggression towards parents than are boys. Again, the differences in the shaping of a powerful, natural, reaction to frustrating circumstances emerge as clearly as sex-typed. Boys will become more aggressive under these circumstances; not because aggression is inherently male (though Maccoby and Jacklin, 1974, say it may well be ) but because mothers regard aggression differently when exhibited by little girls than by little boys.

DISCIPLINE AND PUNISHMENT:

By and large in the New Zealand family discipline and punishment is the responsibility of the mother. Boys, however, are spanked more than girls and are more often spanked by both parents. The greater likelihood of boys to receive physical punishment is also found by Maccoby and Jacklin, 1974, in their comprehensive survey of parental practices. Fathers do not, very often, spank their daughters. But in the case of boys the spanking appears to do less good than is the case of girls, or so the mothers report. Once more we see the greater efficiency of socialisation in the case of little girls and the greater degree of variability in the behaviour of boys. Much the same finding emerges from the questions on discipline; here again, it is mainly the mother who curbs the child's behaviour. Fathers appear to have virtually no role in disciplining little girls and when they exercise discipline over their children at all they are stricter and harsher with the boys than they are with the girls. This is evidence of a general desire to toughen little boys which runs throughout the data. Readers of the earlier study will recall that we found New Zealand parents in general make rather low use of reasoning with four-year old children and this is particularly striking when compared with the American parents in the original Sears' study. The American parents, though they recognise that the technique is not always effective, do try to explain things to their children and exercise verbal control over behaviour. Though reasoning is not a large part of the control system in a

New Zealand family, it is more frequently employed with girls than with boys. This has several major implications: very likely it implies that the language behaviour of girls is responsive to the general language environment which will be richer than that of boys. This is in line with findings from studies such as that of Maccoby (1966) who reports greater verbal facility in girls. This facility, naturally, means that girls make more effective contact later on with the predominantly verbal nature of the school environment and therefore, may be expected to show better progress and receive more positive rewards and praise within the school environment.

Every parent knows that once it is possible to achieve verbal control over behaviour, even in something as basic as toilet training, the speed and the comfortableness of training begins to accelerate. The differential socialisation pattern which runs through much of these data can be clearly seen here, for the boys receiving the less efficient forms of socialisation simply end up less socialised and less responsive to socialising agencies.

CONSCIENCE DEVELOPMENT:

This greater effectiveness of socialisation emerges once more in the sex-role comparison concerning conscience and conscience development. The girls exhibit more guilt and appear to have more highly differentiated and developed moral and ethical responsiveness. Boys, on the other hand, are much more ready than girls (presumably because their capacity for guilt is lower) to admit his misdemeanours, or to report misdemeanours even without their having beeen asked. The closeness of the emotional tie to the mother means that the girls are vulnerable in terms of loss of love, and therefore, are less likely to risk this by acknowledging misdemeanours. At the same time they are carrying around a load of guilt concerning them.

THE FATHER'S ROLE:

The well-known distinction between instrumental and expressive roles (Parsons and Bales, 1953) comes into better perspective in the data concerning fathers in this study. Both aspects are part of the father's role but are differentially displayed; towards their daughters fathers are affectionate, expressive and indulgent — towards their sons fathers are task-oriented; they will spend more time with boys than with girls, but they are also stricter with the boys than they are with girls.

While boys get more outings and probably more company and more attention, than do girls, the girls get more warmth. Father's role in relation to the girls has something of the characteristics of the genial shop-floor fore-man, who, in passing the office, may joke a little with the typists.

MASCULINITY/FEMINITY:

It is very clear that the potency and power of the masculine image and its virtues are more highly valued than the femine. The work of Broverman et al (1972) is wider confirmation of this fact. It is more important that boys shall be boys than that girls shall display feminine attitudes. The feminine attitudes emphasised in these data are neatness, cleanliness, tidyness, docility, passivity, rather than prettyness, feminine charm, grace or other active female components. The attributes of boys are much more active in semantic differential terms. Male is active, potent and strong. Female is passive, ineffectual and weak and evaluatively it is better to be a boy than a girl.

## DIVISION OF LABOUR AND DECISION-MAKING.

While for the sake of reporting the data we have emphasised the features above we should point out that in half of our sample families there is no strong division of labour between husband and wife so that boys and girls will see mother and father inter-changeably in many of the activities that go on around the house. However, this applies only in the context of the way in which the question was framed; we think it decidely unlikely that in many households mother is going to strip down the motorcar engine to replace a head gasket, while father bakes scones for the morning tea and does the ironing on the side. In the other half of the sample the children will never see their parents engaged in other than stereotyped role activities. We think it unlikely in these circumstances that they will be able to later adopt models for themselves which do other than reinforce the polarisation of the sexes in our society. In only 10 percent of the families is the mother able to report that she is the chief authority in the household, even though she bears most of the responsibilities for the conduct of its affairs and in particular for child-rearing. In 40 percent of the sample there is some sharing of authority but overwhelmingly the authority role of the father is emphasised. In fifty percent of the sample, father is recognised by the mother as being the absolute authority. The autocratic character of this situation is very clear for as we have seen the fathers carry very little responsibility but would seem to have a great deal of power.

## BEING A FOUR YEAR OLD GIRL

We are now able to review the salient features of the socialisation of girls in New Zealand families. A little girl may expect and will receive closer warmth in relationship to her mother than will her brother. The mother will spend time with her, there will be more play, more verbal interchange, more interaction generally but on the other hand the mother will not permit as much freedom for the little girl as she does for the little boy. She will be more vigilant, more generally restrictive, make greater demands for obedience and watch to see that instructions are carried through. Around the house the little girl will be expected to be mother's little helper. When she responds by keeping herself and her surroundings neat and clean and tidy she will not be rewarded for this nor will she be praised, for this is expected behaviour. Her body is something to be dressed rather than exercised or owned and already at this stage she will be surrounded by a penumbra of sexual anxiety on the part of the mother, shown in our data in the intolerance for masturbation and nakedness. She will respond to this situation by showing dependency and this will please her mother. She will be rewarded for it. Her relationship with her father is just generally less than with her mother – less time spent, less playing, less talking, less interaction all round but such interaction that there is, is less strict, less punitive and much more indulgent.

It is very clear that mothers in most New Zealand families do have a strongly developed conception of what it means to be feminine and in terms of this inculcate a female role from a very early age. The attributes of this concept of feminity are substantially concerned with the maintenance of appearances. The appearance of the house, its neatness, orderliness, tidyness, cleanness, and of personal appearance of much of the same attributes. Little girls, like women, should be attractive, but not sexual, should be passive, should not display aggression, should stay close to home and be dependent. We found

very little evidence that the talents or abilities of girls in other directions than these were likely to be fostered or promoted. So that even though the set of attributes which the little girls will bring to school may be highly consonant with the school as a learning environment, there is simply not an adequate role support for achieving self-enhancing behaviour.

## BEING A FOUR YEAR OLD BOY

Boys are expected to be allowed to be aggressive, loud, and noisy. They are permitted to roam loosely around the neighbourhood and to develop and exploit their physical capacities in full possession of their bodies. To this end the mothers react towards them in ways that toughen their behaviour and reduce their sensitivity. They spend less time with them, ignore them more, make attempts to instruct and direct them which they do not expect will be very successful, and they find the boys generally harder to handle. In this the fathers will support the mothers.

It is possible, then, to say what constitutes maseulinity as a set of target behaviours for the development of the male role in boys. Because boys are active their behaviour has to be curbed and hence there is a greater use of physical punishment and less use of verbal control. The mothers, because they find the boys difficult to deal with, draw on the resources of their husbands in order to maintain discipline. The fathers respond by doing things more frequently with the boys, by being more prepared to punish them than they are their daughters, and generally fathers train their sons by the elimination of anything which they think is unmanly. They do not in general show a great deal of affection towards boys; they draw attention to manly conduct and virtues and generally recognise achievement and promote it, especially in such things as school attainment. It is clear that education is more important in the minds of both parents for boys than it is for girls.

When we compare the nature of these two role targets for socialisation it is clear that they do not rank equally in value to their parents. The parents reflect the general nature of social values in this matter. Let us put it this way: for boys the world is relatively open and their parents will support them in a development that will ultimately lead to whatever their capabilities may produce, intellectually, physically, sexually – though, not, we would hasten to add, emotionally. The world of women is the world of the house, the home and the duties of child-rearing and attending to the needs of mate and, we cannot but add, master.

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## MEN. NOT SO GREAT EXPECTATIONS

Warwick Neville, senior lecturer in geography at the University of Auckland, and co-editor with James O'Neill of *The Population of New Zealand.*

The recent arrival of the Department of Statistics latest life tables served as a sobering reminder of the transience of the local variety of homo sapiens. And also glaring evidence of the demographic discrimination against the male of the species. The news in these tables is all bad for us males. At virtually all ages females have a higher life expectancy than males, and at some ages the difference is substantial. The discrepancy is greatest among the elderly, as is evidenced by the fact that it is a socially sanctioned custom for the male to make provision for his widow by taking out substantial life insurance.

The first year of life is a hazardous phase in the human life cycle. The risk of dying is not again as great until a person is about 60 (actually in the 59th year for men and the 62nd for women). And from the foetal stage right through infancy the risk for males is more than a third greater than the risk for females. Prospects for survival improve steadily through childhood to about age 10 which, for both boys and girls, is the least risk period of their lives, but the male-female difference persists even at this optimal stage.

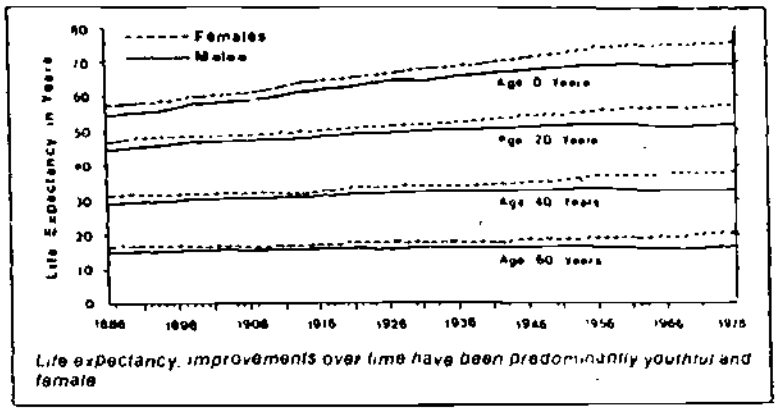
There is a third period during which the male death rate is again relatively high: this is between the ages of 14 and 29 when the large number of fatalities produces the up-surge in the mortality graph described as "the accident hump". But the risk of dying is much less in this phase than in infancy or old age.

The life tables* show that, on average, a female baby can expect to live to the age of 75, but a male baby is likely to live to the age of 69. At age 20, life expectancy for females is a further 57 years, and for males just over 51 years: at age 40, women can expect another 38 years of life, but men another 33 years: and at age 60, 20 years for women and 16 years for men. The longer a person survives, the longer they are likely to survive.

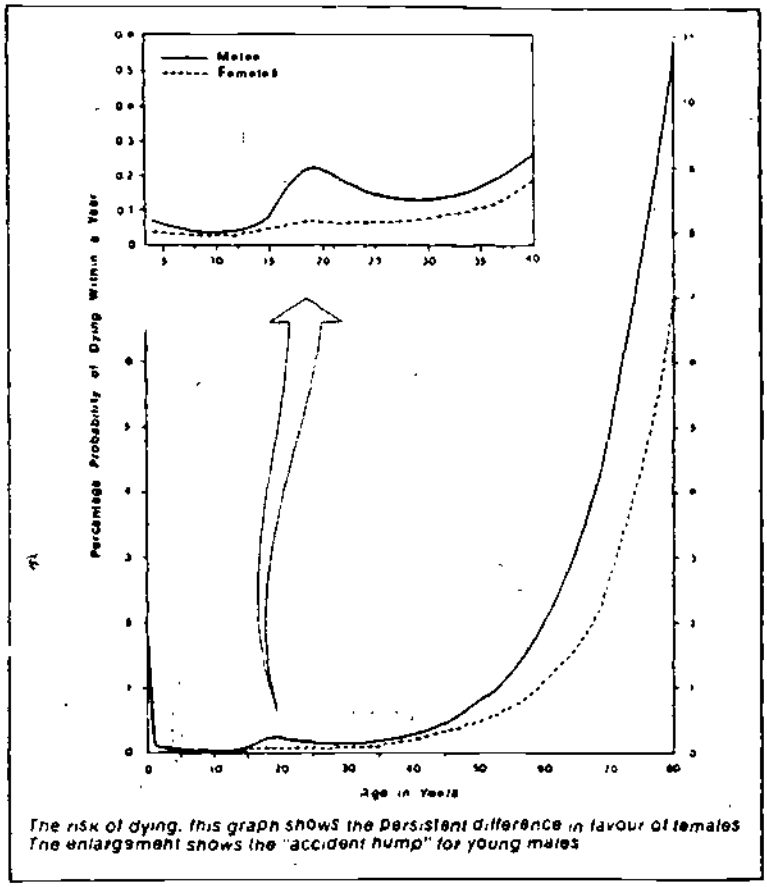
The gap between male and female expectation of life at birth is becoming progressively wider. At the end of the 19th century, for example, the difference was 2.6 years; now it is more than 6.5 years. The gap is also widening at older ages; between men and women aged 60 the difference was only 1.2 years in the 1890s, but in the 1970s it was 4.4.

Probably the most important single factor in this diverging trend of life expectancy has been the change in the pattern of disease. The prevalence of infectious and contagious diseases has been greatly reduced. As causes of death they have been replaced by organic (or degenerative) diseases which, as their name implies, relate to some inherent deterioration of the body. Diseases like smallpox, cholera, typhoid, bubonic plague and the lesser pandemics which assailed our ancestors were more or less indiscriminate in their impact on male and female. But now, those of use who might once have died of one of these

* *New Zealand Life Tables,* 1957-77. Department of Statistics. Other contemporary statistics cited are for 1976.




*Life expectancy: improvements over time have been predominantly youthful and female*




*The risk of dying: this graph shows the persistent difference in favour of females. The enlargement shows the "accident hump" for young males*

survive long enough to suffer from heart diseases, cancers and cerebrovascular diseases, and these three, which account for about 60 per cent of all deaths, affect males more than females.

Each year, for every million males in the population there are about 3210 deaths from heart diseases, and about 2270 deaths for every million females. The death rates from coronary heart disease alone are 2848 for males and 1788 for females for cancers the rates are 1808 for males and 1494 for females (the sex difference is especially conspicuous for lung cancer: 542 per million for males compared with 126 per million for females).

Women have benefited from the treatment or prevention of some sex-linked conditions, for example breast cancer, and the numbers of maternal deaths have been reduced to about one for every 10,000 live births. There has been no parallel advance in the treatment of male sex-linked conditions.

In some of the more controllable areas of risk, males far more than females seem to be bent on self-destruction. Take, for example, the high figure for lung cancer already cited for males. Statistics show that 60 per cent of adult males have smoked regularly at some time but only 42 per cent of females; and males are generally heavier smokers. More males than females are involved in motor vehicle accidents. There are about three male deaths for every female death from injuries sustained in motor vehicle accidents; and in the age group most at risk, 15-24, there are nearly five male deaths for every female death.

However, males have one small consolation: a head start. For every 1000 females born there are about 1050 males. Which is just as well. Because of the higher male mortality, this sex ratio steadily decreases from around 1050 males per 1000 females at birth to about 1020 at age 30, 1000 in the early 50s, 800 in the early 70s and about 400 males for every 1000 females in the 90s. So in our population, which in the age group 0-14 has up to five per cent more boys than girls, there are 35 per cent more women than men at age 65 and over.

Because at marriage the woman is usually two or three years younger than her spouse, and because eventually he is likely to pre-decease her by more than five years even if she is the same age, large numbers of women (in fact nearly 50 per cent aged 65 and over) are likely to be widows for many years. For this and other reasons fewer than four women in every 10 aged 65 and over are currently married.

With the contemporary decline in fertility and consequent decline in the annual birth increment, disadvantaging the male population in particular, the overall numerical balance between the sexes is changing. During the 1970s, for the first time in the peacetime history of New Zealand, females outnumbered males in the total population. In the aging of the population which inevitably follows a sustained decline in the birth rate, larger proportions will be adult and eventually elderly; and among the elderly, women predominate to an ever-increasing degree.

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**READING TEST**

Answer are listed at the end of the test. Page numbers given refer to specific sections of Turner & Helms unless indicated otherwise.

1. A specific time period in an organism's life where an environmental event will have its greatest significance is called the
   (a) maturation phase
   (b) attachment period
   (c) critical period
   (d) age of readiness
2. According to Harlow, "mother love" in infant monkeys is promoted by
   (a) soft, comfortable contact
   (b) contact in which the adult nourishes the infant
   (c) reduction of the hunger drive
   (d) neglectful behaviour which promotes autonomy in the infants
3. Research on institutionalized children indicate that:
   (a) of all the developmental areas affected by institutionalization, retardation of language development is usually pronounced
   (b) long, as well as short term, institutionalization retards later development
   (c) special attention given to institutionalized infants produces minimal improvements on developmental tests
   (d) the potential harmful effects associated with institutionalization do not necessarily persist in later life
4. During infancy and toddlerhood, the type of play which occurs is largely
   (a) exploratory and manipulatory
   (b) social play with children of the same age
   (c) social play with older children
   (d) all of the above
5. Research results indicate that sex typing is fairly well established by
   (a) the third year
   (b) the fourth year
   (c) the fifth year
   (d) the sixth year
6. During the middle years, the child's self concept is increasingly influenced by
   (a) the reactions of parents and peers
   (b) a concept of the "ideal self"
   (c) the level of intelligence and physical maturity
   (d) all of the above

7. Watching violence on T.V.
   (a) may strengthen aggressive tendencies through imitation
   (b) may strengthen aggression through reinforcement
   (c) may weaken aggressive tendencies through discharge
   (d) all of the above

8. During middle childhood, boys prefer activities that:
   (a) are rhythmic
   (b) are non-competitive
   (c) have complex team organizations
   (d) none of the above

9. It is accepted by many that parenthood looms as a transitory stage that is even more crucial than marriage. Which of the following does Rossi (1968) propose as a primary reason(s) for adjustment difficulties?
   (a) the lack of preparation for parenthood in contemporary society
   (b) there is a sudden abruptness of transition as the baby comes home from the hospital
   (c) there are no guidelines available for successful parenthood
   (d) all of the above
   (e) both a and c

10. The role of the father in regard to the child
   (a) has expanded in the last ten years
   (b) can be characterized as authoritarian
   (c) can be characterized as a compromise between work and home
   (d) all of the above

11. Two primary theories of successful aging have been proposed. One is known as the activity theory and other is called the
   (a) inactivity theory
   (b) sedentary theory
   (c) ego preoccupation theory
   (d) disengagement theory

12. There are many key adjustments to be made during the retirement years. Which of the following represent those mentioed in the text?
   (a) marital relations
   (b) widowhood
   (c) kin relations
   (d) all of the above

13. The developmental tasks of midlife include:
    (a) adjusting to the physiological changes of middle age
    (b) developing effective leisure-time activities
    (c) maintaining a satisfactory performance
    (d) all of the above
14. According to Piaget, very young children would consider which of the following behaviours as the worst:
    (a) a child sneakily cuts a small hole in her dress
    (b) a child sneakily cuts a medium sized hole in her dress
    (c) a child accidentally cuts a small hole in her dress
    (d) a child accidentally cuts a large hole in her dress
15. _____ is a stage of moral development?
    (a) Property value
    (b) Moral realism
    (c) Ego idealism
    (d) Ethical realism
16. Children don't really comprehend the meanings of rules nor the reasons for them until they are
    (a) 10 to 12 years old
    (b) 9 or 10 years old
    (c) 7 or 8 years old
    (d) 6 or 7 years old
17. Which of the following is *not* a stage of Kohlberg's theory?
    (a) Postconventional
    (b) Conventional
    (c) Nonconventional
    (d) Preconventional
18. Research by Keniston into the moral reasoning of adolescents reveals that:
    (a) by 15 less than 10% of the adolescents are at the highest or postconventional level of morality
    (b) over 90% of the adolescents achieve the postconventional stage by 15
    (c) social catalysts such as the discovery of corruption facilitate the development of the postconventional stage
    (d) both a and c
19. Which of the following does not serve as a social catalyst to promote postconventional morality?
    (a) new educational, technological, and historical advancements

(b) the discovery of corruption, hypocrisy and duplicity in the world

(c) confrontation with relativistic points of view held by professors and fellow students

(d) none of the above

20. At approximately what age are adolescents aboe to shift from concrete to abstract levels of discourse?

(a) 13-15

(h) 11-13

(c) 15-17

(d) 17-19

ANSWERS (page references to Turner and Helms)

1. (c) 94-95
2. (a) 96
3. (d) 97-100
4. (a) 116-119
5. (a) 161-163
6. (d) 224-226
7. (d) 239-241
8. (c) 226-228
9. (d) 361-362
10. (a) 365-366
11. (d) 434
12. (d) 440
13. (d) 388
14. (d) 229-230
15. (b) 230
16. (b) 229-230
17. (c) 230-233
18. (c) 282-283
19. (d) 281-283
20. (a) 285

## INDIA

Topic: Education of disadvantaged groups

Sub-topic: Education of girls in India.

Course: Summer school-Cum-Correspondence Course leading to the degree of Bachelor of Education (B.Ed.)

By: Dr. G.B. KANUNGO

Introduction

With a view to clearing the heavy backlog of untrained teachers working in the secondary schools as well as in the elementary teacher training institutions of the Country, the National Council of Educational Research and Training New Delhi, started the Summer-School-Cum-Correspondence Course as early as 1966. It has been estimated that about 40 per cent of teachers in India are untrained. They have been teaching for years without having received any professional training for their job. With the provision of Summer-School-cum-Correspondence Course, the NCERT has not only demonstrated its great concern for the backlog of untrained teachers but has developed an innovative model to clear this huge backlog.

The course is mainly offered through the four constituents, namely: the Regional Colleges of Education located at Ajmer, Bhopal, Bhubaneswar and Mysore. Some State Governments in the Eastern region have adopted this NCERT model and instituted similar programmes to reduce the backlog in their respective states under the overall supervision and guidance of the Regional College of Education, Bhubaneswar.

a. *Target Groups*

Experienced untrained in-service secondary teachers and teacher-educators of elementary teacher training institutions having a minimum of five years of teaching experience are admitted to this course. Candidates should have a minimum prescribed qualification of a Bachelor's degree from a University. Some candidates have a Master's degree also. The candidates are highly motivated because through this innovative course they can:

(i) obtain a degree of Bachelor of Education through the distance learning system;

(ii) qualify for a higher scale of pay prescribed for trained graduate teachers;

(iii) acquire professional competence to discharge the various responsibilities of a working teacher; and

(iv) work for advanced degrees in professional education.

The response to this course is always encouraging as is evident from the large number of applications received from working teachers for admission to this course.

b. *Nature of materials*

Correspondence materials are used for this course. Since the course provides a judicious combination of "distance" and "contact" learning correspondence materials

are used. The correspondence course materials may raise certain issues or doubts on the part of the learners. These are discussed with the tutors in the contact sessions during the summer vacation. Correspondence is supplemented by face-to-face contact with the tutors.

c. *Process of development of the materials*

The correspondence materials are developed on those topics of the B.Ed. syllabus of the University, for which not much formal instruction in the class room is not considered necessary. Certain general topics in philosophical, sociological, and psychological foundations of education are taught through correspondance. Some problems of Indian education are also covered through correspondence. The materials are developed by the staff of NCERT in consultation with subject matter specialists and teacher educations. The materials are regularly renewed to make them relevant to the distant learners. Due regard is paid to lay out, level, accuracy, structure, presentation and style in the preparation of correspondence lesson materials. Every effort is being made to make them look like "tutorials in print".

d. *Critique*

This material was subjected to much criticism and certain weaknesses were pointed out by the participants. Although the objectives are clearly stated and the materials are appropriate for the realization of the objectives, it was said that the language and style chosen was closer to a formal textbook rather than to "tutorials in print". A more direct and personal style of presentation would have been more relevant. Others commented that a formal style was considered desirable by the authors in view of the advanced level learners to whom the material is directed. Lack of assignments and evaluative questions and illustrations, graphs etc. was pointed out as certain deficiencies in the lesson. A few changes have been made in the material in the light of the comments received.

**Background of the problems of girl's education in India**

The women of India come under the disadvantaged groups in the society. The constitution of India provides for equal opportunity to both men and women. Laws have been passed to translate this into reality. But still the gap between expectations and the prevailing situation remains very wide. Women, who constitute about 45 per cent of the total population, continue to be in a position of disadvantage so far as their education is concerned. The recent census report indicated that about 81.7 per cent of women in the country are illiterate and another 1.4 per cent are literate without any educational level to their credit. The low enrolment of girls in the schools has tended to lower the overall percentage of enrolment resulting in the failure to achieve targets of universal enrolment.

**Objectives**

1. To help you to understand that:
   (i) it is essential to give priority to the schemes and programmes of promoting education among girls;
   (ii) The problem of girls' education is still an acute problem because:

(a) it has not been possible to bridge the existing gap between the enrolment of boys and girls;

(b) the rates of wastage and stagnation among girls has remained high;

(c) all the intensive efforts made so far have not help in solving the problem of universal enrolment of girls in schools.

2. to get acquainted with:

(i) the efforts made so far to solve the problems of girls education;

(ii) special incentives and facilities are provided to promote education among girls.

There is an urgent need today to take steps so as to revitalize efforts for quantitative expansion and qualitative development of educational facilities for girls. Some questions which may come to your mind for suitable solutions would be as follows:

1. Why is it essential to enrol all the girls in the schools?
2. Why is the problem of girls education an acute one?
3. What efforts have been made to universalize education among girls?
4. What has been the role and contribution of the National Council for women's education?
5. What are the special facilities that are provided to the girls?
6. What have been the major steps taken for solving the problems of girls education?

A host of other such questions might appear which need immediate solutions. You will find some hints regarding these in the following pages. For a better grasp of the problem with reference to your own state it would be better if you conduct a pilot study on the problem of girls' education and the steps needed, with the help of some of your women trainees. The reports of the State Level Seminars on girls' education would provide you a better insight into the area.

**Need and Significance of Educating Girls:**

Education plays a key role in the modernization and economic development of the country. It not only helps in improving the productive potential of the people but also inculcates appropriate attitudes, skill and personality traits. The quantity as well as the quality of school leavers have a direct bearing on the health of the society and its future citizens. Education, thus, is a basic tool for social reconstruction. The country cannot make rapid progress unless the educational system takes proper care to nurture and utilize the creativity and talents of the women who are almost 45 per cent of the total population.

Education of girls assumes special significance because a girl of today has to be a mother of tomorrow. An educated mother can create a better home by moulding the child's character at the young impressionable age. The nation will ever remain at a lower developmental level if the women remain ignorant and superstitious. Since the Indian Republic is wedded to the principles of democracy with adult franchise, the women in the country must be educated to enable them to exercise their votes judiciously.

It is, thus, necessary that women in the country are provided with adequate training and education for an affective participation in programme of national development.

However, even after thirty-three years of independence, the constitutional commitment of providing free and compulsory education for all children up to fourteen years, remains an unfulfilled dream. One girl out of every three still remains out of school and out of 100 girls enrolled in class I, only thirty reach class V. Educational reports of various states show that inspite of various measures taken so far, there are a number of problems which hinder the progress of girls' education. Some major problems are discussed below:

A. Major problems in the field of girls' education

1. Social and economic factors

Even though there has been an overall expansion in the educational facilities, the rate of progress in girls education has been particularly slower at the primary and secondary and secondary school stages. A majority of girls, as soon as they touch the age of eight, are required to contribute to the daily domestic chores, e.g., collecting firewood, fetching water, washing, cleaning, cooking, etc. They often have to be busy looking after their younger brothers and sisters, while their parents are away at work. A good number of girls are engaged in contributing to the family income, by doing odd jobs outside the home. Social factors like early marriage, betrothal and parental apathy have contributed to keeping girls away from the school. Thus, dropout rates among girls have always been higher than that of the boys. On an average 42.85 per cent girls drop out of the school between grades I and II itself. Girl dropouts after II or III grades are prone to relapsing into illiteracy.

2. Inadequacy of women teachers

Lower rates of enrolment of girls in the schools in turn results in a lower supply of women teachers. With the explosion of population in the country, the magnitude of the problem of making provision for the universal education for the children up to the age of fourteen years has increased. The draft Fifth Five Year Plan envisages an additional annual enrolment of 14.9 lakhs girls of the age group six to eleven years, 5.4 lakhs girls of the age-group eleven to fourteen years, and 1.6 lakhs girls of the age-group fourteen to seventeen years. This will all the more accentuate the shortage of women teachers, particularly in the rural and remote area. Girls and their parents have reservations about schools with only male teachers.

3. Increasing adult literacy:

The pattern of the educational development of the females in India since Independence has however, been far from satisfactory. The programmes of adult literacy among women have met with considerable drawbacks. Thus the number of illiterate adult women has increased over the year.

4. Displacement of women from avenues of employment

There is a strange imbalance in the distribution of educational effort and resources among different sections of the population. On the one hand, there is a sharp increase in the number of illiterate women particularly in the rural areas

and on the other hand, there is a rapid expansion of the education of women mostly in the cities.

In rural India, women have played a distinctive and accepted role in the process of earning a livelihood for the family. The economic needs and pressures have compelled many of the urban women also to come out of their homes in search of suitable employment. With the technological advancements and other developments in modern methods, both in agriculture as well as industry, one observes a curious gradual displacement of women from the different field of employment. This is more true for illiterate and semi-literate women who could not get an opportunity to learn new trades and skills, especially, such skills which involved sophisticated methods of production.

5. Aversion to education of girls in ethnic groups

Recent studies have shown interesting regional trends in the progress of girls education. The problem has been found to be a particularly striking one in certain states and even within a state, in specific areas. Further, the aversion to the very concept of educating girls, considered to be a major roadblock to progress in promoting girls education, has been found to be particularly strong in certain specific ethnic or social groups in the country.

B. Steps taken for promoting girls education

The problem of girls' education has long been a concern for the government. Some of the major steps that have been taken so far at variuos levels to solve the above mentioned problems are stated below:

One of the important steps in this direction was the setting up of the National Council of Women's Education (NCWE). In 1958, the government of India appointed a National Committee of Women's Education to study in depth the problems of girls' education and suggest suitable measures for bridging the gap between education of boys and girls. Upon the recommendations of this Committee, the National Council for Women's Education was established at the national level and State Councils for women's education were established at the State level. The main role and function of the NCWE has been to act as an advisory body to the government on all matters relating to the education of girls at all levels, suggest policies, programmes for the quantitative expansion and qualitative improvement of girls education and coordinate the efforts of the voluntary organizations in this area.

Since its inception NCWE, has been working as an active body. Its recommendations have been endorsed by the commissions and committees like CABE. University Education Commission and the Secondary Education Commission.

Primary Education is free in all the States and Union Territories of the country. For girls, education is free up to secondary level in the States of Andhra Pradesh, Gujrat, Jammu & Kashmir, Kerala, Karnatake, Nagaland, Tamil Nadu, Andaman and Nicobar Islands, Laccadive, Minicoy and Amindivi Islands, Arunachal Pradesh, Orissa, Rajasthan, Tripura and Uttar Pradesh. In the remaining parts of the country, this facility is limited to the children of the backward and poor sections of the society. The states have taken the following steps for increasing the enrolment and retention of girls in the schools:

1. Supply of free textbooks, writing materials and clothes;
2. Award of scholarships on the basis of attendance and performance;
3. Improved facilities for training of women primary school teachers;
4. Provision of condensed courses for education of adult women for passing matriculation examination;
5. Construction of hostels for students;
6. Construction of residental quarters for women teachers;
7. Appointment of school mothers; and
8. Appointment of at least one lady teacher in each primary school.

C. Guidelines for a Need Based Programme

You might have noticed from your analysis of the causes of slow progress of girls' education that possible solutions of the problem would be in creating proper attitudes towards it, introducing flexibility and need based programmes and involving the community to a larger extent in the programmes.

Stated below are some such steps:

(i) Wider publicity: To achieve a breakthrough in social resistance and parental apathy in sending girls to schools, there is a need to give wider publicity about the importance of girls' education. The mass media can play an important role in this context particularly in problem regions or groups identified for intensive action.

(ii) Flexibility in the curriculum: The curriculum prescribed by States should be flexible enough to meet the requirements of girls of a particular social group. The prescribed curriculum should be geared toward the needs of girls coming from rural and remote areas, and industrial surroundings so that parents must find the usefulness of sending their daughters to get educated. Certain aspects of health, hygiene and child care should be given special emphasis in the curriculum.

(iii) Opening non-formal centres: To meet the need of the huge numbers of dropout girls, it is desirable that non-formal education centres are opened at suitable places. The hours of operation and the curriculum of these centres should be flexible. This would help the girls to find time to attend to routine domestic chores and simultaneously to get useful education. Such centres would facilitate an increase in the enrolment of girls in the coming years.

(iv) Greater attention to resistance areas: There is a general chronic shortage of financial resources available for implementing programmes for the promotion of girls' education. As such, it would be better if programmes cover more and more localized high resistance areas.

(v) Intensive community involvement: The massive increase in the enrolment of the new entrants as envisaged in the Fifth Plan would result in huge financial demands. Voluntary contributions in cash or kind from the community would bring a great relief in meeting the rising expenditure, besides generating consciousness and a sense of participation in their programmes.

(vi) Training to women labourers: For displaced working force among the women labourers, adult education centres could be established in large numbers in such areas.

The industrial concerns may be approached to provide scope for service and in-service training courses for women labourers.

(vii) Incentive schemes for lady teachers: One important step in solving the problems of girls' education would be to provide for more and more incentive schemes for lady teachers and also for needy girls students. These should be oriented towards the identified needs of high resistance areas.

Assignments:

You are required to co plete the following assignments and send them to your guide according to the time schedule already notified. Please remember that in the final external examinations of the university, you will be required to answer similar types of questions given below. A reading list is given at the end. You are advised to read the supportive materials before attempting the questions. Answers should be brief and to the point:

1. What are the major steps taken in your state for the universalisation of girls' education? Which of them have been effective and how?
2. Give three major reasons for poor implementations of the welfare schemes for women in your community.
3. Briefly explain how cultural constraints impede girl's education in your community.
4. How would you plan a programme for a non-formal education centre for girls.
5. Draw up a scheme to ensure intensive community involvement for promoting education among girls.
6. Briefly discuss how education of girls will help modernization of the Indian society.
7. What work-experience activities would be relevant for girls in your community and why?
8. How would you reduce "wastage" and "stagnation" among girls?
9. Prepare a survey report on the problem of girls' education in India. You may survey one village in your community. The purpose and procedure of the survey may be discussed with your field superviser. It is difficult to prescribe the number of pages for this study. The important point to be kept in view is that the analysis of the survey should be of some immediate help to your school and community in planning the education of girls.
10. What do you understand by "disadvantaged group"? identify other disadvantaged groups in your stage and write a note on their educational problems.

## Bibliography

1. Ambasht, N.K. *A critical study of Tribal Education,* S. Chard and Co. New Delhi, 1974.
2. Hate, C. *Changing Status of Women in Post-independent India* Allied Publishers, Bombay, 1969.
3. Kapm, P. *The changing Status of Women in India* Vikas, New Delhi, 1974.
4. Department of Social Welfare, New Delhi. *The Indian Women: A statistical Profile, 1975.*
5. *Women in India: Compendium of Programmes,* 1975.
6. YWCA of India: *The Educated Women in Indian Society Today A Study:* Tata McGraw-Hill Publishing Co, New Delhi, 1971.

Name: .....

Designation: .....

.....

Address: .....

.....

Registration: No. .....

## RESPONDENT'S OPINION/REACTION

You have completed the Unit on Education of Girls. Please answer the following questions pertaining to this unit. These answers will help us in revising the lesson for the next batch.

1. Did you find the language used in this unit simple and easy to understand? Yes/No
2. Did the unit contain information relevant to your work? Yes/No
3. Did the unit stimulate you to think about the various issues bearing on the theme? Yes/No
4. Did you find any part of the unit useless for your work? If so, which part(s) of this unit would you like to be deleted.
5. Did you feel the need for additional information on any part of the unit? If so, what would you like to be added to the unit?
6. Do you think that this Unit is in harmony with other units that you have studied so far? Please feel free to point out the contradiction in these units.

Signature of the respondent .....

## SRI LANKA

Subject: Educational Psychology

Unit: Child as a Person

By: S.B. Ekanayake

### Introduction

The material annexed in its present form is designed for use with internal students. Educational psychology as is taught to teachers today follow the traditional pattern where the stress is mainly on theory. Although this approach, helps to develop a theoretical background, it does not provide sufficient practical exercises to the teacher; hence the teachers lack skills and self-confidence to assess the situation and problems that arise in the classroom. It was thought therefore, that a more practical approach should be adopted especially to the 'O' and 'A' levels graduate teacher category because they deal mainly with the primary grades. The approach represents a shift from passive lecture-based teacher education to an active, practice-related-with-theory scheme.

The following unit is one such design where practice and theory are combined providing a student with a meaningful method of understanding 'the child as a person'. The process would enable both the teacher educator and student teacher to perceive psychology as a meainingful and rewarding exercise. It will motivate the learner and provide a sound basis to comprehend theoretical aspects of the discipline. Though the material is meant for the internal students, it could be suitably modified for use of distance learners as well. In the case of the internal students attached to educational institutions, the teacher educator guides him before and after each lesson.

### Stragety.

In the observation of children, the distance learner who is in school with children has an advantage over the internal studetns. The former come in contact with a variety of students and are able to use different periods and activities to observe the children in a natural setting unlike the internal student who serves children in a 'studio' pattern.

Relevant advice and guidence are provided by the master teacher or teacher educator a senior teacher or principal to whomsoever the distance learner is attached. The distance learning student observes his class or a class of his colleagues. Instructions to the principal of the school are provided to relieve the student-teacher for certain periods of the day, to enable him to make observations and record his findings. These observations provide immediate impact on the behaviour of the distance learning student and his understanding of his children, unlike that of the internal student, who are at a 'distance from real classroom situations.

In formulating a strategy for the course material the following were considered:

1. Practical aspects in the context of a teacher at work in his own school;
2. Gearing lecture materials in accordance with the guidelines on distance learning; and

3. Reexamination of the objectives of the various materials taking into account their relevance to the practising teacher.

Critical notes

Suggestions by the participants for improvement of the material are summarized as follows:

1. References should be included to enable the supervisors to provide material, gather more facts and knowledge.
2. Instead of mentioning 'objectives' to use general aims.
3. To relate material provided for internal students to distance learning purposes with a more specific approach using guidelines provided.

These points were taken into account in the revision of the unit on the Child as a Person.

For purposes of comparison, the original material is presented below containing course plan items, action for distance learning and rationale. The revised material follows immediately the original one.

| COURSE PLAN ITEM | ACTION FOR DISTANCE LEARNING | RATIONALE |
|---|---|---|
| 1. | Distance learner to organise and undertake two seperate periods of observation (each 40 minutes) one in his own class, one in another. | Learner is in his own school with his own class(es). May be only 'observer' and can have more choice. If he is observing his own class, needs guidance.<br>If he observes another class would have some fresh, uniformed view as internal students. |
| 2. | Ensure learner attends sessions with master teacher in follow up. | Local support service from senior teachers provides discussion leadership with learner (and with other learners if nearby). |
| 3. | Include guideline in material dispatched. | Guideline is given Appendix II page 12. Needs effective integration into other learning materials and experiences. |
| 4. | Distant learner to organize additional observations with guidelines or checklists. | Learner already knows children in his own class, should have observation period specifically on the basis of guidelines, Inferences may be known. |
| 5. | Same as 2 above. | Same as 2 above. |
| 6. | Resource study guide content material. | Lecture material in written form not in distance learning mode (see guidelines). |
| 7. | Resource as supplementary material to study guide. | Additional resource material; study guide in 6 above to take account of and integrate it. |
| 8. | Same as 6 above. | Overall theoretical basis for observed data same as 6 above. |

| COURSE PLAN ITEM | ACTION FOR DISTANCE LEARNING | RATIONALE |
|---|---|---|
| 9. | Distance learner to arrange access to 3 different social situations in his locality (preferably in families using his school). | Can internal students observe 3 private different situations? Practising teachers may have more access to local settings and have additional knowledge of many family members from school situations. |
| 10. | Same as 2 above. | Check observations and comment with discussion leader (and other learners if around) same as 2 above. |
| 11. | Same as 7 above. | Same as 7 above. |

There appears to be a break at this point. A topic could therefore, be included with review questions brought forward from the list of question at the end of the material (in question 1-7) and other self-testing and evaluation tools.

## Proposed revision of Education Psychology

General Aims

1. *Knowledge:* (1) Student-teachers understand that there are individual differences among children.
   (2) They understand that these individual differences emerge from the interaction between heredity and environment.
2. *Skills:* (3) They develop the ability to observe differences in children in both personal and professional relationships.
   (4) They develop the ability to use techniques of studying persons.
   (5) They develop ability to analyse and report on such information.
3. *Attitudes:* (6) Student-teachers view children as different persons.
   (7) Student-teachers view the process of child development as dynamic and continuous.
   (8) Student-teachers commit themselves to the use of psychological insight in teaching.

**Unit 1 – Child as a Person**

(Revised material)

| *Unit* | *Instructional and Learning Process* | *Objectives/Outcomes* |
|---|---|---|
| Study to proceed on an integrated and development basis. | 1. Free unguided, unstructured observation of any class for the duration of 40 minutes. Student-teachers observe and join class discussion on what has been observed. | 1. Possible inference that children in the class observed are different from one another. |
| | 2. Discussion on the inadequacies of free unguided unstructured observation. | 2. Student-teachers infer that students are different from one another. |
| | 3. Construction of a guideline for a study of children based on the following:<br>1. Physical development<br>2. Psycho-motor development<br>3. Emotional/social development<br>4. Intellectual development<br>(A module for observation study is appended page 12.) | 3. They also infer, tentatively, that such differences arise from differences in the environmental factors of the children. |
| | 4. Observation of the structure of a class followed by class discussion on observed data to arrive at a cross-sectional view of the nature of the child and assumptions regarding his home background and other environmental factors. | 4. Identify what these environmental factors are. |
| | 5. Discussion (face-to-face) on how and why such a cross-sectional view can be inadequate for a more comprehensive understanding of children. | 5. Infer the need for a longitudinal study of the child as a person. |
| Prenatal | 6. Introductory lecture notes on factors, facets and stages of child development — emphasis on the interactional nature of heredity and environment. Consider development through stages of prenatal, infancy, childhood and adolescence in relation to the 4 facets of development. | 6. Students build up a concept of personality in a rudimentary form. |
| | 7. Follow-up by lecture(s) in face-to-face classes by a medical specialist in the relevant field and by visits to specialised institutions for observation of factors contributing to development, e.g., maternity clinics or biological laboratories. | 7. (a) Students relate knowledge gained previously with authoritative information and personal observation.<br>(b) Students understand the fertilization process.<br>(c) Students realize the contribution of genes to the physical development of the human person – inclusive of their contributions to the composition of the brain as a structure. |

**Unit 1 – Child as a Person (*continued*)**

| *Unit* | *Instructional and Learning Process* | *Objectives/Outcomes* |
|---|---|---|
| | | (d) Students note the rapidity of prenatal development from a single cell to an organism of millions of cells weighing about 7 lbs. at birth after about 280 days of development. |
| | | (e) Students learn the emergence of the brain and the nervous system. |
| | | (f) Students learn the nature of cephalo-caudal and proximo-distal pattern of development. |
| | | (g) Student-teachers note the influence of the mother's nutritional and emotional status to the child's prenator development. |
| Infancy | 8. Introductory lecture by psychology lecturers on the 4 facets of development as seen during infancy. (0-2 years). (Materials to be in accordance with guidelines on distance learning.) | 8. Students learn the importance of factors like nutrition warmth of the mother and her affection to the child – recognition of the child's need etc., as affecting his overall development – deprivation conditions affecting physical growth and development. |
| | 9. Observation of the growth of infants under varying environments such as:<br>(a) A poor farmer's house<br>(b) A rich home<br>(c) A teacher's home or other government servant of similar standing. | 9. Student teachers learn the needs of children, e.g., need for exploring their physical and social environment; the limitations imposed by the state of maturity and cognitive structures he possesses at various levels of development. |
| | 10. Making 4 observational reports on child-care in respect of:<br>(a) Mother contact with child – mother's attitudes to offspring warm/cold/why?<br>(b) Feeding practices – on demand/on schedule.<br>(c) Cleanliness practices permissive/rigid.<br>(d) Richness of the environmental conditions. | 10. Students learn the dependence on perceptual experience of conceptual formation. |
| Childhood & early stages. | 11. Special lecture(s) by a qualified pediatrician on physical and psycho-motor development to cover the entire age range from early infancy to adulthood. (Materials to be revised based on D.L. Guidelines). | 11. Students learn that development is continuous but there are stages at which growth is not quite noticed, e.g., age 5+ that during other years slow but significant growth takes place. |

Unit 1 – Child as a Person (*continued*)

| *Unit* | *Instructional and Learning Process* | *Objectives/Outcomes* |
|---|---|---|
| | 12. Supplementary lectures by psychology lecturers on cognitive development, based on Piagetian studies to test conservation of substance weight and number and reversibility of thought and lecture(s) on social influences bearing on emotional development in children of this age, plus their needs as developing persons.<br>(Materials to be revised based on D.L., guidelines). | 12. Students learn that as the child advances in age he gains control of his limbs and through that the control of the physical environment. |
| | 13. Observational studies of children in pre-school institutions[0] or Montessori schools or other Child Care Institutions leading to a study of emotional development, socialization and egocentrism.<br>(In areas where pre-schools are located far away or not available distance learning student teachers to observe children in the proximity). | 13. The student-teacher learns that brain development and head structure are closely associated – that development nears completion around the age of 10 but that other parts of the body continue to grow further following a developmental pattern. |
| | 14. Observation of children at three levels simultaneously, e.g.,<br>(a) Grade I level class<br>(b) Grade IV or V level class<br>(c) Grade IX or X level class<br>on the basis of structure suitably built up by the students in collaboration with the lecturers/principal of the school. | 14. Student-teachers learn the dynamic nature of adolescent great potential strength – physical, psycho-motor and emotional – possibility of aggression – responses to argumentation burdened with a conflict situation but the possibility of easing tension when permissive attitudes are present in the elders. |
| | 15. Lectures on conceptual development taking place in the concrete operational period noting results of Piagetian experiments, (Material to be revised to D.L.) based on D.L., guidelines. | 15. Studetns learn cognitive development – culmination of intellectual development at about the age of 15 or 16, to 17. |
| | 16. Lecture/discussion on adolescence to be substantiated by analysis of data from observations of the three classes previously mentioned (Refer to Item 14). Area covered includes: the characteristics of physical development; growth spurts in height and weight; hormonal secretions resulting in growth and activities of the organism/person; need for vigorous exertion; physical growth leading to self-assertive behaviour and sense of self-esteem; role of cultural factors thwarting adolescent aspiration; conflict between childhood and adolescent notions and adulthood expectations; nature of attraction to the members of the opposite sex; aggressive tendencies; cultural influences; companionship and peer group relations (A lecture by a priest on the nature of youth behaviour leading to criminality is suggested).<br>(Material to be revised in accordance with D.L. guidelines). | 16. Student-teachers understand the importance of social and environmental influences on the development of the human personality. |

## APPENDIX I

### Suggested evaluation questions

1. Identify the sources of difference which emerge in a cross-sectional study of children.
2. (a) Why is a cross-sectional view inadequate for a comprehensive understanding of children?
   (b) Suggest a suitable strategy for a fuller view of children.
3. What shortcomings are there in the concept of heredity as the sole determinant of human behaviour?
4. What biological explanations are offered for the phenomena of (a) identical twins (b) Mongolism?
5. Explain the concepts of cephalo-caudal and proximo-distal development in relation to children.
6. What biological changes are associated with the onset of adolescence?
7. What is psycho-motor behaviour?
8. Explain the role of psycho-motor behaviour in cognitive development.
9. What problems can arise in children's behaviour when a mother has to leave a child for work?
10. What is oedipus complex?
11. How is a frustration-sense born in a child?
12. How can a sense of security be built up in a child of school-going age?
13. Examine the relation between a sense of security and learning.
14. Who are delinquents? How can the phenomenon be prevented?
15. In what ways has Piaget's cognitive experiments contributed to a developmental view of learning?
16. What is concrete thinking? Show its relevance to the instructional process during the primary school age.
17. How correct is it to say that adolescent conflicts are culture-bound?
18. Show the significance of the psycho-analytic view of personality.

References recommended (available for supervisory staff)

1. *Educational Psychology and Children* – K, Lovell
2. *The Child* – Jerome M. Seidman
3. *Child Psychology* – Arthur T. Jersild.
4. *Readings in Child and Adolescent Psychology* – Crow and Crow
5. *Educational Psychology* – Blair and Simpson
6. *Educational Psychology* – Smith and Hurtging.

## APPENDIX II

**Module for the study of development of children in a class for the duration of 40 minutes – to observe individual differences**

**General information**

1. Class/Grade:
2. Number of children in class:
3. Age range lowest to highest (to be ascertained from the teacher):
4. Date and time:
5. Your class/another:

**Physical aspects**

1. Please rate by checking the approximate description of the physical plant on a 5-point scale given below:

   (a) very well built
   (b) well built
   (c) medium built
   (d) poorly built
   (e) very poorly built

2. Please give the numbers of observed characteristics of children and classroom interactions in the blanks provided as indicated below:

| | *No. of boys* | *No. of girls* |
|---|---|---|
| (a) apparent physical ..... | _____ | _____ |
| (b) deformities or defects ..... | _____ | _____ |
| (c) respective heights ..... | _____ | _____ |
| (d) respective weights ..... | _____ | _____ |
| (e) active in movement ..... | _____ | _____ |
| (f) non-active ..... | _____ | _____ |
| (g) lethargic or withdrawn ..... | _____ | _____ |

| **Emotional aspects** | *No. of boys* | *No. of girls* |
|---|---|---|
| (a) friendly dealings ..... | _____ | _____ |
| (b) quarrelsome behaviour ..... | _____ | _____ |
| (c) withdrawn ..... | _____ | _____ |
| (d) moody ..... | _____ | _____ |

| **Intellectual aspects** verbal/oral | *No. of boys* | *No. of girls* |
|---|---|---|
| (a) responsive to the teacher ..... | _____ | _____ |
| (b) non-responsive ..... | _____ | _____ |
| (c) reads books ..... | _____ | _____ |
| (d) engaged in writing ..... | _____ | _____ |
| (e) observing ..... | _____ | _____ |

**Follow-up Activities**

1. Action proposed to improve the weak and needy.
2. Developing a progress chart.
3. Designing a plan of action.

## PAKISTAN

Subject: Educational Research and Statistics

Topic: How should a teacher plan research

By: Dr. Muhammad Maqsud Alam Bukhari

### Introduction

Institute of Education and Research of Allama Iqbal Open University offers an "M.A. in Educational Planning and Management" (M.A.-EPM) degree course for the working educationists. For the successful completion of this programme, one has to go through eight courses. "Educational Research and Statistics" coded as EPM-507, is one of the courses, which prepares the students in designing and conducting to a successful completion a research study. This course has fifteen units to be covered in fifteen weeks by the distance learner. These units have been developed recently with the help of external unit-writers and have once been tried out on a group of studetns of M.A. EPM programme during the summer semester, 1981. These units are still to be reviewed, revised and edited before finalization for the second trial. Unit 3 by Dr. Ansari was presented with a view to be improved in the light of the criticisms by the participants of the working group.

### Critical notes

The Unit was presented by Dr. Maqsud Alam Bukhari. Mrs. Fowzia Y. Moosa of Maldives and Mr. Matthew of Australia were the critics. Following were the main points given:

1. The unit has been written in a textbook style.
2. The objectives of the unit, the list of the contents, the activities for students, self-assessment questions, introduction, summary, the conclusion, key to questions, the diagrams, necessary for the distance learning materials had not been given in the unit.
3. The style is impersonal, use of "I" and "you" for making the style personal were suggested.
4. The material does not activate the learner. No exercises or activities have been given for the active involvement of the learner.
5. Content density is high and the learners have not been provided with tools for stopping, thinking, going back and going forward during the study of the unit.
6. Modifications in the content also need to be made by providing examples and illustrations from the local environment and by introducing local and national needs as one of the sources for the identification of the problems.

The unit was revised and re-written by Dr. Bukhari in the light of the suggestions. He also sought help from Dr. Ronnie Carr. Tremendous changes were made to bring it in the shape of an exemplary distance learning material. References were added; objec-

tives were written; list of the content was provided; glossary was prepared; self-assessment questions were developed; activities were incorporated; language of the unit was made personal in style; key to the self-assessment questions was prepared; superfluous materials were deleted; subject content necessary to justify the topic was added; summary blocks were prepared and conclusion was written. The revived unit follows.

**Objectives**

After reading this unit, you should be able to:

1. Explain the steps a teacher should take in planning research;
2. Identify problems in the field of teacher education and define them clearly;
3. Select one of these problems for a research project;
4. Formulate hypotheses for the chosen project;
5. Develop the design and procedures to be followed for data collection in the project;
6. Analyse the data; and
7. Draw conclusions on the basis of data analysis.

## SECTION II

## SELF-LEARNING MATERIALS

CONTENTS

## INTRODUCTION

You have now completed units 1 and 2 which gave you a general introduction to educational research. In this unit you will study the steps which a one takes in planning a research project.

In this unit, I have tried to provide preliminary information about the following stages in the research process.

(a) identification of the problem

(b) formulation of hypothesis

(c) collection and analysis of data

(d) drawing conclusions on the basis of data analysis.

Clearly, different designs will be appropriate in conducting research on different problems; but here I have concentrated on general principles applicable to every type of research design. This broad coverage of the steps, involved ir the scientific study of educational problems, will help you in understanding the concepts presented in the later units of the course.

## IDENTIFYING THE PROBLEM

We shall begin by considering the most important step in planning research — the identification of a suitable problem. As this is your first experience of conducting a research project, you may have to spend months trying to locate a proper problem. In many cases, research cannot be completed simply because by the time the allocated period is over, it dawns on the researcher that either the problem cannot be solved, or that he does not have the material and personal (including intellectual) resources to complete it. Therefore, it is necessary for you to select a problem which can be reasonably handled by you within the specified time.

### What is a problem?

A problem is an obstacle that has to be surmounted, a question that has to be answered, or a situation which we cannot explain. Since the problem defines and determines the nature of the research, it may be useful to consider first the sort of situations that lead to problems for analysis, e.g., where there are noticeable gaps in our existing knowledge.

### 1. Noticeable gaps in our existing knowledge

If you read about a particular field, you may notice that while information is available on some points, there are others, at times quite vital, issues on which no research has been carried out. In Pakistan, the amount of research that has been done is so small that in any area that one cares to look into, one will possibly find major gaps. Where research data is available, the projects have often been carried out on high school or college students only. We know little about, for example, students in the rural areas, students in the lower classes, and students in oriental schools. These gaps in our knowledge constitute potential problems for research.

2. Contradictory results

In many areas of research, the findings reported by one investigator contradict those reported by another. This is quite common in research in which the relationship between two variables is studied either in a biased sample of subjects or with a limited type of task. When such studies are replicated with another sample of subjects or using tasks of a different type, the previous relationship is often either not found or is even reversed. Let us take an example. During the last 30 years, a lot of research has been carried out in the area of creativity as measured by psychological tests. One of the aspects studied has been the relationship between creativity and academic achievement or performance in examinations. Some early investigators found that there was a positive correlation between creativity and academic achievement. However, the findings of later investigators were mixed. Some found a positive correlation, while others found that there was no relationship between the two variables. In the face of these contradictory findings (which make up a problem), it was suspected that the nature of the achievement test might be the deciding factor. So it was hypothesized that if the tests are such that they measure academic abilities of a low level (like knowledge of facts), there will be no positive correlation between creativity and achievement. On the other hand, if the tests measure academic abilities of a higher level (like those involved in analysis and synthesis), there will be a positive relationship between the two variables. Accordingly, an investigation was carried out and the hypothesis was confirmed, thus removing the contradiction in the findings.

3. Phenomena without explanations

Often a fact or an event poses a problem as it lacks an explanation. The fact may be quite a simple one, like the falling of apples which was observed by Newton. Or it may be a more complex observation like accidental fogging on photographic plates in the presence of certain material, on the basis of which Henri Becqueral discovered radio-activity. The point to be remembered is that we come across a large number of facts, events and happenings in our lives. Careful observation of these can lead to the identification of many problems worthy of research. For instance, we see that some teachers are very successful in teaching their pupils. Why is this so? What makes a good teacher? Is it because he knows his subject well? Or is it because he is an expert in communicating? Or is it because he has certain personality characteristics that make him a better teacher? Or is it a combination of these factors? This common observations about differences in teacher effectiveness can be, and has been, an interesting problem for research.

4. National needs and policies

You may be interested in the study on specific needs of your community and your educational institution. You may be asked by the educational authorities to conduct research for nation building purposes and sometimes the implementation of national policies require research. So this can provide you a good opportunity to select a problem for research.

In brief, we can say that a problem is

- an obstacle that has to be surmounted
- a question that has to be answered

– a situation that has to be explained.

We can also summarize that the situations that lead to the identification of a research problem are:

– a gap in our knowledge
– contradictory results of various researches
– phenomena without explanation
– national needs and policies

Activity 1

Write down, at least, three problems that you face in your day-to-day teaching.

Activity 2

Identify possible problems for a research project from the following situations.

(a) the science teachers have difficulties in the conduct of science practicals.

(b) some students run away from the classes during the periods for matthematics and science.

Activity 3

Research studies have been conducted by the sociologists in education to determine the needs of Pakistani society and the text-boards have produced textbo the basis of the objectives laid down by the education officers, who have no teaching and research experience. Find out the gap of knowledge and suggest possible topics for research.

Activity 4

Some research studies have shown that external system of examination is better for the assessment of the students' achievements, whereas other research studies have shown results in favour of internal system of examination. Do you think that these contradictory results on different research studies help you for the identification of some new research problems. State two research topics from this situation.

### The choice of a specific problem

I hope you will find the above discussion helpful when selecting the general area for your problem. You may be interested in the study habits of students, in creativity or in teacher effectiveness. However, all such areas are too broad and complex. For one particular research project, you will have to narrow down the problem so that you are able to complete it within a limited time and within your resources. So when you have selected a general problem area, you will have to follow it up by

1. studying the relevant literature and
2. thinking critically and discussing it with your supervisors and fellow-students.

I think that it would be helpful to look at these activities in more detail.

### The study of relevant literature

It is extremely important that before formulating a research problem, you should study the pertinent literature. This critical reading of previous work involves study of a different kind from that required for your examinations. For example, you are expected to read not only textbooks but also articles that appear in scholarly journals. While the former are generally written in such a manner that the information is relatively less controversial and is well digested and arranged for the convenience of the reader, research articles that appear in journals often include controversial material and/or small pieces of information which have to be organized and interpreted by the reader. Consequently, you have to read them more critically than you would read textbooks.

### Thinking and discussing

Since research means the production of something new which may add to the existing body of knowledge, a researcher must be on the look out for helpful leads that may suggest new ideans. These new ideas may involve a reinterpretation of earlier findings in the light of some other theory, or variations in sampling, methodology or data analysis which may lead to different results. You should also be careful to note any inconsistencies and contradictions that appear in the literature; and to think about ways of reconciling them, or about the criteria which should determine which results are to be accepted.

You will often find useful to discuss your preliminary ideas with faculty members and fellow-studetns. Such discussions are often very helpful because by presenting your ideans to others, you become clearer about them yourself. At times you may feel that your fellow-students and even faculty members have not studied the problem as thoroughly as you have. However, this should not prevent you from discussing your ideas with them. You may, at times, be surprised to find that they can raise questions to which you had never paid attention before. This is because they are not overwhelmed with research traditions in that area, and can, therefore, raise basic questions that the specialists may have overlooked. All this will help you in making the statement of your research problem sharper and better focussed.

However, a note of caution must be introduced here. Although it is legitimate for you to discuss your research problem with faculty members and fellow-students and benefit from their opinions, you must remember that the research is your own work. Therefore, neither teachers nor anyone else can be blamed for the mistakes that you

make. Since the responsibility for the project is yours, you must take the decisions and be able to defend them, rather than putting the blame on others for any incorrect advice.

Activity 5

The following are some of the suggested main areas for research. Trace out, at least, five specific problems for research projects from these broad areas.

- Primary education
- Secondary eduation
- Higher education
- Teacher education
- Instructional technology
- Technical education
- Education through distance learning
- Educational planning
- Financing education
- Educational administration
- Educational research.

**Problems**

When you have finally selected a problem, you will find it useful to put it in the form of a question. This question could be concerned with the nature of its relationship between the variables. For instance:

1. Is there a positive relationship between mothers' education and children's performance in school?
2. Does excessive punishment make children aggressive?
3. Is praise more conducive to learning than blame?
4. Are boys better than girls on mechanical tasks?

The problem is betst formulated as a question(s) because this helps to clarify it and sets the tone for the whole research project which is an attempt to answer the question(s).

However, you can also write a problem in the form of a statement, as illustrated by the following examples:

- Problems of teachers in the secondary school of Karachi city.
- Feasibility of introducing English as an elective subject in the secondary schools of Pakistan.
- Problems of distance learners of Allama Iqbal Open University, Islamabad.

## Good problems, bad problems

As you must have seen by now, there is no dearth of problems in any area of educational research. However, not all problems qualify as subjects for research. Therefore, in making your final choice of a problem you will have to take into consideration some other aspects that determine whether or not it is worth investigating. Some of these aspects are as follows:

1. *A problem should be theoretically solvable*

The major consideration in making your choice is whether the problem is amenable to solution using scientific research techniques. In other words, can the questions (or problem) be presently answered by research? To this, let us think of scientific problems as being divided into three circles, each one surrounding the others (See Figure 1). The innermost circle (1) consists of the problems which have already been solved. They are the established facts of a particular discipline. Circle (3) represents the problems that are presently insolvable and may become solvable later on with advances in science and technology. At the present state of knowledge, however, these problems cannot be solved. The middle area (2) represents the area of problems that can be solved presently, or the questions that can be answered using available scientific research methods. Apart from these three areas, there is the outermost area which consists of problems and questions that are not amenable to scientific study like the metaphysical questions regarding the purpose of the universe, life after death, etc.

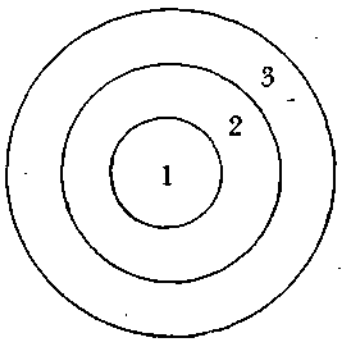


Figure 1. Schematic presentation of scientific problems

Thinking in terms of these areas, it is obvious that a research problem cannot belong to category (1) because that is a waste of energy. If a fact is already proven and established, there is no point in probing it again. There can be some exceptions to this general rule when, for example, a replication study is being conducted. However, the purpose

of such a study is to verify the previous findings and it should be considered an extension of the previous study rather than a piece of research in its own right. As far as (3) is concerned, again you will not take a research problem from this area, because the present stage of science and technology does not permit us to answer such questions. For instance, if you are interested in studying the relationship between religious education in school and the honesty of the pupils, there are no generalized and valid measures of honesty available. Therefore, you have to wait until such instruments are available for assessing this attribute.

2. *A problem should be practically solvable*

In the above discussion, we have talked about theoretical problems that may block research. Even if a problem is not theoretically impossible to solve, the practical problems involved may make the carrying out of research completely impossible. Therefore, you must select problems which are well within the resources available. These resources include human resources and the amount of time they can give. For instance, if you are planning to develop an achievement test for high school students in Pakistan, this would mean testing large number of students from the whole country. Such an enterprise will involve a number of research assistants who may have to work for months in collecting data alone. Similarly, the level of expertise and special skills of the personnel involved in the project is another important consideration. If you intend to use some sophisticated statistical procedures, like factor analysis, you ought to have some expertise in these methods. Or again, if a problem relating to art education is to be taken up you ought to know a good deal about fine art also. The feasibility of a project must be assessed in terms of time required to complete it. For example, developmental study, in which children have to be followed up, say, for three years, may require five years for completion. A study which involves extensive use of projective tests may require a long time in test administration and scoring. If the problem requires in-depth interviews of a large number of people, it will again be time-consuming. The point I am making here is not that developmental studies, projective tests or in-depth interviews should be avoided. It is that you should be aware of the time required for solving the problem; and if you do not have enough time, you should modify the problem suitably. This is particularly important in research that is carried out to fulfill degree requirements as a researcher has to complete his work within a specified time.

In addition to the theoretical and practical issues mentioned above, in judging whether or not to carry out a particular study, you should bear in mind that research is not a mechanical, routine function that one performs daily. It involves creative effort and, therefore, without a high degree of personal interest, curiosity and involvement you may not advance very far in your work. Consequently, you should try to select a problem which personally appeals to you, something about which you are really curious rather than any problem which your tutor may have suggested and which is being carried out merely to fulfill the requirements of a degree.

At the end, I would like to suggest that you should place a problem on the following criteria before you finally select it for a research project.

1. Is it new?
2. Has it no prior claim?

3. Is it significant?
4. Is it from the area of your interest?
5. Is it feasible to you with respect to – time?
   – money?
   – energy?
6. Is the method clear to you for its
   (a) theoretical solution?
   (b) practical solution?

Activity 6

By now you have identified twelve problems through activities No. 1, 2, 3, 4 and 5. Place each of these problems on the six criteria mentioned above and finally select any three problems, which, when placed on the criteria, find "yes" as response to every question in the criteria.

Self Assessment Exercise No. I

Read the following statements; Circle T, if the Statement is True, and F, if it is False.

1. A problem is not an obstacle to be surmounted. T F
2. It is never useful for you to look into the situation for the investigation of a problem. T F
3. A gap in knowledge is a source for the research problem. T F
4. Contradictory results of different research studies, block the way for further research. T F
5. Study of related literature helps in the selection of a specific problem for research. T F
6. You have to narrow down the problem for your research project. T F
7. Articles having controversial materials block the way to further research. T F
8. Selection of a topic for a research project is a routine matter and does not involve much of thinking. T F
9. Discussion with fellow-students will help you in the identification of the problem. T F

10. Problem is an answer to a question. T F

11. A research problem should be theoretically solvable only. T F

(Please turn to page 84 and check your answers to the key.)

## FORMULATION OF HYPOTHESIS

We have already seen that the 'problem' of a study is a question(s). A hypothesis is the suggested or tentative answer to this question; the final answer will, of course, emerge when the study is completed. A hypothesis is usually expressed in an *if a, then b* forms. For example: (1) If a child is praised for class work by the teacher, his performance will improve; (2) Those children who score higher on intelligence tests will obtain higher marks in examinations in comparison with those who score lower on intelligence tests.

The above statements postulate a relationship between antecedent conditions (a) and consequent conditions (b). They may also be called independent and dependent variables. The purpose of the hypothesis is to state in clear terms the relationship between antecedent and consequent conditions that is being put forward for empirical testing.

We mention two minor points here. Firstly, although we have said that a hypothesis should be stated in *"If a, then b"* terms, most of the hypotheses that you will come across in research work are not formulated exactly in this way. This should not be taken as a violation of the rule, because in some cases, the above format is implied and the hypotheses can be re-stated in the above terms. Secondly, we have talked about hypotheses as relating an independent variable with a dependent variable. In actual practice, at times more than one dependent and independent variable may be involved. For instance, we can see the effect of intelligence and motivation on the learning of another skill. Here two independent variables and one dependent variable are involved. In other experiments even more variables may be examined.

### The characteristics of a good hypothesis

We have already said that a hypothesis is a suggested answer to the question presented in the 'problem'. You should remember that it is not an arbitrary answer. It is an answer which has been *logically derived*, from some theoretical framework or which fills in a gap in the existing body of information. This is an extremely important characteristic of a hypothesis which must be understood clearly. Let us suppose, for example, that a new planet has been discovered, and the problem is to determine its shape. Someone advances a hypothesis that the shape of the planet is cubical and wants to test it. Is this an acceptable hypothesis? Apparently not, unless some theoretical justification can be advanced to show that for this particular planet certain peculiar conditions exist which suggest a strong possibility of a departure from the usual roundish shapes.

Take another instance. Suppose we are interested in finding out the difference in attitudes towards education of boys and girls in a particular community. The question is: Is there any difference in parental attitudes towards the education of boys and girls? Now, a number of hypothesis can be advanced:

1. there is no difference
2. the attitude towards female education is more favourable than that towards male education, and

3. attitudes towards male education are more favourable than towards female education.

Which one of these hypotheses is selected for investigation cannot be decided arbitrarily by you. You will have to demonstrate that have arrived at your hypothesis logically; and that this hypothesis is in conformity with the existing body of facts in that area.

In talking about 'problem', I have pointed out already that a good problem is one that is solvable. In terms of hypothesis formulation, this means that the hypothesis advanced must be *testable* i.e. it should be possible to specify the conditions under which the hypothesis will be accepted as confirmed *and* the conditions under which the hypothesis will be rejected. Many theoretical formulations are, by their very nature, such that a testable hypothesis cannot be advanced. For example, if you develop a hypothesis that all forms of behaviour are a manifestation of sex, this hypothesis is not testable because it is not possible for you to specify the outcomes which would be taken as verification or rejection of this hypothesis.

The two characteristics mentioned above, viz., (1) that a hypothesis should be logically arrived at and (2) that it should be testable, are the most important conditions of a good hypothesis. Some other characteristics that should be kept in mind while formulating hypotheses are: parsimony and quantifiability.

*Parsimony*

A hypothesis should be *parsimonious*. This means that if one hypothesis advanced to explain a phenomenon involves a number of concepts, particularly new concepts, while another hypothesis to explain the same phenomenon needs fewer new concepts, then the latter hypothesis will be more acceptable. For instance, take the phenomenon of hypnotism. At one time when the curative powers of hypnotism were discovered, many people believed that this was because of some mysterious magnetic power within humans. This power was called 'animal magnetism'. This 'animal magnetism' was a completely new concept introduced to explain certain observed behaviour. However, this behaviour could also be explained in terms of 'suggestion'. Now, the point is that in order to explain the behaviour, a hypothesis involving 'suggestion' is better than a hypothesis involving 'animal magnetism', because the phenomenon of suggestion is already known and, therefore, we do not add a new concept in advancing this hypothesis. In other words, the suggestion hypothesis, is more economical or parsimonious. Take another example. Some years ago newspapers published a report saying that a Russian girl could read with her finger tips. This assertion created a great deal of controversy. In the experiments that were carried out to explore this phenomenon, subjects were blind-folded and were given some material to read with their fingers. Sometimes they could read; at other times they could not. One hypothesis that could be advanced to explore this phenomenon further is that the former subjects possess some special sensitivity in their finger tips. Another hypothesis could be that the subjects who were able to read could do so because they could 'peek' through a defective blind-fold. Now this 'peeking' hypothesis is better than the 'special sensitivity' hypothesis because it explains the phenomenon in the framework of already existing knowledge. Only when the 'peeking' hypothesis is refuted should we put forward the 'special sensitivity' hypothesis and explore it.

*Quantifiability*

In general a hypothesis which expresses a *quantifiable* relationship is preferable to one which deals merely with the presence or absence of a phenomenon. Quantification is, of course, not possible in all cases, particularly where some new area is being studied. In such cases, a qualitative description may be sufficient. However, a quantitative description, wherever possible, should be explored. For instance, we want to find out whether mothers' education has any influence on the emotional adjustment of their children. One hypothesis could be: 'Children of educated mothers will be less frequently maladjusted in comparison to those of uneducated mothers'. Here we are expressing the two variables (education and adjustment) as dichotomous, without taking into account of the amount of education or the degree of maladjustment. We can phrase the hypothesis differently as 'the level of the mothers' education will be directly related to their children's level of adjustment. In this way, we are making the hypothesis quantitative. Such a hypothesis postulates that the varying amount of mothers' education will be related to various degrees of adjustment. Since this leads to better understanding and prediction, it would be a better hypothesis.

In summary we can say that a good hypothesis is:

(a) logically drawn

(b) testable

(c) parsimonious

(d) quantifiable.

Activity 7

For example you visit a school and there you find a great deal disciplinary problems and you think that a research study should be conducted to investigate the causes of disciplinary problems in the secondary schools of Pakistan. Develop two hypotheses which can help in this research study.

Activity 8

You have developed two hypotheses in Activity 8. Place each of these hypotheses on the following criteria and state whether they are good hypotheses.

Criteria: (a) Is it logically drawn?

(b) Is it testable?

(c) Is it quantifiable?

If your answer is "no' to any of the above criteria, revise your hypotheses and re-test.

### The advantages of having a hypothesis

The main advantage of having a hypothesis is that it provides direction to the research that is being undertaken. If we set out to study merely, say, criminals, student failures, teacher effectiveness and so on, all these areas are so large that we may become completely lost. However, when we start with a hypothesis, we limit ourselves to certain aspects of the field that we want to study. This guides us within manageable limits. Further, by directing our attention to certain specific aspects of behaviour, a hypothesis helps us in observing these areas more sharply. This at times helps in locating phenomena that would not be visible to you when you are merely exploring the field without any clear idea of what you are looking for.

It is because of this that at times it is asserted that it is better to have a bad hypothesis than to have no hypothesis at all. In a number of cases in the history of science, we find that even hypotheses which had no logical foundation led to some important discovery. For example, the ancient Babylonians believed in the magical quality of the number seven. As a part of this belief, they thought that there must be seven planets. At that time only six planets were known which were visible with the naked eye rather easily. But since they believed that there must be seven planets, they started looking for the seventh and using all their skill in astronomy, calculation and observation, were finally able to discover Mercury. Another instance from the same field is far more interesting and mysterious. In 1772 Johannes Daniel Titius of Wittenberg (Germany) announced that he had discovered a simple numerical law, according to which the relative distances of all planets from the sun could be expressed by the series 0, 3, 6, 12, 24, etc. by adding 4 in each one and multiplying it by 10 million. This, very surprisingly, corresponded quite closely to the relative distances of the seven planets known in the 18th century, except that the 8th planet, which should have been 280 million miles from the sun, was not known to exist. However, the law appeared to be so appealing that in 1800 A.D., a party of six German astronomers set out to look for the missing planet. They found a large number of planetoids, which are now presumed to be the fragments of a former full-sized planet in the predicted place.

It should be noted that both these discoveries would not have been possible without the directing effect of the hypotheses which had been formulated.

### The disadvantages of having a hypothesis

Let us have a look at the other side of the picture. The directing and limiting effect of a hypothesis may at times become very powerful; and the researcher may become heavily involved in getting his hypothesis confirmed (or refuted). In such circumstances, he may completely overlook important observations which may be directly relevant to the hypothesis under investigation. In some cases at least, the observation may be more important than the hypothesis itself. The history of science is full of instances where a scientist, while conducting research on one problem came across accidential observations which though not directly relevant to the problem, when pursued resulted in epoch-making discoveries. The example of Bacqueral has been cited earlier. Fleming's discovery of penicillin is another such example. In both these cases, if the scientists had confined themselves to the problems at hand and disregarded what did not appear to be relevant for their hypotheses, the world would have been deprived of important discoveries.

**Self Assessment Exercise No. 2**

Read the following statements and circle T if it is True, and F, if it is False.

1. The purpose of a hypothesis is to state in clear terms the relationship between antecedent and consequent conditions. T F
2. The main advantage of having a hypothesis is that it provides direction and limit for the research. T F
3. A hypothesis is an accurate answer to a question. T F
4. A good hypothesis is generally quantifiable. T F
5. A bad hypothesis is testable. T F
6. A hypothesis is an intelligent guess about the probable outcome of the research. T F
7. There is no possibility of any research without a hypothesis. T F
8. A hypothesis need not be logically drawn. T F
9. A hypothesis is an assumption of the research study. T F
10. A hypothesis is the conclusion of the research study. T F

(Please check your answers with the key on page 84.)

## METHODOLOGY

After an investigator has decided about the problem that he is going to study and has formulated hypotheses about the question(s) involved, he must decide about his methodology. Methodology is intimately related to the problem and the hypotheses. We pose a question (problem), suggest a tentative answer (hypothesis) and then select a technique which will enable us to see whether the answer that wer have proposed is correct or not. This requires careful planning about the group of people from whom data will be collected (the sample), the methods which will be utilized for collecting data and the statistical techniques that will be used to reach a final decision about the confirmation or rejection of the hypothesis (analysis and interpretation). The following sections deal with the planning of these three aspects.

### Sampling

In most educational research, you cannot study the whole population. For instance, if we want to study the level of attainment in mathematics of 8th class students in Pakistan, or even in a province, the number of students is so large that the cost of the study will become quite prohibitive. Also in many cases we want to study a problem in greater detail. For instance, we may be interested in the future aspirations of school children. In such a study, if we try to obtain detailed data for an in-depth study from all the students of, say, class ten, the time involved in obtaining and analysing the responses may be so excessive that by the time the study is completed it would have become out of date.

Therefore, in order to cut down the cost of the study and the duration of field work and to improve its quality, we study only a small part of the population. This small seg-

ment of the population is called a sample. It is important to understand the difference between the two terms. A *population* or *universe* consists of all units in a group. The population in a statistical investigation is always arbitrarily defined by naming some unique property. It could be "all post-graduate students of Pakistan during 1980-81" or "All Pakistani citizens", or "all the males above the age of eighteen years present in Islamabad on a certain date", and so on. The universe could also consist of observations of reactions to a particular stimulus. However, in this discussion, we will confine ourselves to the sampling of subjects.

Activity 9

Define population in the research studies with the following titles:

1. Problems of primary school teachers in Punjab

_____

_____

_____

2. Difficulties of secondary school teachers in Islamabad

_____

_____

_____

You must define your population clearly; and must make certain that it is available for sampling. For example, if we want to study criminals, the most convenient place to obtain our sample of students would be prisons. But all criminals are not convicted and, what is more important, those who are not convicted might be different in some characteristics from those who are convicted. Thus our sample would be of convicts and not of criminals.

There are two basic requirements for a good sample. It should be adequate and it should be representative. The adequacy of a sample means that the number of subjects included in the sample should be large enough to provide reliable data, while its representativeness means that it should be an unbiased reproduction of the important characteristics of the population.

A number of methods are used to ensure that a sample is representative of the population. Some of them are: random sampling, systematic sampling, stratified sampling, quota sampling, multistage sampling, and incidental/opportunity sampling. You will study the details of these types of sampling in some later unit.

2. *Data collection*

After selecting a problem, formulating the relevant hypotheses and deciding upon the sample, one has to proceed to the collection of data. It should be remembered that this stage is no less important that the earlier or later stages of research. At this point, one has to decide on the actual method that is to be used, perhaps carry out a pilot study and finalize the instruments.

The main methods of study used in educational research can be classified under the following major heads: (i) observation (ii) questionnaire and interview (iii) content analysis.

a) *Observation*

Observation of behaviour is carried out in a number of situations under varying conditions. In some situations, the researcher goes out and makes observation of behavior in natural settings without interfering with or disturbing the behavior itself. Such naturalistic observation may be carried out, say, for studying the behavior of children in the classroom or in the playing field; or analyzing the behavior of crowds in the streets. The main condition is that the behavior should be studied in its natural surroundings; and that the observer should be completely inconspicuous so that his presence does not alter the behavior.

Another variant of observation is the non-reactive method or field experimentation where the researcher carefully introduces some new elements into the field and observes its effect without the knowledge of the person(s) being studied. An example of such a method was an experiment in which sealed and stamped envelopes were carefully dropped on the pavements to see how many of them were returned and whether they were opened or not before posting.

Experiments are another type of observation approach in which the observations are carried out under controlled conditions. Usually the person studied is brought to a laboratory (or the classroom acts as a laboratory) and is carefully exposed to certain conditions with his behaviour being observed or recorded. An instance of this method would be the situation in which a child is asked to memorize material of various lengths in order to see the effect of the length of the material on his memory. Another example would be when one group of students is taught by the lecture method, while another comparable group is taught the same material by programmed instruction to see which method is more effective.

A related technique is rating, which may be based on short or long duration observation of behaviour. This technique requires the use of rating scales. An example of this method is the ratings given by teachers to various studetns in terms of their sociability, agression, eagerness to work etc. It should be remembered that all these variables will have to be defined in operational terms before such a rating is constructed.

b) *Questionnaire and interview*

The essential feature of this method is that information or opinion is obtained directly from the subjects. An investigator may conduct in-depth interviews with children, teachers or parents to find out their pupils' emotional problems. Such interviews are conducted using an interview schedule. At times, interview schedules are constructed which do not require very much detail, but the information obtained is usually lacking in depth. Such interview schedules have predetermined answers and can be filled in very quickly. They are used mostly in market surveys and consumer research, although at times consumer researchers also use the in-depth approach. The responses to interviews can be obtained in face-to-face sessions or the questions may be sent to the subject by mail. The *mailed questionnaire* technique can only be used when we are dealing with a literate population. Another variant is the written *questionnaire* that is often used in personality research. The questionnaire may consist of questions or statements with which one expresses agreement or disagreement. Example of such questionnaire methods are various personality inventories, attitude scales, etc.

c) *Content analysis*

Content analysis means analysis of material that is already available. This method is quite often used in research on communication and in personality assessment. The material which is analyzed is either already available or is specially generated for the study. An example of the former is the content analysis of political speeches, editorials, news, short stories and T.V. programmes. An example of the latter is the analysis of responses to projective tests, like the Thematic Appereception Test, which is quite often used in personality research.

These methodological approaches should not be considered as mutually exclusive. Many methods and techniques involve a combination of a number of approaches. For example, many psychological tests use boservation as well as questioning. In the clinical method, at times all three are used at the same time. One should not be tied to a particular method but should use the method or combination of methods most suitable for solving the problem at hand.

The organization of data

While the actual work of data collection will differ from one study to the other depending upon the methodology, certain key aspects should clearly be kept in mind when planning a study, viz.

a) *Time requirements*

Some studies span a very long period; for example, longitudinal studies in which repeated measures of the same individuals are taken after various periods. Such studies require care with regard to the instruments which should remain valid for the duration of the project. A test of current information or even scientific knowledge may require a complete change of contents within a few years. Most achievement tests will also become outdated with changes in syllabuses.

On the other hand, some studies require data collection within a very short period. For instance, if a nation-wide study of political opinion is being carried out, the data collection should be completed within a very short time. Otherwise it will become contaminated due to opinion change that may take place during the period of data collection.

b) *Personal requirements*

In some studies you collect all the data yourself, while in others you engage a number of field investigators for data collection. In the latter case, the method of data collection has to be made uniform for all those involved in this work. For this purpose, some training or practice may be required.

c) *Recording requirements*

In some researches, the measures may be quite simple to record. For instance, in many achievement tests, a single score or a couple of scores will be obtained for each individual which can be preserved on the answer sheets. On the other hand, with open-ended interviews, clinical studies and projective devices, the data available may be immensely large and some sort of selection may be called for at the time of interview or testing. It is a good idea to organize this beforehand in order to maintain proper records.

Data analysis and interpretation

At the stage of planning research, three questions should be clearly postulated:

1. What sort of statistical analysis is to be carried out?
2. What sort of conclusions are expected?
3. What should be the implications of these conclusions?

The nature and type of statistical analysis would depend upon the hypothesis, the methods used for data collection and the facilities available for carrying out statistical analysis. It is obvious that if the problem is to develop a science aptitude test for school children, it will involve a different statistical analysis than if the purpose is to study the personality structure of children belonging to culturally deprived families. However, in both cases, it is necessary that an analysis plan should be prepared beforehand. Many studies remain inconclusive becauses after data collection has been completed, it occurs to the investigator that either measurements used or the spread of the scores or the number of cases do not allow him to carry out the analysis that would have led to maximum information from the data, only a slight modification could have enabled him to get much more useful information. Many of these problems can be overcome at the stage of planning by conducting a pilot study and analysing the results of this study in the same manner as the final data is to be analyzed.

Some prediction of the probable results should also be possible after conducting a pilot study. The results of such a study may indicate what to expect from the final study. Apart from the confirmation or refutation of hypotheses, the implications and interpretations of the results should also be considered. If the conclusions do not appear to be worthwhile, the whole plan may have to be thought about again.

Drawing conclusions on the basis of data analysis

The analysis of data helps in reaching at the findings which provide us a base for drawing the conclusions. For example, a study was conducted to compare the attitudes of M.Ed. students of IER Gomal for the year 1980-81 with the attitudes of teachers in Abbottabad District towards their profession. As a result of data analysis it was found that none of the working teachers happened to fall in the category "excellent attitude towards profession" whereas 10.71 per cent of M.Ed. students were found to fall in this category. From this finding you can safely conclude that the studetns in the teacher education institutions have high positive attitude towards the teaching profession and this attitude shows a negative trend when they go to work in the schools. Another finding of the study was that 20.83 per cent of the working teachers favoured the idea of having a liaison between school and community. From this finding you can conclude that the working teachers have poor attitude in the domain of liaison between school and community.

We have given two simple examples to show how the conclusions are drawn in a research project. The procedures as to how the conclusions are drawn and how the descriptive and statistical data are inferred to arrive at conclusions, will be discussed in detail in a later unit entitled "Analysis and Interpretation of Data."

Self Assessment Exercise No. 3

Read the following statements. Circle T, if the statement is True, and F, if it is False.

1. It is always possible to study the whole population. T F
2. In experiment, observations are made under controlled conditions. T F
3. It is not appropirate to use both observation and questionnaire in the same study. T F
4. For the observation of behaviour, rating scale cannot be used. T F
5. The small segment of population used in the study is named as universe. T F
6. A sample must be adequate in size. T F
7. A random sample is always representative of all the strata of the population. T F
8. A mailed questionnaire technique can be successfully used when the population is illiterate. T F

## CONCLUSION

In this unit you have been introduced briefly to the basic steps that a teacher takes in planning research. To recapitulate these are:

1. Identification of the problem
2. Development of hypotheses
3. Collection and analysis of data and
4. Drawing conclusions on the basis of data analysis.

If you are still unclear about any of these stages, please go back again to the appropriate part of the unit, since it is very important that you understand the fundamentals of research planning before you advance to a more detailed consideration of research process All the issues considered in this unit are dealt with in greater depth in the later units of the course.

Key to Questions in Self Assessment Exercises

Exercise 1 1. F 2. F 3. T 4. F 5. T 6. T 7. F 8. F 9. T 10. F 11. F

Exercise 2 1. T 2. T 3. F 4. T 5. F 6. T 7. F 8. F 9. F 10. F

Exercise 3 1. F 2. T 3. F 4. F 5. F 6. T 7. F 8. F

## GLOSSARY

CLUSTER SAMPLING — A method of sampling entailing random selection of intact groups within a population, e.g. the selection of whole classes or whole schools from a population of school children.

CORRELATION — The extent of relationship between two or more variables.

| | |
|---|---|
| DATA | Observations, test results, scores, interview records etc. any observed facts from which general inferences may be drawn. |
| DEPENDENT VARIABLE | A dependent variable is one not directly under the experimenter's control. Its relationship to the independent variable is the object of the investigation. |
| EXPERIMENT | A study in which the relevant variables are controlled and manipulated by the experimenter rather than simply observed in their natural setting. |
| FACTOR ANALYSIS | A technique aimed at describing a number of variables in terms of a smaller number of basic factors starting with the correlation between test measuring and variables. |
| HYPOTHESIS | An untested idea or assertion put forward to explain some natural phenomenon. |
| INCIDENTAL SAMPLING | A non-random method of constructing a sample by selecting cases known to possess certain desired features without considering for inclusion other cases which possess these features. |
| INDEPENDENT VARIABLE | An independent variable is one which is being systematically varied by the experimenter. |
| MULTISTAGE SAMPLING | In this process a sample is selected by stages, the sampline units at each stage being sub-sampled from (larger) unit chosen at the previous stage. The sampling unit pertaining to the first stage are called primary or first stage units and similarly for second stage units. |
| POPULATION | Any group of or observations which includes all possible members in that category. |
| POSITIVE RELATIONSHIP | When high values on one variable tend to be associated with a high value on another, and low values with low values, there is said to be a positive relationship between the two variables. |
| QUOTA SAMPLING | According to this method the interviews are given in definite quotas of persons belonging to different social classes, different age groups, different races; different regions, etc. and are instructed to obtain required number of interviews to fill each quota. |
| RANDOM SAMPLE | A sample drawn from a population in such a way that every element of that population has a known, non-zero probability of being selected. |
| RATING SCALE | Scales for recording one's judgements. |

| | |
|---|---|
| REPRESENTATIVE SAMPLE | A sample drawn from a population which accurately reflects all the important characteristics of that population. |
| SAMPLE | A group selected from a larger population with the aim of yielding information about this population as a whole. |
| SAMPLING | The process of drawing sample from a larger population. |
| STRATIFIED SAMPLING | The population to be sampled is first divided into strata, e.g. people of high medium and low IQ, men and women. A random sample is then drawn from each stratum. |
| SYSTEMATIC SAMPLING | The selection of a sample by randomly selecting a person to start off with and then people at a regular serial number are taken from each stratum. |
| VARIABLE | A quantity which take any one of the specified set of values. |

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## PHILIPPINES

Subject: The Self-learning Integrated Module for Mothers (SLIMM) to increase their Capability in teaching their preschoolers

Topic selected: SLIMM Area III: Motivate – Develop – Assess way of teaching kindergarten

Reported by: Dr. Paquita D. Gavino

Introduction:

This self-learning module for mothers was developed by Leonides G. Soriano, faculty member of the Teachers College of the University of Mindanao, Davao city, Philippines. Development and testing took two years among mothers from four rural barangays in Kabacan, North Cotabato. The original material is in Ilocano, a Philippine dialect. It was found to be effective in training mothers to teach their preschoolers the equivalent of preschool education.

It is composed of five units, namely:

| | | |
|---|---|---|
| SLIMM Area I | – | Theory Base |
| SLIMM Area II | – | Kindergarten Curriculum |
| SLIMM Area III | – | Motivate – Develop – Assess Way of Teaching Kindergarten |
| SLIMM Area IV | – | Evaluating the Preschooler's Reading Readiness one to ten and operations |
| SLIMM Area V | – | Government Thrusts. |

Critical notes

Reactions on SLIMM centered on much appreciative comments from the participants. It was suggested, however that the material could be made more attractive to mothers by use of illustrations at different stages. The SLIMM is intended for use of mothers (or anyone who has a preschooler to teach) especially in the rural areas where kindergarten education is beyond the reach of the majority. Adding illustrations to the material already tested would increase its cost and this could be a constraint factor to its effectiveness. It was advanced that the simplicity of the original SLIMM in Ilocano was an attraction in itself for mothers to learn and persevere on the complete the module. It was pointed out, further, that rural mothers are highly motivated to learn the right way to train their preschoolers.

An English translation of SLIMM Area III is given below.

### SLIMM Area III: Motivate – Develop – Assess Ways of Teaching Kindergarten

You are now equipped with theory in SLIMM Area I, so you can understand better your child and identify his teachable moments as your entry point of your teaching – learning encounters (t-l-e) with him. In SLIMM Area II you covered goals, content and activities of the preschooler. Here in SLIMM Area III you will gain the skill of teaching

the Motivate–Develop-Assess (MDA) way. MDA is about the simplest method of teaching your child. This area is given in two lessons. The concept of MDA is given in lesson 1 and the practicum phase is given in lesson 2.

## I. Rationale

The skills in teaching can only be learned by actual teaching. Because you have only one person to teach and not a class, you use the individualized teaching-learning-encounter, and SLIMM Area III will teach you how to teach.

MDA is proposed to be the basic method in teaching your preschooler which is aptly used for the 5-6 year old child who easily gets bored and tired. He can hold attention only for ten minutes at most for effective result.

## II. Enabling Objective of SLIMM Area III

Using the instructions, the plan made, instructional materials ready and the child at his teachable moment, you will be able to teach the MDA way in the teaching-learning-encounters with him. Your performance is acceptable if you objective is carried out in at least nine out of ten t-l-e's.

## III. Explanation

There will be only one formative evaluation for the two lessons. Since one is about the concept and the other is the practicum of the concept, of Motivate-Develop-Assess (MDA) way of teaching, both will be using the same pre-posttests.

You may now take the test that follows:

## IV. Pre-posttests for SLIMM Area III

Direction: Fill in the blanks as required in the instructions. The whole test will be about the teaching-learning encounter plan (t-l-e plan). The t-l-e plan should have a goal taken from the Table of specication for preschool education (T.S.P.E.) (p. 13) objectives. After selecting one write it out.

1. Goal: _____ (1 pt)

This goal (objective) should be written as an instructional objective in the CABD format as terminal performance objective (TPO).

TPO:

C – conditions for making the lesson possible in terms of materials, place an entry behavior of learner; write these in the blanks that follow (2 pts)

_____

_____

A – the audience learner, in this case your _____ (1 pt)

B – behavior expected after the lesson is done, which is observable, or visible, measurable and achievable by the audience learner, write it.

_____

_____ (3 pts)

D — degree of acceptable performance of the child in terms of percentage, rate or any measure, write it.

_____

_____ (3 pts)

II. MDA procedure: Your t-l-e will last only ten minutes, so start with an interesting or attention-arresting entry: try the lesson you made.

Motivate:

_____

_____

Develop: You will now carry out your objective as you planned as the lesson proper: write or describe or spell out here what you will do.

_____

_____

_____

_____

Assess: You will now make an evaluation if you were able to carry out your objective; consider your objective, behavior and the degree of performance you listed a while ago. Spell out what you will do in these blanks.

_____

_____

Note: You may use extra sheets for your work if necessary.

For pretest, you should at least get Goal (10 pts) correct as checked with the SLIMM Area II example on page 14. Then proceed to page 6 for SLIMM Area III Lesson 1.

For Posttest, you should at least get both *Goal* (10 pts) and *MDA* (10 pts) correct as checked against the example on page 14 for Goal and page 9 for MDA.

CONGRATULATIONS! YOU ARE GETTING TO BE CAPABLE IN TEACHING THE MDA WAY.

After the posttest please turn to page 85 for instructions for SLIMM Area IV.

## SLIMM Area III — Motivate-develop-assess (MDA) Way of Teaching Kindergarten

### Lesson 1 — Concept of MDA

Motivate-Develop-Assess way of teaching kindergarten is about the simplest method. It is especially designed for you who have no time for the formal teaching procedure as used in the classroom.

This MDA way is basic for the individualized t-l-e between you and your child. This consists of short, snappy and interesting ten-minute encounters during teachable moments.

## I. Enabling Objective III-1

Given the information in lesson 1, you will be able to formulate and select the activities for the three basic steps in teaching kindergarten: Motivate-Develop-Assess. Your performance is acceptable if:

you can preplan your teaching-learning encounters each time for all the objectives in the whole kindergarten course in T.S.P.E.

follow the MDA guidelines in this lesson as closely as possible in conducting MDA with your child.

## II. Explanation

This area of the SLIMM is done to find out how much you are capable of teaching your child in every encounter that you will have with him. It will teach you the basic procedure of motivate-develop-assess. This is followed in all teaching-learning encounter with your preschooler and you will be assured that you follow a scientific procedure of teaching.

*Motivate* means to get the child ready and teachable at the moment and throughout the lesson. Bear in mind you child's nature, his receptivity, time of the day, or the approaches that interest him. Do not detract from your aim or objective even if you must keep his interest. The longest time span of his interest is ten minutes. Make your motivation then short but snappy and appealing to all or almost all of his senses.

*Develop* means to continue unfolding the lesson to him in a sustained motivating state. In other words, don't drag the lesson proper. Remember, he is interested only for ten minutes. Plan your lesson that will last you ten minutes of presentation and development. Use direct teaching, discovery method, imitation or incidental, information giving, as needed.

*Assess* means the ascertaining of the child's gain in the lesson. The child should have learned something in the ten-minute encounter then assess or test him and try to find out if he really learned, using any one of these: a follow-up game, a question, he will identify or produce what is required in the lesson. Test also whether your objective is carried ont in the degree of acceptable performance you set in your objective.

### Guidelines in Using MDA

Motivate the child to create the desire to learn not only for the moment but thro[illegible]he whole lesson. Make lessons appealing and challenging his readiness in [illegible] in motivation.

[illegible]op the lesson after an impressive and effective presentation. Do the development in the form of a game or a contest, or by demonstration in a snappy but interesting w[illegible]

1. Multi-sensory stimulation. The lesson must be heard, seen, touched, smelled, or tested or if this is not possible should have more than one sense to appeal to.

2. Develop from the familiar and gradually to the unfamiliar, or known to unknown.

3. Teach directly but allow discovery which is also exciting. You can tell what is the lesson about, or how to do things in the lesson, ask questions in the process and then direct the child to say what you say or follow what you do. This is direct teaching. It is basic, but this must be followed by self-discovery of answers by the child to questions you ask later. The subsequent allied lessons will become your follow-up and discovery can be done with concepts already learned.

4. Use real objects and actual situations, although you may have fantasy when necessary, role playing and impersonation could be fun, too.

Assess the performance of your child soon after the development of the lesson.

1. Check the performance against the objective of the lesson.
2. Test whether learning took place, i.e. produce, identify, demonstrate or imitate, follow directions and rules of the activity done.
3. Learning should be cognitive, affective, and psychomotor. *Cognitive* in the form of information and knowledge; *affective* in the values, appreciations and attitudes one gets from the learning; and *psychomotor* in the form of skills. As much as possible two or three domains will be taught in the lesson.

Demonstration of the Use of MDA

MIDA is going to be employed in the procedure part of the plan, for the teaching-learning encounter which is now presented.

PLAN FOR A TEACHING-LEARNING ENCOUNTER

Goal: Representation and symbols. (See Table of Specifications (T.S.P.E.). p. 93.)

TPO: C – Given a set of cut-out alphabet, using pictures of familiar objects such as flower, ball, toy, boy, girl.

A – Your preschooler.

B – Can arrange the name of the picture using the cut-out alphabet.

D – Correctly after three exposures.

MIDA: These pictures have names. Can you name them?

Motivate:

You can say their names, but you can also read them. Would you like to read then, too?

Develop: This is how you will read them.

– Arrange the whole word under the picture of a ball, the cutouts B A L L, say *ball.*

– Let the child read it by following you, *ball.*

– Disarrange the letters and repeat the presentation in two more instances.

– Do the same with other pictures: toy, flower, boy, girl.

Assess:

> Present a picture and let him arrange the letters corresponding to the name of the picture and let him read it. Do the same with other pictures. He should arrange the letters accurately under the appropriate picture. These pictures should be the same ones presented earlier (ball, toy, flower, boy and girl).

Your objective is accomplished if the preschooler can do what he is asked each time, for five times.

This demonstration should enable you to make one complete plan for your t-l encounter, which you will use in lesson 2.

This will also serve as your practicum for lesson 1.

You are then requested to proceed immediately to lesson 2 on the next page.

## SLIMM Area III – Motivate-develop-assess Way of Teaching
## Kindergarten

Lesson 2 – Practicum Teaching the MDA way.

You will now do the teaching-learning encounter that you planned in Lesson 1. This lesson is done to help you find out if you can teach actually, the MDA way. You will be aware if you are doing right with the guidelines, for your self-appraisal in the process of teaching.

I. Enabling Objective III-2

How would you know you are successful in the t-l encounter? The following guidelines will help you be aware of the process of teaching the MDA way.

1. Was my objective clear?
2. Did I present my lesson in ten minutes?
3. Did I follow the MDA correctly?
4. What can I do to make the next encounter better?

There is another set of self-appraisal questions which would be valuable for self-assessment in teaching, the MDA way. Turn to the next page for the set of questions

Questions for Self-appraisal (In the original this appears in the next page.)

1. Did my child exhibit interest for the moment or for the whole t-l encounter?
2. Did I present my lesson with a multisensory appeal? or any other effective way of doing the t-l-e?
3. Was I able to assess the learning of my child against the objectives of the lesson?
4. Can I say I am capable of teaching my child?
5. Can I do again another t-l encounter with greater success?

# TABLE OF SPECIFICATIONS FOR PRESCHOOL EDUCATION SOCIO-EMOTIONAL, PERCEPTUAL-MOTOR AND COGNITIVE OBJECTIVES

**OBJECTIVES**

| | *Socio-emotional* | | | | | | | | *Perceptual-motor* | | | *Cognitive* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | *Logical knowledge* | | | | | | *Representation* | |
| *CONTENT* | Dependence on the teacher *A* | Inner controls *B* | Interaction: quantity *C* | Interaction: quality *D* | Comfort in School *E* | Achievement motivation *F* | Curiosity *G* | Creativity *H* | Gross motor coordination *I* | Fine motor coordination *J* | Physical knowledge *K* | Social knowledge *L* | Classification *M* | Seriation *N* | Number *O* | Space *P* | Time *Q* | Simbols *R* | Language *S* |
| 1. The self | | | | | | | | | | | | | | | | | | | |
| 2. Body parts | | | | | | | | | | | | | | | | | | | |
| 3. Members of the class | | | | | | | | | | | | | | | | | | | |
| 4. Members of the family | | | | | | | | | | | | | | | | | | | |
| 5. Community roles | | | | | | | | | | | | | | | | | | | |
| 6. Playground equipment | | | | | | | | | | | | | | | | | | | |
| 7. Foods | | | | | | | | | | | | | | | | | | | |
| 8. Clothes | | | | | | | | | | | | | | | | | | | |
| 9. Furniture | | | | | | | | | | | | | | | | | | | |
| 10. Houses and buildings | | | | | | | | | | | | | | | | | | | |
| 11. Tools | | | | | | | | | | | | | | | | | | | |
| 12. Kitchen utensils | | | | | | | | | | | | | | | | | | | |
| 13. Vehicles | | | | | | | | | | | | | | | | | | | |
| 14. Animals | | | | | | | | | | | | | | | | | | | |
| 15. Plants | | | | | | | | | | | | | | | | | | | |
| 16. Art Materials (e.g. paints) | | | | | | | | | | | | | | | | | | | |
| 17. Toys (e.g. balls) | | | | | | | | | | | | | | | | | | | |
| 18. Colors | | | | | | | | | | | | | | | | | | | |
| 19. Sizes | | | | | | | | | | | | | | | | | | | |
| 20. Shapes | | | | | | | | | | | | | | | | | | | |

Adopted from Kamii and Cazden (1971).

Answers to these questions should be *YES*. If your answer to all these is *yes*, it means that you are successful in using the MDA way.

What is more important to remember is that you made your plan very well before you can ever teach well. The execution of the t-l encounter depends upon the plan.

This lesson's objective is therefore dependent upon how well you accomplished lesson I of SLIMM AREA III.

This MDA way can be repeatedly used in all t-l encounters with your child until the whole kindergarten course is covered (T.S.P.E.), Happy Teaching-Learning Encounter!!! Then take the posttest on page 3.

After the posttest you will be having special instruction for SLIMM AREA IV.

C. Practicum. (SLIMM Area II reproduced)

For your practicum select one objective from the T.S.P.E. (Table of Specification for Preschool Education, p. 13) then construct the instructional objective for it following the TPO format, CABD. For your guideline, below is an example.

1. Goal (objective selected from T.S.P.E.)

   O – Numbers

2. Instructional objective in terms of TPO format

   C – Given ten minutes of teaching-learning encounter (t-l-e) with real objects, ten of each kind, pictures of ten things, squares, and other shapes numbering ten, and the written symbol 10,

   A – The preschooler,

   B – Will be able to identify and produce number 10 in the concrete, semi-concrete and abstract forms,

   D – Accurately in ten out of ten attempts to identify and produce number 10.

Now, fill in the blanks with your work:

1. Objective from T.S.P.E.
2. Instructional Objective in the TPO format:

   C _____

   A _____

   B _____

   D _____

Try another objective for your formative evaluation II-1.

## MALDIVES

**Subject:** How should a Teacher ask questions?

**By:** Fowziya Y. Moosa

**Introduction:**

"How should a teacher ask questions?" is one of a series of self-learning modules for in-service primary teachers that will be developed by the Educational Development Centre, Republic of Maldives.

This module in its original form was presented to the Technical Working Group Meeting. The critiques of participants have been taken into consideration in revising the original draft.

**Critical notes**

The critiques summarised are as follows:

1. Objectives of the module should be given at the beginning of the module and at the beginning of each unit.
2. Directions to the learner should be given at the beginning of the module and the unit. Directions should also be indicated after each exercise as to what pages the learner has to refer for his answers.
3. It was also suggested that the overall physical structure of the module should be organized so as to make it a distance learning study unit on the lines discussed in the meeting.

Revised Form

# HOW SHOULD A TEACHER ASK QUESTIONS?

Prepared by

Fowziya Y. Moosa
Teacher Educator EDC
Republic of Maldives.

To the reader:

This module is designed for you, teachers to enable you to sharpen/master your skill in questioning.

You are expected to read each portion and do the exercises before proceeding on to the next portion of the text. After completion and checking of each assignment, you are expected to perform all of the self and evaluation items correctly.

You will be given the supervision and guidance you need from the head teacher of your school or atoll. He/She will correct and comment on your assignment and send your evaluation to us as EDC.

We would also welcome your own personal evaluation and suggestions for improvement of the material.

EDC

## CONTENTS

## INTRODUCTION

1. What is this?
2. What happens to a tree?
3. What do you hear five times a day?
4. Why do we brush our teeth?
5. Do you believe that everything will get destroyed one day?
6. What did you see on your way to school?
7. What are some of the things we can do in our home compound?
8. Why do we need a house?

These are some questions asked by teachers in actual classrooms. We come across these questions everyday. Read the questions carefully. Some of them require only a word as the answer.

What do you think is the subject area of the questions 2, 3, & 4?

They may be any subject area. But these questions were asked in Islam lessons.

The second question, "What happens to a tree?" and "Do you believe that everything will get destroyed one day?" were both asked in one Islam lesson, which was to develop the concept of Domesday.

Do you think the questions were relevant to the topic?

What will be the expected answer to these questions?

Let us consider questions 1 & 6. These questions were asked in a Language Arts lesson, to develop speaking skills in children.

Do you think the questions were relevant?

Can you think of a better question which will help the teacher in such a situation?

Why is your question better?

Questions 4, 7 & 8 relate to Environmental Studies.

Are they relevant?

Are they good questions? Why?

The skills of questioning are as old as instruction itself. They formed an important method of teaching used in the East, thousands of years ago and later developed by Socrates in the 5th Century B.C. Today questions are used by almost every teacher in every classroom. Despite this long history of the use of questions, it is surprisingly difficult to define precisely what constitutes a question. A rough and ready description would be:

> "any statement which tests the learner and demands on overt or covert response from the learner and/or which extends knowledge in the learner".

If questioning is a tool that tests or fosters learning, then we should choose the kinds of learning we want to promote and choose the appropriate levels of questions.

It is not enough, however, to choose the appropriate levels of questions, we must also know how to communicate questions effectively to a group of pupils and when to use them.

This self learning module has been designed to sharpen your skills in questioning. On completing the module, you should be able to:

(i) identify various types of questions.

(ii) effectively use the various types of questions in your teaching.

We shall discuss the categories and levels of teacher questions, with examples and some activities for you to do in Unit I.

We ask questions for a variety of purposes in a learning situation. These types of questions and their purposes will be discussed in Unit II.

From the moment we start an interaction with our pupils, we are watching out for behavior modifications. We are always evaluating our pupils.

How can we evaluate our pupils?

There are various ways by which we can evaluate our pupils. Questions are the most common tools of evaluation.

What are the characteristics of evaluative questions, and when do we use them? We shall discuss this in Unit III.

## UNIT I

After reading this unit you should be able to:

(a) know the level of questions.

(b) use these type of questions in your teaching.

Questions can make the child's mind operate at various levels.

We shall list the levels of questions now, and discuss the levels in detail later in this unit.

Levels of Questions

1. Recall – Does the pupil recall what he has been told?
2. Comprehension – Can the pupil translate in his own words what he has been told?
3. Application – Does the pupil understand what has been told him and apply his knowledge in a new situation?
4. More than application – Can the pupil identify causes, make predictions, and give rationally based opinions on issues?

Questions that test essentially the recall of knowledge are called *lower order cognitive questions.*

Questions that apply or create knowledge are called *higher order cognitive questions.*

From the levels of questions shown above, recall, comprehensive and application are lower order cognitive questions.

Questions that require more than application are higher order cognitive questions.

Recall Questions:

Questions may make the child recall at factual level. These recall questions may be of two types:

1. Those requiring a Yes or No.

   Eg: Is the Atoll Office of Lhaviyani in Naifaru?

   Is Colombo the capital of Sri Lanka?

   Does the sun rise in the East?

   Must you eat without washing your hands first?

2. Recall questions range from one word answer to questions involving the recall of linked ideas.

   Eg: What is the capital of India?

   In which island is the Noonu Community School?

   Can you remember what type of plant this is?

   What happened to the old miser?

To show us that a person is able to recall some facts about an area of knowledge, we would expect the person to define, to identify, to recognise, to list, to name or to reproduce, with regard to the particular knowledge area.

When the child performs these kinds of actions, all the child does, is to *recall to memory* what had been learned earlier.

*State 5 expectations you would have about what the child will be able to do if you had taught her to operate only at the factual recall level in a unit of learning (of your choice).*

Now let us see whether you can recall, recall questions. From the list below, pick out the recall type of questions and mark (R) at the end of those questions.

1. A verb is a word that expresses action, right?
2. Is honesty important or not?
3. What do we call this?
4. How would you find out whether a plant breathes?
5. Why do insects visit flowers?
6. What is the planet closest to earth?
7. What does "invisible" mean?
8. What do you like best about Eid?

9. How much of the earth's surface is covered with water?
10. How is vinegar made at your home?

(Please refer to page 27 to check your answers).

*State 5 questions at the recall level in any area of knowledge of your choice.)*

**Comprehension Questions:**

Generally speaking comprehension questions refer only to information and skills learnt in recent lessons. They simply test whether the pupil an state in his own words what he has been learning.

If we comprehend a given area of knowledge we should be able to perform actions such as the following.

- to give examples.
- to infer.
- to rewrite in our own words.
- to summarise.
- to estimate.
- to extend.
- to distinguish.
- to compare.

Here are some examples of comprehension questions.

1. State in your own words how levers work.
2. What are the similarities and differences between plants and animals?
3. We need air in order to live. How many of the things below need air?
4. How many ways do we use fire? How many ways can you think of?
5. What do you say a family is?
6. How were these men alike and how were they different?

*Pick out the comprehension questions from the list below and mark (c) at the end of such questions:*

1. Explain how radiation of heat is used in a thermos flask?
2. How does the Post Office help us?
3. Why do people in warm countries wear cotton clothing?
4. How does on ant differ from a mosquito?
5. Describe the National Day Celebrations in your island.
6. Is rain water softer than well water?
7. How do flowers of wind pollination differ from flowers of insect pollination?
8. How do plants take in water from the soil?

9. How many times do we pray?
10. What do you understand from the poem?
11. What will happen to us if people stopped fishing?
12. Re-write the story in your own words.
13. Do you remember what we discussed yesterday?
14. What is "Photosythesis"?
15. Define "education" in your own words.

(Refer to page 27 to check your answers)

II. *Just as you wrote 5 recall questions, write 5 questions you would ask a child to see whether the child has comprehended a portion of knowledge you have taught her.*

Because we can perform the actions we discussed earlier, does not mean we can use what we have learned in a *new* situation. That would be applying the knowledge, which goes further ahead of what we can do with comprehension alone.

Application questions:

Application is the ability to use learned material in new and concrete situations. This includes the application of such things as rules, methods, concepts, principles, laws and theories.

Application questions set up a simple problem situation which the pupil has to solve with his recently acquired or recalled knowledge. A pupil may have learnt to solve the questions:

$x + 4 = 10$; and $2x = 22$

The next question might ask him to apply the principles he has learnt to solve the question,

$2x + 4 = 32$

Here are a few examples of application questions.

1. What material would you use to make a handle for a saucepan, other than wood or plastic? What scientific facts about the material did you use when you decided on the material?
2. Draw a cuboid with 5cm, 3cm, 4 cm dimensions. Draw another cuboid bigger than the one you have just drawn. What properties of the earlier cuboid have you held constant or not changed?
3. Which direction does the wind come from, today? (pupil uses a small windmill or windvane).
4. Does the salt in the sea go into the clouds? Why?
5. Four bottle tops are fixed as above, so that they touch and mesh. If 4 is moved in which direction will 1 move?
6. If the following were the only evidence available in four changes that took place, which would be the one that would best suggest a chemical change?

(i) A solid substance was transparent, and was opaque after the change.

(ii) The melting point of a solid substance was 120° C can was 185° C after the change.

(iii) The density of a gaseous substance changed by 5%.

(iv) The colour of a liquid substance was deep blue and was much lighter after the change.

*Write 5 questions you would ask a child to see whether she has the ability to apply what she has learned in any subject area of your choice.*

"More than application" questions

We can still further our pupil's thinking. We use higher order cognitive questions to enable the pupil to operate at higher levels of thinking.

A person showing ability in higher thinking will be able to perform such actions as:

- to break down
- to differentiate, discriminate, subdivide
- to categorise, to design, to plan, to reorganise.
- to appraise, criticise, to justify, to conclude.

Each higher category is assumed to include the behaviors of the lower levels. When a person operates at the application level, factual recall and comprehension are also involved. And if a person operate at the higher order cognitive level, all the other lower order cognitive levels will be involved.

Here are some examples of higher order cognitive questions.

1. Why did the crane serve dinner in a long-necked vessel?
2. Why do Formulaku people have so many words for waves?
3. Why do you think Male is the capital of Maldives.
4. What things happen to this tree if we stop watering it? why?
5. What things will you be doing different or same, 20 years from now? why?
6. How do you know that heat is a form of energy?
7. Why did the community healthworker raise Hassan's legs on to a pillow when he fainted?
8. Why does wet laundry hung on a clothesline, dry faster on a hot day than on a cool day?

*Write 5 questions you would use to see if your pupils operate at the higher order cognitive levels.*

## UNIT II

After reading this unit, you should be able to:

a) know the purpose of asking questions.

b) increase your fluency in asking questions.

Content:

Purposes of asking questions.

- small step questions.
- prompting and probing.

Fluency in asking questions:

- clarity & coherence.
- pausing & pacing.
- distributing & directing.

We ask questions for a variety of purposes in a learning situation. We may ask questions merely to outline or indicate or signal to the child the area of knowledge we will be learning in a situation. These may be either rhetorical, when the pupil is not expected to reply and teacher answers his own question. Questions may be carefully designed stimulating questions for which a preliminary or partial answer is expected.

We could use questions to promote learning in a variety of ways such as *small step questions* which will lead the child through a chain of small learning steps. We would then word the question in such a way that there will be a high probability of giving the correct answer for each of them.

Here are examples of small step learning questions, in a learning situation.

I T: What happens to a metal spoon put into a glass of hot tea?

S: It gets hot.

T: What happens to a plastic spoon put into a glass of hot tea?

S: It also gets hot.

S: It doesn't get hot so fast.

T: OK. Let us say, we put the metal spoon and the plastic spoon to the glass of hot tea at the same time which one will get hot first?

S: The metal spoon.

T: Right. What will happen to an iron rod put into a fire?

S: It will get hot.

T: If we put a piece of firewood and the iron rod into a fire at the same time, which one will get hot first?

S: The rod.

T: Very good. So what can we say about the materials wood, iron, metal and plastic with regard to heat?

II. Here are 10 digits.

0 1 2 3 4 5 6 7 8 9

Let us take the digits 3, 5, 8

– How many 3 – digit numerals can be written with these without repeating?

– Are the same three digits used in each numeral?

– Does each number express a different quantity?

– What makes this possible?

– Take any one numeral (say 358). What do we call the place on the right where the "8" is?

– What is the name of the place to the left where the "5" is?

– What is the name of the place to the left where the "3" is?

– Take the numeral 583.

In what place is the "8"? the "3"?

Another type of questions that help the students is the *prompting* and *probing questions*. This type of questions is particularly helpful in discussion.

Consider the following:

T: Why do you live in a house?

P: Because my mum and dad live in a house.

T: Mum, any other reason?

Class: (silence).

T: Well, we live in a house, because we need .....

This is an example of what frequently happens in the first discussion lesson given by a teacher. The discussion drags and degenerates into an unprepared lecture. This can be avoided by prompting or probing any weak answer given.

Prompting consists of giving hints to help the pupil. In the example just given, the teacher could have said, "Yes, that's right. Let us think this way. What will happen if we don't have a house?"

A series of prompts followed by encouragement can help pupils to gain confidence in giving replies.

Example:

T: We were talking about the types of materials we use for clothes. Tell me what those types were.

S: Cotton, polyester, double knot, nylon, woolen.

T: Very good. Aishath, what kind of a dress would you wear, if we were going to the park, this afternoon?

S: I will wear .....

T: OK. Would you wear a very nice dress?

S: Yes.

T: OK. You will wear a very nice dress. Would you wear a long one?

S: No.

T: A short one?

S: Yes.

T: Would you wear a dress made of polyester material?

S: No.

T: Double-knit?

S: No.

T: Cotton?

S: Yes.

T: Why do you want to wear a short cotton dress?

S: Because it is hot in the afternoon.

T: Very good.

Probing questions direct the pupil to think more deeply about his initial answer and to express himself more clearly. In so doing they develop a pupil's critical awareness and his communication skills.

Example:

T: Aminath, you went to Male this year. What did you think of it?

S: Mum, it was nice.

T: What was nice about it?

S: Well, I liked walking in the park, I liked watching TV, I liked ice-cream, I liked shopping .....

The simple probe, "What was nice about it?" evoked from this seven year old girl a series of impressions which revealed her interests in sights, TV and food. Probing questions with older and more sophisticated children tap the highest levels of their thinking. You may be agreeably surprised by what such questions can reveal.

*You are given below a series of teacher's questions and student's responses. Write questions that will probe the student's responses. After you have completed the drill, ask a colleague/your headmaster to check your answers to see if he agrees that they are probing questions.*

1 T: How would your life be different if you didn't have to go to school?

S: I wouldn't have to do homework.

Probe:

2. T: How would human life be different if we had no thumbs?

S: We couldn't throw a football very well.

Probe:

3. T: Why is cotton cooler than wool to wear in hot weather?

S: Because wool is heavier than cotton, and the more cloth you have on the hotter you are.

Probe:

4. T: We want to have a small garden infront of our classroom.
What shall we plant?

S: All kinds of flowers.

T: Yes, what kind of flowers?

S: Flowers of all colours.

Probe:

*How many the teacher proceed from here to bring out the following from the children, and lead them to formulate the initial stage of planning the garden?*

— We can plan only small plants because of the limited space.

— these plants must be available and adaptable to the climate.

Aside from being aware of the levels and types of questions we use, we also have to be careful to see if our questions have *clarity* and are paced exactly in the sequence that they are required to assist the learning child. We will take the issues further in this unit, so that you will be able to understand and practise these different characteristics of a question and increase your fluency in asking questions.

Fluency in questioning can be developed if we master the following 6 elements.

— Clarity and coherence.

— Pausing and pacing.

— Directing and distributing.

Clarity and coherence

Below are 3 questions. Read them and rank them in terms of their clarity and coherence.

(i) Well, er, that't um, er, very interesting and what, er, I think I ought to, um, er, do now is ask someone, or one of you whether you would, er, prefer to fish in the Maldives with a rod or a net?

(ii) Is a net better?

(iii) Hassan, which do you think is better for fishing in Maldives, a rod or a net?

(iv) Ahmed, do you think you would fish with a rod in Maldives or would you buy a net?

Most of you will have put (ii) lowest on your list for the question does not tell for what a net is better, or better than what, or even what kind of net is referred to.

The second question is obscured by the 'ums' and ers'. It is also not clear that it is a question until the teacher stops speaking.

The third example is clear and coherent. It is brief, to the point and directed at a specific person in the class. The fourth example is brief and incoherent. For it offers the

pupil two conflicting alternatives. Ahmed may want to fish with a rod *and* buy a net. Such a question would confuse most pupils. We should avoid using this type of questions unless our intention is to deliberately create a situation which may be subjected to "critical thinking" analysis.

Clear and coherent questions need to be planned. This is particularly important when you are using high level cognitive questions.

In the early stages of teaching such questions should be written down in the lesson plan and scrutinised carefully.

Exercise:

Make the following questions clear and coherent.

1. Is electricity better?
2. Do we have to use match sticks for a fire?
3. Well, er, I think, I should, ask you whether it is easier to er, catch a fish with a rod?
4. Aishath, what sort of a dress would you wear?
5. Do you know what things are inside you that cannot be seen?

Pausing and Pacing:

Beginning teachers frequently ask more questions than they receive answers. Their failure to obtain answers is often due to lack of pauses and variation in their delivery of questions (pacing). Immediately after asking a question you should pause and look around the class. There are non-verbal cues which tell you whether someone has the answer. The raising of a hand is the formal signal but there are other signals to look for. When a person is ready to answer, he opens his mouth slightly, he may lean forward slightly, he may open his eyes slightly. Be on the lookout for those signals during the pause after asking a question. The length of pause also acts as a signalling device to pupils. A short pause before repeating or rephrasing the question indicates you are expecting a prompt answer. A long pause (over 3 seconds) indicates you are expecting pupils to think carefully before answering it.

Which sort of pause would you use, after a low level cognitive question?

The speed of delivery of a question is determined partly by the kind of question being asked. Low level drill questions can be asked quickly, more complex questions should be preceeded by a short pause, asked slowly and clearly, and followed by a long pause. Asking complex questions at a quicker pace results in confusion and the pupils will probably remain silent and bewildered. When you first start using pausing and pacing behavior you should help the pupils to learn what you want them to do. Immediately follow a high level question by remarks such as "Now, think over your answer carefully", or "Please try to give a full answer". Then, pause for three or more second. When you are going to use quick fire questioning techniques you should first say "Now I'm going to ask you some questions and I want you to answer them as quickly as you can". Start firing your questions and pause only briefly before calling upon a pupil to answer. These remarks can gradually be dropped and eventually your pausing and pacing will become the signals for the kind of answers being sought.

Directing and distributing:

Some pupils are more willing to answer questions in class than others. These pupils are often brighter and more attentive. They usually know the answer that the teacher is seeking. The teacher finds such pupils rewarding and he may, therefore, unwittingly devote more time to these pupils than to their less fortunate peers. In this way the teacher unintentionally produces a cleavage in the class between a small group of active participants and a large group of passive learners. Their passivity may change to boredom, then to deviant behaviour and discipline problems for the teacher. These problems can be minimised by *directing* questions to specific pupils and *distributing* the questions around the class. Whilst asking questions one should monitor the class to see who is and is not listening. A question directed at someone who is not paying attention can be a useful controlling device. One should pay particular attention to children sitting near the back and at the side of a formal classroom. These are areas which many teachers neglect.

If a question cannot be answered by the first person asked, you can after a pause, redirect it to another pupil or set of pupils. This keeps the pupils alert and more ready to learn.

Perhaps the most common weakness of beginners is not to control pupil's answers. You should always direct your attention at a specific person when you aks a question by using the name of a pupil, eg: Aishath, do you . . . . . rather than "Do you . . . . . ", or by looking pointedly at one pupil. The pupil you look at need not be the one you want to answer the question. Do not accept answers that are called out. This leads to problems of control and ineffective teaching. If several pupils shout answers, the temptation is to pick the right answer out of the chorous. This reinforces the shouting of the pupils and so encourages them to shout again. It does not allow a teacher to reward the individual who gave the correct or interesting answer, nor does it allow the probing of a wrong answer. Shouting by pupils increases, the volume of noise heightens the problem of control and reduces the quality of teaching.

So far, directing and distributing have been discussed in terms of minimizing discipline problems. Skilful distributing and directing also involves pupils more closely. They are more likely to participate and enjoy discussions, if they know that they have a fair share of discussion time. There are however, always some pupils who are reluctant to participate in discussions.

Directing questions in a non-threatening way towards such pupils will help to draw them into the discussion. If they respond then their response should as far as possible be praised and subsequently used again in the discussion. If they cannot respond one should redirect the question to another pupil, after giving them an encouraging nod and remark.

Q: *What would you do if a shy child did answer but his answer was completely wrong?*

(Please ask your head teacher to comment on your response.)

## UNIT III

This is the last unit of the module. It includes evaluative questions and evaluation.

After completing this unit you should be able to:

a) know the characteristics of evaluative questions.

b) use questions to evaluate your pupils at all levels of thinking.

Evaluative question and evaluation:

Evaluative questions encourage pupils to discriminate between different ideas and values, and works of art. They encourage pupils to give reasons for their judgements. In so doing pupils are prone to make explicit their reasons so that they are more open to change along rational lines.

As in all higher cognitive questions the initial questions may not achieve a high quality answer. Hence one must probe by asking why? Are there other reasons? What does anyone else think? In this way you can help pupils become aware of the complexity of some questions and that there are many ways of looking at a problem. This will help them to consider many different viewpoints and arrive at more balanced and rational opinions.

Some examples of evaluative questions.

1. How did you feel about the neighborhood as you walked around it? I know most of you have lived here for quite a while, and sometimes we take things for granted. What were your reactions as you looked at the community and tried to find out what kinds of stores there were?
2. Coconut palms have to be planted at a space of 22ft the least in order to ensure a good yield of fruit. If we plant these palms closer, the trees will bend. These bended coconut palms are needed for boat building. So how shall we plant coconut trees?
3. Which is more profitable to us, poultry or vegetable gardening?

Here is a list of common opening to evaluation questions.

Do you agree . . . . . .? Why?

Do you think . . . . . .? Why?

What is your opinion . . . . . .? Why?

Would it be better . . . . . .? Why?

Which is best . . . . . .? Why?

Which do you like . . . . . .? Why?

Do you believe . . . . . .? Why?

Do you consider . . . . . .? Why?

As we said earlier, we are evaluating our pupils the moment we interact with them.

We have gone over different types of questions and what level of thinking is facilitated through these questions.

We are able to know the level of our pupils thinking through some of those questions, because we move onto a higher level question after we have tested their thinking, at a certain level.

*Write 10 questions that you would use to see whether your pupils have learned a given area of knowledge. You may use questions that require a response from any level of thinking.*

Now that we have read this module and have done the exercises we shall see if we have really mastered the questioning skill.

Activity I

1. Reread the extract from a lesson given below:
2. Classify the questions as R (recall) C (comprehension) Ap (application) or A (more than application) and U (unclassified). Write the appropriate letter in the right hand margin.

Teacher: Good morning, boys and girls. Ahmed, could you please open the window? 1

No one knows what were going to do today, do they? 2

Well, I'll tell you. We are going to see what we can remember about insects.

Ahmed, do you know any insects? 3

Pupil: Butterflies.

Teacher: OK, butterflies, Hassan do you know any other insect? 4

Pupil: Flies.

Teacher: Very good. Can anyone tell me what these two insects have in common? 5

Pupil: They both have two eyes, two feelers, 3 pairs of legs. . . . (pause)

Teacher: Aminath, can you think of anything else? 6

Pupil: The body is divided into 3 parts.

Teacher: Very good. Do you know some differences between a butterfly and an ant? 7

Pupil: Yes, butterflies have four wings. Flies have two.

Teacher: OK, which of these insects do you like? 8

Class: Butterflies.

Teacher: Can you tell me why? 9

Pupil: Because flies are dirty.

Teacher: Why do you say that? 10

Pupil: Because flies sit on dirty things.

Teacher: What dirty things? 11

Pupil: Rotten food.

Pupil: Waste matter.

Teacher: Good, what about butterflies? 12

Pupil: Butterflies are nice.

Teacher: Good, what is nice about butterflies? 13

Pupil: Butterflies have lovely wings.

Pupil: They sit on flowers, and leaves.

Teacher: OK, we know that butterflies are insects, they have lovely wings and that they sit on flowers and leaves. What else do you want to know about butterflies? 14

Pupil: Where they live.

Pupil: How it is born.

Pupil: Different kinds of butterflies.

Teacher: OK, let us think about them .....

Now refer to page 27. How many questions were you able to recognise correctly? If you are not satisfied with your score, identify what part of this unit you were not able to comprehend, and go over it a little more slowly.

If you are satisfied with your score,

1. Plan a micro lesson of ten minutes duration which involves questions and answers. In your lesson plan give examples of the sorts of questions you hope to ask, and a summary of the points you expect the question and answer lesson to cover.
2. Teach the lesson. Pay particular attention to the items described on the rating scale which follows. Ensure you summarise the main points of the question and answer session in your closure of the lesson.
3. Check the lesson on the "Fluency in asking question" guide. Discuss ways in which your fluency in questioning might be improved and then write a brief paragraph in which you summarise the suggested improvements.

Answers to exercises:

P ..... 5

1. R
2. R
6. R
7. R
9. R

P ..... 6/7

1. C
2. C

4. C.
5. C.
7. C.
8. C.
10. C.
12. C.
14. C.
15. C.

P . . . . . 25/26

1. U
2. U
3. R
4. R
5. C
6. C
7. C
8. A
9. A
10. A
11. A
12. A
13. C
14. U

## AUSTRALIA

Title: "Tutoring at a distance."

Reported by: Mr. Trejor Mathews

Introduction:

This Australian exemplar is taken from the booklet "Distance Education" prepared for use in the training of in service teachers in the methods and techniques of distance learning.

The unit titles in "Distance Education" are:

1. What is distance education?
2. Preparation of distance education materials part 1.
3. Preparation of distance education materials part 2.
4. Which media?
5. Tutoring at a distance.

Background to Materials and Target Audience:

These materials were developed for use in two contexts:

1. As an elective unit for a programme developed at State College Hawthorn in Victoria for the training of part-time teachers especially in Technical and Further Education Colleges.

   These materials on distance learning were designed for use with a small number of part-time teachers involved as tutors in external studies programmes. These part-time teachers are untrained in teaching, including at a distance.

2. As an elective in the complementary component of the Diploma of Technical Teaching offered by State College, Hawthorn in Victoria.

   Teachers undertaking this elective are upgrading their qualifications from a certificate to a diploma.

   Most of these teachers who take the elective have become interested in distance learning because of their teaching context, for example, in rural areas, however, they would still teach mainly in face-to-face situations with part-involvement in the distance mode of learning.

Development of Materials:

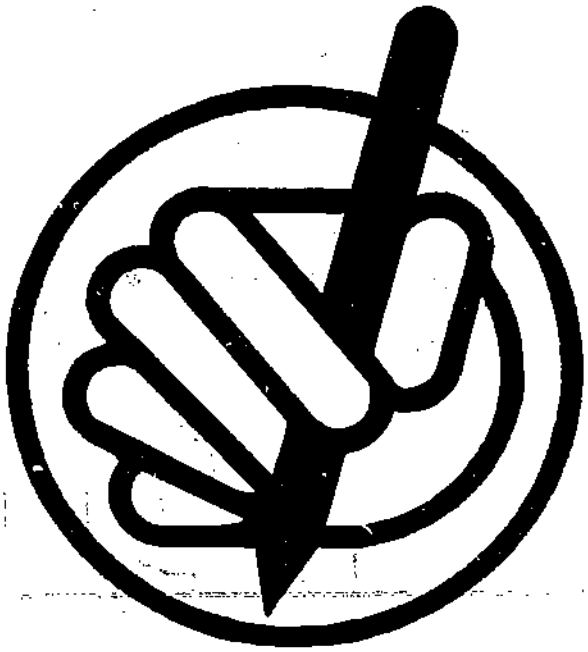
These materials were developed and written by a team of four staff members from the Royal Melbourne Institute of Technology's School of External Studies, in the State of Victoria, for use in the contexts indicated above.

The materials are designed to provide guidelines for the distance tutor or prospective tutor, who is regarded as a very important person in meeting the needs of distance learners.

**Critical notes on limitations of the materials:**

1. There is an absence of a clear statement of objectives for this unit. Such a statement would enable learners to be clearer on expected outcomes and enable them to progress more systematically through the learning process.
2. There is no provision for feedback from learners in these materials. Such feedback should be sought as part of the evaluation and review process leading to re-writing of materials, if necessary.
3. Parts of the materials may not be meaningful for some learners who may have students who are very different from "Fred" who is referred to in the materials. Additional examples of students and their typical problems may increase their meaningfulness and relevance.
4. Learners could be given more advice about ways in which they could gain information about their own students, especially if the example given does not really apply to their particular situation.
5. The self-help question relating to counselling in a marital situation could be clearer.

# distance education



an elective,

part-time teacher training program

complementary component, diploma of technical teaching

*Australia*

**UNIT 5**

**TUTORING AT A DISTANCE**

INTRODUCTION

FRED, THE STUDENT

YOU, THE TUTOR – GENERAL

1. Tuition
2. Academic Counselling
3. Administrative Counselling
4. Personal Counselling

YOU, THE TUTOR – SPECIFIC

1. Scheduling
2. Correction or Teaching?
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A – Tutor Agreement, Ballarat Off-Campus Center
B – Short Bibliography of Readings on Adult Education

ELECTIVE FOR:
PART-TIME TEACHER TRAINING

COMPLEMENTARY COMPONENT,
DIPLOMA OF TECHNICAL TEACHING.

# UNIT 5

# TUTORING AT A DISTANCE

## INTRODUCTION

There are two people in the VTOCN whose needs must be considered — Fred, the student, and you, the tutor. Let's look at each in turn.

## FRED, THE STUDENT

**Fred, the citizen**

You may remember that Fred is an adult returning to study. He has commitments to his family, community and job, as well as his commitment to studying.

**Fred's reasons**

He has returned to study for a purpose, or a complexity of purposes — some of which he is aware of and some of which he is not, some of which he will acknowledge and some of which he won't. He may want to improve his career prospects, catch up on new developments in his area, or develop totally new vocational skills. He may want to broaden his general knowledge or improve himself as a member of the community. May be he has enrolled to prove something to himself or to prove something to his family or friends. It could be that he didn't take the decision himself, but that it was forced on him by his boss or his ambitious wife.

**How is Fred different from the primary and secondary school student?**

Let us compare this to the case of a child or adolescent attending primary or secondary school. Fred Junior has no choice as to whether or not he will attend school. He is therefore less likely to have clearly defined expectations of his studies than Fred Senior who has chosen — or appears to have chosen — to study. Presumably Fred has done this because he expects, either consciously or subconsciously, to go through certain experiences which will result in certain changes in himself and/or his environment. And presumably he sees either those experiences, or those changes, or both, as desirable.

Adults therefore return to study with certain expectations which are of two main types —

- the experiences they will go through
- the changes these experiences will cause in themselves, their situation and their environment.

## SELF-HELP QUESTION

In the spaces below, list two possible expectations in each of these categories in the case of a woman who:

- left school at sixteen
- worked for ten years as a clerk
- left work to get married (to Fred, maybe?)
- has two children aged seven and twelve
- now, at the age of forty, has chosen to study for her H.S.C. by the off-campus mode.

1. *Expected Experiences*

2. *Expected Outcomes*

In your answers, did you include such expected experiences as coping or not coping, loneliness or privacy, conflict between family and study commitments? Did you include amongst the expected outcomes job prospects, self-enrichment or just showing Fred what she was capable of?

**Fred's ago**

Fred has a self-image. He sees himself as an adult who should be treated differently to the way a child is treated – he expects relevance, stimulation and intelligent feedback as far as his studies are concerned, and he expects to be talked or written to as an adult. If he is anything like me, he has built up a set of defence mechanisms to protect his image, and may respond quite negatively if that image is threatened.

And yet he may lack a lot of knowledge and skills, many of them at a basic level.

**to sum Fred up**

So Fred is a complex sort of bod – he is an adult who thinks of himself as one; he has a variety of commitments apart from study; he expects certain things of study; and, on top of it all, he has chosen to study at a distance, not only from the college, but also from you.

## YOU, THE TUTOR – GENERAL

What are you, as Fred's tutor, expected to do? There are four types of activity which could be considered:

1. **Tution**

**Marking Fred's assignments**

In the context of the VTOCN, this involves the marking of assignment work and providing feedback to the student. This is obviously

the main activity expected of you and we will deal with it in greater detail further on.

face-to-face tuition

You could also be involved as a tutor at seminars, workshops, and/or tutorials which are arranged on formal and informal bases in many of the off-campus subjects offered.

## 2. Academic Counselling

### 2.1 *Specific*

yout area of expertise

From time to time you may be called upon, or feel it is necessary, to advise Fred on courses of action related to the subject which is bringing the two of you together.

For example, you might discuss with him the possiblity of additional work he could do to cover gaps in his knowledge or skills, dropping the subject and trying another one (this could be due to the subject not being challenging enough, or, alternatively, being too challenging, for Fred), or to concentrate on some aspects of the subject rather than others.

involve the off-campus co-ordinator

Because Fred's Off-Campus Co-ordinator is responsible for monitoring Fred's overall progress in his off-campus studies, you will need to decide when it is appropriate to bring him in on this sort of counselling.

### 2.2 *General*

Fred might also come to you, or you may be aware of problems he is having, with the overall course of off-campus study he has chosen. Should you counsel him on such problems, or should you refer him to the Off-Campus Co-ordinator?

Initially this sort of advice would have come from the Off-Campus Co-ordinator who would at that time have handled the administrative steps and paperwork necessary to launch Fred into the system. Any official change to Fred's studies will also have to be made through the Off-Campus Co-ordinator, and it is therefore likely, and desirable, that he will assist Fred to take such a decision. But what part should you play?

greater involvement by the off-campus co-ordinator – less by you

Presumably not as great a part as in the case of counselling Fred on the subject for which you are his tutor; and maybe no part at all if you feel you are not qualified or it is none of your business. So it is a case of passing Fred on to his Off-Campus Co-ordinator for most of this type of advice, but being prepared to act as a first point of contact when appropriate, and to provide input to the discussions based on whatever knowledge

you have of Fred, particularly as regards his performance in your subject.

3. Administrative Counselling

another job for the off-campus co-ordinator

One again, this is an area where the Off-Campus Co-ordinator is expected to play a major part in supporting Fred. So, although Fred may come to you for help with the paperwork and procedures which appear to be unavoidable in any education system, it is quite all right to pass him on to the Off-Campus Co-ordinator.

Of course, you could provide whatever assistance you feel qualified and inclined to give, before putting the matter in the hands of the Off-Campus Co-ordinator.

4. Personal Counselling

This is neither your responsibility, nor, for that matter, the Off-Campus Co-ordinator's.

try to keep out of this one

In fact, there is considerable danger in trying to psycho-analyse Fred, or to help him with his family problems. You will find that it makes an objective teacher/student relationship difficult to maintain, and you could very well find yourself personally involved to a far greater extent than you would wish. And, unless you are qualified to provide personal counselling, or have demonstrated considerable natural talent in this area, there is a good chance that you would do Fred more harm than good.

but you can't just send him away

So what should you do if Fred comes to you with his personal problems? It is obviously not possible to reject him out of hand, saying: "I am not qualified to listen to your problems, so don't talk to me about them."

Any teacher dealing with adult students should listen to their problems as one human being to another – as you would if your neighbour came to you with his or her problems – but should point out that there are others better qualified to provide expert assistance. You would therefore listen to Fred's problems and provide feedback as you would to any acquaintance, but attempt to direct him, either through his Off-Campus Co-ordinator or directly, to such qualified persons as the student counsellors at Fred's college.

to sum up . . . . . .

To sum up, your role is essentially that of tutor and counsellor in a specific subject which Fred is studying, but, as I have indicated in the sections above, you should limit any other sort of counselling to that which you are qualified, capable and willing to give. In the case of personal counselling, you should strike a balance between treating Fred as a fellow-human being, on the one hand, and not becoming involved in a business of which you know little, on the other.

## SELF-HELP QUESTION

If Fred came to you and told you that his wife had threatened to leave him if he continued with off-campus study, would you:

| | | Yes | No |
|---|---|---|---|
| (a) | not talk to him until he had seen a student counsellor? | ☐ | ☐ |
| (b) | listen to his problems, then send him to a student counsellor: | ☐ | ☐ |
| (c) | ask his wife to see you, so that you could find out what her objections were? | ☐ | ☐ |
| (d) | ask his wife to see you, so that you could explain Fred's situation to her? | ☐ | ☐ |
| (e) | give Fred some clues on study and assignment work to cut down the time he takes on study at home? | ☐ | ☐ |
| (f) | tell Fred it's really not your business? | ☐ | ☐ |
| (g) | advise Fred on how to explain to his wife how important his study is? | ☐ | ☐ |
| (h) | advise Fred to call his wife's bluff? | ☐ | ☐ |
| (i) | advise Fred to leave his wife? | ☐ | ☐ |
| (j) | any other (give short outline). | ☐ | ☐ |

If you chose (c), (d), (g), (h) or (i), then you could be in danger of becoming involved in Fred's personal affairs at risk to your teacher/student relationship with him.

If you chose (a) or (f) you could weaken the personal relationship between yourself and Fred.

This is not to say that (b) and (e) are the ideal approaches to take. However, they are an attempt to provide Fred with a sympathetic ear, but to limit advice to your own area of expertise.

If you gave an alternative approach under (j), take another look at it and decide whether you have achieved a reasonably balanced involvement.

## YOU, THE TUTOR – SPECIFIC

### 1. Scheduling

To coin a phrase, time is of the essence. The longer the turn around time, the less effective is the feedback your corrections provide.

**don't keep Fred waiting**

Remember that, if it takes you five days to correct an assignment by Fred, then he will receive the corrected work ten days after he submitted it – and a lot of things can happen to a busy family man like Fred in ten days. So it could be difficult for him to remember the assignment to which your comments refer.

And yet, your comments are the main, and possibly the only, feedback that Fred will receive while he is studying your subject. So it is necessary to arrange your own personal timetable so that you can respond as quickly as possible to Fred's work. If you have difficulty doing so, you could 'phone Fred, explaining that you haven't lost interest in him and giving him some preliminary responses to his work. And, if that isn't possible, get in touch with Fred's Off-Campus Co-ordinator and explain the situation to him.

**or, if you do, let him know why.**

**let your off-campus co-ordinator be your conscience**

As a matter of fact, if the Off-Campus Co-ordinator senses that you are having difficulty getting Fred's assignments back to him, he will certainly get to touch with you.

### 2. Correction or Teaching?

Should you just mark Fred's work, or should you build teaching into your comments?

If you were simply marking the work, you would give it a tick or a cross, a grading, and/or a short comment indicating what you thought of Fred's efforts. Sometimes this may be all that is possible or required, particularly if it is a straightforward assignment and Fred has apparently had no problems with it.

But you should look for opportunities to go beyond this. For example, Fred's response to the question:

"Define momentum"

may have been

"Momentum is how fast things travel".

A whole range of responses from you is possible:

(a) "Wrong – 1/5"

(b) "Only partially correct – 1/5"

(c) "1/5 – this is only partially correct – in fact, momentum is the quantity of motion of a body and is derived by multiplying its mass by its velocity"

(d) "This is partially correct – a body's velocity does play a part in its momentum But check your textbook on page 36 to discover what else is involved".

(e) "This is partially correct. But you have only identified one aspect of measuring a body's momentum. For example, would there be a difference in the motion of a piece of lead compared to a piece of cork, both of which were travelling at the same velocity? What would that difference be? When you have thought about this, check on page 36 of your textbook".

(a) and (b) and both examples of straight marking, although (b) does provide marginally more information.

**teaching by preaching**

(c) marks the assignment, but does considerably more in that it *teachers* Fred. It does this by directly supplying him with the right answer.

**teaching by involving Fred**

(d) and (e) also mark the assignment and also aim to *teach* Fred. But they do this quite differently to (c). Instead of directly supplying him with the right answer, they provide clues aimed at starting Fred off on the way to discover the correct answer for himself. (d) does this by directing him to a reference; (e) does this by providing clues and asking questions.

**what teaching method does Fred prefer?**

There is a strong school of thought that the sort of teaching provided in (d) and (e) is much more appropriate for adult learners than the sort of teaching provided in (c). In other words, adults respond to learning situations to which they themselves are able to contribute actively, instead of passively receiving the good word from the all knowing teacher.

### 3. What Tone Should You Convey?

**don't threaten Fred unduly**

As we indicated earlier, Fred could be returning to study with considerable trepidation. And, because his self image is something he wants to protect, he may not be prepared to accept what he sees as demoralising criticism which fulfills his worst expectations of the education process.

**Fred needs your support**

You should therefore aim to make your responses to his assignment work as supportive as possible.

This means picking out those aspects of his work which display his strengths and encouraging him to build on these. It also means identifying his weaknesses and suggesting ways of improvement. It does *not* mean building up a false sense of academic brilliance in Fred – but, when brutal honesty is necessary, it should incorporate concrete proposals for developing positive points and overcoming negative ones.

And try to avoid the implication that a mistake, or a number of mistakes, made by Fred in a particular assignment, is an indication that Fred is a fool generally.

Let us look again at the example of Fred's response to the question.

~~"Define momentum"~~

which, as you may remember, was

"Momentum is how fast things travel".

Possible variations in the tone of your comment are shown in the following examples:

(a) "Nonsense! This is basic physics which anyone attempting this course should know."

(b) "Incorrect. Check your references."

(c) "This is partially correct, but velocity is only one component of momentum. In order to check what else is involved, I suggest that you . . . "

(d) "You are quite right in saying that velocity is involved when measuring momentum. However, there are other factors, and to establish what these are, I suggest that you . . . "

(e) "A very good answer. There is just one slight omission and, to see what that is, you might like to . . . "

~~SELF-HELP QUESTION~~

Give each of the comments above a rating out of 5 in each of the columns in the table below:

| | Encouragement | Discouragement | Misleading impression |
|---|---|---|---|
| (a) | | | |
| (b) | | | |
| (c) | | | |
| (d) | | | |
| (e) | | | |

If I had done this rating exercise, (c), (d) and (e) would have rated highly in encouragement, with (d) higher than (c), and (e) higher than (d); (a) would come top in discouragement with (b) running second; (e) would lead the field in giving a misleading impression (in this instance, of having done much better than was the case).

### 4. How Long Should Your Response Be?

There are at least two opinions on this.

One suggests that all Fred is interested in is the mark he receeived for his assignment and he will not bother to read comments of any length.

The other argues that a tutor response consisting only of a mark and a very short comment, or no comment at all, would neither make Fred feel that anyone cares, nor provide him with any learning experience.

The answer probably is that you should gear the length of your response to:

- the nature of the assignment;
- Fred's response to the assignment;
- and what you know of Fred.

**don't make comments unnecessarily long . . . . . .**

So, if it was a straightforward assignment, Fred's answer was correct, and you know that Fred is a no nonsense man who can't be bothered with unnecessary verbage, you would keep your comments short and sweet.

**but, on the other hand . . . . . .**

However, in the example of the momentum assignment, none of the tutor responses to Fred's answer were too long. In fact, some – e.g. "Wrong – 1/5" – would surely be too short to be of any use in helping Fred to learn where he went wrong.

### 5. What Language Should You Use?

Again you must consider the level of language appropriate to the subject being studied, and to what you know of Fred.

It is not much use advising Fred that:

**is your language too complex or too pompous?**

"you have been the prey of a popular misconception regarding this elementary concept"

if he doesn't know what that means. What, for example, might have been a better way of putting this to a forty year old Fred whose last school experience was year eight at Nar Nar Goon Primary School twenty-seven years ago?

And yet, as I have mentioned on one or two occasions, Fred is an adult who expects to be spoken and written to as one. If, as an alternative to suggesting he is a prey of a popular misconception, you wrote:

**is your language too childish?**

"What a silly mistake you've made! We must watch out for this one next time, musn't we?"

He could easily respond in a negative way to what he sees as patronising language and tone.

Tone can be affected by choice of language in other ways, too — compare the following:

(a) "You have made a mistake"

(b) "You are wrong"

(c) "You have committed an error"

(d) "You've made a boo boo"

(e) "Your answer is incorrect"

**how friendly is your language?**

All of which seem to be saying the same thing. Yet, (c) conveys a more formal tone than the others, (d) is the friendlist, and (e) is the only one suggesting that the answer, rather than Fred, is wrong.

## 6. What Medium Should You Use?

Most of what we have said suggests that your responses to Fred's assignment will be via the written word. Generally this is true, but you should also consider the advantages of using other media.

**using the spoken word**

For example recording your comments on to a cassette may create a less formal and more friendly atmosphere than the written word — particularly if it helps get your personality across to Fred. And it may be a lot easier for you in some cases to "talk" to Fred in this way, rather than compose a letter to him.

**audience participation**

Sunilarly, you may find that a telephone conversation, or a face to face meeting, will, on certain occasions, help you to get your comments across, and, equally importantly, to receive immediate feedback from Fred.

Of course there are limits. Trying to explain a complicated mathematical formula or architectural drawing is much better done on paper.

**the written word some basic considerations**

When you do use the written word, you should still consider how to communicate most effectively.

Should you print rather than write long hand? An honest appraisal of the legibility of your writing is necessary here.

How long should your sentences and paragraphs be? A reasonable rule of thumb is to keep your sentences short, and to use paragraphs to introduce visual and logical breaks into what might otherwise be a depressing mass of words.

What colour pen/pencil should you use? If Fred has unhappy memories of red ink slashed across his school projects, this is not the best colour to use.

### 7. What Contact Should You Make Outside Assignment Work?

Basic to the philosophy of the VTOCN is the concept of local and central support for Fred which goes beyond just marking his assignments.

So you, as either a local or a central tutor in the VTOCN, will be encouraged (and paid!!) to make additional contact with Fred through:

**small group sessions with Fred and the other students**

- *Tutorials* — these sessions can be arranged between yourself and Fred, using the Off-Campus Co-ordinator to provide the venue and facilities. They can be regular or once-off events. In some subjects a preliminary tutorial giving Fred an outline of the aims of the subject and what is expected of him can be very useful. A tutorial shortly before an exam can help in Fred's exam preparation;

**getting to know each other**

- *Additional Correspondence and/or Telephone Contact* — this can be used to introduce yourself to Fred and let him know how to go about contacting you in the future. During a course of study, it can be a means of generally finding out how Fred feels about the subject, or drawing his attention to key topics and how he might tackle them;

- *Seminars and Workshops* — not all subjects include these, in some they are compulsory, in others highly recommended. But, if your subject does include them, they are a very good way of meeting Fred in a working situation, and to back this up with the informal interaction that always occurs on such occasions.

A word of caution, however! Fred may have chosen the offcampus mode of study because he prefers to be left alone. Or it could be extremely inconvenient for him to travel to your tutorials. In such cases, your well meaning efforts at additional communication may

irritate and cause Fred to withdraw. So you need to be sensitive to Fred's attitude and situation, leave him the option of not participating in this extra communication, and make sure that, when it does take place, Fred sees it as productive.

## YOU, THE TUTOR, IN THE VTOCN

**use the system**

Fred isn't the only one who should use the structures and practices of the VTOCN and the Technical Colleges within it.

**the good old off-campus co-ordinator again**

As a tutor employed by Fred's local Off-Campus Centre, you may, and should, draw on the advice and support of the Off-Campus Co-ordinator, and make use of the college facilities. Your Off-Campus Co-ordinator will help you to access academic, library and photo-copying resources. He will fill you in on the mysteries of the paper-work and collecting your pay.

Attachment A is an example of one Off-Campus Centre's support system for its tutors.

If you are employed as a "Network Tutor" by the VTOCN's co-ordinating authority, then it will provide the sort of support described above. In particular it does this through its Liaison Officers.

Even if you are employed by a local Off-Campus Centre, you may have occasion to use these central services, and should not be shy about doing so.

## CONCLUSION

In choosing to be an off-campus tutor, you have become part of a system which provides learning to a group of students, mainly adults returning to study, who have chosen to study at a distance.

You should relate what you know of their needs to the process of contributing to their learning experiences away from the traditional classroom. These students have certain pre-conceived notions of themselves and how they, as adults, should be treated. They also have memories of school, and therefore education, which could well be in conflict with how they believe they should be treated; and they have returned to study for particular purposes.

Whilst you should get to know your students and take the initiative to provide them with the support that will help their learning experiences live up to their more positive expectations, you should be careful to avoid a personal involvement so deep and complex that you are unable to maintain a working teacher/student relationship. And your support should not result in students receiving false impressions of their academic abilities – it should help make them

aware of their strengths and weaknesses in your subject area, and provide the means for them to develop the strengths and eliminate the weaknesses.

Would you now turn to page Q.1 for your assignment on tutoring at a distance.

Thank you.

## ASSIGNMENT 5

1. In about 250 words indicate what you, as an off-campus tutor, would want to find out about a new student; why you want this information; and how you would go about obtaining it. What information would you give the student in return, and for what reasons.

2. Imagine that you have taken over some off-campus students from another tutor who, for his/her own reasons, has decided not to continue off-campus tutoring. Before you have had time to do anything about this new job, you receive the following letter in the mail:

"Dear Tutor,

I was appalled by your correction of my assignment on the use of integrated circuits.

Not only did you show incredible arrogance in some of your comments, for example, "This is absolutely incorrect" and "This is putting it too simply", but I don't believe you understood what I was trying to say. I have used integrated circuits in my job for the last five years and should know what I'm talking about – maybe, sitting in your ivory tower, you don't know what's going on in the real world of industry."

You should realise that your dealing with a family man with a responsible position in a respected firm. I put a lot of time into this assignment and expect you to do the same with your tutoring. To get a mark of C for an assignment I spent about ten hours I could ill afford on, makes me pretty angry.

I hope you can do something about this as I am seriously considering giving up this course.

All the best,

Ryhen Letob."

(a) What mistakes in approach do you think your predecessor might have made in dealing with this student?
(50 to 100 words)

(b) What might this letter tell you about this student?
(30 to 100 words)

(c) What further information would you need to obtain to deal with this matter full?
(30 to 100 words)

(d) Would you involve the Off-Campus Co-ordinator? Why/why not?
(30 to 50 words)

(e) Prepare a short preliminary response to the student.
(100 to 200 words)

(f) Give a brief explanation of the thinking behind your preliminary response.
(50 to 100 words)

*Australia*

ATTACHMENT A

SCHOOL OF MINES AND INDUSTRIES, BALLARAT LIMITED

OFF-CAMPUS CENTRE

# TUTOR AGREEMENT 1980

Off-Campus Co-ordinator
School of Mines and Industries
Lydiard Street South
*Ballarat* 3350

Phone (053) 315911

CONTENTS

## CALENDAR 1980

| | |
|---|---|
| 21 January | Off Campus Centre opens |
| 12 February | New Tutors Workshop |
| 15 February | First day for receipt of assignments |
| 16 February | Orientation Day |
| 28 February | 1979 Supplementary payments<br>Tutor allowance payment |
| 17 June | Mid-year examination commence<br>Internal assessments due |
| 20 June | First semester assignment payment cut off date |
| 26 June | First semester tutor payment made |
| 2 October | Tutor Workshop |
| 10 November | End of Year examinations commence<br>Internal assessments due |
| 28 November | 1981 Tutor agreements due |
| 12 December | Second semester assignment payment cut off date |
| 18 December | Second semester tutor payment made |
| 19 December | Off Campus Centre closes |

## INTRODUCTION

At the start of 1977 the Off Campus Centre at the School of Mines and Industries, Ballarat introduced a teaching program designed to meet the needs of students who elected to study at home.

### Programme of study

A wide range of Technical and Further Education courses is available and the student may undertake single subject studies or seek to complete a recognised course of study over several years.

### Students

The students are drawn from a diversity of occupational and educational backgrounds. Generally they are adults who are in full-time employment and/or have family commitments. Therefore they are studying at home in their spare time. Also many are returning to study after a gap of several years and may lack confidence in their ability to study.

Obviously the main difficulties faced by the students are

- : work pressures
- : domestic demands
- : development of study skills.

In choosing a pathway which is known to be more demanding because of the difficulties involved off campus students have shown themselves to be highly motivated, particularly since they have made a choice based upon an experience of life which is almost certainly wider than that of the conventional student.

### Study materials

The students' tuition takes several forms. However, the major element is the series of correspondence units supplied to the student upon enrolment. The material is designed to help the student learn by himself. He is required to respond to the material in an active way by writing essays, working through problems, undertaking projects, etc. While some of the work is used for self-assessment the rest is submitted in the form of an assignment for tutor comment and assessment.

### Student support service

Of equal importance to a student in a system which teaches by means of correspondence study materials is an intermediary which facilitates and supports him in learning at home. In the Off Campus system the intermediary role has developed as two unique functions:

(i) Tuition, which is related solely to the academic content of a subject,

and (ii) Counselling which arises from the adult education experience which suggests that at least 50% of a given student's needs are not strictly related to the subject in hand.

That is not to say that his needs are solely psychological and unconnected with the content of study, but the help he needs is of an educational kind, even of an academic kind, but not strictly subject based.

The function of tuition and counselling are filled by the student support service which is provided by the staff of the Off Campus Centre and the partime tutors.

The support service aims to:

(i) forestall the demoralisation and consequent "drop out" of students,

and (ii) provide a continuity of concern for each student.

## TUTORS

The tutor's responsibility includes

: Correspondence tuition
: Tutorial teaching
: at a distance tuition
: counselling.

### Correspondence tuition

Correspondence Tuition is the central and continuing teaching process in the Off-Campus system. The main source of individual advice, guidance and constructive criticism for an off campus student on a particular subject is his tutor, who bases his teaching primarily on the student's assignment and his advice is primarily written advice.

In commenting on assignments the tutor must seek to adapt the study material to the individual needs as best he can. By evaluating the work and offering criticism, he may suggest ways in which the student might improve. This requires two things of the tutor

: The ability to convey, through his comments, advice for further study
: the ability to perceive his student's present state of knowledge and conceptual framework so that the advice may be relevant.

It would be difficult to overstate the importance of the correspondence teaching function. In writing assignments students are reconstituting their newly acquired knowledge in terms of their previous experience and knowledge. The way they do this will depend on the way they perceive their relationship with their tutor. If the tutor's comments are constructive and supportive and not destructive of the student's selfesteem then a positive relationship will be developed which will forestall demoralisation and consequent 'drop out'.

### Tutorial teaching

We have seen that correspondence teaching is the chief method by which a tutor teaches his student. However, the Off Campus system has provision for tutorial sessions enabling tutor and student to meet with each other. These are to be arranged by the tutor, in co-operation with the Off Campus Co-ordinator. The need for these varies with each subject.

The tutorial session should be a participatory evenwhere the tutor does not so much lecture his students but seeks a response from them to a few well chosen questions or problems.

A tutorial early in the year provides the tutor with an opportunity to briefly outline the aims of the subject and explain what is expected of the student. Also any early difficulties may be identified.

*Self-learning materials*

If an examination is included in the method of assessment then a tutorial before the examination can be useful in the student's examination preparation.

At a distance tuition

Two further avenues open to the tutor in teaching off campus students are:

- additional correspondence
- telephone contact.

The additional correspondence may be in the form of a tutorial letter which:

- draws attention to key topics in the subject or corrects common misunderstandings revealed by the assignments of a number of students
- provides additional information.

The additional correspondence may be attached to students' assignments or distributed through the Off Campus Centre.

The telephone provides a useful means of dealing with the difficulties of individual students.

Tutors are asked to provide students with their telephone numbers. It is good practice to set aside a certain time each week. A balnket invitation creates uncertainty. Students are normally reluctant to intrude into their tutor's spare time, though some might be over demanding, and specificity makes the contact more business like. Also a telephone call from the tutor can provide the opportunity for the tutor to follow up with the student an assessment or comments which have been given on an assignment. This is particularly useful in the case of a low grade.

Counselling

Although much of the individual help and advice of a general administrative nature, related to the education progress of the student, will be given by the Off Campus Co-ordinator the part-time tutor has a valuable role to play.

It is perhaps surprising at first, to realise the depth of involvement that can develop and the sense one has of getting to know the student, at a personal level, through his written work, even when one may never see the student at all.

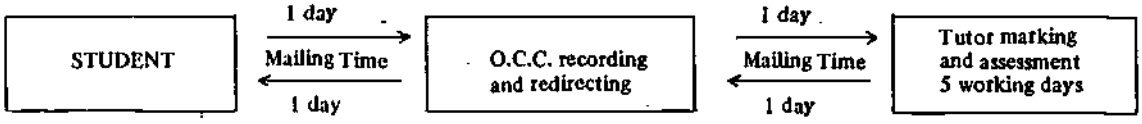
Many of our tutors have found the tutor-student relationship to be a most satisfying experience. The tutor can best make his advice, knowledge and support available, if he develops this personal relationship with each student.

Early individual contact with new students is clearly important for the establishment of the relationship. With many students this contact will occur on Orientation day or at an early tutorial session. However, some students may not contact their tutor and in such cases the tutor should take the initiative to contact the students. In particular the tutor should contact those students who do not submit their first assignment by the due date. At all times the Off-Campus Co-ordinator can be called upon for assistance and advice when dealing with students' difficulties and problems.

## ORGANIZATION

### Assignment flow

The movement of assignments between students and tutors is always through the Off Campus Centre. This ensures that the Centre can trace the whereabouts of an assignment and assignment and accurately determine payments to tutors.




The times shown above when added together, and weekends included, will amount to around two weeks. *The Off-Campus Centre works to maintain this acedule and therefore tutors are required to work to the 5 days for marking and assessment* of assignments.

### Rate of study schedule

For all subjects Rate of Study Schedules are included in the Student Manual. The Schedule is an important guide to your student. If a student has fallen behind with the submission of his assignment then it may be an indication that he is in difficulty and the tutor should take the initiative to contact the student.

Generally it is not the policy of the Off Campus Centre to cancel a student's enrolment if he fails to return assignments (other than those decleared compulsory for assessment purposes).

### Attachment from

With each assignment the student is required to include an *Attachment Form*. Section C can be detached for the tutors records and can be used to check assignment payments. Section B has space for the grade, date and some general comments from the tutor. Other comments can be made throughout the assignment.

### Assessment procedure

It is recommended that you adopt the procedure currently used at H.S.C. level when marking.

| Letter Grade | Percentage Range |
|---|---|
| A | 80 — 100 |
| B | 70 — 79 |
| C | 60 — 69 |
| D | 50 — 59 |
| E | 40 — 49 |
| F | 30 — 39 |
| G | 20 — 29 |
| H | 0 — 19 |

*Self-learning materials*

Student roll

Tutors are supplied with a roll listing their students' names and telephone numbers as soon as possible after the first submission date for assignments. Space is provided to enter results, dates etc. The role is particularly useful to monitor students progress and in determining final assessments.

Stamped self-addressed envelopes and business reply post envelopes

Students must provide stamped self-addressed envelopes for the return of their corrected assignments. Tutors *should not* use these envelopes for returning assignments direct to students. Assignments *must be* returned to the Off Campus Centre and for tutors who return assignments by mail, Business Reply Post envelopes are provided.

Request for information forms

Students are supplied with Request for Information forms which are used for seeking answers to special questions arising from their study. Sometimes students simply write a personal letter.

Student information card

With the submission of the first assignment each student is required to attach an Information Card for the tutor. The card contains such information as address, telephone number, current studies, previous education and occupation which can prove helpful to a tutor.

Application to carry assignment assessment forward

A student who fails a semester subject may wish to repeat it in the following semester, in which case, the student is required to re-enrol. However, if the assessment for the subject includes a mark for the assignments submitted throughout the semester then the student may make formal application to have his previous assignment work credited to him.

## MATERIALS SUPPLIED TO TUTORS

Tutors are supplied with copies of the

: Student Manual

: Prospectus

: appropriate Study Material.

Particularly in the case of the Study Materials tutors are welcome to suggest to the Off-Campus Co-ordinator any academic or administrative changes they feel should be made. Also it is possible to arrange distribution to supplementary notes, where appropriate, to the students concerned.

## TUTOR WORKSHOPS

Two workshops for tutors have been planned for the year.

The first will be role – based briefly for tutors in their first or second year of service.

The second will provide opportunity for social interaction and discussion of issues affecting the Off Campus operation.

## ORIENTATION DAY

At the heginning of the year an Orientation Day is arranged so that tutors and students can meet. The program provides for:

: a brief introduction to the Off Campus system
: an introduction to the S.M.B.
: a short briefing from tutors on their subjects
: social interaction.

## PAYMENT

Payments to tutors include:

: Tutor Allowance
: Assignment Marking Fee
: Tutorial Fee
: Examination Script Marking Fee (if required).

Tutor Allowance

The Tutor Allowance payment is made in recognition of the expenses incurred by a tutor in performing his duties.

For example

Fixed expenses could be

% desk space costs
% electricity
% telephone rental
textbooks
stationery
preparation (familiarisation with course, texts, study materials and off campus mode of teaching)

Variable expenses could be

Time and expenses involved in communicating with students. Both *initiating* contact with students as well as *receiving* enquiries from students.

The payment consists of a flat-rate fee plus a variable fee based on a rate per assignment marked. The flat-rate fee is paid early in the year whilst the variable fee is included in the semester payments.

Assignment Marking Fee

A fee is paid for each assignment marked. Assignment payments are made each semester. They are determined from the number of assignments returned to the Off-Campus Centre *on* or *before* a set "cut-off" date.

Tutorial Fee

For each hour of tutorial contact undertaken with student a tutor will be paid the normal part-time lecturing fee.

Examination Script Marking Fee

In a small number of subjects tutors are required to mark examination scripts. The fee is the same as the assignment marking fee.

Income Tax

All fees, except the Tutor Allowance, are liable to income tax and therefore the pay office at the S.M.B. is obliged to deduct tax from payments. Tutors will be provided with a Group Certificate at the appropriate time.

SCHEDULE 1980 (To be returned to the Off-Campus Co-ordinator)

SUBJECT(S)

Payment rates applying to this agreement

Tutor Allowance ..... plus ..... per assignment

Assignment marking fee ..... per assignment

Examination script fee ..... per script

Tutorial Fee ..... per hour

Other .....

Anticipated allocation of students .....

Orientation day

Will you be attending on Orientation Day? Yes ☐ No ☐

Tutor details

Name .....

Address (for correspondence) .....

..... Postcode .....

Telephone numbers: ..... (Home) ..... (Business)

Times of availability for phone contact with students (minimum of 3 hours)

Day(s) of week ..... Time(s) .....

.....

Telephone number to be used by students .....

I agree with the foregoing. (If there are any reservations, these should be listed on an attached sheet.)

Signatures of interested parties

TUTOR .....

CO-ORDINATOR .....

DATE .....

Photograph ☐

Study Materials ☐

Prospectus ☐

Study Manual ☐

**ATTACHMENT B**

## A Short Bibliograph of Readings on Adult Education

### BOOKS

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ROGERS, Jennifer, *Adults learning.* Open University Press, 1977.

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WILLIAMS, Kenneth O., *Study of the feelings and attitudes of participants towards the H.S.C. course conducted at the Geelong Y.W.C.A., July, 1977.* The author, 1977.

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### PERIODICALS

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GOODSIR, Warwick W., "Andragogy and its implications". *Training and Development in Australia,* vol. 5, no. 2., June 1978, pp. 12-19.

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## SECTION III

## PROGRAMMED TEXT

## THAILAND

Title: Systems Orientation

Media Used: Distance Learning Programmed Text

Tried out by: Supervisory Unit, Department of General Education Ministry of Education, Thailand.

Reported by: Mr. Kamol Thitakamol

Introduction:

The "Self-Instructional Module on SYSTEMS ORIENTATION", is a specimen of a distance learning programmed text prepared by Tan Boon Tee, SEAMEO* Regional Centre for Education in Science and Mathematics (RECSAM) of which Thailand is a member country. This booklet was translated into Thai and has been tried out by the Supervisory Unit, Department of General Education, Ministry of Education, Thailand. The Supervisory Unit is responsible for organizing training programmes for the in-service teachers of the Department. This programmed text was used as one of the materials for training in-service teachers who have had experience of teaching. The duration of learning this programmed text is six hours. It is in the process of try-out as a result of which necessary revisions will be made.

Critical Notes:

1. Question No. 4, frame (5), alternative (C): a set of non-related ideas should be changed by other suitable ideas which may not be obvious to the learners. The correct answer of question No. 4 should be also reformulated accordingly.
2. Frame 41, the sentence ". . . . . please refer back to the relevant pages . . . . . ." may be changed by " . . . . . please refer back to the previous pages . . . . . .
3. Pre-test and post-test should be given to assess effectiveness of learning.

Objectives

At the end of this material, you should be able to:

1. Describe what system orientation is.
2. Distinguish between systems approach and systems thinking.
3. Differentiate the different types of systems.
4. Identify the various system relationship.

Instructions

1. The material is divided into frames. You have to work through frames carefully one by one.
2. Choose the correct response in a multiple – choice question.
3. State if a given statement is true or false.

4. Fill in the blanks.
5. Give an answer.
6. Solve a simple problem.
7. Write everything on a piece of paper. As soon as you have finished the task given in the frame, turn over the page to compare your answer. If you choice or answer is correct, proceed to the next frame once more and work on it again.

(1)

## SYSTEMS ORIENTATION

1. There are many ways of defining the word 'system'.

   In a simple way, a system can be defined as

   *A set or group of objects with emphasis on the relationships between the objects and the relationships between their attributes* (characteristic and functions).

(2)

2. In systems, we are dealing with

   (i) a set of components or elements,
   (ii) a set of relations,
   and (iii) a set of objectives.

(3)

3. In other words, a system consists of sets of _____, _____ and _____ and their interactions to form a meaningful whole.

(4)

3. elements, relations, objective.

(5)

4. Which one of the following sets is not a property of a system?
   (a) A set of objectives
   (b) A set of relationships
   (c) A set of non-related ideas
   (d) A set of elements

(6)

4. Choice (c). Non-related ideas do not normally form a system. Any collection of things which shows no relationship or interaction among them does not comprise a system.

(7)

5. 'System' can be used to refer to a great variety of things: a molecule, an animal, a car, a school and so many other things. Can your name a few more systems?

(8)

5. A cell, a plant, an institution, the solar system, a river, an ocean, a forest . . . . . .

(9)

6. Consider a car system. Basically, what are the essential components of a car?

(10)

6. The engine, the chassis, the steering wheels, the brakes . . . . . .

   All these components can be considered as subsystems themselves comprising of smaller components (elements). For instance, the engine is made up of fuel injection, pistons, car shaft, inlet and exhaust valves, connecting roads, flywheel . . . . . .

(11)

7. The subsystems interact with one another to form a more meaningful total system.

   How do these subsystems of the car system interact with one another to make the car move?

(12)

7. The chassis holds the engine and the wheels in position. The engine turns the wheels and the car moves.

(13)

8. The main elements in a blood circulation system are:

   (i) _____
   (ii) _____
   (iii) _____
   and (iv) _____

   In what simple way do these elements interact to make the circulation of blood possible?

(14)

8. Blood, Heart, Arteries, Veins.

   The heart pumps the blood through the arteries and the veins return the blood to the heart.

(15)

9. The systems you have just come across in questions 7 and 8 are respectively examples of *Manipulated* (Physical) systems and *Natural* (Biological) systems. There is yet another category of systems - the *Conceptual* (mathematical, theoretical) systems. The set theory, atomic theory are two examples of conceptual systems.

   What are the three categories of systems?

(16)

9. Natural, Manipulated and Conceptual.

(17)

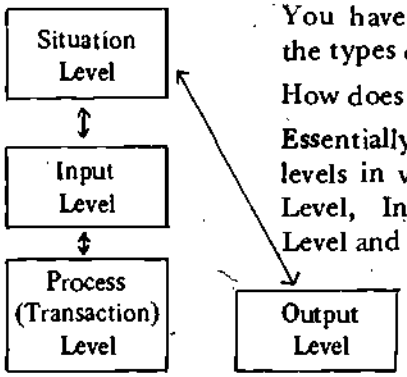
10. (i) An ecosystem is a Manipulated system. True/False
(ii) A telephone system is a Conceptual system. True/False
(iii) A highway system is *not* a Natural system. True/False

(18)

10. (i) False. An ecosystem is a Natural system.
(ii) False. A telephone system is a Manipulated system.
(iii) True. A highway system is a Manipulated system.

(19)

11.




You have learnt what a system is and what the types of system are.

How does a system function then?

Essentially, there are four interdependent levels in which a system functions- Situation Level, Input Level, Process (Transaction) Level and Output Level.

(20)

12. The Situation level consists of (i) the set-up and (ii) the pre-process situation.

The Input level deals with (i) the input and (ii) the resources.

The Process level is concerned with (i) the operations' and (ii) the interactions.

The Output level consists of (i) the output (ii) the post-process situation and (iii) the feedback.

(21)

13. Can you identify the four interdependent levels in the functioning of a system?

(22)

13. The situation level,
input level,
process level,
and output level.

(23)

14. For instance, in the "digestive system":

the situation is the alimentary canal;
the input is the food;
the process is the digestion of and absorption system;
the output is the waste, energy and tissue growth.

Can you do a similar one as above for a 'car engine system'?

(24)

14. In a 'car engine system':

| | |
|---|---|
| the situation | the engine and all its elements |
| the input | the petrol; |
| the process | the ignition of petrol; |
| the output | the movement of the piston |
| | the rotation of the flywheel |

(25)

15. The *output* is the product of a system. It is the *inputs* and processes that were fed into the system. Often, the output is evaluated, analysed and fed back again to the system so that the system may be readjusted or modified. An example will be the "Curriculum Development" System.

Can you think of another system that has a feedback built in?

(26)

15. The making of a new piece of equipment, instrument or machine is another example.

For instance, in building an aeroplane to meet certain specifications, a prototype is first constructed and tested.

(27)

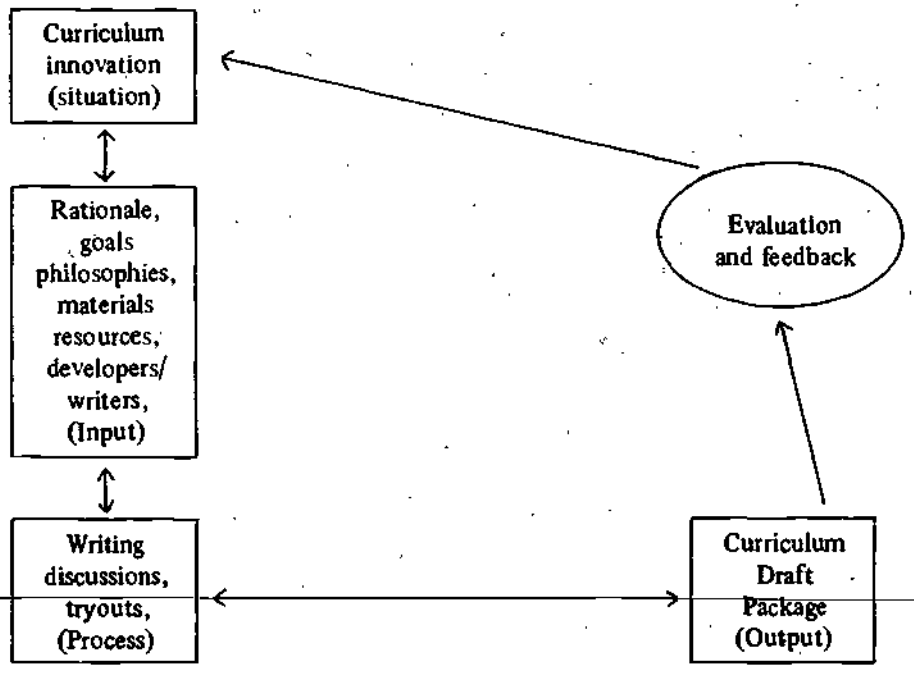
16. Some of the elements characteristic of a curriculum development system are:

Curriculum innovation, rationale, goals, philosophies, materials, resources, developers/writers, writing, discussions, tryouts, drafts .....

Can you relate the elements given above in terms of situation, input, process and output?

(28)

16. Curriculum Development System



(29)

17. A system can be very simple or very complex.

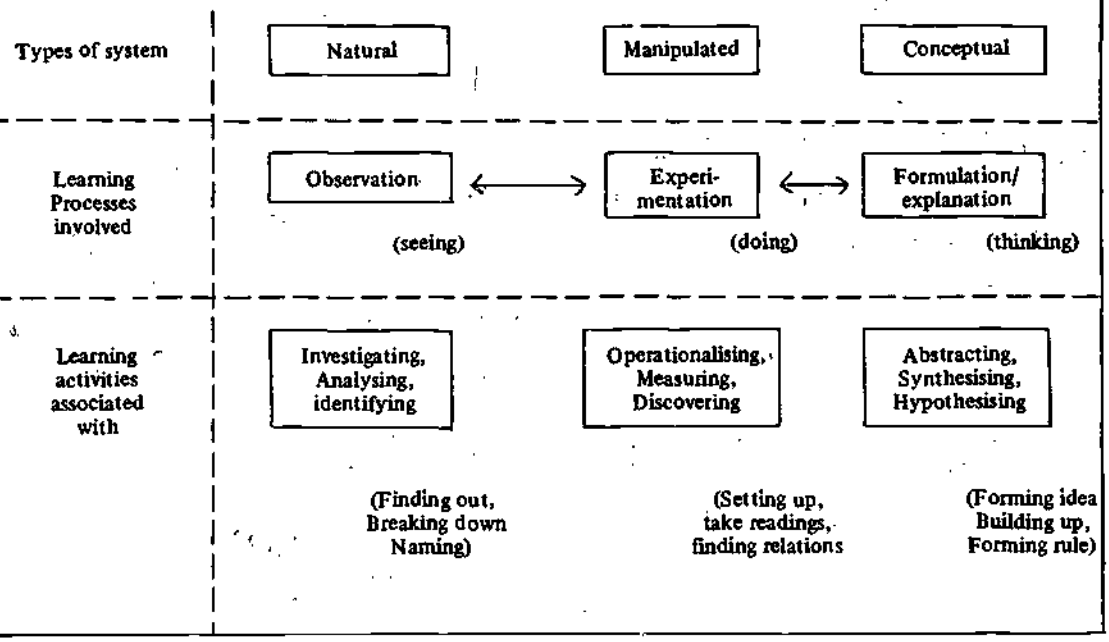
Very often, a system is a subsystem of some complicated larger system.

You may recall that the three categories of system are:

Natural ⟶ Biological
Manipulated ⟶ Physical,
and Conceptual ⟶ Theoretical

(30)

18. The various learning processes and activities used in the study of the three categories of systems are as shown in the following chart:




(31)

19. The learning process involved in the study of conceptual system is _____; and that involved with natural system is _____.

(32)

19. Formulation/Explanation. (Thinking),
Observation. (Seeing)

(32)

19. Formulation/Explanation. (Thinking),
Observation. (Seeing).

(33)

20. In a manipulated system the learning process involved is:
(a) Observation (seeing)
(b) Experimentation (doing)
(c) Formulation/explanation (thinking)

(34)

20. Choice (b).

Experimentation is the most essential component in the learning process involved in a physical or manipulated system. Through experimentation, we learn to measure; and this leads to discovery.

(35)

21. Which three of the following learning activities are associated with the conceptual system?

1. Abstracting
2. Investigating
3. Analysing
4. Measuring
5. Discovering
6. Synthesising
7. Identifying
8. Hypothesising
9. Operationalising

(36)

21. 1. Abstracting (Forming ideas)
2. Synthesising (Building up the ideas)
3. Hypothesising (Forming rules, laws).

(37)

22. The learning activities associated with a natural system are

_____,
_____,
and _____.

(38)

22. Investigation (Finding out),
analysis (breaking down), and
identification (naming).

(39)

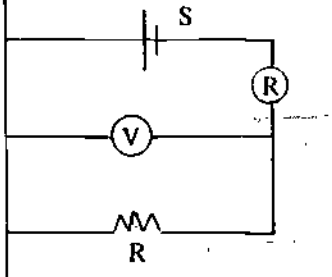
23. What are the learning activities associated with a manipulated system?

Can you give an example of the above in connection with a simple electrical circuit with resistance wire, ammeter, voltmeter and dry cells?

(40)

23. Operationalising (setting up), measuring (take readings), and discovering (finding relations).

Set up a simple circuit as shown:




S is the dry cell,
A is the ammeter,
V is the voltermeter
and R is the resistance wire.

By taking the values of V and A for different lengths of R, we can find the relationship between V, A and R.

(41)

24. We have thus far learnt

What a system is,
What the types of systems are,
How a system functions,
and What the learning processes and activities used in the study of systems are.

If you are not very sure of any of the above areas, please refer back to the relevant pages once more before proceeding to the next page.

(42)

25. When we think of a school system, naturally we would like to think about the school in terms of the staff, pupils, classrooms, curriculum and extra-mural activities. We would certainly wish to know how the teachers, pupils and curriculum interact, and how the facilities in school are related to the extra-mural activities.

This type of thinking is called "Systems Thinking".

(43)

26. What is "System Thinking"?

"System Thinking is a way of thinking about systems in terms of the various interactions and relationships within the among subsystems and systems.

Can you give an example of "Systems Thinking"?

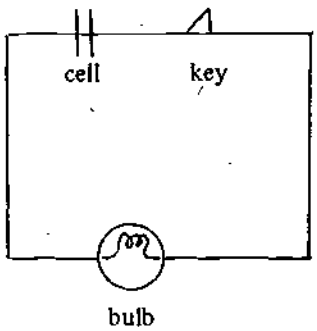
(44)

26. Think about a motor car system in terms of the interactions and relationships of the various components (elements) like

(i) engine subsystem
(ii) wheel subsystem
(iii) gear sybsystem
(iv) steering subsystem
. . . . . .

(45)

27. Consider the circuit below.




If the bulb does not glow when the key is pressed down, what would you do to remedy this fault?

You may replace the cell, the wire, the key and the bulb all at the same time to see if the bulb glow this time.

Is this the best way of solving the problem?

If not, can you suggest another way?

(46)

27. The components in the circuit are the cell, the key, the wire and the bulb. The fault can be due to the malfunctioning of any one of the components.

First check if the cell is working properly; then find out if the key gives good contact, or the wires are tightened to the terminals properly; and finally see if the bulb is not fused.

This kind of approach to problem-solving is known as "Systems Approach".

(47)

28. What is "System Approach"?

"Systems Approach" is a way of dealing with systems in terms of problem finding and problem solving. It is the application of systems concepts to assist in decision-making and problem-solving.

Would you consider direct application of a formula or set of formulas to solve a problem - a "systems approach"?

(48)

28. No. It is not "Systems Approach" if it implies the use of a formula or a set of clear-cut ways for handling problems.

(49)

29. In thinking about systems, we are basically concerned with eight kinds of relationships known as the "Systems Relationships".

They are:

1. Structural relationships
2. Interactional relationships
3. Functional relationships
4. Part-whole relationships
5. Isomorphic relationships
6. Subsystem-system relationships
7. System-suprasystem relationships
8. Observer-system relationships.

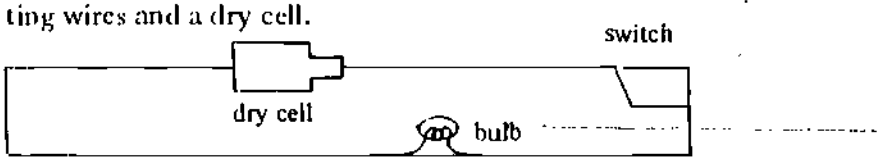
(50)

30. Structural relationships emphasize on structure and sequence. We are interested in the way in which different components of the system are related spatially (in space) and temporally (in time).

For example, a description of the different positions of the earth at different times of the year shows a structural relationship between the sun and the earth.

(51)

31. The fiture shows a closed circuit of a bulb, a switch, some connecting wires and a dry cell.




Can you indicate the structural relationship of this simple electrical system?

(52)

31. The structural relationship is indicated by the positioning of the cell, the connecting wires, the switch and the bulb to form a simple electrical circuit which enables the bulb to glow.

(53)

32. Structural relationship is concerned with function and change.

True or False.

(54)

32. False.

Structural relationship is concerned with structure and sequence, where we are interested in spatial and temporal relationships of the components of the system.

(55)

33. 2, 4, 6, 8, 10, 12, .....

The above is a sequence of number where the next number is always greater

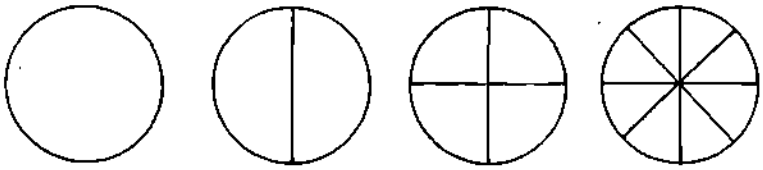
by 2. This sequence

shows the structural relationship between the numbers.

Can you give another example of structural relationships without using number?

(56)

33.



The circle has been halved each time to two semicircles, four quadrants, eight segments and so on.

(57)

34. International relationships emphasize on interaction and change. We are concerned with how the components interact and how the final product changes as a result of this interaction.
For example, water is heated by a burner to form steam.

Refer to the circuit on Question 31, page . . . Can you indicate the interactional relationship involved?

(58)

34. The interactional relationship is indicated by the interaction of the electrical source (the cell) with the load (the bulb) to give out heat and light.

(59)

35. Interactional relationship is concerned with function and sequence.

True or False.

(60)

35. False.

International relationship deals with interaction and change. It indicates how the components in a system interact to give raise to changes in the final product.

(61)

36. $3 + 9 = 12$

The addition of two numbers to give a new number shows the interaction of the two numbers to give rise to a change in the final number. This is an example of interactional relationships.

Can you give another example without using number?

(62)

36. A piece of wood burns in air.

The wood is made up mainly of carbon.

When it burns in air, the carbon combines with the oxygen to give carbondioxide.

The interaction of two elements (carbon and oxygen) results in a a new product (carbondioxide).

(63)

37. The Functional relationships emphasize on function and purpose. In functional relationship, we are concerned with how the structure and interactions are related to the functions or purposes of the system as a whole.

For example, the importance of a telephone and its use in communications give the functional relationship of the telephone in communication media.

Refer back to the circuit in Question 31, page . . . Can you indicate the functional relationship involved?

(64)

37. The functional relationship in the circuit is indicated by the roles of each of the electrical components (cell, switch, connecting wires, bulb). The cell is the electrical current to flow.

The bulb gives out light and heat.

(65)

38. The part-whole relationships emphasize on relevance and synergy. (Synergy means the sum of the parts is always more meaningful than the whole.) In this part-whole relationship, we are interested in the relevance of parts to the whole and the relationship of parts to the whole system.

For example, the various organs in the body combine and interrelate to form a human body. The organs and the body give the part-whole relationship. The body is the synergy. Can you give another example of the part-whole relationship of a system?

(66)

38. Consider a school. Teachers, pupils, classrooms and fields are all parts of a school system. The various parts combine and interrelate to form the school, giving the part-whole relationship.

(67)

39. The isomorphic relationships emphasize on convergence and isomorphism. Convergence deals with generalisation. Isomorphism deals with equivalence, one-to-one correspondence.

For example, the concept of fractions will involve decimals and percentages, and these form an isomorphic relationship.

How does the isomorphic relationship appear in the study of frequency distribution, say, the distribution of the weight of pupils in a class?

(68)

39. The frequency distribution of the weight of pupils can be represented as a line graph, a histogram or a pie chart. The graph, histogram and pie chart are isomorphic.

In an electrical system, the isomorphic relationship is indicated by the various effects produced by electricity; namely, the heating effect, the chemical effect, the magnetic effect and the lighting effect.

(69)

40. The subsystem - system relationships emphasize on independence and inter-dependence. In this relationship, we are interested in focussing our attention on the more manageable subsystems and their relationships to the whole system.

For example, the solar system is a subsystem of the galaxy. The solar system is dependent on the galaxy, though it can be taken as an independent system when considering the planets.

(70)

41. The subsystem - system relationships are closely related to the system-suprasystem relationships.

If a galaxy is the system, then the suprasystem will be the universe.

A system is always a part of a larger suprasystem.

(71)

42. The system-suprasystem relationships emphasize on boundary (limit) and ecology.

To every system, there is always a suprasystem. The universe is the ultimate.

In system-suprasystem relationship, we are concerned with the fact that a system is always a part of a larger suprasystem.

Consider the number system. The real number system is part of the overall number suprasystem. The integers are the subsystem of the real number system.

Can you give another example of the system-suprasystem relationships?

(72)

42. Sea transport is one of the transport systems in the suprasystem "Transport". The ocean-liners, ships and boats are subsystems of the sea transport system.

(73)

43. We are coming to the eighth systems relationship - the observer-system relationship.

Can you recollect the other seven systems relationships?
They are:

(74)

43. 1. Structural Relationships
2. Interactional Relationships
3. Functional Relationships
4. Part-whole Relationships
5. Isomorphic Relationships
6. Subsystem-System Relationships
7. System-Suprasystem Relationships

(75)

44. The observer-system relationships emphasize on divergence and relativity: divergence in terms of the relative importance of parts or components, and relativity in terms of the frame of reference of the observer.

In the observer-system relationship, we are concentrating on the relative importance of parts, depending on the particular frame of reference we are viewing.

For instance, in electricity, the observer-system relationship is exemplified by man's recognition of the usefulness as well as the danger of electricity.

Can you give another example of the observer-system relationships?

(76)

44. Two vehicles A and B are moving at different speeds along the same direction. The speeds of A and B are respectively 60 and 40 kilometers per hour. To B, A's speed is 80 km/hr; but in a different direction. However, to a stationary observer by the side of the road, the speeds of A and B are still 60 and 40 km/hr respectively. This illustrates the observer-system relationship.

(77)

45. Fill in the missing number:

3, 6, 12, 24, _____

What relationship do you think the above test item is measuring?

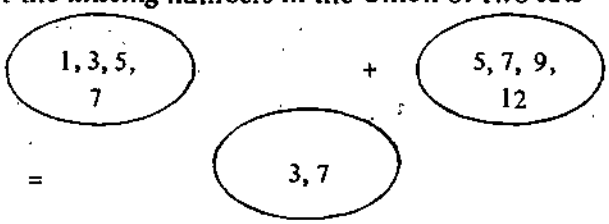
(78)

45. 48.

The test item is measuring structural relationships.

(79)

46. Insert the missing numbers in the Union of two sets




What systems relationship does the above item intend to measure?

(80)

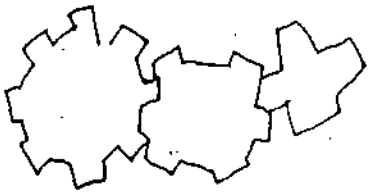
46. The missing numbers are

1, 5, 9, 12

Functional relationship being measured.

(81)

47.



The diagram shows a gear system comprising the gears A, B and C.

(i) If gear A rotates once, how many times will gear C rotate?

(ii) If gear C rotates clockwise, in what direction will gear A rotate?

What systems relationship does the above item intend to measure?

(82)

47. (i) Twice
(ii) Gear A will rotate colckwise.
Interactional relationship is being emphasized.

What systems relationship does the above item intend to measure?

(82)

47. (i) Twice
(ii) Gear A will rotate colckwise.
Interactional relationship is being emphasized.

(83)

48. Fill in the missing shape:

 is to 

as  is to _____

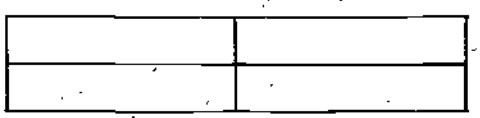
What systems relationship does the above item intend to measure?

(84)

48. A Square (□) is the most appropriate shape.
Part-whole relationship is being measured.

(85)

49. Insert an appropriate word in the empty box:



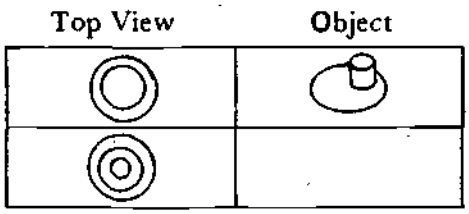
What systems relationship does the above item intend to measure?

(86)

49. Forest/jungle/woods.
Isomorphic relationship is being emphasized.

(87)

50. Fill in the empty box an appropriate figure.




What systems relationship is being emphasized here?

(88)

50.


Observer - System relationships.

(89)

51. Fill in the blank with an appropriate word:

Wings are to birds

as

limbs are to _____

Which systems relationship is being measured?

(90)

51. Animals.

Subsystem - system relationships.

# SECTION IV

# RADIO

## PHILIPPINES

Subject: Group Dynamics in School Administration and Leadership

Topic: Group Discussion in Nation-building

Reported by: Dr. Paquita D. Gavino

Introduction:

The lesson on Group Discussion in Nationbuilding is one of the 34 units for radio broadcast compiled by Eugenio B. Cauilan, lecturer in the University-of-the Air Program of the University of Mindanao, Dajao city, Philippines. It is part of the course Education 209, whose nomenclature is Group Dynamics in School Administration and Leadership. The course is offered for in-service teachers leading to the degree of Master of Arts in Education.

The lesson is in the form of group discussions designed to illustrate a technique employed by professors and instructors in colleges and universities who believe in group dynamics as effective means of facilitating teaching and learning.

Critical notes:

Criticism centered on the style of English used. It was noted that its formal style of English may be too complex for students in Asian countries where English is not the medium of instruction in the schools. However, the material should suit the high standard of English cultivated at the master's level in countries where English is used as medium of instruction.

The material that follows retains the formal style of the original material except that some interactive elements were added at appropriate places as suggested in the study group.

Education 209

UM Air Lesson No. 20 — Group discussion in nation — building

PROFESSOR:

Good evening, everybody. The subject of discussion this evening is "Group Discussion in Nation-Building." We have so far devoted five sessions in this class to an intensive study of group discussions in which we learned the essentials of this phase of group dynamics, external preparations, the format, the role of the leader, the role of the members, and the special techniques. We now want to see the relevance of group discussions to the task of nation-building. Before doing this, however, we need a brief review of the psychological theories of group discussion. Our work tonight therefore has two important parts: (1) review of psychological theories, and (2) group discussion in nation-building. We shall leave the selection of the topics under each part to the class.

To enable us to organize the ideas presented this evening into a coherent outline

which will guide us in answering the follow-up questions, I suggest that we take note of the important points contributed by all the members who will speak in this session.

We may now begin the discussion on Part 1, the psychological theories of group discussion. Anyhody who is ready may open the discussion.

AGNES:

If my friends have no objections, I propose that we use as our tentative guide for Part I the topics in Chapter 8 of Dr. Bulatao's booklet which we are now using as reference. We may delete some of them and present some of our own.

The first psychological theory is: Every individual has a unique world. This means that each of us is like a leaf in one tree; no two leaves are exactly identical in every aspect. A classical illustration, among many others, is the story about the six blind men of Hindustan and the elephant. Each man developed his own concept of the elephant on the basis of that part of the animal that he had touched while the animal was passing by. Each preferred to live in his own world instead of taking advantage of the combined intelligence of his group. Their group discussion took the form of mutual recrimination instead of mutual respect for one another's opinion. What these blind men needed was a group leader who was not blind, one who knew the whole truth becasue he could see it. He would have told these blind men that while each of them was partly right they only had to put together all their own individual concepts to build up the whole and true concept of the elephant. The implication of this psychological truth is that no single individual may have all the truths or facts; he needs the help of others in his search for reality.

BERT:

Another theory is: The source of creativity is the true self. One may conform to social standards and be a "socialized" creature. However, since he is essentially different from others in many ways, his true self eventually comes out when the occasion demands. One of the natural tendencies of the individual is to engage in creative activities as a means of projecting his personality. He may follow the stereotypes in his social world in his effort to conform to social pressures and to gain social approval, thereby building an aura around him which is artificial in the sense that what he has tried hard to create is not really his. It does not reveal his true self, his unique personality. In one of our earlier sessions we had an example of this when one of us talked about "balikbayan" (returnee) from Hawaii. In the story, this "balikbayan" tried to impress his home-town people that he had become an American in dress and in speech. What he was showing was not his true self, and instead of being sincerely welcomed and appreciated, he only succeeded in earning a new name, "balik-buang" (crazy returnee). The implication of this theory for group dynamics is clear: one should not "put on airs" in his relation with others. We can be better understood if we build and create something of social value around our true selves.

CORA:

Another psychological theory relevant to group dynamics is: It is difficult to tap and correct the true self. There is bound to be conflict between the true self and the socially-oriented self. The primitive desires of man have both positive and negative values to both

the man and to society; so are the social influences in man's environment. The implication of this theory may be noted when we observe how some men blindly overvalue certain social beliefs, standards, and even superstitions. In one group session in which the medium of communication was nothing but English, one man who could understand the language but could not speak it as fluently as the others had to supress his desire to participate in the deliverations in English for fear of being looked down upon. However, when he was allowed to use any other medium, vernacular or a combination of English with the dialect, he had to apolegize first. He said, "Ako intawon, grade four lang. Ako na lang Binisayon, kay walhón man god ang akong iningglis." (I shall just use Vigayan because having finished only grade four, my English is left-handed.) That man's exposition on the community problem under discussion was adjudged the most lucid in that session. He explained how one can caponize a cockerel without modern instruments.

DANNY:

That leads us to the theory that group discussion is an opportunity for the individual to liberate the true self. The group in Cora's description was a benign one. It accepted the man whose English was "left-handed" as an asset to the group, and the man gave a good account of himself, his true self. In other words, "Lumabas ang natural" (the true self had been liberated) through the tolerance of his group.

ELPIE:

The incident also proved another theory: The true self can be corrected by group discussion. Part of the true self in the man in Cora's description had build around itself the wrong notion that one had to speak fluent English to be able to communicate with others. That notion was corrected when he received the adulation of other members of his group after his participation.

In group discussions, then, we liberate our true selves when we are allowed to speak in our own natural way, giving voice to our deep thoughts and feelings without censure, without ridicule.

While we speak of the correction of the true-self, we must also remember the anti-social true self. This type of self should not be liberated; instead, its correction thro gh participation in group work should be the goal. How is this made possible? New experiences in creativity in collaboration with others can make one learn to govern his anti-social desires and to keep his primitive passions within due bounds. Working with others who are motivated by the generally accepted concepts of the true, the good, and the beautiful in human life is sound therapy in itself.

FRED:

One more theory is that group discussion is a fruitful experience; it solves problems and promotes personal growth. Given the right kind of people to work with, it should not be difficult for one to find solutions to his own problems and in the process develops a healthy personality.

PROFESSOR:

With the principles we have discussed in Part I of our tentative outline, we should be better prepared for Part II, nation-building. Before we actually discuss the subject, it is necessary for us to consider what kind of nation is to be built and what objectives this nation desires to attain. We should know what it is now attempting to accomplish toward the attainment of its objectives. We know that the Philippines is what it is now, its strengths and weaknesses, as the result of our own people's brand of group dynamics for centuries before us. I think we should limit discussion to the contribution of group discussion as a phase of group dynamics to national reconstruction under the New Society, and to do this we should know the broad goals of the New Society. What are these goals, may I ask?

GORING:

As published in the national papers on November 2, 1972, the goals of the New Society are expressed in the code name:

PLEDGES, in which :—

- P stands for Peace
- L for land reform
- E for Economic development
- D for Development of moral values
- G for Government reforms
- E for Educational reforms, and
- S for Social services

Out question now is: What is the role of group discussion in the effort of the New Society to achieve each of these objectives? To begin with, I venture to say that the formulation of the foregoing objectives was the outcome of group discussions among the President's advisers under the leadership of the President himself even if we assume that the ideas had already been in his mind to start with. There must have been a series of conferences which culminated in the final drafting of the preclamation, in the same way that a law comes to its final form only after several committee deliberations and open hearings in the chambers of Congress and Senate preparatory to its submission to the two chambers.

PROFESSOR:

And now, for the first objective, Peace and Order. Like the preclamation itself in which this objective was included, the problem of peace and order had been the subject of many conferences, but we are more concerned here with the role of group discussions in the maintenance of peace and internal security. To me, the most significant group discussions were the series of confrontations held in Zambeanga City, Basilan, and Jolo in which representatives of both parties "laid their cards on the table" so to speak. I say "significant" because those confrontations had given both sides opportunities to

reexamine their own views and to see that the problem of dissidence can not be solved by all the group discussions in the world unless both sides – the pretagenists themselves – lay down their arms first and together use reason instead of passion in working out a solution. I think I have overdone my part. Let us hear others who may have better ideas than mine on this topic or on the rest of the objectives of the New Society.

HENRY:

What I know about the role of group discussions in the implementation of the program for land reform may be limited. I shall confine my remarks to what I have observed among our ex-tenants. I call them ex-tenants because they have been released from the bondage of soil. They talk now mostly about their problems of improving their methods of production, no longer about how to pay their debts. Group discussions in their case have virtually become sessions in agricultural education. The concept of land reform is no longer that of transferring of ownership of the land but that of reforming their farming practices. Mass media has come to their aid in the form of radio lectures and printed suggestions. Experts in agricultural technology also go to the barries to attend meetings of farmers, give demonstrations, and help farmers evaluate new techniques now being applied.

AGNES:

The third goal, economic development, involves a more comprehensive program because of the complexity of the problems involved in its implementation. Group discussions have to include problems of the efficient and expeditions production of food and raw materials, the processing of food and raw materials, their distribution, and consumption. There is even a new course called "consumerism" which is designed to make people not only wise and intelligent consumers but also more vigilant against unethical advertisements and commercial gimmicks.

It should be admitted, however, that merely talking about economic development will not improve the national economy. Talk must be based on actual productive experience. That is why in our schools today teachers and pupils talk less and produce more. Emphasis is on productivity. The best place to hold a group discusston on eggplants, for example, is the eggplant garden where pupils and teachers see actually the aggplants hanging here and there. What we want to emphasize here is that, ideally, a group discussion can be more meaningful to all concerned if it is help in the proper setting. This implies therefore the need for structuring school environments accordingly and, whenever necessary, the resort to field trips, at least in the immediate vicinity. The Laguna approach to community education may therefore be revived, because in this approach group discussions are held outside the school premises, that is, in places in the community where the materials under discussion are available and where the people in the community can freely participate in the discussions.

BERT:

I agree with you. Now let me talk on the next objective. When we discuss the development of moral values and how group discussions may contribute to their development, it is assumed that we are aware of existing situations and problems in society

which tend to cause normal degeneration among our people. While the study of hypothetical problems may be helpful, we should be more realistic by attacking real situations. Generally, discussions should center on causes of moral problems and the best means of removing these causes. A moral problem is like a physical ailment which needs a thorough diagnosis by a specialist. If the social diagnosis shows that the cause is somewhere within the administrative or government machinery, the correction should begin in that place. Accordingly, group discussions must be properly oriented; otherwise, we may be barking at the wrong tree, or punishing the wrong person. This leads us to the next objective – government reforms and reorganization.

CORA:

You are not insinuating of course that all the ills of the old society must be blamed on the administration.

BERT:

Of course not, Cora. Ours is a democracy. The people govern. They set up the machinery of administration through the Constitution. All that process involves public discussions in which we are all expected to be active participants.

Skills in conducting public discussions, however, should be developed. I can say that courses like Education 209 (Group Dynamics in School Administration) and specifically this unit are useful.

CORA:

I agree with you, Bert. This nation "must be great again", as the President himself said in 1965. By "nation" he meant us all – the people – and the government machinery, the administration, must undergo a "revolution" within itself, a peaceful one as described in his book entitled: *Today's Revolution: Democracy?*, published in 1971. Chapter six, pages 91-120, describes his idea of a New Society. Chapter seven of the same book, page 127, says something relevant to our lesson tonight, and I quote:

> "I will not recommend, however, a national silence about our faults. As a matter of fact our strongest institution is the freedom of speech, and yet the humblest Filipino has the right to ask what ends are served by freedom of expression – at its base, freedom of thought – when it abandons discussion of abuse. More than any President, I delight in the confrontation of ideas, and, for this reason, I will not consent to any restriction on democratic dialogue."

DANNY:

Government reforms and reorganization means a general overhauling of the machinery. This overhauling must include our educational system which the President described in 1972 as "irrelevant, misaligned, and an exercise in solipsism." Our school system had been out of gear itself because we – the people – had allowed it through our own complacency to be that way. "Show us the schools of the people", said Rizal, "and I will tell you what the people are."

This old-society "irrelevance and misalignment" of our educational system was

aggravated by the alienation of some of our highest educational institutions themselves which had become tools of an alien ideology advocating nihilistic doctrines which instigated violent "parliaments of the streets" instead of peaceful confrontations.

ELPIE:

That reminds me of Simoun in Rizal's *El Filibusterismo* who advocated total destruction of a "sick race" to be replaced with a strong one. That "sick" race is still with us, but under the New Society it is being rehabilitated through our present program for social services which is the last of the goals of the present administration. If society is "sick", it must not be left to decay; it must be cured of its ailments. Just as a patient who is in a critical condition needs the services of specialists who are in *constant consultation* for the purpose of pooling together their talents in the search for the most efficacious remedies, so should those among us who are still "sick" and in dire need of the best remedies be given the care and attention they need from the best minds in this country. Our specialists in social regeneration must now come to the conference table and do their job.

PROFESSOR:

Thank you, everyone. We may now summarize the ideas taken up here with the help of the following questions:

1. State the psychological theories on group discussions and briefly describe some specific illustrations of their application.
2. What are the goals of the New Society? Explain the role of group discussion in the attainment of each of these goals.

You may refer to the following sources which are available in your forum centers.

1. Bulatao, Jaime, pp. 27-39.
2. "Broad Goals of the New Society", *Daily Express*, November 2, 1972.
3. Department Order No. 6, s. 1973.
4. Marcos, Ferdinand. *Today's Revolution: Democracy*, pp. 91-120; 127.

Once again may I remind you to answer these questions in your work books. Since we are now more than half-way through with our course, your term projects should be coming up to fairly good shape. Thank you for your participation.

BROADCASTER:

Questions and suggestions regarding the course will be greatly appreciated. Your forum leaders are available anytime for consultation, or you may write to me or Dean Paquita D. Gavino, coordinator of the University – On – The – Air, Davao city.

Till next broadcast time, please consult your schedules, this is Mike Balbin saying goodnight and sweet dreams!

## INDONESIA

**Subject:** Radio Programme on "How to Teach the Meaning of Incomplete Sentences" for Elementary School Teachers In-service Educaiton in Indonesia

**Translated by:** Mr. Slamet Sudarman

**Introduction:**

This material is used for in-service elementary school teachers in Indonesia by radio, supported by printed materials. The educational Radio Broadcasting System in Indonesia supports the in-service education programme carried out by the Mobile Team Units which is a face-to-face activity.

The face-to-face in-service programme is carried out three times a year, for a period of seven days each, for teachers who are in regions with good transportation and communication. For regions where transportation and communication are difficult, the in-service programme is implemented once a year for 15 days. The programmes of the Educational Radio Broadcasting System for Elementary School Teachers are transmitted twice daily covering Indonesian language, Physics, Social Studies, Mathematics, the Moral of Pancasila, and Music. These in-service programmes are needed to train teachers in the implementation of the new curriculum and the use of new text books published by the government.

A curriculum is made for the Educational Radio Broadcasting programmes from the existing in-service materials developed by the Mobile Team Units, the existing curriculum, the new textbooks, and other resources. The curriculum is designed by a team consisting of subject matter specialists, curriculum experts, instructional developers/ media specialists, and representatives of the target teachers. Each subject matter is divided into topics and sub-topics.

Programmes for the Educational Broadcasting are developed from these sub-topics in the form of printed supplementary materials and radio scripts for 20-minute broadcasts. The teachers are expected to read the printed supplementary materials before they listen to the broadcast. In the printed supplementary material, they are provided with the objectives of the programme, the synopsis, the difficult or foreign terms, and the materials that cannot be broadcast e.g. diagrams, pictures, and forms. Information about activities students should complete before, during, and after the broadcast, are also provided in the printed materials, aside from a guide-book with general suggestions on how to follow the Educational Radio Programmes.

The following material is taken from the Indonesian Language consisting of: (1) a topic: how it is written and broken down in the curriculum; (2) the printed material: how it comes out in the form of the printed material: and (3) the radio script, which is based on the curriculum and the printed supplementary material.

The original materials are in Indonesian language but an English translation was made for use in the Technical Working Group meeting. The English translation is given here.

## BASIC PATTERN OF THE LEARNING AND TEACHING ACTIVITIES

SUBJECT MATTER : INDONESIAN LANGUAGE

MEDIA : RADIO

| *General Objectives* | *Topic* | *Sub Topic* | *MEDIA* | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | *Title* | *Prog. No.* | *Specific Objectives* | *Material* | *References* | *Notes* |
| The teachers have the balance knowledge of teaching "Meaning" | 4.2. Meaning of sentences | 4.2.1 Meaning of incomplete sentences | Meaning of incomplete sentences | I.1. 24 | The teachers can:<br>- explain what an incomplete sentence is.<br>- guide their students to understand the meaning of an incomplete sentence. | - incomplete sentences<br>- incomplete sentence structure<br>- meaning of incomplete sentences | - Bahasa Indonesia Belajar Membaca Dan Menulis I a, I b, I c<br>- Pedoman Guru I | - Narration<br>- Dialogue<br>- Simulation |

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183

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*Indonesia*

*Radio*

**Critical notes**

The critiques given by the participants after the material was presented were:

1. The terms used should be consistent.
2. The abbreviation of words and the technical terms should be explained.
3. References should be provided after the evaluation.
4. Time and target clientele should be clearly indicated.

## SUPPLEMENTARY PRINTED MATERIALS

| | | |
|---|---|---|
| SUBJECT MATTER | : | Indonesian Language |
| PROGRAM NUMBER | : | I.I. 24 |
| TOPIC | : | The meaning of a sentence. |
| SUB-TOPIC | : | The meaning of an incomplete sentence. |
| TIME | : | Second semester |
| CLASS | : | I |

I. The Objectives of the Program

At the end of the program the teachers should be able:

1. to explain the meaning of an incomplete sentence.
2. to guide their students to understand the meaning of an incomplete sentence.

II. Synopsis

In the old days grammarians had the opinion that the completeness of an sentence was decided by the sentence pattern of: Subject-Verb-Verb-Object (S-V-O). The completness of a sentence is based on the harmony of 'form' and 'content'. Sometimes the content might be broader than the form. In this case the sentence is considered as incomplete. In other words we may say that a sentence is incomplete when the form is not in accordance with the sentence pattern S-V-O, or when the pattern of S-V-O is not fulfilled.

In daily language or in oral language we frequently hear incomplete sentences, such as:

'Go!'
'No!'
'Quickly!'

Old grammarians considered that they were not sentences because they do not meet the requirements of the sentence pattern of S-V-O. These sentences are very simple, consisting only of one word, but the meaning is broad. The form 'go!' may mean,

'You must go!'
'Go from here!'
'Go from me, because I hate you!'

On the other hand there are groups of words such as:

'kereta api'
'rumah sakit umum'
'pendidikan kesejahteraan keluarga'

which have complete meaning but they are not sentences. If we consider these groups of words as incomplete sentences we can still understand their meaning based on:

1. the expression
2. the intonation
3. the meaning
4. the situation

which become the requirements to understand an incomplete sentence. To teach this sub-topic we can use the techniques of lecturing, demonstration and question-answer or a combination of these techniques.

**III.** Evaluation

Answer the following question:

1. What is an incomplete sentence?
2. According to old grammar, what is the definition of:
   - a complete sentence,
   - an incomplete sentence.
3. What kind of sentences (complete or incomplete) are those that have the pattern of S-V.?
4. Mention the requirements of understanding the meaning of incomplete sentences.
5. Based on the requirements about (No. 4), what ideas do you think the following forms have:

   'Come in!'
   'Sit down!'

**IV.** References:

1. Bahasa Indonesia, Pedoman, Guru Membaca dan Menulis Permulaan I, Dep. P dan K.
2. Bahasa Indonesia – Belajar Membaca dan Menulis I b, Dep. P dan K.
3. Tatabahasa Indonesia, Dr. Goys Kraf, Halaman 153, Nusa Indah, 1976.

RADIO PROGRAMME

| | | |
|---|---|---|
| I. | SUBJECT MATTER | : INDONESIAN LANGUAGE |
| II. | PROGRAMME NUMBER | : I.I.24 |
| III. | TOPIC | : THE MEANING OF SENTENCE |
| IV. | SUB-TOPIC | : THE MEANING OF AN INCOMPLETE SENTENCE |
| V. | TIME | : 2ND SEMESTER |
| VI. | CLASS | : ONE |

| | | | |
|---|---|---|---|
| 1. | | FX : | OPENING TUNE ... UP ... DOWN ... UNDER |
| 2. | ANNOUNCER | : | OPENING ANNOUNCEMENT |
| 3. | | FX : | OPENING TUNE ... DOWN ... OUT |
| 4. | ANNOUNCER | : | Hello listeners, especially Elementary School Teachers in Indonesia. I am very glad to meet you again in this programme. At this moment we are going to talk about our daily tasks, especially on the process of learning and teaching activities. We are going to talk about the learning and teaching process of Indonesian language. The topic is how to teach the meaning of a sentence and the sub-topic of our programme today is how to teach the meaning of an incomplete sentence. Are you ready to listen to our programme now? To know more about the teaching of the meaning of an incomplete sentence let us listen to our friends who are talking about this subject. But before we meet them, let me tell you the objectives of this programme. After listening to this programme, you are expected to be able: (1) to explain the meaning of an incomplete sentence, and (2) to teach your students to understand the meaning of an incomplete sentence. |
| 5. | | FX : | BRIDGEMUSIC ... (10") |
| 6. | MRS. SRI | : | Mr. Hadi, have you been here long? |
| 7. | MR. HADI | : | Yes, madam, I want to see you. |
| 8. | MRS. SRI | : | Is there anything important? |
| 9. | MR. HADI | : | Yes, madam, I want to ask you about the unit lesson of class I. |

10. MRS. SRI : Which unit lesson?

11. MR. HADI : The unit lesson for next week.

12. MRS. SRI : What is the subject matter?

13. MR. HADI : Indonesian language.

14. MRS. SRI : As head of this school, of course, I will help you do your job.

15. MR. HADI : Thank you, madam.

16. MRS. SRI : What problem do you have?

17. MR. HADI : It is about this topic. The meaning of a sentence, and the sub-topic is, the meaning of an incomplete sentence. I am not sure about this.

18. MRS. SRI : OK. I am sure you know what is meant by a sentence which covers complete and incomplete sentences.

19. MR. HADI : Yes, I know it. But the first grade students don't know what an incomplete sentence is. We have never taught grammar in the first grade.

20. MRS. SRI : That is right. Even in the 5th or 6th grade we never teach grammar separately. Therefore we must know what an incomplete sentence is.

21. MR. HADI : An incomplete sentence is a sentence that does not meet the requirements of the S.V.O. pattern.

22. MRS. SRI : That is according to traditional grammarians. They considered that a sentence is incomplete if the s-v-o is not complete. And we frequently do not follow the s-v-o pattern in our daily conversation. Does this mean that the sentences we speak have no meaning?

23. MR. HADI : Yes, they have. But, a sentence is a unit of words that has a complete idea.

24. MRS. SRI : But what is meant by a complete sentence where the form and the meaning of the sentence are in harmony. If the meaning is broader than the form, the old grammarians considered it as incomplete.

25. MR. HADI : So, according to the traditional grammarians, if the meaning is broad, the form must be broad too.

26. MRS. SRI : Yes, they taught that if the pattern is incomplete the concept is also incomplete.

27. MR. HADI : Hum

28. MRS. SRI : Mr. Hadi, In Our daily life we frequently just say 'Go', 'Come on'.

29. MR. HADI : Are they sentences too? Complete sentences?

30. MRS. SRI : Traditional grammarians considered them as incomplete sentences, because there is too much idea or meaning in the word 'Go', 'Come on'. 'Go' sometimes means, 'you have to go', or 'you have to leave me'.

31. MR. HADI : What do you call such sentences?

32. MRS. SRI : In traditional grammar they are called incomplete sentences. According to traditional grammar a sentence is complete if it has a subject and a predicate, with or without an object (ADLIB). If a sentence has no subject or predicate it will be incomplete.

33. MR. HADI : Now what about groups of words such as 'a stone house', 'a flower garden', 'on the table'.

34. MRS. SRI : Do you ask about the meaning of those words or do you want to know whether they are complete or incomplete sentences?

35. MR. HADI : Not the meaning, but whether they are sentences or not?

36. MRS. SRI : They are not sentences, but phrases.

37. MR. HADI : 'a stone house' is not a sentence but a phrase.

38. MRS. SRI : Yes, that is right.

39. MR. HADI : Well, you frequently mention traditional grammar. Is there any other grammar?

40. MRS. SRI : Yes, there is. Traditional grammar distinguishes complete and incomplete sentences. While Goys Kraf, a modern grammarian, says, that a sentence is a saying preceded by a pause, while the intonation of a saying shows that it is complete.

41. MR. HADI : Wait a minute. You have just mentioned 'a pause'. What does it mean?

42. MRS. SRI : According to Kraf, a pause means more than a stop. A stop means that a process which is going on is stopped. Before a process we may say nothing, but it does not mean 'a stop', therefore, we use the term 'a pause'.

43. MR. HADI : So we have a pause before a process happens.

44. MRS. SRI : Yes, we have 'an early pause' which is before a process, we have 'a middle pause' which is a stop in the middle of a process, and 'a final pause' which is a stop after a process.

45. MR. HADI : Hum, in this way, there are three pauses, an early pause, a middle pause, and a final pause.

46. MRS. SRI : That is right.

47. MR. HADI : Just now you also mentioned the intonation of a sentence. Does it have any influence on the meaning of a sentence?

48. MRS. SRI : Oh yes, of course. It influences the meaning of a sentence. A sentence with a rising intonation at the end, has a different meaning than a sentence with a falling intonation.

49. MR. HADI : So, if I say, 'You are a good boy' (WITH RISING INTONATION) has a different meaning if I say 'You are a good boy' (FALLING INTONATION).

50. MRS. SRI : Right. The meaning of a sentence is also influenced by the expression and the situation.

51. MR. HADI : Yes, we have studied about it. But there is another question (ADLIB). The textbook for the first grade covers only how to write and to read, Book I.

52. MRS. SRI : Well, do you mean that you have problems to get the materials to teach the meaning of incomplete sentences?

53. MR. HADI : Yes, you are right. In Book I all sentences are complete sentences.

54. MRS. SRI : All sentences are in the form of S.V.O. or S.V., right?

55. MR. HADI : Yes.

56. MRS. SRI : To teach the meaning of an incomplete sentence we may take sentences that we use daily with the students, so they will know the exact meaning of incomplete sentences we use every day.

57. MR. HADI : Is it necessary to tell the students that there are complete and incomplete sentences?

58. MRS. SRI : No, it is not. Do you know why?

59. MR. HADI : Hum. We need not teach grammar to the students.

60. MRS. SRI : That is right. As in Book I the sentences are complete, we much look for examples by ourselves. We then ask questions about the meaning of our examples. Let us listen to a cassette programme from the Educational Radio Broadcasting about this.

61. FX : BRIDGEMUSIC . . . (10")

62. TEACHER : Let us study Indonesian. Listen to me, 'Mother goes to market'. Repeat after me Amin.

63. AMIN : Mother goes to market.

64. TEACHER : Fine. Where does mother go?

65. STUDENTS : to market.

66. TEACHER : Excellent. Now listen again. Mother goes. You can add, Mother goes to the shop, or Mother goes to the bathroom. Now you Yanti, add some other thing.

67. YANTI : Mother goes to buy rice.

68. TEACHER : Right. You are right Yanti. Mother goes to buy rice. Now listen to me, 'Mother goes' (RISING). Is there any difference?

69. STUDENTS : Yes, there is.

70. TEACHER : Well, who knows the difference? Raise your hand. (PAUSE). Well, you Iwan.

71. IWAN : Asking.

72. TEACHER : That is good. Mother goes? (RISING) is a question. Now listen again. If you are crying and say: Mother go! What does it mean?

73. STUDENTS : I want mother to go.

74. TEACHER : Right. So when you are crying you do not want your mother coming to you and you shout, 'Mother go' (ADLIB). Now, listen again. 'Go'. You say that while your eyes become so wide. What does 'go' mean?

75. STUDENTS : To ask one to go and you are angry.

76. TEACHER : Right. This means that someone who says that is angry, and he asks another one to go. So if you are talking to someone you must look carefully to him or her. Now listen again. Eat. What does it mean? (PAUSE). No one knows? O.K. This means that I want you to eat. Well, listen again. Mother (CALLING). What does it mean?

77. STUDENTS : Calling.

78. FX : CLOSING TUNE ... UP ... DOWN ... UNDER

79. ANNOUNCER : CLOSING ANNOUNCEMENT.

80. FX : CLOSING TUNE ... UP ... DOWN ... OUT

*Notes:* ADLIB: unscripted
s-v-o: Subject-Verb-Object.

# SECTION V

# TELEVISION

## THAILAND

TITLE: EDUCATION MANAGEMENT IN THE THAI SOCIETY – WELLFARE EDUCATION

MEDIA USED: DISTANCE LEARNING THROUGH TELEVISION BY SUKHOTHAI THAMMATHIRAT OPEN UNIVERSITY

Reported by: Mr. Kamol Thitakamol

Introduction:

This material is developed for the Education Course 101: Fundamentals of Education. The target audience are teachers, educators and others interested in education. The duration of the telecast is 30 minutes. The schedule of the programme relating to this script can be obtained by writing to Sukhothai Thammathirat Open University.

Critical Notes:

1. A similar programme might be introduced by radio broadcasting, especially for those countries where the television service is not available for distance learning.

2. Co-operation between the open university and the television station is very important, to make the programme successful.

3. It is necessary to provide learners with correspondence materials including tests, followed by the television programme.

4. Some measures to assess effectiveness of this type of telecasting should be considered.

Telecast on Sunday, 14th December, 1980 (6:00 - 6:30 a.m.)

Taped on Monday, 8th December, 1980

Television Station, Channel 7, Bangkok, Thailand

| | |
|---|---|
| Master of Ceremony | Dr. Siriwan Suwanapa |
| Guest Speaker | MR. KAMOL THITAKAMOL |
| Programme Director | ..... |
| Staff Director | ..... |
| Co-ordinator | ..... |
| Camera – man | ..... |
| Video – tape | ..... |
| Light | ..... |
| Sound | ..... |
| Script | Mr. Viriya Vongselaohakul |
| Consultants | Dr. Siriwan Suwanapa<br>Ass't Prof. Vichitr Bhakdirat |

PROPS

1. Living room set: two chairs
2. Caption stand etc.

| Pictures | Sound |
|---|---|
| 8. S/I Camera 1, Caption 7 Welfare Education F.O. (Camera and Slide) | F.O. Music. |
| 9. Dissolve (Camera 2) M.S. M.C. | Good morning ladies and gentlemen, our programme today is the first of the series entitled "fundamentals of education". In this series, we will discuss educational management in the Thai society. The series is broken down into 3 programmes. The first programme deals with welfare education, the second, special education, and the third, adult education and education for monks and novices. |
| 10. S/I (Camera 1) Caption 8 | It is a well-known fact that the Royal Thai Government has provided the following types of schools. |
| 11. Dissolve side 2 Kindergarten | Kindergarten. |
| 12. Dissolve slide 3 Elementary schools | Elementary schools. |
| 13. Dissolve slide 4 Secondary schools | Secondary schools. |
| 14. Dissolve slide 5 Vocational schools | Vocational schools. |
| 15. Dissolve slide 6 Universities | Universities. |
| 16. Dissolve (Camera 2) M.C. | It is obvious that the above educational institutions cater to the general public. However, there are others who cannot participate actively in these institutions. |
| 17. Dissolve slide 6, 7 and tribal people | These are Thais who live in remote rural areas. |
| 18. Dissolve slide 8 "Nomadic boat people" | Nomads, e.g., "boat people". |
| 19. Dissolve slide 9 Refugee Center | Refugees. |
| 20. Dissolve slide 10 Handicapped people | The handicapped. |
| 21. Dissolve slide 11 Blind children | The blind. |
| 22. Dissolve slide 12 Deaf children | The deaf. |
| 23. Dissolve slide 13 Mentally handicapped children | The mentally handicapped. |
| 24. Dissolve slide 14 Factory Workers. | Those who had no education opportunity while they are young and still wish to study. |
| 25. Dissolve slide 15 Monks and novices | Monks and novices. |
| 26. Dissolve (Camera 2) M.S., M.C. | The above mentioned groups cannot be enrolled in ordinary schools. The Government responds to their needs by providing special education for them. |

| *Pictures* | *Sound* | |
|---|---|---|
| | | In order to inform the public of the general management for these groups and that for the general public, we have invited Mr. Kamol Thitakamol, Head, Supervisory Unit, Department of General Education, Ministry of Education, to speak to us, today. |
| 27. Zoom at (Camera 2)<br>(Two shots)<br>(M.C. and Mr. Kamol are projected on the screen) | M.C.: | Good morning, Mr. Kamol. |
| | Kamol: | Good morning. |
| | M.C.: | I would like to ask if there are any agencies providing education for those members of the society who are fundamentally different from the mainstream of society. |
| | Kamol: | The Department of General Education and the Department of Non-formal Education, Ministry of Education, are directly responsible for the education of these members of society you are referring to on a non-formal basis. Other agencies involved also are the Social Welfare Department, Department of the Interior, and various foundations for the handicapped under the auspices of the King as well as the Police Patrol Headquarters, hospitals, and different voluntary agencies. |
| | M.C.: | What roles do the military, Boarder Patrol Department, and other voluntary agencies play in providing non-formal education? |
| | Kamol: | In general, the Boarder Patrol Department arranges education for minorities, e.g. different tribal groups in the northern area. |
| | M.C.: | Thank you. I would like to request you to give more details of the roles of the Ministry of Education. |
| 28. Zoom in (Camera 2)<br>M.S., Mr. Kamol. | Kamol: | We may break down the education management for special types of people into 3 categories. The first is welfare education which provides educational assistance to students in inaccessible areas, for example, tribal people, or nomadic boat people and homeless children who lost their parents in battlefields and the lepers' children. These children are put in boarding welfare schools to study general as well as occupational subjects. After elementary school, the government gives scholarship for students to continue their education in secondary or vocational schools and teachers colleges. The second category is called special education. It is specifically for the handicapped. It is broken down into school for the blind, school for the deaf, school for the physically handicapped and school for the mentally retarded. The third category is adult and continuing education including education for monks and novices, in the form of out-of-school education. The third categories are under the auspices of the Department of Non-formal Education. |
| 30. Cut L.S.<br>M.C. and Mr. Kamol. | M.C.: | How many welfare schools are in existence now? and how do they admit students? |
| | Kamol: | At present, there are 23 schools in Bangkok and in the regions. We have, for example, Bang Gruay |

| Pictures | Sound |
|---|---|
| | and Panom Tuan Welfare Schools. We have criteria for admission to welfare schools. Each school accepts students from their own provinces. Each province selects students and sends them to the welfare school of that area. |
| | M.C.: Thank you. Ladies and gentlemen, today we could only talk about one category of welfare education. The other two categories will be discussed in our next program. We wish to thank Mr. Kamol for being with us today. |
| | Kamol: Goodbye. Thank you too. |
| 31. Dissolve (Camera 2) M.S., M.C. | Ladies and gentlemen, Thai Hilltribes or various hilltribes are a minority who lack educational opportunities because they live in remote rural areas. The government has arranged for various methods of education for these groups. For instance, village schools are built and tribal children are admitted into welfare schools. At present, the Department of Non-formal education has a new medium to provide education for tribal children. We would like to invite you to stay with us and view the film provided by the Technology Center, Ministry of Education. |
| 32. Dissolve film. | |
| 33. Dissolve (Camera 2) M.S., M.C. | The movie to be shown here is only a fraction of the actual movie. If you are interested in the whole movie, you may borrow it from The Technology Center, Ministry of Education. |
| 34. Dissolve slides 9, 15, 16. | Another group of a different cultural background which creates problems in educational arrangement is the refugees at various refugee camps. The government has built temporary schools in refugee camps. |
| 35. Dissolve (Camera 2) M.S. | The last thing on this programme is a television tape by the Technology Center, Sukholthai Thammathirat University. It shows detailed activities of Panom Tuan Welfare School, Karjanaburi. |
| 36. F/I Television Tape | |
| 37. S/I Tellop credit title | We have promised each other that ..... F/I Muste (Children's bedtime) |
| 38. Dissolve (Camera 1) Caption The end F.O. (Camera 1) | F.O. Music |

## SUMMARY

The collection of eleven exemplar materials on distance learning were the contributions of the participants of the Technical Working Group Meeting held at Allama Iqbal Open University, Islamabad, Pakistan in 4 to 16 November, 1981. Participants were from Australia, India, Indonesia, Maldives, New Zealand, Pakistan, Philippines, Sri Lanka and Thailand.

The materials were categorized into the following with their corresponding subject/topic:

Category I – Correspondence course materials:

1. Human development;
2. Education for disadvantaged groups;
3. Education for girls in India;
4. Teaching psychology – Child as a person; and
5. How should a teacher plan a research.

Category II – Self learning materials:

1. Self-learning integrated module for mothers to increase their capability in training their preschoolers;
2. How should a teacher ask questions; and
3. Tutoring at a distance.

Category III – Programmed text:

1. Systems orientation.

Category IV – Radio:

1. Group discussion in nation-building; and
2. How to teach meaning of incomplete sentences.

Category V – Television:

1. Education management in the Thai Society – Welfare Education.

The exemplars were developed for use in the pre-service and in-service training of a target audience comprizing of: (1) student teachers; (2) teachers and teacher educators; and surrogate teachers.

Critiques for each of the materials centered not only on the strengths but more so on the limitations of the original materials based on the guidelines on distance materials developed by the working group. These critiques served as the springboard upon which revisions were made within the time contraints available preparatory to the final form and inclusion of the exemplars in this portfolio.

## APEID PUBLICATIONS RELATED TO TEACHER EDUCATION

1. *Working new directions in teacher education: re-orienting teacher education for rural development (Teacher Education [illegible])*

2. *Preparing teachers for education in rural development - a handbook, 1977*

3. *Continuing education for teacher educators - advanced-level workshops, 1978*

4. *Continuing education for teacher educators: handbook of suggestions for organising advanced-level workshops, 1978*

5. *Developing instructional modules for teacher education: a handbook, 1978*

6. *Developing instructional modules for teacher education: selected exemplar modules, 1978*

7. *Continuing education for teacher educators: identified needs and plans for national workshops, 1979*

8. *Policy studies in Asia - the training of educational personnel: India, Nepal, Pakistan, Philippines, Thailand, 1979*

9. *Teacher education: directions of change, 1979*

10. *Universalising education: selected innovative experiences - new techniques for preparing educational personnel, 1979*

11. *Universalising education: strategies for development and use of instructional materials, 1979*

12. *Designing instructional materials for general education and teacher training: a portfolio of experiences in Asia and Oceania, 1980*

13. *New personnel profiles in relation to changes in society and educational systems, 1980*

14. *In-service teacher education: developing innovatory strategies and instructional materials; report, 1980*

15. *Preparing educational personnel: Training methodologies based on locally available learning resources, 1980*

16. *Social change and new profiles of educational personnel, 1981*

The Asian Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of life of the people in the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through over one hundred national centres which they have associated for this purpose with APEID.

The 21 countries in Asia and the Pacific participating in APEID are: Afghanistan, Australia, Bangladesh, China, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Singapore, Socialist Republic of Viet Nam, Sri Lanka and Thailand.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the Unesco Regional Office for Education in Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

The eight programme areas under which the APEID activities are organized during the third cycle (1982–1986) are:

1. Universalization of education: access to education at first level by both formal and non-formal means;
2. Education for promotion of scientific and technological competence and creativity;
3. Education and work;
4. Education and rural development;
5. Education and urban development;
6. Educational technology with stress on mass media and low-cost instructional materials;
7. Professional support services and training of educational personnel;
8. Co-operative studies, reflections and research related to educational development and future orientations.