LIFELONG EDUCATION: DEFINITION, AGREEMENT AND PREDICTION

by

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ABSTRACT

Lifelong education, promulgated by Faure et al. (1972) and elaborated by UNESCO, has been difficult to implement. This is because its central components are not well identified and it calls for a restructuring of education systems. Moreover, advocates of lifelong education know little about the extent to which educators agree with the concept, and need to recognize that those who occupy positions of power within present systems might resist changes that threaten their careers or the status quo. This study had three purposes: to clarify the concept through identifying its constituent elements and deriving postulates from them and thus contribute towards its definition, to develop an instrument to measure the extent to which educators accept these postulates, and to predict "agreement" with them. The attempt to contribute toward a definition of lifelong education was commenced by formulating seventeen characteristics incorporating ideas or assumptions of authors directly connected with UNESCO. An instrument, embodying 28 postulates, was created to measure "agreement" with lifelong education. An array of socio-demographic variables (age, sex, years of teaching experience, self-perceived progressiveness, types of schools, and position) and perceived career effects (on prestige, authority, job security, job difficulty and other advantages) were used as independent variables to predict agreement with lifelong education.

The content, construct and face validity of the Lifelong Education Scale used to measure agreement, was established with
the assistance of nineteen experts on lifelong education associated with UNESCO and 36 pilot subjects in Hong Kong. The LLE scale consisted of 28 item pairs (postulates and contrasts). Total scores were derived by summing over items. Although lifelong education involves variable interactions, there was no attempt to measure interactions among the postulates. The LLE Scale for the dependent variable "agreement" simply asked respondents to agree with postulates. The psychometric properties of two other instruments (the CE Scale and SD Questionnaire) used to measure independent variables were also examined and found to be acceptable. The three instruments were refined and, when ready, completed by 270 Hong Kong educators employed in 68 schools.

It was hypothesized that "career effects" would not account for more variance in educators' agreement with lifelong education than socio-demographic variables. Various analyses, designed to examine the predictive power of different variable combinations showed the following.

"Career effects" did not assert a greater influence than the combination of socio-demographic variables. Considered separately, the best predictors of agreement with lifelong education were "career effects" (on authority and job security). Of the socio-demographic predictors, the most powerful were sex, age and self-perceived progressiveness. When the conjoint effects of the socio-demographic and "career effects" variables were considered they explained 23 percent of the variance in agreement with lifelong education. All the variables, except
"years of teaching experience" explained some variance in agreement with the postulates. But, 77 percent of the variance in "agreement" was unexplained. In this study "agreement" was assumed to stem from an interaction of socio-demographic and career effects.

In retrospect, some of the unexplained variance may have resided in socio-cultural variables. As this study was conducted in Hong Kong, less than ten years before it was supposed to be returned to China in 1997, the political situation was unsettling for many people. There were somewhat intangible and difficult to measure variables which might have influenced the educators' agreement with lifelong education.
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CHAPTER I
NATURE OF LIFELONG EDUCATION

If beauty lies in the eyes of the beholder, 'lifelong education' lies in the ears of the listener, for it rings a different bell for different people. The term, 'lifelong education', often appears attractive enough and people hail it enthusiastically at first sight. But is it education throughout life, organized or unorganized, compulsory or free, planned or accidental? Is 'lifelong' an adjective, describing the kind of education given to youth to prepare them for the whole of their life, or one that bespeaks a different philosophy? How does it differ from 'lifelong learning', 'adult education', 'recurrent education' and 'permanent education', all of which are part and parcel of modern educational jargon?

The notion of lifelong education, as discussed by Faure et al. (1972) in Learning to Be, and subsequently elaborated by UNESCO, has been difficult to implement. This is partly because implementation involves restructuring entire educational systems. The kind of restructuring envisaged threatens those who have a vested interest in maintaining the status quo. For them, horizontal or vertical integration, or democratisation, are potential threats to their authority and power. Administrators and teachers would feel uncomfortable with some aspects of lifelong education. Thus, before expecting implementation to occur, it is necessary to examine the barriers that impede such possibility. Clearly, educators' acceptance or non-acceptance
of the concept of lifelong education could be an asset or a barrier. Since they are the ones to execute policies, successful implementation depends on their acceptance. As Cropley observed:

Acceptance of many of the pronouncements of proponents of lifelong education looks to be mainly a matter of face validity, or even shared ideology, rather than of commitment based on analysis of evidence.... [or] how the outcomes of lifelong education would be evaluated. How would administrators, politicians, or educational theorists know whether changes had taken place [or] those changes would be responsive to the kinds of problem they were supposed to deal with? (1977, p. 152-153)

Hence, the underlying problems of lifelong education lie deeper than surface meaning of the term.

**History of the Concept**

The concept of lifelong education can be traced back to Greek philosophers. It is said that Socrates, Plato and Aristotle laid the foundations of a philosophy of lifelong learning. Lewis (1981), for example, claimed that Socrates considered lifelong learning to be the key to happiness and a "healthy soul" at death; Plato claimed that lifelong study was essential to the control of the immortal soul and the right ordering of society, and Aristotle stressed the lifelong role of study for achieving what one aimed for in life.

Within the present century, the idea of 'lifelongness' in education was expressed in the letter of transmittal that accompanied the 1919 Report of the Adult Education Committee of the Ministry of Reconstruction. Ten years later, Yeaxlee (1929) returned to the theme in a book, entitled 'Lifelong Education',
which stressed that the case for lifelong education rested ultimately upon the nature and needs of human personality in such a way that no individual could rightly be regarded as outside its scope. Dewey (1938) also claimed that education is a lifelong process.

The concept gained popularity as the Declaration of Human Rights endorsed by the United Nations after the Second World War emphasized people's right to education and stimulated governments to consciously use education as an instrument for development. As Faure pointed out,

In countries which were taking their first steps towards industrialization, progress in industry began to have a very nearly direct relation to the popularization of education (Faure et al., 1972, p. 10).

Education has been used to further programmes of development or to maintain cultural balance. Indeed such great progress has been made through education that it is viewed not just as something happening in earlier periods, but throughout life.

The Second UNESCO International Conference on Adult Education had for its theme, "Adult Education in a Changing World" (Montreal, 1960), and set lifelong education as a goal for the future policies of governments. However, it was not until 1965 that the UNESCO International Committee for the Advancement of Adult Education officially discussed the paper, which was presented by the Secretariat on 'Education Permanente/Continuing Education'. The paper dealt with lifelong education, though the concept was not defined fully (Hely, 1962).

During the 1970's, UNESCO concentrated on elaborating the
concept of lifelong education and sought methods to implement and disseminate information related to it. The International Commission on the Development of Education was formed in 1971 for this purpose with Edgar Faure as Chairman. The Faure Report (1972) Learning to Be -- the World of Education Today and Tomorrow stimulated wide discussion. Lifelong education was proposed "as the master concept for educational policies in the years to come for both developed and developing countries" (Faure et al., 1972, p. 182). This idea encompassed many activities and began to be recommended as a guiding principle for educational reform work of the member countries.

In 1972, the Third UNESCO International Conference on Adult Education was convened in Tokyo with its theme, "Adult Education in the Context of Lifelong Education". The conference recommended that all governments include adult education as an integral part of their educational system based on the concept of lifelong education (Lowe, 1975).

The number of countries interested or willing to adopt the concept of lifelong education was reported by Gelpi (1979) as follows:

Responses to the survey on lifelong education conducted within the UNESCO National commissions [on "experiences of the various member states subscribing to the principle of lifelong education", November 1977] (54 responses analysed as at May 2nd, 1978) confirm that there is widespread acceptance of lifelong education as a "new educational concept relating to the educational system as a whole -- both to initial and to subsequent education" (39 out of 54 responses); it also shows that the concept of lifelong education is reflected in the educational legislation of 40 out of 54 countries, that lifelong education is visualized as an educational approach relevant to all countries -- not merely the industrialized countries -- (46 out of
54), and that it is a global approach which does not concern only the urban population (48 out of 54 responses). At the level of political and educational structures the concept of lifelong education has become accepted in recent years, even if this acceptance is sometimes of nonspecific nature (Gelpi, 1979 in Cropley [ed.], 1979).

Countries such as Canada, U.S.A., Great British, Spain, Sweden, Poland, China, Korea, Japan, New Zealand and others in Eastern Europe, South America, Africa and Asia were said to have implemented various elements in varying degrees (see Kulich, 1982; Linton, 1980; Hochleitner et al., 1978; Rubenson, 1981; Gelpi, 1981; Williams, 1977; Boshier, 1980; Japan, Ministry of Education, Science and Culture, 1982; Moro'ka, 1980; Sutherland, 1980; Al-Sharah, 1986; Ekanayake, 1986; and Urevbu, 1985). All this is evidence of the fact that the concept of lifelong education has been put into practice in diverse ways, even though sometimes in a 'nonspecific' manner.

Towards a Definition

UNESCO was responsible for the promulgation of modern forms of lifelong education, and so it is necessary to analyse the writings of authors connected with UNESCO.

In the Faure Report (1972) lifelong education was not defined, but there were 'four basic assumptions', said to be essential for any society seeking to bring about reform in its educational system through evolution rather than revolution. These were:

1) the existence of an international community which amidst the variety of nations and cultures, of political options and degrees of development, is reflected in common aspirations, problems and trends, and in its movement towards one and the same destiny;
2) the belief in democracy, conceived of as implying each man's right to realize his own potential and to share in the building of his own future;

3) the aim of development is the complete fulfilment of man, in all the richness of his personality, ... as individual, member of a family and of a community, citizen and producer, inventor of techniques and creative dreamer;

4) only an overall, lifelong education can produce the kind of complete man ... no longer assiduously [acquiring] knowledge once for all, but [learning] how to build up a continually evolving body of knowledge all through life—'learn to be' (Faure et al., 1972, p. v-vi).

Lengrand (1975), one of the intellectual godfathers of lifelong education, and member of the UNESCO Secretariat since 1948, wrote An Introduction to Lifelong Education, and had this to say,

What we mean by lifelong education is a series of very specific ideas, experiments and achievements, in other words, education in the full sense of the word, including all its aspects and dimensions, its uninterrupted development from the first moments of life to the very last and the close, organic interrelationship between the various points and successive phases in its development (Lengrand, 1975, p.20).

At the 19th Session of the UNESCO General Conference held at Nairobi in 1976, there was an attempt to define lifelong education as follows,

the term 'lifelong education and learning', for its part, denotes an overall scheme aimed both at restructuring the existing education system and at developing the entire educational potential outside the education system;

in such a scheme men and women are the agents of their own education, through continual inter-action between their thoughts and actions; education and learning, far from being limited to the period of attendance at school, should extend throughout life, included all skills and branches of knowledge, use all possible means, and give the opportunity to all people
for full development of the personality;
the educational and learning processes in which children, young people and adults of all ages are involved in the course of their lives, in whatever form, should be considered as a whole (UNESCO, 1977, p. 2).

To Cropley (1977), the key notion in lifelong education was:
all individuals are to have organised systematic opportunities for instruction, study and learning at any time throughout their lives. This is true whether their goals are to remedy earlier educational defects, to acquire new skills, to upgrade themselves vocationally, to increase their understanding of the world in which they live, to develop their own personalities, or some other purposes (1977, p. 21).

Cropley and Dave claimed that lifelong education consisted of five words: (1) totality, meaning covering the entire life-span of the individual and encompassing all levels and all forms of education; (2) integration, meaning all educational institutions are inter-related and interconnected; (3) flexibility, meaning a dynamic approach is used in educational content and methods; (4) democratization, meaning to make it possible for people with different abilities and interests to receive education; and (5) self-fulfilment, meaning to improve each individual's quality of life intellectually, emotionally, socially and politically (Cropley & Dave, 1978, p.13-14).

Gelpi's (1979) statement, which came closest to being a definition from a social perspective, was,
Lifelong education can be regarded from several perspectives (response to social demand, and /or existen­ tial demand, and /or economic and/or cultural demand etc.) and according to the perspective chosen one might think that a development of lifelong education can occur in a specific kind of society or at a speci­ fic period (Gelpi, 1979, p.1).
It can be seen from the above statements that the concept of lifelong education for the UNESCO authors was broadly based, and concerned the individual and society. But there was little consensus as to what elements should constitute a definition. Each author looked at the concept from a different perspective.

**Confusion in the Field**

Ever since UNESCO began promoting lifelong education some confusion has accompanied the term. There are two types of confusion — in terminology, and in concept.

**Terminology**

'Lifelong education' is often confused with 'adult education', 'recurrent education', 'permanent education', and 'lifelong learning'. The term 'lifelong education', although often associated with 'adult education', 'recurrent education', and 'permanent education', should not be equated with them, because it encompasses education for children and youth, as well as for adults. Yet, since the concept of lifelong education was promulgated at the UNESCO Third International Conference on Adult Education in Tokyo 1972, (which had 'Adult Education in the Context of Lifelong Education' for its theme), it has often been confused with adult education, a subset of lifelong education. Indeed the Faure (1972) and other reports and articles published by UNESCO have made it clear that lifelong education means education occurring in informal, non-formal and formal settings throughout the entire life-span of individuals. It has lifelong and lifewide dimensions.

The terms 'recurrent' and 'permanent education' are asso-
ciated with the OECD (Organization for Economic Co-operation and Development) and Council of Europe. The former term is a strategy which enables individuals to resume studies whenever they desire, and return to their regular employment. The latter term is a French equivalent of 'adult education'.

From one perspective, 'lifelong learning' should mean the act of learning throughout one's lifetime and be applied to the underlying function of lifelong education although not limited by it, since one can learn without subjecting oneself to the external ritual of the educational process. It retained its literal meaning until Lifelong Learning in the Higher Education Act, which became Public Law 94-482, was passed by the U.S. Congress in October 1976 (Cassara, 1979, p. 55). Since then, lifelong learning in the U.S.A. has largely been equated with continuing and adult education, much to the dismay of the rest of the world, which has to deal with the confusion that results from this usage.

Concept

Conceptual confusion involves the philosophy, theory and research concerning lifelong education. Analytic educators like Lawson (1982, p. 99) complained that "from many points of view 'lifelong education' could be seen to be less of a concept of education and more of a policy of education". He considered the adjective 'lifelong' to be a redundant descriptor. Since education was clearly 'for life', he could not see any novelty in the notion of 'lifelong' education.

The Faure report (1972) was a policy recommendation to
governments wishing to develop their country through education, but, as a philosophy, it was an amalgam of many ideas, assumptions and postulates. As Cropley put it,

The literature on lifelong education, particularly when it is approached in terms of educational ideas rather than as a set of practices, makes it clear that the majority of writers in the area have indeed accepted, implicitly if not always explicitly, certain beliefs about the nature of man, good, society and education. In this respect, there is an identifiable "philosophy" of lifelong education, if agreement among thinkers concerning goals and values can be said to involve a philosophy. This "philosophy" is loosely humanitarian and humanistic in nature (Cropley 1979, p. 102).

Then he went on to list elements to be included in a philosophy of lifelong education. It would:

1. involve learners as actors in their own learning rather than as passive recipients,
2. foster the capacity to be an active learner,
3. lead to democratization of society,
4. improve the quality of life of all men and women (Cropley, 1979, p. 102).

White (1982), who looked upon lifelong education as a challenge to the traditional programme, spoke in favour of lifelong education, when he rejected the traditional concept of "an educated man" in the liberal philosophy,

If education is to be reconceptualized as a "lifelong process" and not as something belonging only to youth, then we might as well drop the concept of the educated man: there is no line to be crossed; the journey goes on forever (White, 1982, p.130-131).

For persons looking for an ideology that integrates the nature of humankind, education and life, the literature on lifelong education offers solutions rather than abstract philosophy.
Hence, they may be disappointed. But, for those with an eye on operational strategies, the treatment of lifelong education in the literature is elastic enough to include practical concerns.

A frequent criticism concerns the claim that lifelong education lacks a theoretical base. This evoked the following suggestion by Parrot who said that:

To establish the validity and relevance of lifelong education, one must establish a theory which is logically consistent, internally sound, and which is also in a direct and observable relationship with external realities. Without both these conditions being met, lifelong education will wallow in the quicksands of an all-embracing dreamworld (Parrot, 1974, p. 143).

Cropley discussed the need to verify the various fragments of theory:

A continuing problem for educational theorists has been that, although there are scattered and fragmentary statements that emphasize the lifelong nature of educative learning, these have not been collected and organized into a unified theory of lifelong education. Thus, although lifelong education is, to some extent, merely the revival of earlier ideas, it can claim to represent a novel contribution to educational thinking ... (Cropley, 1977, p. 150).

The lack of a well defined theory leaves the door open for various interpretations and reactions, such as by Illich (1971) who advocated "de-schooling", and Ohliger who objected to 'compulsory lifelong schooling' (1983, p. 161), but this is not the same as lifelong education.

As for research, Cropley had this to say in 1977,

Analysts of lifelong education have seldom made a careful analysis of the empirical evidence [to support the belief] that the kinds of expedients proposed for reforming education, both in and out of school, would actually have the desired results. Indeed, it is not at all clear whether or not such [empirical] evidence exists (Cropley, 1977, p. 152).
Many countries and people claim to be practising lifelong education, which they generally understand to mean adult education. Even in books bearing the name lifelong education, there is often scanty evidence pertaining to its philosophy. In short, the field of practice is confused and this mirrors the state of the concept.

The Purposes of the Study

There were three purposes to this study. The first was to clarify the concept of lifelong education through identifying its constituent elements, or characteristics, and deriving postulates associated with them for the development of a definition. The second was to create a reliable and valid instrument to measure the extent to which educators agree with the postulates. The third was to predict educators' agreement with them.

Significance of this Study

It is essential that the concept of lifelong education be clarified before empirical evidence pertaining to its endorsement can be gathered. Many countries claim to be 'practising' lifelong education, and many books have been written on it, but since no definite lines have been delineated for practice various claims have been difficult to evaluate. For research purposes, it is necessary to develop a fairly comprehensive definition with constituent elements of the concept, which should spell out what it would entail to make learning throughout life possible. Hence, this study involved three main steps. The first was to define lifelong education; the second was to
establish the reliability and validity of an instrument built from the definition; the third was to identify variables that could predict educators' agreement with the concept of lifelong education. The results would be useful for policy makers who have to decide whether or not to adopt lifelong education as a 'master concept'.

**Strategy to Accomplish the Purposes**

The following table shows the strategy employed to accomplish the three purposes of the study.

**Table 1**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Strategies</th>
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<tr>
<td>Developing definition</td>
<td>I: Review literature, II: Identify characteristics and derive postulates</td>
</tr>
<tr>
<td>Developing instrument</td>
<td>I: Develop items from postulates, II: Validity and reliability tests by experts and pilot subjects</td>
</tr>
<tr>
<td>Predicting agreement</td>
<td>I: Identify predictors, II: Correlational analysis</td>
</tr>
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</table>

In developing a definition, a review of literature by authors having a direct association with UNESCO was regarded as having greatest relevance for this study, since UNESCO has been the chief proponent of lifelong education. This included the works of the International Commission on the Development of Education (Faure, 1972), Lengrand (1975), Dave (1973, 1976, 1983) Cropley (1977, 1979) and Gelpi (1979, 1981, 1984, 1986a, 1986b). The ideas expressed by these authors were considered
more authoritative than those of other writers who appeared to have derived their notions from the UNESCO group. Yet even among these leading spokesmen there was limited agreement concerning the characteristics of 'lifelong education'. There were some basic points on which they all seemed to agree, such as those concerning 'democratization' of education and the 'improvement' of society, but there were others on which they differ. Gelpi was unique in his stress on culture being integrated into the curriculum, while Faure and Dave put stress on vertical and horizontal integration. In short, different insights were applied to postulates concerning lifelong education. This variation is understandable since they all wrote from different perspectives and under different circumstances. Faure et al (1972, p.v) were commissioned by UNESCO to suggest "overall solutions to the major problems involved in the development of education in a changing universe", and made 21 recommendations. Lengrand wanted to "throw some light on the varying significance of the concept and to show what forces militate in its favour", (Lengrand 1975, p.1) and he looked at lifelong education from a sociological perspective. Dave (1976) hoped his work "will make a humble contribution towards the furtherance of understanding and implementation of lifelong education" and drew up twenty characteristics. Gelpi (1979) wanted to show what a society practising lifelong education would be like, and provided nineteen indicators. Cropley (1977), a psychologist, approached the concept from a psychological point of view. In short, they partly differed and duplicated one another. Review of other
authors was also necessary for clarifying the concept.

For this study it was necessary to identify the characteristics of lifelong education. Associated with each characteristic were various postulates or ideals, which, if implemented, would affect practice in the field. The characteristics were general statements describing each aspect of lifelong education. They were in the form of 'is' statements. The postulates associated with the characteristics were ideals and expressed as 'should be' statements. The characteristics and postulates, taken together, defined lifelong education.

In developing an instrument to measure educators' agreement with lifelong education, the postulates of lifelong education were used as items. The validity and reliability of these items had to be established by experts on lifelong education and pilot subjects. Experts were used to examine content and construct validity, the pilot subjects for face validity, and both for reliability in internal consistency purposes.

In predicting educators' agreement with lifelong education, effects on personal interests formed the bases of the prediction. It was believed that aspects of educators' personal interests would be affected if the postulates were to be implemented. Predictive variables on educators' agreement with the postulates were identified as related to personal particulars, such as age, sex, years of teaching experience, and self-perceived progressiveness, the types of schools they worked in and positions held. Moreover, what they perceived as the effect of the implementation on their personal interests, such as their
perceived "career effects" (on prestige, authority, job security, job difficulty and total advantages), would have predictive influence. The rationale for choosing these variables is given in Chapter IV. Reliability testing by pilot subjects showed internal consistency of the instrument.

Structure of the Dissertation

Chapter I has described the nature of lifelong education, factors affecting its implementation and need to understand why educators 'agree' or 'disagree' with its postulates. Figure I shows the steps associated with the execution of this study.
Phase I - DEFINITION

Literature Review  Ch. II

Derivation of 17 Characteristic Categories  Ch. III

Derivation of 51 "initial" postulates 51 "initial" contrasts  Ch. III

Phase II - INSTRUMENT DEVELOPMENT

LLE Scale sent to 21 experts for content & construct validity & reliability purposes  Ch. V Ch. VII

LLE Scale, CES & SDQ sent to 36 pilot subjects in HK for face validity & reliability purposes  Ch. V Ch. VII

LLE Scale, CES & SDQ refined Postulates reduced to 28 Contrasts reduced to 28  Ch. III, Ch. VII

Phase III - METHOD

"Final" LLE Scale, CES & SDQ administered to 412 HK educators  Ch. IV Ch. VI

284 responses 270 Usable  Ch. VIII

Phase IV - PREDICTING AGREEMENT

Results I
Nature of Sample  Ch. VIII

Results II
Predicting Agreement

A. Ancillary hypotheses
(Regression: Y=agreement, X=separate socio-demographic variables)

B. Minor hypotheses
(Regression: Y=agreement, X='career' variables, groups of socio-demographic variables)

C. Major hypotheses
(Regression: Y=agreement, X='career' variables, combination of socio-demographic variables)  Ch. VIII

Results III
Searching for Explanatory Power  Ch. IX

Figure I  Phases Associated with Execution of Study
The steps are classified under four phases - defining lifelong education, instrument development, method and predicting agreement. Phase I deals with defining lifelong education. The process is described in chapters II and III, the former deals with the review of literature on lifelong education, the latter with characteristics of lifelong education and their associated postulates.

Phase II deals with independent and dependent variables, and the validity and reliability of the instruments. These are described in chapters IV and V. Chapter IV explains the independent and dependent variables, and the hypotheses, Chapter V the design of the validity and reliability tests.

Phase III is concerned with the method. The research design is ex post facto. The location chosen, the population and sample are described in Chapter VI.

Phase IV involved refining the instruments, testing hypotheses and the analysis of variable interactions used to predict agreement with the postulates. These steps are described in chapters VII, VIII and IX. The first of these chapters describes the results of the validity and reliability tests and the refinement of instruments, i.e. the Lifelong Education Scale (LLE Scale) for measuring agreement with the postulates (the dependent variable), the Career Effects Scale (CE Scale) and the Socio-demographic Questionnaire (SD Questionnaire) for predicting agreement. The latter two chapters contain the results of data collection, preparation and analysis, the verification of the ancillary, minor and major hypotheses, and the analysis
of the predictors and the acceptability of the postulates imbedded in the definition of lifelong education. A summary of the study, conclusions and recommendations are found in Chapter X. The following chapter begins the review of literature.
CHAPTER II
LITERATURE ON LIFELONG EDUCATION

In this chapter an account is given of the review of literature on lifelong education undertaken to define the concept, which was Phase I of the study. A description is given of the general background of the literature available, and how it was roughly categorized and used.

Background

Between 1984 and 1986, several ERIC searches were done using the descriptors: lifelong education, lifelong learning, continuing education, professional education, recurrent education and adult education. Twelve books using the words, 'lifelong education' in their title were found in ERIC. A search of Psycinfo from Data Base identified nothing with 'lifelong education' in its title. But much literature on lifelong education could be found in the IERS (International Educational Reporting Service) of the UIE (UNESCO Institute of Education) in Hamburg, and in the International Journal of Lifelong Education. The list drawn from the last mentioned sources from 1982 onwards contained mainly commentaries, reports and recommendations for practice. This list dealt with the broad field of practice. Fifteen books and 21 articles bearing the phrase 'lifelong education' in the titles were reviewed. Thirteen books and three articles from five UNESCO authors were used extensively to form the characteristics and postulates.

Works with 'lifelong learning' in their title were more
plentiful than those with 'lifelong education', but, on examination, it appeared that most equated 'lifelong learning' with 'adult education', especially in the U.S.A. Those not exclusively related to 'adult education', mostly emphasized curriculum and methods (e.g. Clark, 1980; Van Bernem, 1981; Chambers & Sprecher, 1985). On the whole they did not seem to clarify the concept of lifelong education, except in de-emphasizing the form of education. Some of the authors could be said to form schools of their own, such as Illich (1971), Tough (1979) and Ohliger (1983) in that they promulgated "self directed" aspects of education. There were also publications listed under continuing education, professional education and recurrent education. These works mainly dealt with aspects of the concept put into practice.

In the following sections there is a brief review of literature written since 1972, the year the Faure Report was published. Works with 'lifelong education' as part of their titles were emphasized, because the term implied not only the concept, but also the organization, system and process for the concept, so they suit the purposes of this study. The literature could be roughly categorized into that which elaborated the concept and that which concerned applying the concept.

**Elaborating the Concept**

The concept of lifelong education promulgated by Faure and the other members of the International Commission of the Development of Education in 1972 was elaborated during the 70's and early 80's. Faure et al. (1972), who promoted the concept, made
21 recommendations for practice. In 1973 Dave, Director of the UNESCO Institute for Education at Hamburg, pinned down the concept under 20 characteristics, and subsequently made suggestions concerning curriculum and teacher training (1973, 1976, 1977, 1983). Lengrand (1975) was one of the founders of Peuple et Culture and, as a member of the UNESCO Secretariat, examined the foundations of lifelong education from a sociological and cultural perspective. In 1977, Cropley who was on leave and working at the UNESCO Institute of Education in Hamburg (Cropley & Dave, 1978, p. v), wrote 'Lifelong education: a psychological analysis' (Cropley, 1977) in which he explored the psychological dimensions of lifelong education. Gelpi (1979, 1984, 1986a, 1986b) had experience associating with workers (Ireland, 1979, p. ix), drew up 19 "implementation indicators", and examined unresolved problems concerning power and control. In his concern for workers and culture, he stressed the importance of lifelong education as a challenge to the unemployed. The publications by these authors were essential to this study because of their direct connection with UNESCO, which adopted the partly defined concept at its Second International Conference on Adult Education at Montreal (1960), and officially promulgated it at the Third International Conference on Adult Education in Tokyo (1972).

Besides the UNESCO writers already mentioned, other authors also wrote about the concept, theory or philosophy of lifelong education. For example, Parrot claimed that lifelong education lacked a theoretical base and suggested a restrictive defini-
tion. He said the important point was to aim at raising "people's consciousness of our perception of reality, not to blow their minds with unattainable fantasies" (Parrot, 1974, p.143). Lawson (1982) looked at lifelong education from a liberal and analytic perspective and found the concept lacking clear definition. He thought the traditional concept of education had become blurred, and that the distinction between formative influences and those chosen intentionally by the individual and the state had become obscured. Wain (1985), reacting to Lawson (1982) and others, considered lifelong education as being inadequate as a philosophy. Its concern with formal operations militated against the "utopic approaches" of philosophy. He suggested adopting the philosophy of John Dewey, thus providing lifelong education with "the missing philosophical paradigm" that was needed in order to be internally consistent and coherent as a programme. These critics all pointed to the need for clarification, and their works were useful in shaping the approach of this study.

Applying the Concept

There was plenty of literature dealing with the implementation of lifelong education and much dealt with policy and planning, finance and resources (including libraries and museums), curricula, equality of opportunities, attitude towards learning, and teacher training. This literature revealed basic problems faced by countries in their attempts to implement or advocate implementation of lifelong education. These were problems related to educational systems already in existence, or to practices
already accepted without question, such as the lack of opportunities for the integration of different stages of schooling and the emphasis on learners passing examinations rather than on learning how to learn. This literature pointed out the different aspects of the concept, such as vertical and horizontal integration, democratization and the training of teachers, that should be included in a definition.

**Vertical integration.** Related to vertical or lifelong integration, policy and planning were the chief concerns of writers on lifelong education in the 70's and 80's. Pierce (1976) complained about the alleged lack of an integrated and organized policy for youth and adults that would help young adults in their transitions between stages in life. He stressed that education should meet the need of adults of all ages rather than merely serve institutional interests. Linton (1980), writing about Britain, offered suggestions on how to make lifelong education applicable to the existing educational system, particularly in the area of adult education. He advocated using lifelong education as a unifying system for planning. Olofsson's (1981) report on a recent longitudinal project for evaluating the Swedish educational system was an example. It involved 'follow up' of representative samples of sequential cohorts as they left formal education and entered 'working life'. It outlined problem areas connecting secondary school and adult education, such as drop-out rates and rejection, and formed a positive relationship between attendance in secondary education and attendance in adult education. Allman (1982) challenged research
which assumed adulthood is 'non-developmental'. She stressed that adulthood should be conceived as a developmental period, and that lifelong education was an instrument to facilitate the development. Vertical integration required an improved curriculum to solve problems related to transferability. Griffin (1982) analysed the "adult curriculum" and lifelong education, and suggested that adult education as it was in Britain might be an obstacle to the development of an integrated lifelong education curriculum, because many adult education programmes were structured to supply second chances rather than to integrate the learning stages as was often stressed in lifelong education. He called for a reappraisal of adult education content and stressed the importance of transferability. Mitter (1982) made a comparative analysis of four cases: Belgium, Brazil, Nigeria and Romania, focussing on transitions which confronted learners as they progressed through formal education from pre-school to work. So, curricula and transferability would be problems, if vertical integration were overlooked.

**Horizontal integration.** This involves planning for life-wide learning, integration of school, community and the world of work, and maximization of resources and opportunities. Furter (1977) approached lifelong education from: anthropological, socio-economic and political perspectives, and viewed it as informal, non-formal and formal. The importance of comprehensive, diversified and flexible educational structures in the context of lifelong education was emphasized by Mitter (1982). Integration of school, community, and the world of work was
stressed by Guy (1981) who wrote on the implications and implementation of lifelong education with reference to Vancouver (Canada) and Fairfield (New Zealand) to show that schools and communities can be integrated. Fincham (1982) drew attention to the implications of the concept of lifelong education for the secondary school in the United Kingdom. He considered the present secondary education as lacking relevance to life and found a sharp discontinuity between school and work, the curricula emphasizing content rather than development of the individual, and the emphasis of most public examinations still on testing "recall". Urevbu (1985) described the policy adopted by the Nigerian government in integrating science and technology into a policy of lifelong education based on the changing societal needs of the country. For example, all industries should be required to take on a certain proportion of school-based apprentices and government departments required to provide apprenticeship places. He enumerated the problems of implementation and suggested guidelines to solve them. The integration of education and work is at the basis of the problem.

In a horizontally integrated system, resources should be put to maximum use, and more equally distributed among providers of formal, non-formal and informal education than had been generally done. Wolfenden (1973) discussed the contrasts between museums and libraries in the 1920's and now, and claimed that earlier museums and libraries were dull places but now there was an increased awareness of the need for colour and enjoyment in such places. He drew attention to the need for teach-
ers to regard librarians and museum educators as partners. Williams (1977) edited articles written on Sweden, Quebec, Zambia, Venezuela, Poland and Ghana, showing examples of the effects of lifelong education on the use of university resources in these places, in the hope that, other countries knowing such sharing, would have changes in the availability of resources. Hochleitner, Artigas and Cuerpo (1978) reported on the Spanish educational reform which they claimed had been based on the principles of lifelong education. They saw the General Education Law as an attempt to implement lifelong education. That effort met with such problems as "conflict of interests between teachers and the aims of the reform; ... a tendency to regard vocational training as an educational level rather than as a bridge between school and employment; setbacks in the struggle between old and new educational methods and practices", (p. 78). The biggest problems appeared to be the lack of finance, which came up again and again. Rubenson (1981) made reference to a study on self-directed learning and criticized its inadequacy for policy purposes since it concentrated only on the processes and frequency of this learning and neglected the outcomes for the individual and society. For research to be useful for decision purposes, the philosophy of lifelong education and self-directed learning must be related to existing theories of the social function of education. He thought future research should look into the efficacy of individual resources as against collective resources and the role of education in social change. Kulich (1982) wrote on the roles to be played by
universities: in addition to generating new knowledge in research, they also contribute increasingly to lifelong education provision through undergraduate and graduate programmes and professional continuing education. He asserted that government support for universities of British Columbia in promoting lifelong education was insufficient. Such literature showed that clarification on finance and resource aspects of lifelong education was needed.

Democratization. In 1982 the Japanese Central Council for Education (Japanese Government, 1982) recommended measures for the re-organization of the educational system based on the concept of lifelong education. Among the obstacles to implementation were: competition to enter prestigious schools and academic careers, lessening of family education for children due to urbanization and cramming of academic knowledge in school to the neglect of personality training. Reform was underway. In the provisional Fourth and Final Report on Educational Reform (Japanese Government, 1987), many of the elements found in lifelong education were stressed, especially those related to creating more opportunities for learning outside the formal school system, and the recognition of knowledge gained outside formal schools. Such literature showed that equality of opportunities when implementing lifelong education was a prerequisite, for without that it would be difficult to foster positive attitude of learning, since competition for entrance into prestigious schools and academic careers would always be present, and cramming could not be discouraged.
Teacher training. The training of teachers has been one of the chief concerns expressed by the UNESCO authors. Lynch (1977) stressed that knowledge of self, of culture and society, of production and the environment were important elements of teacher training. Dove (1982) pointed out that the teacher played a pivotal role in establishing a positive and fruitful relationship between school and community in a "horizontally integrated" system of lifelong education.

The literature just discussed consisted mostly of reports and recommendations. The areas covered revealed some of the problems, such as: the failure of governments to plan education as a unified system of lifelong education, thus resulting in a lack of educational opportunity for transitions from youth to adult; and a lack of understanding of the importance of learners' developing a positive attitude to learning rather than cramming in knowledge for the passing of examinations. In the existing educational systems a clear and definite concept of lifelong education had to be understood before it could be successfully implemented. Such literature showed that the concept of lifelong education was subject to multiple interpretations. Although the above mentioned research and critiques of research were not directly contributory towards this study, they showed the type of research on lifelong education being covered. There is a large area and much research is needed. If the concept of lifelong education is not clarified, the field will remain an unmapped terrain as far as research is concerned. On the whole, the literature reviewed pointed the way to the kind of postu-
lates that should be derived from the literature.

**No Clear Definition**

The literature in this review consisted mainly of descriptions of lifelong education. But no research had been reported to show the logical consistency of the postulates underlying the concept. In fact, there was still no clear definition of the concept. Although many people had expounded on the concept, there was no official pronouncement to clarify or rigorously define what they meant by lifelong education or what it entailed in practice. Even prominent authors from UNESCO wrote their works for different reasons, but not strictly to define the concept. For example, Faure et al. (1972) wrote a report for the Director General of UNESCO, Rene Maheu, from whom they received the appointment to the International Commission on the Development of Education (Faure, 1972, p.v). Lengrand (1975) wrote his work for the Member States of the General Conference of UNESCO (Lengrand, 1975, p.1). Both Dave (1973, 1976, 1983) and Gelpi (1979, 1984, 1986a, 1986b) wrote with the member countries of UNESCO in mind. Cropley (1977) said he wrote his work with "a wide audience in mind," such as newcomers into the field of lifelong education, scholars, instructors of teacher training and students (Cropley 1977, pp. 7-8). Everyone was using the words, and several examined its systemic qualities. But only a few ever presented a set of postulates which governments could adopt.

Because of the fact that each of these prominent authors had a definite purpose in mind when he wrote his work, so each
expressed lifelong education from a different perspective. Therefore, a framework for the concept was needed, and until one was developed and endorsed by relevant authorities, those who used the term lifelong education would continue to deal with various concepts while calling them all by the same name.

**Literature for Definition**

The concept of lifelong education was not the invention of UNESCO, but in recent decades, UNESCO has been its chief proponent. Therefore, authors directly associated with UNESCO were of greatest relevance and their writings became the foundation for the list of postulates developed here. Other writers appeared to have derived their ideas from these leading writers. Therefore, in defining the concept, literature related to the concept lifelong education from the UNESCO authors already mentioned was the primary resource.

Among the publications of these UNESCO authors there were duplications and different emphases. To clarify the concept it was necessary to pin it down to concrete characteristics and postulates, which were statements expressing what the characteristics would imply when being put into practice. The review of literature pointed out different aspects of the concept and the different educational ideas that would constitute a basic framework for the definition of the concept. In the next chapter an account is given of the process used to derive the characteristics of lifelong education and the associated postulates.
CHAPTER III
DERIVING CHARACTERISTICS AND POSTULATES

The various phases associated with this study were shown in Figure I at the end of Chapter I. This chapter belongs to Phase I of the study. As noted, the purposes of the study were to clarify the concept of lifelong education through deriving postulates for a fairly comprehensive definition, to measure educators' agreement with the postulates and to explain variance in agreement. Steps taken to achieve these three purposes were interrelated. It was not possible to measure "agreement" until such time as a defensible instrument was developed, and the instrument could not be developed until such time as lifelong education had been defined. This chapter describes the steps associated with formulating the definition subsequently used in the development of the instrument. This involved procedures designed to derive a set of postulates concerning lifelong education from seminal literature, particularly the Faure Report Learning to Be.

There were 21 recommendations given by Faure et al. (1972), twenty characteristics by Dave (1983), nineteen indicators by Gelpi (1979) and various points stressed by Cropley (1977) and Lengrand (1975). These recommendations and characteristics varied in emphases. This chapter shows how these recommendations, indicators and points can be categorized under seventeen "characteristics" and associated "postulates". The process involved the following steps.
Deriving Characteristic Categories

The recommendations (Faure et al. 1972), the characteristics (Dave 1983), the indicators (Gelpi, 1979) the other points stressed by Cropley (1977) and Lengrand (1975) were first listed and classified into groups of related ideas (see Appendix A). This process of classification resulted in seventeen groups. These groups of related ideas were expressed with one general 'umbrella' statement showing their central concept or commonality. The 'umbrella' statement formulated for each group could be said to be a 'characteristic' of lifelong education embodying the ideas of postulates expressed by the UNESCO authors. The characteristics fell into the following three categories:

1) inherent, that is, expressing the essence of lifelong education;

2) fundamental, those which are essential, or the absence of which would result in distorting the entire concept;

3) desirable, those which would enhance the meaning or operation of lifelong education.

The Seventeen Characteristics

The rationales for seventeen characteristics and example quotations are in accordance with the postulates retained for the final version of the questionnaire. (see Appendix B on Original Characteristics, and Postulates). Detailed materials contained in the appendices are intended for those who wish to compare the characteristics and postulates with the original ideas from the literature.
Inherent Characteristic

This characteristic reveals the essence of the concept. Lifelong education is not just accidental learning throughout life, but involves conscious and planned processes of learning carried out during people's lives. This is inherent, because if this is not understood by governments and providers, it cannot be said that lifelong education is used as 'a master concept'. Therefore,

Characteristic 1) Education covers the entire life-span of individuals (Faure et al., 1972, p.182; Cropley, 1979, p.9; Dave, 1983, p.3).

There is only one quintessential characteristic - lifelongness. The following are statements expressed by different authors:

The lifelong concept covers all aspects of education, embracing everything in it, with the whole being more than the sum of its parts.... we propose lifelong education as the master concept for educational policies in the years to come for both developed and developing countries (Faure et al., 1972, p. 182).

The single most obvious idea in writings about lifelong education is that it should be something which goes on throughout people's lives (Cropley, 1979, p.9).

The three basic terms upon which the meaning of the concepts is based are "life", "lifelong" and "education" (Dave, 1983, p.3).

To compensate for the neglect of pre-school and adult education in traditional systems, Faure et al. advocated giving priority to the development of pre-school and adult education (Faure et al., 1972, pp.191, 206). But if education for life is stressed there should be no need to stress priority for any age-group unless a society believes it must invest a disproportion-
ate amount of resources on one age group in order to compensate for previous inadequacies.

The reasons why education should be lifelong are numerous and varied, the chief ones being related to change. The consequences of change have strong implications for lifelong education. For example, a lower infant mortality rate and a longer life expectancy increase the pre-school age group and lengthen post-retirement periods. This calls for an increase in places for kindergarten as well as retraining and readjustment. Technological change brings on obsolescence and also calls for retraining or redeployment. When changes occur quickly, people may suffer psychologically, unless given a chance to learn how to adapt at any time during their lives. Education should help people analyse what changes they should resist or promote.

**Fundamental Characteristics**

The next eleven characteristics are grouped under the fundamental category. They deal with essential aspects of the concept; lifelong education would be incomplete without any one of them. They include philosophy that regards knowledge as being tentative and related to life; vertical integration of education throughout life and horizontal integration of the different aspects of education; a positive attitude towards learning; freedom of choice in subject matter and place; easy entry-exit-re-entry; diversified educational provision; special teacher training; shared responsibility with learners in the management of the educational enterprise; societal improvement and a peaceful world community. The eleven characteristics are considered
as fundamental to the concept of lifelong education.

**Characteristic 2) Knowledge is held to be related to life situations** (Faure et al., 1972, p.xxx; Lengrand, in Cropley, 1979, p 32.).

This characteristic is important because it gives the underlying reason why education should be provided for the entire life-span of an individual. This notion is based on the fact that modern world changes cause many situations to be transient. For example, Faure et al. wrote,

One implication of the scientific and technological era is that knowledge is being continually modified and innovations renewed (Faure, 1972, p. xxx).

Lengrand explained,

The traditional concept of knowledge is itself increasingly in doubt. Up to now knowledge has usually been considered to be something by itself....But this is only one component of knowledge, the component contained in manuals, encyclopaedias, treatises and articles....[But there is the other which holds that] there is no other knowledge than the relationship the individual establishes with the object he wants to know....This conception of knowledge has a number of implications of vital importance for lifelong education. If knowledge does not exist by itself, and if it has no stability, then we must stop clinging to it as if it were a piece of solid rock (Lengrand, in Cropley, 1979, p. 32).

Therefore,

Education should be conceived as a process of self-fulfilment rather than as a curriculum to be learnt (Faure, 1972, p. 143).

In other words, learners should be taught the skill to learn more than they should be required to absorb ready-made knowledge (Lengrand in Cropley, 1979, p.35). Knowledge is conceived of as the result of an internal operation. One has to make information meaningful to one's own life situation, whether
using it to solve a problem or to satisfy curiosity. Only then can one claim to have increased one's knowledge. Hence knowing how to learn is more convenient than carrying a baggage load of information. But this characteristic should not be interpreted to mean that there is not a need for some fundamental knowledge.

Characteristic 3) The different stages of life and knowledge are to be vertically integrated (Faure et al., 1972, p.183; Dave, 1983, p.6; Cropley, 1977, p.79, p.93).

The understanding of growth, the interpretation of meaningful knowledge, and the demands made by changes, call for integration. As Cropley put it,

Growth is, in fact, integrated over time, or vertically integrated. This interlocking growth process begins in earliest infancy so that it is lifelong.... learning is rightly viewed as a continuous fabric stretching over a lifetime (Cropley, 1977, p. 93).

Cropley elaborated further,

With psychological development, people acquire patterns of motives, the capacity to experience emotions, an image of themselves as a certain kind of a person, and so on. Each phase of development in these domains is linked to preceding phases and to subsequent phases, so that events at one time in the developmental process interact with those at both earlier and later times (Cropley, 1977, p. 97).

The periods when people are most motivated by different events to learn are the best time for them to be taught. Such events happen in different periods of life. In other words, there are teachable moments in the different periods of learners' lives which should be discovered and used by educators, especially those when learners are most motivated and have the "willingness to focus effort" (Cropley, 1977, p. 102-103).

The understanding of knowledge being transient and related only to life situations calls for vertical integration. Educa-
tion systems should be an expression of such a vertical integra-
tion, for as Lengrand put it,

The first question is to what extent knowledge of any
subject is lasting and changeless. Apart from some ab-
stract truths not subject to variations of experience,
such as mathematical data, the domain of knowledge
expands and changes at such a pace that anyone who
does not regularly adapt his conceptions to the reali-
ty of facts and the evolution of ideas, finds himself
reduced to a totally or partially false vision of the
area in which he is engaged. Regular recycling, as
frequently as possible, thus seems indispensable
(Lengrand, in Cropley, 1979, p.31).

Again he said,

Knowledge itself is an internal operation carried out
by a mind which resolves a problem, finds an answer to
a question.... But every individual can actualize his
potential in his own way, according to his own rhythm
depending on the general biological sociological facts
and the particular happenings at that moment in his
life (Lengrand, in Cropley, 1979, p. 32).

Faure called for integration through the abolition of "ar-
tificial and out-dated barriers between different levels of ed-
ucation " (Faure et al., 1972, p.189), so that learners might
move along the educational system with ease. His statement was
supported by Gelpi, who advocated "integration between initial
training and subsequent training " (Gelpi, 1979, p.x).

Characteristic 4) The different aspects of education, such
as subject disciplines, institutions and educators, related to
the different aspects of life are to be horizontally inte-
grated (Faure et al., 1972, p.189; Gelpi, 1979, p.x; Dave, 1983,
p.6).

The chief reason for the integration of different subject
disciplines is that traditional education with its emphasis on
separate disciplines and specialisations produces people of
different disciplines who are often unable to understand one
another, and learners who are limited in their choice of work.
As Faure (1972) explained, the traditional "academic model" of education, which separates so-called general education from so-called technical education,

has the serious disadvantage of preparing people only for a limited number of professions, and of ruling out the possibility for its graduates, when jobs are scarce, of turning, even temporarily, to the technical and practical activities they have been taught to despise (Faure, 1972, p.xxxi).

This is no help to full development of the whole person. Therefore, Faure suggested that artificial barriers "between different educational disciplines, courses ... and between formal and non-formal education should be abolished" (Faure et al., 1972, p.189).

Gelpi went to the root of the matter and called for the "abolition of any ranking between the so-called manual disciplines and the so-called intellectual disciplines" (Gelpi, 1979, p. x). The traditional attitude places intellectual disciplines higher in a status hierarchy than manual disciplines, which include "the technical and practical activities they [the learners] have been taught to despise" (Faure, 1972, p.xxxi). Such an attitude, emphasizing status, is an obstacle to horizontal integration of the different aspects of education.

Moreover, emphasis on dichotomizing general and technical training would mean turning out students who are either ill-equipped for employment or lack a sense of culture and refinement. Therefore, the world of school should also be integrated with the world of work. Dave gave his reason for the horizontal integration of the different aspects of life as follows:
... integration between the physical, intellectual, affective and spiritual aspects of life is necessary for full development of personality. Such an integration is also required for performing personal, social, and professional roles in a harmonious manner and for taking care of all tasks ranging from the simplest to the most complex ones in an optimally effective manner (Dave, 1983, p. 6).

The key idea of horizontal integration is for the development of a full personality so that one can perform one's different life roles in a harmonious manner.

Characteristic 5) Education is to develop in the learners a positive attitude towards learning throughout life (Faure et al., 1972, p.xxix; Cropley & Dave, 1978, p.12, 20, 31).

This is an essential characteristic of lifelong education, for without it lifelong education could not be maintained. One of the drawbacks of traditional education seems to be its failure to foster interest in learning.

In certain regions where only half of all children are able to enter school, that half again of that half [meaning half of those who have entered school] fail to adapt to it, and become discouraged even during primary education (Faure, 1972, p. xxix).

Therefore it is essential that,

the purpose of lifelong education is that of influencing the process of lifelong learning which already exists. The goal is not that of making lifelong learning occur; that already happens. What is needed is an education system which is capable of aiding, guiding, systematizing and accelerating the process of lifelong learning, in order to improve its efficiency, increase its extent, provide it with goals and purposes, and make it more capable of meeting the needs of the individual (Cropley & Dave, 1978, p. 20).

The skill required for lifelong education is what Dave (1983) termed educability, which includes intrinsic motivation, self-understanding, self-evaluation, willingness to be a learner plus studying and information gathering skills and strategies to
enable one to obtain relevant knowledge when needed. Therefore,

A teacher should facilitate active participation in the learning process (Cropley & Dave, 1978, p. 31).

Learners should be trained to regard learning as something relevant to their lives (Cropley & Dave, 1978, p. 12).

Learning how to learn is important to the whole process of learning throughout life, if interest in learning is to be maintained.

Characteristic 6) Learners are given freedom of choice in where to learn their subjects of interest (Faure et al., 1972, p.220; Dave, 1983, p.7).

The proponents of lifelong education endorse freedom of choice:

It should be made a principle to centre educational activity on the learner, to allow him greater and greater freedom as he matures, to decide for himself what he wants to learn, and how and where he wants to learn it and take his training (Faure et al., 1972, p. 220).

To become 'autodidactic' (Gestrelius, 1977, p. 12 in Cropley, 1979, p. 18) is the term given to self governed learning. The practical problems involved providing for freedom of choice would be the concern of the administrators and planners, since there has to be sufficient subjects to choose from and enough places to go to. But still, Dave stressed that lifelong education is "characterized by its flexibility and diversity in content, learning tools and techniques and time of learning", and "alternative patterns and forms of acquiring education" (Dave, 1983, p.7). Since interests vary from person to person and from time to time in the person's life, a diversified choice of subject matter is necessary to meet the need.
Characteristic 7) Diversification of educational provisions is stressed (Faure et al., 1972, p. 183; Cropley, 1979, p. 74; Dave, 1983, p. 7).

Provision is essentially tied up with the lifelong learning process, for if provision is inadequate, it would be pointless to persuade people not to stock up knowledge but to learn as the need arises throughout life.

It makes its appeal to all kinds of agencies: school, college and university but equally the family, the community and the world of work, books, press, theatre and the media for mass communication (Richmond quoting Lengrand in Cropley, 1979, p. 74).

Dave also wrote,

Lifelong education includes both formal and non-formal patterns of education, planned as well as incidental learning (Dave, 1983, p. 7).

Faure stressed the multiplication of educational institutions:

Educational institutions and means must be multiplied, made more accessible, offer the individual a far more diversified choice. Education must assume the proportions of a true mass movement (Faure et al., 1972, p. 183).

It is easy to see that adequacy and diversity should also be stressed in such places of learning, since the education of the citizens is dependent on them. Faure suggested diversification through division of responsibilities, e.g.

... business, industrial and agricultural firms will have extensive educational functions.... Their role should not be limited to training workers, but extended so far as possible to training technicians and researchers (Faure et al., 1972, p. 198).

In so doing, diversification of educational opportunities is provided for, and the business, industrial and agricultural firms will also have the right kind of personnel and share the financial responsibility for training and research.
Characteristic 8) Entry-exit-re-entry opportunities are provided for all kinds of qualifications and experiences (Faure et al., 1972, p.186, p.203; Cropley & Dave, 1978, p.14; Lengrand, 1975, p.50).

This characteristic is a logical necessity if education is to be lifelong. Faure et al. wrote,

As educational systems become more diversified and as possibilities for entry, exit and re-entry increase, obtaining university degrees and diplomas should become less and less closely linked to completing a predetermined course of study (Faure et al., 1972, p.203).

Each person should be able to choose his path more freely, in a more flexible framework, without being compelled to give up using educational services for life if he leaves the system (Faure et al., 1972, p.186).

Under most existing systems it is difficult for persons to enter education at their appropriate level after leaving school, since life experience and knowledge gained out of school are not ordinarily recognized academically. Cropley and Dave pointed out,

Finally, it would not suppose that an individual is committed to a single life path as a result of educational decisions taken in childhood, but would permit change, for example through new learning carried out after the period of conventional schooling had ended (Cropley & Dave, 1978, p.14).

And Lengrand also emphasized that,

The notion that a man can accomplish his life span with a given set of intellectual or technical luggage is fast disappearing. Under pressure from internal needs and as an answer to external demands, education is in the process or reaching its true significance, which is not the acquisition of a hoard of knowledge but the development of the individual, attaining increasing self-realization as the result of successive experiences (Lengrand, 1975, p.50).

Such experiences may involve returning to school or other
educational institutions. Flexible admission requirements are needed.

**Characteristic 9)** It is required that teachers receive **special training based on lifelong education** (Faure et al., 1972, p.217; Cropley & Dave, 1978, p.36).

In lifelong education the role of teachers has changed from that of a 'distributor of knowledge' to that of a 'facilitator', a 'counsellor' and 'co-ordinator'. To fulfill these new roles it is necessary that teachers update their professional knowledge and techniques. On the training of teachers the proponents of lifelong education wrote,

... teachers will need a number of special personal properties, of which one is the capacity to engage in a process of lifelong learning themselves, both in order to offer a model of lifelong learning for their pupils and also to cope with their own periodical obsolescence (Cropley & Dave, 1978, p.36).

... the principle of a first, accelerated training stage, followed by in-service training cycles, should be adopted (Faure et al., 1972, p. 217).

By keeping up with their own learning teachers can communicate with others more meaningfully than if they were to be confined in a stale milieu. In short, teachers should be lifelong learners also. The special training they receive should not be taken to last all their life without any replenishment.

**Characteristic 10)** **Learners are given a share of responsibility in the management of the educational enterprise** (Faure et al., 1972, p.222; Gelpi, 1979, p.xi).

This characteristic is closely tied in with the idea of freedom and democracy, and with training for democracy. Learners should be given the chance to voice their opinion and have a share in the management of an activity that intimately affects their lives, i.e., their education. Therefore the proponents of
lifelong education advocate such a right for the learners. Faure et al. wrote,

All learners, whether young or adult, should be able to play a responsible part not only in their own education but in the entire educational enterprise (Faure et al., 1972, p. 222).

Gelpi (1979) also supported the idea of "participation of school-children and students in the management of educational institutions" (Gelpi, 1979, p. xi). How this can be done is not spelt out, nor is the degree of participation defined, but the essence of participation is clear. Learners should be able to play a responsible part in their own education, which includes having a voice in the governance of the educational institutions they attend.

Characteristic 11) Education is to be forward looking and optimistic of societal improvement (Faure, 1972, p. 13; Dave & Stiemerling, 1973, p. 29; Lengrand, 1975, p. 99).

If traditional education is accused of being reactive and preservative, lifelong education is essentially proactive and procreative. It not only looks in the direction of changes, but also anticipates them. The stress on the rapidity of change would mean that education not only has to adapt to change but also to anticipate change, since change presupposes movement, and it is within the nature of movement that it gains momentum along the way. Faure wrote:

Science and technology have never before demonstrated so strikingly the extent of their power and potential. During this "second twentieth century", knowledge is making a prodigious leap forward.... (More than 90 percent of scientists and inventors in all of human history are living in our times.) Equally remarkable is the constantly diminishing gap between a scientific discovery and its large-scale application. Man
took 112 years to develop practical applications of the discovery of the principles of photography. Only two years separated the discovery from the production of solar batteries... (Faure et al., 1972, pp. 87-88).

The speed of change in modern society makes it impossible for a person to learn what he needs within a short span of his life and to expect that knowledge will last him all through life.

Education should prepare learners for a type of society which does not yet exist (Faure et al., 1972, p. 13).

Learners should be trained to view time as something positive, bringing human experience, discoveries and progress (Lengrand, 1975, p. 99).

In short, lifelong education has to be forward-looking and optimistic of societal improvement.

Characteristic 12) The value of a peaceful world community is developed in learners (Faure et al., 1972, p. 235, p. 240; Lengrand, 1975, p. 105-107).

Granted that the explosion of knowledge is happening on a global scale, discoveries made in one country are affecting other countries, and lifelong education is supposed to develop an integrated and whole person, it would be regrettable if it fails to inspire an international dimension in the thinking of the lifelong learner. Such a sense is essential for world peace and the development of a personal global perspective. Faure wrote,

All countries at all development levels should therefore be brought into the common effort towards international solidarity, which at the same time should give special consideration to developing countries (Faure et al., 1972, p. 235).

A spirit of peace should be inculcated in the learners (Lengrand, 1975, pp. 107).

Through their programmes learners should be given some
awareness of the unity of mankind and the common aspirations (Faure et al., 1972, p. 240).

If it is true that peace is society's greatest good, that the very survival of the human species is threatened by conflicts ... Inculcating a spirit of peace in individuals is therefore bound up with all the other ultimate ends of education, whether intellectual, affective or social. (Lengrand, 1975, pp. 105-107)

It is especially important in lifelong education because the learners are not only children who will be the rulers of the world, but also adults who already 'rule' the world. Besides, the networks of news and information through satellites and electronic media have already tied people together into a world communication net. Given a world view, one is better able to see oneself and others in a broad perspective, and be rid of pettiness that centres on oneself. In short, the above fundamental characteristics are essential to the concept of lifelong education.

Desirable Characteristics

The desirable characteristics in lifelong education are those practices which facilitate and promote lifelong education even though they are not absolutely essential, but in a system practising lifelong education they are prominent, such as providing equal opportunity for all, maximizing the use of resources, encouraging experiments in self-instruction, enacting supportive legislation, and working toward improved quality of life for all.

Characteristic 13) It is assumed that equal opportunity is provided for all who want to learn (Faure et al., 1972, p. 192; Dave, 1983, p. 6; Gelpi, 1979, p.x).

Since education has been declared to be an universal right,
equal opportunities must be given to exercise that right. But in stressing equal opportunities, the proponents of lifelong education do not stress compulsory education at any stage of people's life, since developing countries may not be ready for such a heavy financial undertaking; nor do they insist that education be free of charge, because it may well be that incentive can be better maintained if education is not free. Wherever possible, equal opportunity for education should be extended to everyone:

All children must be guaranteed the practical possibility of receiving basic education, full-time if possible, in other forms if necessary (Faure et al, 1972, p. 192).

Contrary to the elitist form of education, lifelong education is universal in character. It represents democratisation of education (Dave, 1983, p. 6).

Education, according to the new construct, is no longer the prerogative of a few. Equality of access to education for all is provided at any stage in life, the chief criterion of eligibility being one's capacity to profit from it (Dave, 1983, p.6).

The basis for this characteristic is a democratic ideology, which presupposes equal rights and equal opportunities. Opportunities could not be equal, if the quality of schools in urban and rural areas were unequal. Therefore, Gelpi called for the "abolition of inequalities in the quality of schools in urban and rural areas" (Gelpi, 1979, p.x). The concept of democracy, equality and human rights are subsumed in such a demand.

Gelpi (1979) also expressed a strong bias for workers although such bias is not included in this derivation of a definition, since it is only one of Gelpi's approaches, and
cannot be considered as a characteristic of lifelong education, as the other authors did not emphasize serving any one group of learners.

**Characteristic 14)** The limitation of educational resources is overcome through maximum utilization of facilities, including places of work (Lengrand, 1975, p.32; Lengrand in Cropley, 1979, p.28).

This characteristic is based on the fact that facilities would be in great demand if people are motivated to learn. Learning in some cases, such as pre-service and in-service training, is best done not in premises built exclusively for education, but in environments suited to other purposes. Therefore,

... if one accepts this perspective of a global enterprise which involves the different ages and different periods in life, which harmonizes study time with recreation time, which aims to make optimal use of existing buildings and equipment, then schools and colleges should no longer be built on traditional models but rather on the line of the British village colleges or similar institutions of a polyvalent character and for multiple use (Lengrand in Cropley, 1979, p. 28).

We must, of course, insist strongly that builders of all types (architects, town-planners, etc.) and those who utilize their service ... should engage in no building scheme without having first taken account of the basic needs of human beings both as individuals and as members of communities (Lengrand, 1975, p. 32).

Facilities are essential for lifelong education. Granted the nature of lifelong education is flexible and diverse, and can occur in many places, this should not be an excuse for not building more educational institutions when needed. Also educational facilities should be provided in the workplace (Lengrand, 1975, p.12) and an educational component should be available in all buildings where people gather. An interest in self and
community improvement can be fostered, and easy access provided to those who wish to learn.

Characteristic 15) All types of teaching methods and educational technology are encouraged, particularly experimentation on the effectiveness of self-instruction (Faure et al., 1972, p.209-210; Dave & Stiemerling, 1973, p. 83; Gelpi, 1979, p.xi; Dave, 1983, p.7).

This characteristic is based on the understanding of individual differences among the learners, and different situational needs. Faure et al. stressed that, "the accelerating and multiplying effect of new techniques of reproduction and communication is basic to the introduction of most educational innovations (1972, p. 210). Also,

It has been envisaged that a variety of techniques will have to be used to create opportunities for individuals to continue their education throughout life, new methods will have to be evolved to ensure increasing contact and communication among people and to promote initiative and creativity among them (Le Veugle in Dave & Stiemerling, 1973, p. 83).

Hence, according to Gelpi, "there should be significant development of experiments in self-instruction (1979, p.xi). The inclusive use of all types of media is stressed (Faure et al., 1972; Gelpi, 1979; Dave, 1983). Since lifelong education caters for all types of situations throughout the learners' lives, and as different media help to meet different needs, it is desirable that all media be used. Dave wrote,

Lifelong education is a dynamic approach to education which allows adaptation of materials and media of learning as and when new developments take place (Dave, 1983, p.7).

This need to utilize technology to serve all types of situations and learning requirements is more obvious now than ever before, with the micro and super-micro computer and other
electronic media on the market.

**Characteristic 16) Relevant legislation, such as for paid educational leaves, is recommended to support education throughout life for teachers and learners** (Faure et al., 1972, p.216; Gelpi, 1979, p.xi).

To encourage the maintenance of professional standards, to ensure equal educational opportunities, to have a fairer distribution of teaching personnel in urban and rural areas, and to promote the building up of knowledge through research, legislation should be enacted. Gelpi wrote,

> Provision of facilities (paid leave, scholarships, instructional materials, etc.) [should be made available] to underprivileged groups to enable them to profit from the educational system (Gelpi, 1979, p. xi).

Legislation is in place not only for the benefit of the learners, but also to retain teachers in the less preferred places.

> The desire for promotion, with its financial and social advantages, should not send him [the teacher] inexorably towards a bigger and bigger town, a larger and larger educational establishment, or towards the highest levels of education and the highest grades within those levels (Faure et al., 1972, p. 216).

Whether legislation succeeds in producing the desired results is another matter, but various kinds are desirable and advantageous if lifelong education is to be practised.

**Characteristic 17) The aim of education is to lead to improved quality of life for the people in a community** (Lengrand, 1975, p. 103; Cropley, 1979, p.104; Dave, 1983, p.9).

All education aims to lead to improved quality of life, and lifelong education is particularly more so and is more effective because it is there when people need to improve themselves in the different stages of their lives.
The ultimate goal of lifelong education is to maintain and improve the quality of life (Dave, 1983, p. 9).

The goal of lifelong education can be seen as that of developing a "new man", eager to learn throughout life, capable of doing so, able to set priorities and judge results, democratic, concerned about fostering the quality of life and so on (Cropley, 1979, p. 104).

Lengrand went further to explain what was meant by "quality of life" in a community:

The aims of education also come face to face with the components of what is today called the quality of life ... Everything comes into play, the air we breathe, be it pure or contaminated, the water we drink, be it healthy or polluted, and the land-scape around us, be it pleasant or dismal; or hostile environment which causes distress or a friendly environment where a man feels supported, encouraged and loved ...(Lengrand, 1975, p. 103).

Evidently Lengrand was referring to the community, including work places, where educational opportunities should be provided to solve problems related to community and work. Therefore, education should be used as an instrument for individual and community development.

**The Nature of the Characteristics**

The seventeen characteristics of lifelong education have been derived mainly from the works of the five chief authors promoting the concept from UNESCO. Table 2 identifies the authors from whose works the seventeen characteristics were derived.
Table 2
Sources of Characteristics and Postulates of Lifelong Education

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Faure</th>
<th>Lengrand</th>
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Faure (1972) was the most important single source, followed by Dave (1976, 1983), Cropley (1977, 1979) Gelpi (1979), Lengrand (1975, 1979, in Cropley) and others.

The seventeen characteristics are not all structure and organization, like a skeleton, but embody attitudes, beliefs and values that give spirit to actions and policies. They are inter-related, depend on one another, and, as a result, form an integral whole.

**Interrelationship of the Characteristics**

The inherent characteristic shows the essence of the concept, namely, education should be lifelong. To put the inherent characteristic into practice, the fundamental characteristics must be present to support it, namely, there must be vertical
and horizontal integration of life and knowledge related to life situations, so that there is no need to stock up a baggage of knowledge; the developing of a positive attitude toward learning, so that interest for learning can be sustained throughout life; freedom of choice in place and matter of learning, a diversified provision of learning opportunities, and a flexible entry-exit-re-entry system all help to meet the need for learning in the different life situations; the special training of teachers in the concept of lifelong education so that the spirit and attitude promulgated can be ensured and passed on; the sharing of responsibility in the management of the institution and the educational system to ensure democracy and the handing down of policies according to the concept of lifelong education; and an optimistic outlook on life that would lead to a sense of the world community, so that the ultimate aim and objective of education can be attained. If lifelong education is to be put into practice these qualities must be stressed, because they are inter-dependent. It would be desirable, though perhaps not essential, to have the desirable characteristics as well, such as equal opportunities for all, maximum use of resources, different teaching methods and educational technology, paid leaves and scholarships.

The characteristics are "umbrella statements" for the postulates. These postulates are manifested when the characteristics are put into practice. For example, when lifelong education is put into practice teachers should be lifelong learners, and learners should have a positive attitude towards learning,
otherwise there is little hope that they will continue learning throughout life. The postulates are related to the characteristics which are related to one another; the lack of any one affects the effectiveness of the whole.

Postulates Comprising a Comprehensive Definition

The postulates, which are various ideas taken from the writings of the UNESCO authors and grouped under the seventeen characteristics also demonstrate interrelationships. They are the assumed state of affairs expected in a society using lifelong education as the 'master concept' in an education system. They were processed as follows:

1) Not all the statements have been used verbatim. Those repeating the same idea are incorporated within one statement.
2) Those expressing segments of a general concept expressed elsewhere are left out.
3) Statements of explanation rather than description of an assumed state of affairs are also excluded.

(see Appendix B on Original Characteristics and Postulates)

Altogether 51 postulates associated with seventeen characteristics were developed before being refined. Only 28 survived the refining process. (see Chapter IV)

The following are the postulates retained. They are related to the seventeen characteristics of lifelong education. One postulate for the "inherent" characteristic, two for each of the "fundamental" characteristics, and one for each of the "desirable" characteristics were retained. These 28 postulates
are considered sufficient to show the comprehensiveness of the concept of lifelong education, with the seventeen characteristics as its framework. The 28 postulates relating to the seventeen characteristics were:

**Inherent Characteristic and Postulates**

**Characteristic 1)** Education covers the entire life-span of individuals (Faure et al., 1972 p. 182; Dave, 1983, p.3).

Postulate 1. Education should cover the entire life-span of an individual (D2 in Appendix A).

**Fundamental Characteristics and Postulates**

**Characteristic 2)** Knowledge is held to be related to life situations (Faure et al., 1972, p.xxx; Lengrand in Cropley, 1979, p. 32).

Postulate 2. Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt (Faure, 1972, p. 143).

Postulate 3. Learners should be taught how to learn rather than to accumulate facts (L6 in Appendix A).

**Characteristic 3)** The different stages of life and knowledge are to be vertically integrated (Faure et al., 1972, p.183; Dave, 1983, p.6; Cropley, 1977, p.79, p.93).

Postulate 4. There are 'teachable moments' in the different period of learners' lives which should be discovered and used by educators (Cropley, p.102-103).

Postulate 5. Learners' initial training in school and subsequent training at work should be integrated (Gr in Appendix A).

**Characteristic 4)** The different aspects of education, such as subject disciplines, institutions and educators, related to the different aspects of life are to be horizontally integrated (Faure et al., 1972, p.189; Gelpi, 1979, p. x; Dave, 1983, p.6).

Postulate 6. Distinctions between arts, science and technical streams of education with regard to learners' different subjects should be abolished (F4 in Appendix A).

Postulate 7. Any ranking between manual and intellectual disciplines should be abolished (Gj in Appendix A).

**Characteristic 5)** Education is to develop in the learners a
positive attitude towards learning throughout life (Faure et al., 1972, p. xxix; Cropley & Dave, 1978, p. 12, 20, 31).

Postulate 8. The chief duty of a teacher is to facilitate active participation in the learning process (Cropley & Dave, 1978, p. 31).

Postulate 9. Learners should be taught to regard learning as something relevant to their lives (Cropley & Dave, 1978 p.12).

Characteristic 6) Learners are given freedom of choice in where to learn their subjects of interest (Faure et al., 1972, p.220; Dave, 1983 p.7).

Postulate 10. Learners should be free to choose the school in which to learn (F20 in Appendix A).

Postulate 11. Learners should be given freedom to decide what they want to learn (F20 in Appendix A).

Characteristic 7) Diversification of educational provisions is stressed (Faure et al., 1972, p. 183; Cropley, 1979, p.74; Dave, 1983, p.7).

Postulate 12. Educational institutions should be increased to offer the individual a diversified choice (F2 in Appendix A).

Postulate 13. Business companies should train not only workers, but researchers as well (F9 in Appendix A).

Characteristic 8) Entry-exit-re-entry opportunities are provided for all kinds of qualifications and experiences (Faure et al., 1972, pp.186, 203; Lengrand, 1975, p.50; Cropley & Dave, 1978, p.14).

Postulate 14. Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling (F3 in Appendix A).

Postulate 15. Examinations should be used as a means of comparing method effectiveness rather than as an academic admission aid (F11 in Appendix A).

Characteristic 9) It is required that teachers receive special training based lifelong education (Faure et al., 1972, p.217; Cropley & Dave, 1978, p.36).

Postulate 16. Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula (F18 in Appendix A).
Postulate 17. Teachers should be learners throughout their lives (CD2 in Appendix A).

**Characteristic 10** Learners are given a share of responsibility in the entire educational enterprise (Faure et al., 1972, p.222; Gelpi, 1979, p.xi).

Postulate 18. All learners should be given a responsible role to play in the educational system (F21 in Appendix A).

Postulate 19. Learners should participate in the management of the educational institution they attend (Gg in Appendix A).

**Characteristic 11** Education is to be forward looking and optimistic of social improvement (Faure, 1972, p.13; Dave & Stiemerling, 1973, p.29).

Postulate 20. Education should prepare learners for a society of the future (Faure, 1972, p.13).

Postulate 21. Learners should be taught to view time as being able to bring about human experience, discoveries and progress (Lengrand, 1975, p. 99).

**Characteristic 12** The value of a peaceful world community is developed in the learners (Faure, 1972, p.240; Lengrand, 1975, p.107).

Postulate 22. A spirit of peace should be inculcated in learners (Lengrand, 1975, p. 107).

Postulate 23. Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations (Faure, 1972, p. 240).

**Desirable Characteristics and Postulates**

**Characteristic 13** It is assumed that equal opportunity is provided for all who want to learn (Faure et al, 1972, p. 192; Gelpi, 1979, p.x; Dave, 1983, p.6).

Postulate 24. Similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all (Gh in Appendix A).

**Characteristic 14** The limitation of educational resources is overcome through maximum utilization of facilities, including places of work (Lengrand, 1975, p. 32; Lengrand in Cropley, 1979, p. 28).

Postulate 25. Educational facilities should be provided in places of work (L9 in Appendix A).

**Characteristic 15** All types of teaching methods and educa-
tional technology are encouraged, particularly experimentation on the effectiveness of self-instruction (Faure et al., 1972, p. 209-210; Dave & Stiemerling, 1973, p. 83; Gelpi, 1979, p.xi; Dave, 1983, p.7).

Postulate 26. There should be significant development of experiments in self-instruction (Gp in Appendix A).

Characteristic 16) Relevant legislation, such as for paid educational leaves and others, is recommended to support education throughout life for teachers and learners (Faure et al., 1972, p.216; Gelpi, 1979, p.xi).

Postulate 27. Paid educational leaves should be provided by legislation (L10 in Appendix A).

Characteristic 17) The aim of education is to lead to improved quality of life for the people in a community (Lengrand, 1975, p. 103; Cropley, 1979, p.104; Dave, 1983, p.9).

Postulate 28. Education should be used as an instrument for individual and community advancement (Ge in Appendix A).

It was beyond the scope of this study to measure interrelationships; but still their logical linkage can be shown in the following.

Interdependence of the Postulates

Lifelong education is an integral concept. To a certain extent, each postulate depends upon other postulates. Thus, the inter-relationships among them are crucial in the field of practice and, although these were not measured in this study, their conceptual basis is worth considering.

If education were to cover the entire Life-span of individuals (Postulate 1), then there should be plenty of opportunities for people to learn throughout life and there would be no need to accumulate knowledge while they are young. Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt, (Postulate 2). Since learners
have to be learning throughout life, it is important that they have the skill to learn and not just store up facts, for facts may change, but with a skill to learn they will be resourceful enough to find relevant facts from available sources. Therefore, learners should be taught how to learn rather than only to accumulate facts (Postulate 3). The time when learners are most motivated to learn would be the best time to teach them. Such a time is called a 'teachable moment', and so there are 'teachable moments' in the different periods of learners' lives which should be discovered and used by educators (Postulate 4). The learners should not be forced to learn everything while they are young. What the learners learn in school should also be useful for them at work, and enable them to pursue further learning when required. Therefore, learners' initial training in school and subsequent training at work should be integrated (Postulate 5). Such integration would not be possible if they are taught one type of knowledge or skill in school, but are expected to know another type at work. Very often, while learners are at work, they are required to use a broad spectrum of knowledge, not limited exclusively to arts, science or technical knowledge, but involving a certain amount from all three. For example, a typist having technical skill may have the opportunity to work in a chemist shop or a book shop. The work would be facilitated if that typist has a background of arts and science subjects. Therefore in order to enable learners to have a broad choice of subjects, and also to choose the ones they would prefer to learn, there should be a variety of subjects provided, and
learners should not be streamed into purely arts, science or technical classes learning only arts, science or technical subjects. In other words, the distinctions between arts, science and technical streams of education with regard to learners' different subjects should be abolished (Postulate 6). A variety of subjects would enable learners to develop what they are talented in, and all talents are useful for the individuals and for society. But if society has a bias favouring intellectual talents but not manual skills, then it is difficult for learners not to think they would be discriminated against if they choose manual subjects, even though manual training may suit them. Therefore, any ranking between manual and intellectual disciplines should be abolished (Postulate 7).

If not all subjects can be provided in one school, then they can be provided in different schools, hence, educational institutions should be increased to offer the individuals a diversified choice (Postulate 12), and learners should be free to choose the school in which they prefer to learn (Postulate 10) and also be given freedom to decide what they want to learn (Postulate 11). But learning is done not only while they are of school age but also while they are at work, therefore, educational facilities should be provided in places of work (Postulate 25). As an enrichment to learning, business companies should train not only workers, but researchers as well (Postulate 13), since businesses have their own expertise and experience which will be beneficial to learning. For those who prefer learning on their own for various reasons, there should
be significant development of experiments in self-instruction (Postulate 26) to facilitate self directed learning, so that everyone would have a fair chance to learn. Not only that, similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all (Postulate 24).

Therefore, the development of talents, interest and skill to learn is at the core of the learning process. Adequate opportunities and facilities must be provided for such development.

As for teachers who play an important role in the learning process of learners, it is essential that they know and understand their duty. Since to develop an interest and a skill to learn in the learners is basic for their learning throughout life, the chief duty of a teacher is to facilitate active participation in the learning process (Postulate 8) so that learners would be interested in learning how to learn. The best means to maintain an interest in learning is to relate knowledge to life, and not just abstract knowledge, but knowledge that is meaningful and useful to the learners. Therefore, learners should be taught to regard learning as something relevant to their lives (Postulate 9), so that they will have a positive attitude towards learning. But teachers have to acquire such teaching skills as facilitating the learning process and motivating the interest in learners towards learning. They themselves will need special training to become educators rather than specialists in transmitting pre-established curricula (Postulate
Their interest and skill in teaching need to be maintained and their expertise kept up to date, so they should be learners throughout their lives (Postulate 17). To enable them to learn throughout life without being hampered by the lack of funds, paid educational leave should be provided by legislation (Postulate 27), so that every teacher will have a chance to pursue further studies.

There is also the need for societal support, if education is to cover the whole life-span of individuals. As learners do not confine their learning to their youth, they will resume learning at different periods of their lives, and they would have had different experience and would be at different levels of knowledge. Therefore, they should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling (Postulate 14), and their experience and knowledge should be taken into account when they are seeking admission to further learning. Admission should not be based on academic achievement alone. Examinations on academic achievement should be used as a means of comparing method effectiveness rather than as an academic admission aid (Postulate 15), since the learners' experience and knowledge may not be examinable in the academic sense, but will prove helpful as a skill in learning, and the learners' academic achievement will improve quickly once given the chance to learn. To ensure that the educational institution and the educational system provide learners with programmes that satisfy their felt needs and not just ascribed needs, learners should
participate in the management of the educational institution they attend (Postulate 19), and be given a responsible role to play in the educational system (Postulate 18), so that they can voice their own needs as well as having a chance to understand and practise democracy.

As to what should be taught to learners, besides motivating them to learn, teaching them the skill to learn and developing their talents, learners should be taught to see their world in a broader perspective, and be concerned with the future, to have a spirit of optimism and a spirit of peace. Why? Because the world is getting smaller and smaller through fast means of transportation, and no corner of the world is so distant that it is not influenced by the outside world. The world is also changing very fast with technological development. Education should prepare learners for a society of the future (Postulate 20) and learners should be taught to view time as being able to bring about human experience, discoveries and progress (Postulate 21), so that they are always prepared for change to take place, to adapt to change, and also to initiate or to resist change when necessary. Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations (Postulate 23), so that a spirit of peace can be maintained. A spirit of peace should be inculcated in learners (Postulate 22), because without peace nobody can learn as desired. Education should be used as an instrument for individual and community advancement (Postulate 28). This is important, because learners who have had support from the community for
learning throughout life should not turn out to be selfishly thinking of their own advancement without thinking of the advancement of the community and should help to raise the quality of life as a whole.

**Derivation of a Definition**

The foregoing analysis has described the seventeen characteristics and associated postulates. Lengrand (1975) defined lifelong education as a "series of very specific ideas, experiments and achievements, [that is] education in the full sense of the word". Lengrand's was a commendable definition but, like others, lacked specificity concerning the components to be embodied within "lifelong education". The postulates represent an attempt to identify components that "bound" the concept of lifelong education. But here a clarification is needed. Lifelong education works within a system. In practice, the postulates would interact. They exist in an ecological system where a change in one affects the others. It was beyond the scope of this study to examine these interactions. Rather, the purpose was to simply list, and then use - in a summative fashion - postulates that represent what experts claim is the essence of lifelong education. So, from one perspective, it could be claimed that lifelong education is simply the "sum" of these postulates. But this is overly simplistic, since it is their interactions that shape the character of lifelong education in the world of practice. Thus the "comprehensive definition" referred to throughout this report is, in one sense, only a partial one since the systemic qualities of lifelong education were not
encompassed in the quantitative analysis, although they certainly informed the conceptual foundation of the study. Thus the postulates are a contribution toward a truly comprehensive definition of lifelong education which cannot be obtained at this time, because its systemic qualities are difficult to study and are not well understood or canvassed in the literature. Nevertheless the list of postulates described here are an essential first step and, as a definition, it can be said that, lifelong education consists of the postulates associated with its seventeen characteristics.

The Definition

The definition can be expressed in the following terms.

Lifelong education means:

Inherently
1. Education covers the entire life-span of individuals.

Fundamentally
2. Knowledge is held to be related to life situations, so education is considered as a process of self-fulfilment rather than a curriculum to be learnt; and learners are taught how to learn rather than to accumulate facts.

3. The different stages of life and knowledge are to be vertically integrated, so the 'teachable moments' in the different periods of learners' lives are discovered and used by educators; and learners' initial training in school and subsequent training at work are integrated.

4. The different aspects of education, such as subject disciplines, institutions and educators, related to the different aspects of life are to be horizontally integrated, so distinctions between arts, science and technical streams of education with regard to learners' different subjects are abolished; and any ranking between manual and intellectual disciplines are also abolished.

5. Education is to develop in the learners a positive attitude towards learning throughout life, so the chief duty of a teacher is to facilitate active participation in the learning process; and learners are taught to regard
learning as something relevant to their lives.

6. Learners are given freedom of choice in where to learn their subjects of interest, so learners are free to choose the school in which to learn, and are given freedom to decide what they want to learn.

7. Diversification of educational provisions is stressed, so educational institutions are to be increased to offer the individual a diversified choice; and business companies train not only workers, but researchers as well.

8. Entry-exit-re-entry opportunities are provided for all kinds of qualifications and experiences, so learners are able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling; and examinations are used as a means of comparing method effectiveness rather than as an academic admission aid.

9. Teachers are required to receive special training based on the philosophy of lifelong education; they are trained to be educators rather than specialists in transmitting pre-established curricula, and are learners throughout their lives.

10. Learners are given a share of responsibility in the entire educational enterprise, so all learners are given a responsible role to play in the educational system, and participate in the management of the educational institution they attend.

11. Education is to be forward looking and optimistic of social improvement: it prepares learners for a society of the future, and learners are taught to view time as being able to bring about human experience, discoveries and progress.

12. The value of a peaceful world community is developed in the learners, so a spirit of peace is inculcated in learners, and through their programmes learners are given some awareness of the unity of mankind and its common aspirations.

Desirably

13. Equal opportunity is provided for all who want to learn, so similar quality in resources for all schools in urban and rural areas are maintained to ensure fairness for all.

14. The limitation of educational resources is overcome through maximum utilization of facilities, including places of work, so educational facilities are provided in places of work.
15. All types of teaching methods and educational technology are encouraged, particularly experimentation on the effectiveness of self-instruction.

16. Relevant legislation, such as for paid educational leaves and others, is recommended to support education throughout life for teachers and learners.

17. The aim of education is to lead to improved quality of life for the people in a community, so education is used as an instrument for individual and community advancement.

The postulates subsumed under this definition were rephrased in 'should be' statements for the purpose of measuring educators' agreement with them. The respondents were presented with a list of postulates and asked to indicate the extent to which they agreed with each. Scores were summed over items, so a person with a high score would tend to be more positively disposed towards lifelong education, in its entirety, than those with low scores.

The consistency of the postulates had to be tested before it could be said they constituted 'lifelong education'. A group of experts and pilot subjects were chosen to establish their reliability and validity in the process of instrument building. This is discussed in a later chapter. In the next chapter, independent and dependent variables for the study are identified.
CHAPTER IV
INDEPENDENT AND DEPENDENT VARIABLES

The first purpose of this study was to clarify the concept of lifelong education through deriving postulates associated with the characteristics and thus contribute towards a definition. The second purpose was to develop an instrument to measure educators' agreement with the postulates. Much effort was expanded the creation of postulates which subsequently served as items in an instrument designed to measure "agreement". The development of tests designed to examine the reliability and validity of the instrument are detailed in the next chapter. The third purpose was to predict "agreement".

In order to inform the reader of the rationale behind the instruments, the independent and dependent variables and the design of the research have to be described before instrument development. Therefore, this chapter belongs to Phase III of the study instead of Phase II (see Figure I). It contains a discussion of the independent variables chosen, the research design and the hypotheses. The independent variables are assumed to explain variance in educators' agreement with lifelong education.

Literature for Conceptualizing the Study

In this review attention had been paid to the kinds of theories that would be useful in formulating a conceptual framework for explaining variance in educators' agreement with lifelong education. Lifelong education has been defined as having seventeen characteristics and associated postulates.
Inspiration for the conceptualization employed for this study partly came from Apel (1966). The purpose of his study was to test the notion that a respondent's expectation of certain effects of proposed institutional changes could be used more accurately than a single measure of personality, (i.e. the Rokeach Dogmatism Scale), to predict attitudes toward specific institutional changes. Apel thought global characteristics like dogmatism were far less efficient predictors of human behaviour in specific situations than variables which measured expectancy in the affected parties' perceptions of the effect of the proposed changes on their own personal interests. His 'expectancy' predictors turned out to be superior to single personality characteristics because the whole situation affected by the proposed change was taken into account. Human beings were thought to accept or reject a proposed change on the basis of their understanding of what it will mean to their own interests.

Apel developed an instrument for comparing respondents' beliefs regarding the functions of university extension, their interpretations of the "effects" of change, and expressed willingness or unwillingness to implement the proposed activity. It was hypothesized that the anticipated result of change as it affected institutional goals and personal interests (such as prestige, prospect for advancement, difficulty of job, interest of job, and all things considered) was a better predictor of attitudes toward change than single personality measurement. The rationale behind his study was that although attitude towards change in general varies among persons, the most important
variation in explaining attitude toward specific changes seemed to be what the individuals consider 'good' or 'bad' for themselves.

Independent Variables

Since the postulates of lifelong education were educational ideas, and this was a study on educators' agreement with them, factors affecting this agreement were chosen as the independent variables. There were personal data, types of schools, and position.

Personal Data

Personal data included: sex, age, years of experience in the teaching profession and self-perceived progressiveness. The popular view was that increasing age was associated with a disinclination to change. But as there were no firm grounds on which to base the prediction on these variables, a null hypothesis was thought best assigned to sex and age as predictors of attitude.

Regarding the effect of experience on change, the research findings were mixed. Apel (1966) referred to earlier research reported by Dalton (1959) and Trumbo (1961), which indicated that individuals with more capability would tend to have more favourable attitudes toward changes, apparently disagreeing with Presthus (1962) who suggested an increase in an individual's expertise and competence (assuming that capability could be equated with expertise and competence) increased his resistance to change. Since research views were divided, a null hypothesis was thought best assigned to years of experience as a predictor.
of agreement with lifelong education.

Self-perceived progressiveness was chosen because a person possessing a strong degree of progressiveness might reasonably be expected to be more receptive to new ideas and change than a person not so inclined. In this study, although many of the postulates of lifelong education were innovative, it could not be certain that "perceived progressiveness" would be an influential variable for predicting agreement with the postulate, since many of the postulates, when put into practice, would entail certain changes which may or may not be in the respondents' "personal interests". Therefore, a null hypothesis was thought best to deal with 'self-perceived progressiveness' as a predictor of agreement with lifelong education.

Types of schools

Different types of schools grouped according to their curricula and methods of financing would likely possess differential elements affecting educators' agreement with lifelong education, especially if changes were implied in so doing. Four types of schools were identified: schools grouped according to curriculum such as academically oriented schools like grammar schools, and vocationally oriented schools like technical schools; and schools grouped according to funding - "government funded" and "non-government funded" schools.

Academically and vocationally oriented schools. Educators in these two types of schools might have different views on postulates related to teaching methods. In lifelong education a diverse selection of technologies for teaching should be availa-
ble for use, and not just chalk-and talk as commonly practised in some classrooms. Educators from vocationally and academically oriented schools might view this differently. Many of the former would have technical know-how, but not so the latter.

In lifelong education physical resources are to be maximized in time usage and for different age groups, and not be limited to school hours and groups of traditional school ages. Educators from vocationally and academically oriented schools might have a different view on this. The former might be concerned over the wear and tear on the workshops, whereas those from academically oriented schools consisting mostly of classrooms might be concerned over such things as art works on notice boards being spoilt.

Government funded and non-government funded schools. It was uncertain how educators in these schools would react to lifelong education, but differences were there. For example, in lifelong education, easy entry-exit-re-entry to educational institutions is encouraged. This entails a good deal of work for administrators and teaching problems for the teachers. Therefore, it would likely be frowned upon by both administrators and teachers, but for financial reasons easy entry-exit-re-entry is prevailing in non-government funded schools, so educators from government funded and non-government funded schools might view this implication differently.

In lifelong education access to educational facilities is to be equal for all and not determined by predefined factors like I.Q. and physical fitness, as in the current selection
system. Administrators and teachers might not like that since this would mean an end to homogeneous classes and many educators consider a heterogeneous class of learners difficult to handle. But flexible access was a common practice in many non-government funded schools due to financial reasons, since more admissions mean more income. Therefore administrators in government funded and non-government funded schools would likely have different views on this postulate.

An integration between knowledge and life is stressed in lifelong education, entailing the abolition of rigid levels of classes, but requiring the practice of recurrent education. Both administrators and teachers would probably not like that, since it would mean the end of homogeneity and difficult administrative and teaching work. But it would mean flexible admission and improvement of finance in non-government funded schools. Therefore administrators in government funded and non-government funded schools would possibly have different views on such postulates.

In lifelong education there is also a stress on integration between knowledge and the environment, entailing the recruitment of specialists besides teachers, and also the abolition of the distinction between arts, science and technical streams of education, and any ranking between manual disciplines and intellectual disciplines. Both administrators and teachers might frown upon that in government funded and academically oriented schools, since this could be a threat to their authority in subject matter. But in non-government funded schools both ad-
ministrators and teachers might not mind since both administrators and teachers are often required to handle more than one subject, and the involvement of other people from other disciplines may mean easier work, so educators in these schools might differ.

Since differences exist, although not in a clearly predictable direction, it was thought best that a null hypothesis be assigned to schools grouped according to curriculum and schools grouped according to funding as predictors of agreement.

**Position**

Educators grouped according to position were divided into two categories: administrators (i.e. principals and their assistants) and teachers. Positions were chosen because people holding different positions would have different responsibilities which could result in different perspectives on issues. It was envisaged that educators in different positions would look at educational ideas from different perspectives. Two positions were originally considered for comparative purposes, namely: administrators and teachers in this research, and by administrators, it was meant to be principals only. But it was not certain whether a sufficient number of principals would participate in this study, so the sampling was modified to include their assistants. Assistants are partly administrators and partly teachers, so it was thought that in case there were not enough principals, their assistants might also be compared with teachers. Principals would either answer or not answer the questionnaire, and no way could be thought of to ensure their res-
response, except through a persuasive letter stressing the importance of their participation. Therefore, assistants were included just in case the principals did not want to reply.

The nature of knowledge in lifelong education is defined by the learners and not prescribed by the school. This situation would make planning more difficult, but teaching might become more interesting. The outlook of lifelong education is proactive, e.g. preparing learners for a society that does not yet exist (Faure et al, 1972). This would involve special curriculum planning for administrators, but teachers might feel this rather challenging. The ideology of lifelong education is to create a sense of the world community, and to aim at reaching a high quality of life for society in general and not just for individual advancement. Teachers and administrators might have similar or different views on this.

As for clients, in lifelong education they comprise all groups and not just those of traditional school age. The administrators and teachers might see an increase in their prestige, if education were to be provided for the whole life-span of all individuals, since the status of their profession would be enhanced if education were in great demand. Moreover, some teachers might feel threatened by the idea of teaching adults who might be older and have higher status than they do. But it was not certain that they would really think that way.

In the educational process of lifelong education, easy entry-exit-re-entry to educational institutions is encouraged. This would entail a good deal of work for the administrators and
teaching problems for the teachers. Therefore, it might be frowned upon by both administrators and teachers. In lifelong education learning activities are to be freely chosen by the learners, and not strictly predetermined by the school. Administrators might not like that since administrative problems may ensue when learners cannot make up their minds on what to choose, but teachers might have more freedom in class than they do if they have to abide by a set curriculum. Therefore their views might be different.

The use of technology and audio-visual aids is proposed by advocates of lifelong education. Administrators might endorse that because learners would be kept interested, and discipline problems could be minimized. The teachers' view might be different, because this might entail additional lesson planning and preparation.

The teachers in lifelong education are to be trained as educators and not just as information transmitters. Administrators might like that, since this would improve the quality of the teaching staff, bring up the standard and increase the prestige of the school. But teachers might be offended, since many of them are used to just passing on information and getting students to pass examinations. The implementation of lifelong education implies they were to be retrained. So the view of administrators and teachers might be different.

Educational leave for teachers is considered as a right in lifelong education and not as a privilege. Administrators might not like that because it would mean teachers would be absent,
and additional work for the administrators. Teachers might approve because they could have a change from the routine of teaching, and after up-grading themselves in knowledge, they might be promoted to a higher position. So the views of administrators and teachers might be different.

In the provision of lifelong education, a diversified selection of subjects is advocated, and a broader curriculum. This would require planning and managing more courses, and so more work than now, which the administrators might not like, but teachers might not mind, since they are used to handling their own subjects unaffected by increase or decrease of subjects in the institution. Therefore the views of administrators and teachers might be different.

Physical resources for education are to be maximized in time usage and for different age groups, and not limited to school hours and school-aged groups as the way many resources are used now. Administrators might not like sharing the same premises with some other heads in charge, and human relationship problems might ensue. Teachers might be differently affected, e.g. they might be required to share their desks with other teachers from the evening school, so they might not like that.

Access to educational facilities is to be equal for all and not determined by predefined factors like I.Q. and physical fitness, as it was in some current selection systems. Administrators and teachers might be differently affected. This would mean an end to homogeneous classes. Many teachers would find it difficult to teach learners with different standards in a mixed
class, but administrators might not be affected in the same way. Therefore their views might differ.

In lifelong education the organization management of the educational institutions is to be shared with learners unlike the prevailing practice which often excludes learners. Administrators might not like that since it would mean difficulty, such as having to handle complaints and different opinions, but teachers do not deal with administration, so their views might be different.

There is also a stress on integration between knowledge and the environment, entailing the recruitment of specialists besides teachers, and also the abolition of the distinction between arts, science and technical streams of education, and any ranking between manual disciplines and intellectual disciplines. This might be a threat to job security and an end to homogeneity. It is not clear how the administrators and teachers would regard the implementation of such ideas.

Since these are the postulates associated with the characteristics of lifelong education which would be variously endorsed or frowned upon by administrators, it was thought best to assign a null hypothesis to the variable of position as predictor of attitude in the study.

**Intervening Variables**

The variables described so far appeared non-directional and passive. There might be unknown factors offsetting the predicted effects. These factors were intervening variables. These were difficult to identify. But what could be pinned down were
educators' perceived effects of lifelong education on their 'personal interests', such as career effects (on prestige, authority, job security, job difficulty and other advantages. These are intervening variables, actively moderating the educators' agreement with lifelong education.

**Career Effects**

In this study 'personal interests' were 'prestige, authority, job security, job difficulty and other advantages'. 'Authority' was chosen because such personal interests were pertinent to a society like Hong Kong, the chosen locale, since prestige, authority, job security and job difficulty were the personal concerns of people having to eke out a living in a competitive society. Some of the postulates of lifelong education, if implemented, would affect the authority of administrators and teachers, such as those advocating letting learners participate in the management of the educational institution they attend, and de-emphasizing a fixed curriculum. 'Job difficulty' was used to break the 'response set', the tendency of the respondents to reply in the positive. More 'job difficulty' would mean less 'personal interest'. 'Job security' was chosen to replace 'interest of job', since some of the postulates of lifelong education, if implemented, might pose a threat to the job security of teachers, such as those advocating the recruitment of specialists from other fields to teach besides the regular teaching staff, and to use educational technologies, which many educators may not feel comfortable with.

Although the major hypothesis of Apel's study (1966) was:
anticipated result of change as it affects institutional goals and personal interests (such as prestige, prospect for advancement, difficulty of job, interest of job, and all things considered) was a better predictor of attitudes toward change than any single personality measurement, and it was confirmed, yet it was not certain that the perceived career effects (on prestige, authority, job security, job difficulty and other advantages) would be better predictors of educators' agreement with the postulates of lifelong education than all other variables just listed, namely, personal data: age, sex, teaching experience and self-perceived progressiveness; the types of schools they worked in and the position they held. Therefore, null hypotheses were assigned.

Dependent Variable

The educators' agreement with the postulates of lifelong education was the dependent variable. The independent variables were predicted to affect it.

Type of Research Design

This was an ex post facto study. A Lifelong Education Scale (LLE Scale), a Career Effects Scale (CE Scale) and a Socio-demographic Questionnaire (SD Questionnaire) were developed (see Appendix I.1,2,3). The LLE Scale was to measure the subjects' level of agreement with the postulates, the CE Scale to measure their views concerning the effects of lifelong education on their prestige, authority, job security, job difficulty, and other advantages. The SD Questionnaire elicited personal in-
formation, such as age, sex, years of experience in the teaching profession, self-perceived progressiveness, the type of school in which they were employed and their position, i.e. administrator, assistant or teacher. These variables were also used as predictors.

A Model

A model detailing hypothesized interrelationships between variables used in this study is shown in Figure II.
INDEPENDENT VARIABLES

PERSONAL DATA
- AGE
- SEX
- EXPERIENCE IN TEACHING
- SELF-PERCEIVED PROGRESSIVENESS

TYPES OF SCHOOLS
- GOVT-FUNDED
- NON-GOVTFUNDED
- ACADEMICALLY ORIENTED
- VOCATIONALLY ORIENTED

POSITIONS
- ADMINISTRATOR
- TEACHER

PERCEIVED CAREER EFFECTS
- PRESTICE
- AUTHORITY
- JOB SECURITY
- JOB DIFFICULTY
- OTHER ADVANTAGES

DEPENDENT VARIABLE

STATED AGREEMENT WITH THE POSTULATES OF LIFELONG EDUCATION

A = Personal data
B = Types of schools
C = Positions
D = Career effects
W = A + B + C
Y = Agreement with lifelong education postulates

Hypothetical effect on Y:

D = A
D = B
D = C
D = W

FIGURE II A MODEL FOR PREDICTING VARIANCE IN EDUCATORS' AGREEMENT WITH POSTULATES CONCERNING LIFELONG EDUCATION (1)
As shown in Figure II, individuals are affected by different factors influencing their agreement with the postulates of lifelong education. As educators, their agreement towards the concepts are affected by personal data: such as age, sex, years of teaching experience and self-perceived progressiveness; the types of schools they work in: whether academically or vocationally oriented schools, funded or non-funded schools; and the position they hold: whether administrators or teachers. Moreover, their responses are influenced by the anticipated effect of lifelong education on their authority, prestige, security, job difficulty and 'other advantages'.

The level of stated agreement with the postulates formed the dependent variable and all the other variables mentioned above were independent. The lines denote these presumed relationships. Thus "career effects", as well as personal data, the types of schools they work in, and the position they hold as separate categories, and consequently, all the variables considered together in personal data, types of schools they work in and the positions they hold as a group, will have influence on their agreement with lifelong education.

**Hypotheses**

Ancillary, minor and major were formulated. Ancillary hypotheses were related to personal data and were null, because there was no certainty concerning the direction of relationship investigated here. The six ancillary hypotheses were so called because it was perceived that their variables would have some influence on educators' agreement with the postulates.
The minor hypotheses were related to career effects (on prestige, authority, job security, job difficulty and other advantages). It was not certain if career effects would be better predictors than personal data, type of school and position. Thus the three minor hypotheses were also null.

There was only one major hypothesis. It was not certain if career effects would be better predictors than the combination of personal data, type of school and position. Therefore, the major hypothesis was also null. The hypotheses were as follows.

Ancillary Hypotheses

Ancillary Hypothesis One: There is no significant difference between male and female educators in their agreement with the postulates of lifelong education.

Ancillary Hypothesis Two: There is no significant relationship between the age of educators and their agreement with the postulates of lifelong education.

Ancillary Hypothesis Three: There is no significant relationship between educators' years of experience in the teaching profession and their agreement with the postulates of lifelong education.

Ancillary Hypothesis Four: There is no significant relationship between educators' self-perceived progressiveness and their agreement with the postulates of lifelong education.

Ancillary Hypothesis Five: There is no significant difference between educators who work in vocationally oriented schools or academically oriented schools, non-government funded school or government funded school, in their agreement with the postulates of lifelong education.

Ancillary Hypothesis Six: There is no significant difference between educators who are administrators and those who are teachers in their agreement with the postulates of lifelong education.
Minor Hypotheses

Minor Hypothesis One: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of personal data (age, sex, years of teaching experience and self-perceived progressiveness) on educators' agreement with postulates of lifelong education.

Minor Hypothesis Two: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of types of schools on educators' agreement with postulates of lifelong education.

Minor Hypothesis Three: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of positions on educators' agreement with postulates of lifelong education.

Major Hypothesis:

There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of a combination of personal data (age, sex, years of teaching experience and self-perceived progressiveness), types of schools and positions on educators' agreement with postulates of lifelong education.

In the following chapter the development of the LLE Scale, the CE Scale and SD Questionnaire is described.
CHAPTER V
INSTRUMENT DEVELOPMENT

Three instruments were used in this study. The LLE Scale (Lifelong Education Scale) was for measuring educators' agreement with the postulates of lifelong education, the CE Scale (Career Effects Scale) and the SD Questionnaire (Socio-demographic Questionnaire) for predicting their agreement. The instruments were for three groups of recipients, the experts, the pilot subjects and the main sample that consisted of Hong Kong educators. There is also an account of the procedures used to identify lifelong education experts and pilot subjects to establish the reliability and validity of the instruments.

The Lifelong Education Scale

The content of the LLE Scale was drawn from the writings of the UNESCO authors. It has been shown in Chapter III how the 21 recommendations of Faure (1972), the twenty characteristics of Dave (1976), the nineteen indicators of Gelpi (1979), the points stressed by Lengrand (1975) and Cropley (1979) were categorized under seventeen characteristics, from which 51 postulates were derived. The characteristics form the boundary of 'lifelong education'. Their associated postulates formed the content of the LLE Scale. The experts were asked whether they considered the statements in the questionnaire were postulates of lifelong education. As it is not unusual for subjects to acquiesce to authoritative sounding terms, the postulates were matched with contrasting statements (contrasts), and all items were random-
ized, so that the respondents would not be able to respond positively to all the statements without contradicting themselves.

The Postulates and their Contrasts

'Postulates' referred to the postulate statements, and 'contrasts' to statements intended to be their contrasting statements. The contrasts were not exact opposites of the postulates, but statements not completely compatible with ideas expressed in the postulates. They were included to check on the responses and to counter possible response set. When the experts replied, they would soon become aware that some of statements were the opposites of others, so they would be more careful with their responses than if the statements were all phrased in a positive format. But not all contrasts were phrased in a unidirectional manner; some were just different current educational ideas stated in positive formats.

(see Chapter VII, para. Treatment of the Contrasts)

The 51 postulates plus their contrasts were randomly distributed throughout the questionnaire sent to experts for validity and reliability testing (see Appendix B). The following is an example of a postulate and its contrast.

Postulate 1 - Education should cover the entire lifespan of an individual.

Contrast 1 - Education should cover mainly the youthful years of an individual.

"Youthful years" is not exactly the opposite of lifespan, but because lifelong education emphasizes education for the whole lifespan, and some current practices emphasize education
for youthful years, this was deemed to be a "contrast". So statements, such as this, were conceptual opposites. They were paired as follows.

Postulate 1 - Education should cover the entire lifespan of an individual.

Contrast 1 - Education should cover mainly the youthful years of an individual.

Postulate 2 - Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt.

Contrast 2 - Education should be considered a curriculum to be learnt rather than a process of self-fulfilment.

Postulate 3 - Learners should be taught how to learn rather than to accumulate facts.

Contrast 3 - Learners should be taught to accumulate facts rather than how to learn.

Postulate 4 - There are 'teachable moments' in the different periods of learners' lives which should be discovered and used by educators.

Contrast 4 - Learners learn best while they are young.

Postulate 5 - Learners' initial training in school and subsequent training at work should be integrated.

Contrast 5 - Learners' initial training in school and subsequent training at work should be separated.

Postulate 6 - Distinctions between arts, science and technical streams of education with regard to learners' different subjects should be abolished.

Contrast 6 - Classes should be divided into arts, science and technical streams.

Postulate 7 - Any ranking between manual and intellectual disciplines should be abolished.

Contrast 7 - Intellectual disciplines should be ranked higher than manual disciplines.

Postulate 8 - The chief duty of a teacher is to facilitate active participation in the learning process.

Contrast 8 - The chief duty of a teacher is to pass on knowledge.
Postulate 9 - Learners should be taught to regard learning as something relevant to their lives.

Contrast 9 - Learners should be taught that learning does not have to be relevant to their lives.

Postulate 10 - Learners should be free to choose the school in which to learn.

Contrast 10 - Learners should be restricted in choice of school in which to learn.

Postulate 11 - Learners should be given freedom to decide what they want to learn.

Contrast 11 - Learners should abide by the curriculum of the school.

Postulate 12 - Educational institutions should be increased to offer the individual a diversified choice.

Contrast 12 - Educational institutions should be increased according to the need of the job market.

Postulate 13 - Business companies should train not only workers, but researchers as well.

Contrast 13 - Only tertiary educational institutions should train researchers.

Postulate 14 - Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling.

Contrast 14 - Learners should be left to fend for their own learning once they leave formal schooling.

Postulate 15 - Examinations should be used to compare method effectiveness rather than as an academic admission aid.

Contrast 15 - Examinations should be used to judge whether learners are fit for academic admission.

Postulate 16 - Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula.

Contrast 16 - Teachers should be trained chiefly to transmit knowledge of the curricula.

Postulate 17 - Teachers should be learners throughout their lives.
Contrast 17 - Teachers should be learners mainly during their initial training.

Postulate 18 - All learners should be given a responsible role to play in the educational system.

Contrast 18 - Learners should be deterred from playing a responsible role in the educational system.

Postulate 19 - Learners should participate in the management of the educational institution they attend.

Contrast 19 - Learners should be kept out of the management of the educational institution they attend.

Postulate 20 - Education should prepare learners for a society of the future.

Contrast 20 - Education should prepare learners to maintain the contemporary society.

Postulate 21 - Learners should be taught to view time as being able to bring about human experience, discoveries and progress.

Contrast 21 - Learners should be taught to view time as being able to bring about old age, boredom and decay.

Postulate 22 - A spirit of peace should be inculcated in the learners.

Contrast 22 - A readiness for war should be inculcated in the learners.

Postulate 23 - Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations.

Contrast 23 - Through their programmes learners should be given some awareness of the diversity of national interests.

Postulate 24 - Similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all.

Contrast 24 - It is but natural that schools in urban areas should have better quality resources than schools in rural areas.

Postulate 25 - Educational facilities should be provided in places of work.

Contrast 25 - Work places should be kept for work, not for
Postulate 26 - There should be significant development of experiments in self-instruction.

Contrast 26 - There should be limited development of experiments in self-instruction.

Postulate 27 - Paid educational leaves should be provided by legislation.

Contrast 27 - Paid educational leaves should be a privilege not a right.

Postulate 28 - Education should be used as an instrument for individual and community advancement.

Contrast 28 - Education should be viewed as an opportunity chiefly for personal advancement.

The first set of 51 postulates were sent to experts on lifelong education, but only 28 were retained after reliability and validity processes were completed (see Chapter VII). The experts were asked not whether they agreed or disagreed with the 51 statements, but whether they considered them as denoting a postulate of lifelong education.

The content of the LLE Scale for Experts was also the content of the LLE Scale for Pilot Subjects. They had to express their agreement or disagreement with the statements in the questionnaire. A five point Likert scale was utilized: 'strongly agree', 'agree', 'no opinion', 'disagree' and 'strongly disagree'. The statements, postulates and contrasts, were randomized.

The Career Effects Scale

In the CE Scale (see Appendix I.2) respondents were asked to respond to a five point Likert type scale containing items dealing with how their prestige, authority, job security, job...
difficulty and total advantage would be affected if lifelong education were to be implemented.

The implication statements. The CE Scale was used to measure educators' perceived career effects, should the postulates be implemented. So, the abstract ideals were brought down to concrete situations. The implication statements were based on the postulates. They described the state of affairs which would exist if the postulates were implemented. For example,

HOW WOULD IT AFFECT YOU.............?

3. If learners were to be taught how to learn rather than to accumulate facts,

MY PRESTIGE
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY AUTHORITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

If learners were to be taught how to learn rather than to accumulate facts, their prestige, authority, job security, job difficulty and other advantages would be affected. A respondent might reply 'my prestige would be moderately increased'; 'my authority would be very much decreased'; 'my job security would be very much decreased'; 'my job difficulty would be moderately
increased' and 'my other advantages would be unchanged'.

The subjunctive clauses for 28 implication statements rephrased from the 28 postulate statements were:

1. If education were to be provided for the entire life-span of all individuals,

2. If education were to be considered as a process of self-fulfilment rather than as a curriculum to be learnt,

3. If learners were to be taught how to learn rather than to accumulate facts,

4. If the 'teachable moments' in the different periods of learners' lives were to be discovered and used by educators,

5. If learners' initial training in school and subsequent training at work were to be integrated,

6. If distinctions between arts, science and technical streams of education with regard to learners' different subjects were to be abolished,

7. If the ranking between manual and intellectual disciplines were to be abolished,

8. If teachers were to facilitate the active participation of students in the learning process,

9. If learners were to be taught to regard learning as something relevant to their lives,

10. If learners were to be free to choose the school in which to learn,

11. If learners were to be given freedom to decide what they want to learn,

12. If educational institutions were to be increased to offer the individual a diversified choice,

13. If business companies were to train not only workers, but researchers as well,

14. If learners were to be able to choose their path in a flexible framework, without being compelled to give up using educational services for life, if they leave formal schooling,

15. If examinations were to be used as a means of comparing method effectiveness rather than as academic admission aid,

16. If teachers were to be educators rather than specialists in
transmitting pre-established curricula,

17. If teachers were to be learners throughout their lives,

18. If learners were to be given a responsible role to play in the educational system,

19. If learners were to participate in the management of the educational institution they attend,

20. If education were to prepare learners for a society of the future,

21. If learners were to be taught to view time as being able to bring about human experience, discoveries and progress,

22. If a spirit of peace were to be inculcated in learners,

23. If through their programmes learners were to be given some awareness of the unity of mankind and its common aspirations,

24. If similar quality in resources for all schools in urban and rural areas were to be maintained to ensure fair opportunities for all,

25. If educational facilities were to be provided in places of work,

26. If there were to be significant development of experiments in self-instruction,

27. If paid educational leaves were to be provided by legislation,

28. If education were to be used as an instrument for individual and community advancement,

The implication statements were used to form the CE Scale. This questionnaire was also marked on a Likert scale of 1-5 for each response (see Appendix I.2).

The SD Questionnaire

The Socio-demographic Questionnaire consisted of questions asking the subjects the type of school they work in, based on the locale chosen for the field study in Hong Kong (see Chapter VI, para. on Location Chosen and on Population). Exam-
pies of such types of schools were government Anglo-Chinese schools, government Chinese middle schools, government technical schools, aided Anglo-Chinese schools, aided Chinese middle schools, aided technical schools, aided prevocational schools, private Anglo-Chinese schools or private Chinese middle schools. Other questions asked the subjects' positions: principal, assistant to principal, or teacher; their years of working in the teaching profession: years part-time and years full-time; and their self-perceived progressiveness; their sex and year of birth (see Appendix I.3).

Since some educators, particularly those in Chinese middle schools, are not well versed in English, a Chinese version of the LLE Scale, the CE Scale and SD Questionnaire were produced so that the whole sample could be reached. A qualified scholar, Dr. Michael Lau, the curator of Fung Ping Shan Museum of the University of Hong Kong was invited to certify that the translated version by Miss Sung Lan Yau, official translator of the Catholic Truth Society, was comparable to the English original (see Appendix AD).

Securing Reliability and Validity Data

The reliability and validity of the LLE Scale, CE Scale and SD Questionnaire had to be established before they could be used for collecting data for the study. For this purpose experts on lifelong education and pilot subjects were identified. The results of the reliability and validity tests, and the refinement of these three instruments are reported in Chapter VII.
Identifying Experts and Pilot Subjects

The following paragraphs deal with how the experts and pilot subjects were identified. First, a letter was sent to the chief of personnel of UNESCO Paris, Hamburg, and Bangkok requesting names of writers and experts on lifelong education (see Appendix P). These offices were chosen because UNESCO headquarters was situated in Paris with the Office of Lifelong Education; UNESCO Institute of Education which published many books on lifelong education was in Hamburg; the UNESCO Office for Asia was situated in Bangkok, and this study was to be conducted in Asia. So these offices were considered appropriate for the purpose of identifying lifelong education experts. From a list of 34 provided by these UNESCO offices, 21 associated with UNESCO publications on lifelong education were chosen and were sent the LLE Scale for Experts (see Appendix C). Of these 21, two could not be reached. Thirteen of the 34 were not chosen because their writings were limited to adult education. Of the nineteen reached, thirteen responded by answering the questionnaire, four responded by making comments and two did not respond (see Appendix M).

Next, three Hong Kong schools of different types were invited to participate in the pilot test. The original form of the LLE Scale, CE Scale and SD Questionnaire (in English or Chinese) was sent to twelve randomly chosen teachers from each of these schools: one government Anglo-Chinese school, one aided Anglo-Chinese school and one aided Chinese middle school.
Thirty-five of the 36 teachers (97 percent) responded.

The results of reliability and validity testing of the instruments are given in Chapter VII. The next chapter describes the method.
This chapter is related to Phase III of the study as shown in Figure I. It describes how the LLE Scale, CE Scale and SD Questionnaire were administered to educators in Hong Kong. It gives a description of the locale chosen, and the reasons for doing the research there. The population of the study is described, as well as the procedures for selecting the respondents, administering the instrument and following-up non-respondents.

Location Chosen

Hong Kong was chosen as the location for this study, because of the following criteria: 1) it was a place where the chosen variables for perceived career effects would be pertinent; 2) the government had either accepted or was interested in accepting lifelong education as a 'master concept'; 3) it had an educational system with different types of schools for data comparison purposes; 4) a co-operative population from which data could be gathered; and 5) it was convenient and economical for the researcher (who is a Hong Kong citizen). Hong Kong met the criteria. It was a dynamic place in which innovative ideas might be considered and adopted.

Socio-political Context

Hong Kong is a British colony on the south eastern shore of China near the mouth of the Pearl River in Guangtung Province. A population of 5.5 million lives in an area of 1,061 square kilometres. Although small, it occupies a strategic position for
trade and commerce. It is the gateway to China and situated in the concourse of world traffic. It is also a free port and a monetary centre. Education has been regarded by the government and the people as an important means to maintain prosperity. People strive to obtain prestige and wealth.

Socio-economic Situation

The situation is also favourable to new ideas arising from the notion of lifelong education. The city is overpopulated, and totally dependent on trade with the outside world. "This [dependence on trade] is hardly surprising. How else can a tiny enclave, in size not much more than 1000 square kilometres, most not suitable for development, manage to feed, clothe, house, transport and provide other amenities for as many as 5.5 million people?" commented the 1987 Hong Kong Annual Report (Hong Kong Government, 1987, p. 1). The people are hard working and dynamic. Job security and job difficulty would be their concerns.

Moreover, Hong Kong is undergoing political changes. Since 1842, it has been under the British, but, according to the Sino-British Agreement (Hong Kong Government, 1984), by 1997 will be returned to China. An overall policy or 'master concept' that would activate the education system might be an appealing way to ensure prosperity and freedom. Lifelong education is likely to be of interest to its planners and educators. A possible drawback of the location is the transitory political situation. People's ideas may be changed overnight, being influenced by the media. Power, authority and advantages are common topics of discussion, be it political power and authority ruling from
Beijing or democracy ruling from home. So, educators' responses might be affected by the political atmosphere.

Within the last decade the city has become one of the four monetary centres of the world, next to Tokyo, London and New York, and is the world's "13th largest trading entity" (Hong Kong Government, 1987, p.1). So the general income of the people is high, but school places, especially at the tertiary level are short. Therefore, any innovative ideas to increase educational opportunities would be welcome. This situation plus the studious attributes of the Chinese people and the competitive Hong Kong lifestyle could influence the dynamics of agreement with lifelong education.

The Educational System

In Hong Kong, there is an educational system with different types of schools: those that are academically oriented and those that are vocationally oriented, and those that are government funded and non-government funded. The educational system is divided into kindergartens, primary schools, secondary schools, tertiary education institutions and adult education institutions. Secondary schools have more variety in types than kindergartens or primary schools and are less individualistic and autonomous than tertiary or adult educational institutions. Therefore they were chosen rather than the other kinds.

Regarding the choice of secondary schools for the study, it can be said that although lifelong education is implemented throughout the society in school and non-school settings, yet schools or educational institutions, be they for adults or
children, would be involved, and implementation will depend on educators' agreement with the postulates of lifelong education functioning within those schools. Educators in secondary schools in Hong Kong were chosen as the population for the study, since lifelong education is most often associated with adult education, less often with tertiary education and least with kindergarten and primary education, secondary education seems to be the golden mean.

The Population

The population consisted of educators in the different types of secondary schools in Hong Kong. The population of schools was 472 in number. They were of different types with different sources of funding and curricula. Different sources of funding provide different working conditions for educators. The curricula also differentiate working conditions for educators, as can be seen from the elaborations given in subsequent paragraphs. Since the working conditions of the schools were different, it could be envisaged that individuals who work in them would have different responses to the postulates. Therefore, for the sake of clarity and comparisons the types of schools were viewed from the bases of funding and curricula.

Viewed from a financial angle, schools were of three types, namely government schools, aided schools, and private schools. Government schools were owned by government; aided schools were owned by voluntary agencies but fully subvented by government; and private schools were owned by individuals or organizations.
Government schools were the first choice for qualified teachers since they had the best financial benefits. Aided schools had the same salary scale as government schools, but without such fringe benefits as a housing allowance and medical care. Therefore they were the second choice for qualified teachers. Private schools could not keep up with government salary scales and other fringe benefits and were less preferred than government schools by qualified teachers.

Since the working conditions of government schools and aided schools were quite similar, it was envisaged that the responses to the underlying postulates and to the implications of implementing lifelong education might also be similar. Non-government funded schools had more freedom of action and flexibility than government funded schools, so it was envisaged that the responses from educators working within them might be different from those of their counterparts working in government funded schools. But their similarities and differences were uncertain, so a null hypothesis was assigned to types of schools. The population was divided into those working in government funded schools (i.e. government and aided schools) and those in non-government funded schools (private schools). The three types of secondary schools in Hong Kong grouped according to method of financing is shown in Table 3.
Table 3

Hong Kong Secondary Schools According to Funding

<table>
<thead>
<tr>
<th>Types of schools</th>
<th>no. of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Government schools:</td>
<td></td>
</tr>
<tr>
<td>a. Government Anglo-Chinese schools</td>
<td>22</td>
</tr>
<tr>
<td>b. Government Chinese Middle schools</td>
<td>4</td>
</tr>
<tr>
<td>c. Government Technical schools</td>
<td>9</td>
</tr>
<tr>
<td>2. Aided schools:</td>
<td></td>
</tr>
<tr>
<td>a. Aided Anglo-Chinese schools</td>
<td>230</td>
</tr>
<tr>
<td>b. Aided Chinese Middle schools</td>
<td>26</td>
</tr>
<tr>
<td>c. Aided Technical schools</td>
<td>9</td>
</tr>
<tr>
<td>d. Aided Prevocational schools</td>
<td>13</td>
</tr>
<tr>
<td>3. Private schools:</td>
<td></td>
</tr>
<tr>
<td>a. Private Anglo-Chinese schools</td>
<td>104</td>
</tr>
<tr>
<td>b. Private Chinese Middle schools</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>472</td>
</tr>
</tbody>
</table>

There were 472 schools, 35 government run, 378 aided and 159 private schools. Private schools were either Anglo-Chinese or Chinese middle schools. There were no private technical or prevocational schools, possibly because they were costly to run.

Viewed from a curricular perspective the secondary schools in Hong Kong were, 1) Anglo-Chinese schools; 2) Chinese middle schools; 3) Technical schools and 4) Prevocational schools, as shown in Table 4.
Anglo-Chinese schools provided five years of schooling following primary level. Like grammar schools, they used English as a medium of instruction with Chinese taught as one of the subjects. They emphasized arts and science subjects, and were based very much on the grammar school type in England, with a traditional and conservative type of approach to education. Chinese middle schools were secondary schools with subjects taught in Chinese with English as one of the subjects. They were a mixture of Chinese middle schools of pre-war China and English grammar schools. Their approach to education appeared to be more traditional and conservative than those of the Anglo-Chinese secondary schools. Technical schools were also five years after primary and specialized in technical subjects such as electricity, metal work and carpentry, with both English and Chinese as the media of instruction. Their approach to education was
more liberal and more work oriented than the former two types. Prevocational schools were three years after primary. They had 50 percent arts and science subjects and 50 percent technical subjects taught in Chinese. They were a new development in the Hong Kong educational system and were an attempt to integrate school and work, and fit neatly into the nine years of free education, i.e. six years primary and three years prevocational. Graduates from prevocational school could either leave school to go to work, or go on to complete the five years of secondary school.

Prevocational schools and technical schools were vocationally oriented, while Anglo-Chinese schools and middle schools were academically oriented. For the sake of brevity, comparisons would be made according to these two methods of grouping.

Since the working conditions, expectations and assumptions underlying vocationally oriented schools and academically oriented schools were quite different, it was envisaged that the responses of educators working in them to the postulates of lifelong education and to the anticipated effects of implementing them might also be different. Therefore, the population was divided into two groups: those working in vocationally oriented schools (i.e. government technical schools, aided technical schools and prevocational schools) and those in academically oriented schools (i.e. government Anglo-Chinese schools, government Chinese middle schools, aided Anglo-Chinese schools, aided Chinese middle schools and private schools).
Sampling

The administrators and teachers were looked at from the perspective of their belonging to academically oriented or vocationally oriented schools and also from the perspective of their belonging to government funded or non-government funded schools. The population from which a stratified random sample was drawn, was as follows.

In government funded schools the staff ratio for secondary schools was given by government at 1.3, for each class. The ratio for private schools was lower and irregular, but 1.3 could still serve as an approximation. Given an average school with 24 classes, there would be 24 * 1.3 = 32 on the staff, 2 of whom would be administrators (i.e. the principal and assistant principal). The estimated distribution of administrators and teachers is shown in Table 5.
### Table 5

**Administrators and Teachers According to School Orientation**

<table>
<thead>
<tr>
<th></th>
<th>Estimated No. of Administrators</th>
<th>Estimated No. of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academically oriented schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Anglo-Chinese schools:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Government Anglo-Chinese schools</td>
<td>44</td>
<td>642</td>
</tr>
<tr>
<td>230 Aided Anglo-Chinese schools</td>
<td>460</td>
<td>6716</td>
</tr>
<tr>
<td>104 Private Anglo-Chinese schools</td>
<td>208</td>
<td>3036</td>
</tr>
<tr>
<td>2. Middle schools:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Government Chinese Middle schools</td>
<td>8</td>
<td>117</td>
</tr>
<tr>
<td>26 Aided Chinese Middle schools</td>
<td>52</td>
<td>759</td>
</tr>
<tr>
<td>55 Private Chinese Middle schools</td>
<td>110</td>
<td>1606</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>882</td>
<td>12,876</td>
</tr>
<tr>
<td><strong>Vocationally oriented schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Technical schools:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Government Technical schools</td>
<td>18</td>
<td>263</td>
</tr>
<tr>
<td>9 Aided Technical schools</td>
<td>18</td>
<td>263</td>
</tr>
<tr>
<td>4. Prevocational schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Aided Prevocational schools</td>
<td>26</td>
<td>380</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>62</td>
<td>906</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>944</td>
<td>13,782</td>
</tr>
</tbody>
</table>

In academically oriented schools it was estimated that there were 882 administrators and 12,876 teachers, far more than those in vocationally oriented schools, where there were 62 administrators and 906 teachers. The total population was estimated to be 944 administrators and 13,782 teachers.

The distribution of administrators and teachers according to method of financing is shown in Table 6.
Table 6
Administrators and Teachers
According to School Funding

<table>
<thead>
<tr>
<th>Government funded schools</th>
<th>Administrators</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Government Anglo-Chinese schools</td>
<td>44</td>
<td>642</td>
</tr>
<tr>
<td>230 Aided Anglo-Chinese schools</td>
<td>460</td>
<td>6716</td>
</tr>
<tr>
<td>4 Government Chinese Middle schools</td>
<td>8</td>
<td>117</td>
</tr>
<tr>
<td>26 Aided Chinese Middle schools</td>
<td>52</td>
<td>759</td>
</tr>
<tr>
<td>9 Government Technical schools</td>
<td>18</td>
<td>263</td>
</tr>
<tr>
<td>9 Aided Technical schools</td>
<td>18</td>
<td>263</td>
</tr>
<tr>
<td>13 Aided Prevocational schools</td>
<td>26</td>
<td>380</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>626</strong></td>
<td><strong>9140</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-government funded schools</th>
<th>Administrators</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>104 Private Anglo-Chinese schools</td>
<td>208</td>
<td>3036</td>
</tr>
<tr>
<td>55 Private Chinese Middle schools</td>
<td>110</td>
<td>1606</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>318</strong></td>
<td><strong>4642</strong></td>
</tr>
</tbody>
</table>

| **Grand total**                                   | **944**        | **13782** |

There were 626 administrators, 9140 teachers in government funded schools, almost double those in non-government funded schools, where there were 318 administrators and 4642 teachers.

To maintain a representative and workable size sample a stratified sampling method was employed. It was considered sufficient to choose 20 schools from each type based on curriculum. Since all vocationally oriented schools were government funded, 20 of them were to be chosen and matched by 20 government funded academically oriented schools and 20 non-government funded academically oriented schools. Each type was to be randomly drawn to make up a total sample of 60 schools. From each of these 60 schools two administrators (i.e. the principal and assistant) and four teachers were included. The principal was to be re-
quested to randomly draw these four teachers from the staff list. The respondents from each sub-type of schools were to be merged into each type, making a total of 120 administrators (i.e. principals and assistants) and 240 teachers, or a grand total of 360.

The LLE Scale, the CE Scale and the SD Questionnaire were to be given to the administrative and teaching staff of schools chosen according to the ratio of the sample.

Data Collection

The Education Department of Hong Kong was approached and asked for the following: names and addresses of all the secondary schools and their principals. Based on the method of sampling for this study the schools chosen consisted of 20 from each type: academically oriented and government funded, academically oriented but non-government funded, and vocationally oriented and government funded. There being no vocationally oriented but non-government funded, the number totalled 60. The schools were randomly picked, 20 from each type.

A letter in English or Chinese (see Appendix X.1,2) together with The LLE Scale, the CE Scale and the SD Questionnaire, was sent to the principals of those schools randomly selected, asking if they would join in this research to identify current educational ideas among educators in Hong Kong and how they regard these ideas. Principals were asked to give the names of their assistants and four teachers from their staff list based on four randomly drawn numbers, and to send them to the researcher, so that a personal letter and the questionnaire might be
sent to invite them to participate in the study. When the recipients received the letter, the researcher hoped they would appreciate the importance of their participation. Also, the principals, knowing the assistants would receive a questionnaire, would be discouraged from passing their own to their assistants to reply. If any principal was unwilling to allow the school to participate, then the principal of another school of the same type was randomly drawn to serve as a replacement until the desired number of schools was reached. The month of May, being the month when schools begin their summer time-table with half day sessions only, was considered to be the best time for the letters and questionnaires to reach the recipients. Mid-June being the time when final examinations are starting, it was considered to be the deadline for the questionnaires to be returned. In other words, within six weeks the whole process of data collection had to be accomplished.

The subjects did not seem to be co-operative at first. One week after the 60 envelopes containing the letter to the principals and the questionnaire with return envelopes for the questionnaire and the name of teachers were sent out, 27 questionnaires had been returned blank, only two had been completed, with the names of the assistant and teachers. To ensure a sufficient sample another 27 were sent out in the second week. The third week was no better than the second, 32 were returned blank. This could be due to the fact that it was near the time for final school examination, and the respondents were too busy. Polite reminder letters were sent with little result.
Finally it was decided that if the number of schools in several types of schools were few, all the schools within those types would be sent the letter and questionnaire and, if the number in a given type were many, a sample would be randomly drawn and sent. Reminders, first in the form of a letter, then by telephone, were used to follow up, when the subjects did not return the questionnaire after the deadlines. (see Appendix Z.1,2) Upon receiving a completed return, the researcher sent a letter of 'thanks' immediately with a polite request to the recipient to gently remind those colleagues who had not yet returned the questionnaire.

In the following chapter an account is given of the results from the reliability and validity tests by experts and pilot subjects, the refinement of the LLE Scale, the CE Scale and the SD Questionnaire.
CHAPTER VII

RELIABILITY AND VALIDITY OF THE INSTRUMENTS

Three instruments were used in this study. The LLE Scale, was used to measure the extent to which Hong Kong educators "agreed" with lifelong education. The CE Scale was used to ascertain the extent to which the postulates would affect their career on such aspects as prestige, authority, security and other advantages. The SD Questionnaire was used to gather information on the socio-demographic data to be also used as predictive variables.

This chapter discusses the procedures used to examine the extent to which the three instruments were reliable and valid. Table 7 shows a summary of the steps taken to establish reliability and validity of the instruments.
### Table 7

**Reliability and Validity Tests Done on the LLE, CE and SD Instruments**

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Reliability internal consistency</th>
<th>Validity content construct face</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. LLE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experts</td>
<td>[Hoyt, Multiple Correlation]</td>
<td>[Hoyt, comments]</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot</td>
<td>[Hoyt, Multiple Correlation]</td>
<td>[Hoyt, comments]</td>
</tr>
<tr>
<td>Sample</td>
<td>[Hoyt, Multiple Correlation]</td>
<td></td>
</tr>
<tr>
<td><strong>2. CE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot</td>
<td>[Hoyt, Multiple Correlation]</td>
<td>[Hoyt, comments]</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample</td>
<td>[Hoyt, Multiple Correlation]</td>
<td></td>
</tr>
<tr>
<td><strong>3. SD</strong></td>
<td></td>
<td>[Comments]</td>
</tr>
<tr>
<td>Pilot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questionnaire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 7, three instruments were used with three groups of people, the experts, the pilot subjects and the main sample of the study. With respect to reliability the emphasis was on internal consistency, that is, the extent to which different parts of the tests were related to other parts. Reliability and validity are based on Nunnally's (1967) discussion on these topics. With respect to validity there was an attempt to examine the following.

Content, construct and face validity. Content validity is

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the extent to which the items in the tests were a "fair representation" of those encompassed by the domain of interest or phenomenon being measured, which in this study was lifelong education. Construct validity is the extent to which the tests measure the theoretical constructs presumed to underlie the phenomenon of interest which, in this study, was lifelong education. Face validity is the extent to which the tests "made sense", or were meaningful to respondents.

Reliability the LLE Scale

The LLE Scale was sent to experts, pilot subjects and the main sample of the study. For the experts and pilot subjects the "initial" 51 postulates with 51 contrasts made up the content and were randomly arrayed in the questionnaire. After the content and construct validity test involving the experts and face validity test involving the pilot subjects only 28 postulates with 28 contrasts were retained. The following is an account of the reliability testing process for the LLE Scale for experts, pilot subjects and sample of the study.

Experts

The LLE Scale was sent to the 21 experts associated with UNESCO. Thirteen responded by answering the questionnaire, four by making comments as well as answering the questionnaire, two only made comments, and two did not respond at all, making a total response rate of 19 out of 21 (see Appendix M). The experts were asked to verify the postulates. The inclusion of other experts, in addition to the five chief authors, was used to give credence to the postulates as belonging to lifelong
education and understood by a broader circle than only the authoritative authors. They were asked whether they considered the statements, which consisted of postulates and their contrasts, to be postulates of lifelong education by giving a tick to one of the boxes for 'yes', 'not sure' and 'no'.

LERTAP (the Laboratory of Educational Research Test Analysis Package, Nelson, 1974) was run on the data obtained from the thirteen experts. This routine produced percentages, means, standard deviations, and correlations between items and subtest or total test scores. The postulates constituted a subtest of items, as did the contrasts. The total test consisted of all the postulates and their contrasts. Hoyt's estimate of reliability of the individual subtests, Hoyt's estimates of reliability of the total test and the Cronbach's alpha showing the consistency for the composite of all the tests were given.

In this case there were two subtests -- one for the postulates and one for the contrasts. Internal consistency and reliability of the postulate and contrast items were expressed through their linear correlation coefficients with their subtests and with the total test. The detailed results are presented in Appendix E Table A - Results of Reliability Tests on LLE Scale by Experts.

The intercorrelation of subtests in the LLE Scale as expressed through the experts' responses is shown in Table 8, which gives Hoyt's estimate of reliability of each subtest and the total test, showing the consistency of the items within each test, and Cronbach's alpha for composite, showing the consist-
ency of the two subtests with the total test.

Table 8

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Hoyt Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtest 1 (Postulate)</td>
<td>.56</td>
</tr>
<tr>
<td>Subtest 2 (Contrast)</td>
<td>.68</td>
</tr>
<tr>
<td>Total test: Hoyt</td>
<td>.67</td>
</tr>
<tr>
<td>Cronbach's alpha</td>
<td>.19</td>
</tr>
</tbody>
</table>

The Hoyt estimates of reliability for the two subtests and total test were acceptable, considering the broad coverage of educational ideas in the content. The Cronbach's alpha was low, indicating that the two subtests measured different constructs.

This result could be due to some of the experts not perceiving certain contrasts as opposites of the postulates. A detailed discussion on the treatment of contrasts is given later on in this chapter, in the section dealing with the refinement of the instrument.

Reliability was further examined through the Pearson correlations results from the LERTAP among the subtests and the total test. There was a high correlation coefficient (r=0.62) between the total test and the postulate subtest as well as between the total test and the contrast subtest (r=0.85), but a low correlation (r=0.11) between the subtests themselves. An ideal result would have a correlation coefficient of at least 0.5. As it is, these results confirmed those shown by the Hoyt's estimates and the Cronbach's alpha for composites, that there was a fairly
high consistency among the experts in their responses to the postulates and in their contrasts separately, but not much consistency when the postulates were correlated with the contrasts. This meant that when they agreed with a postulate they did not always disagree with the statement that was intended as its opposite, or at least not to the same degree. The contrasts were not perceived by the experts as the exact opposites of the postulates. This finding led to a decision to treat the postulates and their contrasts separately.

**Pilot Subjects**

The original form of the LLE Scale (see Appendix D.1) in English or Chinese was sent to the pilot subjects. Reliability of the LLE Scale for Pilot Subjects was established through internal consistency. The pilot subjects, not knowing the test was on the concept of lifelong education, were asked whether they agreed or disagreed with the educational ideas in the LLE Scale. As the postulate and contrast statements were randomized, there is every chance of the educators agreeing and disagreeing with the same statement in contrasting formats. Thus their consistency would be shown.

The intercorrelation of subtests in the LLE Scale as expressed through the pilot subjects' responses is shown in Table 9. There were 35 respondents for the LLE Scale for Pilot Subjects. The data from all of the returned questionnaires were run with LERTAP and the following data resulted.
Table 9

Intercorrelation of Subtests in the
LLE Scale: Pilot Subjects' Responses

<table>
<thead>
<tr>
<th>Hoyt Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtest 1 (Postulate)</td>
</tr>
<tr>
<td>Subtest 2 (Contrast)</td>
</tr>
<tr>
<td>Total test: Hoyt Cronbach's alpha</td>
</tr>
<tr>
<td>Cronbach's alpha</td>
</tr>
</tbody>
</table>

The Hoyt estimates of reliability for all three were high and the Cronbach's alpha was also high. The results showed that the two subtests were reliable and consistent in themselves, and they were consistent with the total test. In other words the pilot subjects were very consistent in their responses to the questionnaire statements, the postulates as well as their contrasts indicating that the contrasts were perceived by the pilot subjects as opposites.

The LERTAP results for Pearson correlations of the subtests and the total test, with contrast scores being reversed, showed postulates with contrasts were correlated at 0.96; postulates with total test at 0.99; and contrasts with total test at 0.99. These results confirmed the consistency of the responses, when the pilot subjects agreed with the postulates they also disagreed with the contrasts, and vice versa.

Sample Subjects

When the reliability testing of the LLE Scale for experts and pilot subjects had been accomplished and the 'final' items identified, the items were then randomized once more and set out
The intercorrelation of subtests in the LLE Scale as expressed through the main sample subject responses is shown in Table 10.

<table>
<thead>
<tr>
<th>Subtest 1 (Postulate)</th>
<th>.69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtest 2 (Contrast)</td>
<td>.71</td>
</tr>
<tr>
<td>Total test: Hoyt</td>
<td>.77</td>
</tr>
<tr>
<td>Cronbach's alpha</td>
<td>.49</td>
</tr>
</tbody>
</table>

The Hoyt estimates for both subtests and for the total test were acceptably high, when the broad scope of content was taken into account, but the Cronbach's alpha was moderate. These results showed that the main sample were consistent in their responses to the questionnaire statements, both within the postulates as a subtest and the contrasts as another subtest; but not all of the contrasts were perceived by the main sample subjects as opposing the postulates.

Pearson correlation coefficients of the subtests from the LERTAP showed postulates and contrasts were correlated at 0.34, postulates and total test at 0.80 and contrasts and total test at 0.84. These results confirmed the consistency and reliability of the responses to the postulates, but when the postulates were correlated with the contrasts the consistency was not so high, and vice versa, i.e., when the subjects agreed with the
postulates they sometimes agreed with the contrasts. Since some of the contrasts were not exact opposites of the postulates the educators reacted to them as separate ideas, as mentioned previously. But as subtests, the postulates and contrasts were consistent and reliable within their own set. Therefore, on the whole, the reliability and internal consistency of the LLE Scale for Main Sample Subjects was acceptable, considering the breadth of scope and variety of areas in the content.

**Content and Construct Validity of LLE Scale**

Content and construct validity were assessed through analysing comments from the experts, which could be categorized into two groups: explanations of what had been considered as 'yes', 'not sure' or 'no' to the questions, and remarks related to the wording or phrasing, i.e. the meaning of the statements (see Appendix F Comments from Experts, and paragraph on Refinement of Instruments further on in this chapter). Necessary syntactic modifications were made on the postulates and their contrasts, but the semantic aspects of the originals were kept as much as possible. Thus an attempt was made to improve the wording of the statements.

The separate consistency of the two subtests with the total test shown by the Hoyt estimates and their correlation coefficient with the total test was accepted as being sufficient for validity purposes showing the two tests were taken to be different in construct and content. In conclusion the validity test of the postulates by the experts was considered acceptable.
Face Validity of the LLE Scale

The consistency shown by Hoyt estimates and the correlation coefficient of the Pearson correlations of the subtests with the total test showed the consistency of responses made by the subjects. This was accepted as sufficient for face validity. Furthermore, comments from the pilot subjects were also used to improve the clarity of the questionnaire statements. Their comments were mostly related to their giving explanation to their agreeing or disagreeing with the statements, and to the wording and phrasing of the statements. The postulates and contrasts were either rephrased or eliminated based on the pilot subjects' comments, and on the statistical analysis of internal consistency of the items from the LERTAP results. Thus face validity as tested with pilot subjects was found to be satisfactory.

Reliability of CE Scale

The original form of the CE Scale (Career Effects Scale) was given to the same recipients as those to whom the LLE Scale were given, that is to pilot subjects and main sample subjects. There were 30 pilot subjects out of 36 (83 percent), who answered. The responses of five showed signs of carelessness, leaving big gaps and, so their questionnaires were eliminated, leaving 25 pilot subjects.

As for the main sample subjects, there were 412 questionnaires sent and 284 (68.9 percent) returned. Fourteen were discarded for having too many blanks. The following is an
account of the results of reliability tests of the CE Scale (Career Effects Scale) from the pilot and sample subjects.

Pilot Subjects

The intercorrelation of the subtests in the CE Scale as expressed through the pilot subjects' responses are shown in Table 11. The LERTAP run on the responses of the 25 pilot subjects produced the results with five sub-tests related to career effects and the total test.

Table 11

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Hoyt Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestige</td>
<td>.70</td>
</tr>
<tr>
<td>Authority</td>
<td>.80</td>
</tr>
<tr>
<td>Security</td>
<td>.74</td>
</tr>
<tr>
<td>Difficulty</td>
<td>.92</td>
</tr>
<tr>
<td>Advantage</td>
<td>.84</td>
</tr>
</tbody>
</table>

The Hoyt estimates for each of the five subtests and for the total test were high and the Cronbach's alpha was a little lower than the Hoyt estimate for the total test, which was as expected, since the number of tests was smaller than the number of items in each test. The results showed that the pilot subjects were very consistent in their responses to the questionnaire statements, so the reliability of the subtests, and the test as a whole, was acceptably high.

To further show the consistency of the career effect items
with one another, a correlation matrix was produced as shown in Table 12.

Table 12

Correlation Coefficient of Subtests and Total Test
of the CE Scale: Pilot Subjects' Responses

<table>
<thead>
<tr>
<th>Var</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prestige</td>
<td>Authority</td>
<td>Security</td>
<td>Difficulty</td>
<td>Advantage</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>1.00</td>
<td>.71</td>
<td>.65</td>
<td>.14</td>
<td>.59</td>
<td>.70</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>1.00</td>
<td>.76</td>
<td>.22</td>
<td>.57</td>
<td>.77</td>
</tr>
<tr>
<td>3</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>.33</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The correlation coefficients of 'prestige', 'authority' and 'security' with one another were high, but not with 'difficulty' and 'advantage'. This outcome is explainable, because an implementation that brought an increase to 'prestige' and other benefits might not result in a decrease in 'difficulty'. The phrase 'total advantage' might have been unclear, since two respondents commented that they were not sure whether it meant the sum total of the advantages or other advantages not mentioned. This item was rephrased to 'other advantages', before the test was used with the main sample.

Main Sample

The intercorrelation of subtests in the CE Scale as expressed through the main sample subjects' responses are shown in Table 13. The LERTAP run on the responses of 270 respondents produced the results with five subtests related to career effects and the total test.
Table 13

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Hoyt Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestige</td>
<td>.88</td>
</tr>
<tr>
<td>Authority</td>
<td>.87</td>
</tr>
<tr>
<td>Security</td>
<td>.86</td>
</tr>
<tr>
<td>Difficulty</td>
<td>.89</td>
</tr>
<tr>
<td>Advantage</td>
<td>.95</td>
</tr>
</tbody>
</table>

Total test: Hoyt Cronbach' Alph .96 .75

The Hoyt estimates for each of the five subtests and for the total test were acceptably high, and the Cronbach's alpha was a little lower than the Hoyt estimate for the total test, which was as it should be, since the number of tests was smaller than the number of items in each of the tests. The results showed that the subjects were consistent in their responses to the questionnaire statements. The LERTAP Pearson intercorrelation of the five variables with one another was also consistent, as can be seen from the matrix in Table 14.
### Table 14

**Correlation of Subtests and Total Test of the CE Scale: Main Sample Subjects' Responses**

<table>
<thead>
<tr>
<th></th>
<th>Prestige</th>
<th>Authority</th>
<th>Security</th>
<th>Difficulty</th>
<th>Advantage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00</td>
<td>0.88</td>
<td>0.81</td>
<td>0.21</td>
<td>0.46</td>
<td>0.82</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>0.85</td>
<td>0.28</td>
<td>0.47</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
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<td>0.43</td>
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<td>0.17</td>
<td>0.56</td>
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<td></td>
<td></td>
<td></td>
<td>1.00</td>
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</tbody>
</table>

The correlation coefficients of 'prestige', 'authority' and 'security' with one another were high, but low with 'difficulty' and 'advantage'. The same explanation for these in the pilot test could be applied here, because an implication that brought an increase in 'prestige' and other benefits might not mean a decrease in 'difficulty'. The phrase 'total advantage' was re-phrased from 'other advantages', but this did not seem to improve the correlation coefficient. Perhaps the phrase 'other advantages' is still perceived as vague.

### Face Validity of the CE Scale

The separate consistency of the variable subtests with the total test shown by Hoyt estimates and the correlation coefficient was accepted as being sufficient for face validity purpose. Wordings that were unclear were clarified, based on comments from the pilot subjects as previously reported.
Face Validity of SD Questionnaire

The Socio-demographic Questionnaire was given to the pilot and main sample subjects. The purpose was to assess its face validity among the pilot subjects, and to obtain information from the main sample subjects. The items constituted some of the independent variables of this study. Using comments from experts and pilot subjects, items were clarified. In the following paragraphs, an account is given of how these comments were used to refine the three instruments.

Instrument Refinement

Refinement of the instruments was based on results from the reliability and validity tests with experts and pilot subjects. This section gives an account of how this was done.

Procedures for Retaining Postulates and Contrasts

Procedures for retaining postulates and contrasts from the LLE Scale for Experts were based on statistical analyses and comments from experts.

Step 1: LERTAP was run to find out the consistency within the subtests (i.e. the postulates and contrasts considered separately), and total test (i.e. the postulates and contrasts considered together). A correlation coefficient was obtained for each item with the subtest (r.sub) and the total test (r.tot). The two correlation coefficients for the item were summed up and the result was rated (R) according to seven point scale to indicate the item from being poor to being excellent. The (R)
of the postulate and the contrast formed a Pair Rate. A pair of postulate and contrast having a pair rate of eight or more would be considered for selection. The following is an illustration of how the scale was set.

Codes:  
E=Excellent  
G=Good  
Q=Questionable  
P=Poor  

r Sub = Correlation Coefficient of Sub-test  
r Tot = Correlation Coefficient of Total Test  
(R) = Rating on Item  
Pair Rate = Total Rating of Postulate and Contrast from Experts

Rating scale:

<table>
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<tr>
<th></th>
<th>P+P</th>
<th>Q+P</th>
<th>G+P/</th>
<th>E+P/</th>
<th>E+Q/</th>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1 = both poor  
2 = 1 questionable + 1 poor  
3 = 1 good + 1 poor; both questionable  
4 = 1 excellent + 1 poor; 1 good + 1 questionable  
5 = 1 excellent + 1 questionable; both good  
6 = 1 excellent + 1 good  
7 = both excellent

Note:  
Excellent : r > 0.30  
Good : r 0.15 < or= 0.30  
Questionable : r 0 < or= 0.15  
Poor : r < 0

The following is a section of Appendix E Table A on Results of Reliability Test on LLE Scale for Experts showing how pair rates resulted and were used.
The item responses from experts were rated according to their correlations with their subtest and total test in the $R$ column. The correlation coefficient results of a postulate and its contrast formed a Pair-Rate. Items with a Pair-Rate of eight or more would be considered for selection except when one of them was too weak, e.g. having a negative ‘$r$’ (for details, see Appendix E Table A - Results of Reliability Tests on LLE Scale for Experts).

In five cases when items were weak, i.e. with a Pair Rate of five or six, they were retained for the following reasons.

The first pair was as follows.

**Postulate:** Q81=(5) - Learners should be trained to acquire the skill to learn more than to accumulate facts.

**Contrast:** Q45=(6) - Learners should be trained to accumulate facts more than the skill to learn.

This pair had a Pair-Rate of 6, but a mean of 2.77 for ‘yes’ replies to the postulate and a mean of 2.85 ‘no’ replies to the contrast. These means showed there was consistency in the experts' replies. Therefore they were retained. The wording was improved by substituting the word ‘trained’ with ‘taught’, based

<table>
<thead>
<tr>
<th>Exp. Random</th>
<th>Item</th>
<th>Experts</th>
<th>Pair Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Col. items= no. X r.Sub r.Tot R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38 Q36=(1) 20 2.77 -0.32 0.07 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Q38=(2) 17 2.54 0.57 0.69 7 9*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>97 Q95=(3) 48 2.77 0.08 0.51 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Q13=(4) 4 2.59 0.50 0.44 7 12*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83 Q81=(5) 39 2.77 0.20 -0.02 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 Q45=(6) 21 2.85 0.05 0.13 3 6x*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* =Selected
x* =Weak but chosen

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on the comments from the experts.

The second pair was as follows.

Postulate: Q28=(33) - Learners should be trained to regard learning as something relevant to their lives.

Contrast: Q86=(34) - Learners should be trained to regard learning as something not necessarily relevant to their lives.

This pair had a Pair-Rate of 6, but a mean of 2.92 of 'yes' replies to the postulate and a mean of 2.96 'no' replies to the contrast, therefore they were retained because of these high means, showing consistency in their replies. Based on the comments of the experts, the statements were rephrased as follows.

Postulate: Q28=(33) - Learners should be taught to regard learning as something relevant to their lives.

Contrast: Q86=(34) - Learners should be taught that learning does not have to be relevant to their lives.

The following was the third pair.

Postulate: Q59=(73) - Teachers should be learners throughout their lives.

Contrast: Q30=(74) - Teachers should be learners only during their initial training.

The pair had a Pair-Rate of 6, but a mean of 3.00 of 'yes' replies to the postulate and a mean of 3.00 of 'no' replies to the contrast, which meant all the experts said 'yes' to the postulate and 'no' to the contrast, showing consistency, therefore they were retained in their original form.

The fourth pair was as follows.

Postulate: Q35=(77) - Paid educational leaves should be provided by legislation.

Contrast: Q90=(78) - Paid educational leaves should be a privilege not a right.
The pair had a Pair-Rate of 5, but a mean of 2.62 of 'yes' replies for the postulate, and a mean of 2.46 of 'no' replies for the contrast, showing consistency, so they were retained. No change in wording was made, because there were no suggestions from the experts.

The fifth pair was:

Postulate: Q6=(79) - All learners should be allowed to play a responsible part in the entire educational enterprise.

Contrast: Q14=(80) - Learners should not be allowed to play any responsible part in the entire educational enterprise.

The pair had a Pair-Rate of 5, but a mean of 3.00 of 'yes' replies to the postulate meant all the experts said 'yes' to the postulate; and a mean of 2.77 of 'no' replies to the contrast, which meant most of the experts said 'no' to the contrast. Therefore they were retained, because the replies showed consistency, but based on the experts' comments, the wording was revised as follows.

Postulate: Q6=(79) - Learners should be given a responsible role to play in the educational system.

Contrast: Q14=(80) - Learners should be deterred from playing a responsible role in the educational system.

The retained postulates were all endorsed by the experts with 'yes' to a high degree, and the contrasts were rejected with 'no' also to a high degree. Based on the comments from the experts, the weak postulates were rephrased to improve the internal consistency.

Step 2: The comments from the experts on the various items were grouped under each item (see Appendix F). Based on these comments and suggestions the wording of the retained pairs of
postulates and contrasts were amended, but the original meanings were preserved. Comments from experts were categorized into two groups: explanations of what had been considered as 'yes', 'not sure' or 'no' answers to the questions, and remarks related to the wording of the statements.

Examples of explanations given for responses to postulates are as follows.

Postulate: Q71=(75) - Legislation should abolish the hierarchical distinctions maintained among the various categories of teachers between primary and secondary schools.

{This is a complicated question. What about higher education. One should distinguish the distant objective from the realizable accomplishments in the foreseeable future.} [nil reply]  
(Kaddoura)

Postulate: Q33=(51) - Schools should be built for multiple use of different age groups in education.

{`not sure', adult learners need other places for learning than schools of our times.} (Pfluger)

Examples of explanations given for responses to contrasts are as follows.

Postulate: Q21=(84) - Learners should be trained to maintain social stability.

{`not sure', it depends in what kind of society you are taught.} (Pfluger)

Postulate: Q90=(78) - Paid educational leaves should be a privilege not a right.

{`no', but economic conditions are the final judge.} (Kaddoura)

In their responses to contrasts the experts elaborated more on why they agreed or disagreed with these contrasts than whether they thought these were postulates of lifelong education.

Great attention was paid to remarks related to the wording
or phrasing of postulates, since content and construct validity were considered. The examples were as follows.

Postulate: Q37=(15) - Artificial distinctions between different levels of education should be abolished.

[This is a tautology. If there are different levels, they are, perforce, distinct.] [nil] (Kaddoura)

Kaddoura's comments were accepted and the postulate was eliminated.

Postulate: Q26=(65) - A fixed part of the increase in education budgets should be reserved for the development of sophisticated techniques.

{Badly put - perhaps means "innovation"} (Stock)

This postulate was eliminated, because besides the poor wording the Pair Rate was low, only five.

Attention was also paid to remarks related to wording or phrasing of the contrasts, insofar as they involved the postulates. The examples were as follows.

Postulate: Q17=(88) - Learners should be trained to view time as being possible to bring about old age, boredom and decay.

{needed rephrasing or preferably eliminating - it does not make sense as it stands now.} (Duke)

This contrast was rephrased to read, "Learners should be taught to view time as being able to bring about old age, boredom and decay.

Postulate: Q21=(84). - Learners should be trained to maintain social stability.

{trained, same as commented before.} (Stock)

{not sure', as subsequent and training not clear.} (Stock)

The words 'train', 'trained' or 'training' in contrasts were substituted by 'teach', taught' or 'teaching', as in the postulates.

So like the postulates, the contrasts were either re-
phrased or eliminated based on the experts' comments.

There were also general remarks. Examples were as follows.

{I found it difficult to answer to some of your entries by, 'yes' or, 'no' as in some cases the right answer would be yes and no.} (07, Lengrand)

{I would like to know which is the aim of this questionnaire. May the answers serve to inform about opinions concerning lifelong education, or may they help the deciders to take some decisions.} (Suchodolski)

Because the experts did not know how the statements in the questionnaire were going to be used, they might sometimes have forgotten they were only asked to say whether the statements were postulates of lifelong education, and not to agree or disagree with the statements. Because the respondents looked at the statements from a different perspective some of the postulates did not correlate well with their contrasts.

Besides considering the experts' comments and using them, the separate consistency of the two sub-tests with the total test shown by the Hoyt estimates and their correlation coefficient with the total test were accepted as being sufficient for construct and content validity purposes.

Altogether 28 pairs of postulates and their contrasts were retained, based on one pair for the one and only inherent characteristic, two pairs for each of the eleven fundamental characteristics, and one pair for each of the five advantageous characteristics, making a total of 28 pairs. The contrasts were retained only for the purposes of checking on the responses and to counteract possible response sets.
The Retained Pairs of Postulates and Contrasts

To show the situation of the retained pairs of postulates and contrasts, a frequency count of the responses was run on the item pairs from the experts with the following results (see Appendix G).

There were 82.42 percent 'yes' replies for the postulates, as compared with 2.75 percent 'no' replies, 13.46 percent 'not sure' and 1.37 percent 'missing'. A t-test run on the 'yes' with 'no' replies showed that there were significantly more 'yes' (mean=10.71) than 'no' (mean=0.36) replies, with p<.01 (two-tail). In the 'no' replies, only one postulate had two 'no' replies, and eight postulates had only one 'no' replies. Therefore, on the whole the experts said 'yes' to the retained postulates. Thus they were taken as validated postulates of lifelong education by the experts.

As for the contrasts, which were supposed to be the opposite of the postulates, 22.25 percent were 'yes' replies as compared to 60.16 percent 'no', 16.76 percent 'not sure' and 0.82 percent 'missing'. The result of a t-test run on the 'yes' with 'no' replies showed that there were significantly more 'no' (mean=7.82) replies than 'yes' (mean=2.89) replies, with p<0.01 (2-tail). Comparing this result with that of the postulates, it could be seen that, on the whole, the experts said 'yes' to the postulates and 'no' to the contrasts.

Treatment of the Contrasts

The reader is reminded that contrasts were formulated to match the postulates, primarily as a check on the responses to
see whether the experts were saying 'yes' to, and the pilot subjects were agreeing with the statements without bothering to study and think about them, and secondarily to offset a possible response set. The contrasts were formulated as conceptual opposites of the postulates rather than literal or syntactic opposites so as to avoid using too many 'should be' and 'should not be' statements which would make the questions obviously opposites and defeat the purposes of checking on the response set. It would also make the whole questionnaire sound very mechanical.

The analyses mentioned in the previous paragraphs, as well as the data on Appendix G - Frequencies of Experts' Replies to Postulates and Contrasts Retained, threw light on four situations.

Two of the contrasts proved to be weak matches of the postulates, and that the experts did not regard them as opposites. Examples were as follows.

Postulate: Q3=(85) - Education should prepare learners for a society that does not yet exist (Faure, 1972, p.13).
[cases=13, yes=9, not sure=3, no=1]

Contrast: Q64=(86) - Education should prepare learners to maintain the contemporary society.
[cases=13, yes=6, not sure=2, no=5]

Postulate: Q8=(95) - Education should be used as an instrument for individual advancement and community advancement (Ge).
[cases=13, yes=13, not sure=0, no=0]

Contrast: Q23=(96) - Education should be viewed as an opportunity chiefly for personal advancement.
[cases=13, yes=6, not sure=4, no=3]

These pairs are not exact opposites. Nevertheless, the respondents were expected to agree with the postulates and
disagree with the contrasts. They should emphasize the one and de-emphasize the other according to the spirit of lifelong education. But many did not see the statements in that light, hence the seemingly inconsistent responses.

Two of the contrasts appeared to be opposites of the postulates, yet the sum of 'yes' replies to the postulates and contrasts were more than thirteen, which was the number of respondents. Therefore it showed that some of the experts replied 'yes' to the postulates, and also 'yes' to their contrasts. Thus their responses showed apparent inconsistency. These postulates and the number of persons choosing each response are shown in their next section.

Postulate: Q96=(13) – Initial training and subsequent training of learners should be integrated (Gr).
[cases=13, yes=11, not sure=2, no=0]

Contrast: Q39=(14) – Initial training and subsequent training of learners should be separated.
[cases=13, yes=3, not sure=2, no=8]

Postulate: Q84=(63) – There should be significant development of experiments in self-instruction (Gp).
[cases=13, yes=12, not sure=1, no=0]

Contrast: Q70=(64) – There should be limited development of experiments in self-instruction.
[cases=13, yes=3, not sure=2, no=8]

Eleven said 'yes' to Postulate: Q96=(13), but three said 'yes' to its Contrast: Q39=(14), making a total of fourteen, and showing that one respondent said 'yes' to both the postulate and the contrast. In Postulate: Q84=(63), twelve said 'yes', but three said 'yes' its Contrast: Q70=(64), making a total of fifteen, showing that two respondents said 'yes' to both the postulate and the contrast.
One contrast had more 'yes' responses than the postulate.

Postulate: Q32=(93) - Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations (Faure, 1972, p. 240).
[cases=13, yes=10, not sure=3, no=0]

Contrast: Q53(94) Through their programmes learners should be given some awareness of the diversity of national interests.
[cases=13, yes=13, not sure=0, no=0]

The experts did not perceive that emphasizing national interests would encourage the division of nations rather than cohesion. The weakness of the contrast lies in the word 'interests' which could mean 'profit', 'selfish interest' or 'concern'. Emphasizing the former two meanings would divide, but emphasizing the last meaning would unite. The experts might have taken the last meaning, differing from what is generally understood in the Orient. The experts could have a broad view of interests. If so, national interests could also be one of the common aspirations, and the concept could be included in the postulate statement. Therefore the contrasts were retained only as a check on response set. This decision is consistent with the notion that the contrast should not be over-emphasized and should be analyzed separately from the postulates.

One contrast had as many 'yes' replies as did its postulate.

Postulate: Q2=(43) - Educational institutions should be multiplied and made accessible to offer the individual a diversified choice.
[cases=13, yes=10, not sure=3]

Contrast: Q51=(44) - Educational institutions should be multiplied according to the need of the job market.
[cases=13, yes=10, not sure=3]

The contrast was not an exact opposite of the postulate, for 'a diversified choice' might include those meeting 'the need of
the job market', and the experts did not regard them as opposites. Since the concept of 'the need of job market' could be included in the postulate statement without affecting the meaning of the response, this contrast was retained.

Two postulates did not receive strong support.

Postulate: Q85(45) - Business companies should train not only workers, but researchers as well (F9).
[cases=13, yes=7, not sure=5, no=1]

Contrast: Q74=(46) Only tertiary educational institutions should train researchers.
[cases=13, yes=2, not sure=1, no=10]

Postulate: Q57=(91) - A spirit of peace should be inculcated in learners (Lengrand, 1975, p. 107).
[cases=13, yes=8, not sure=5, no=0]

Contrast: Q67=(92) - A readiness for war should be inculcated in the learners.
[cases=13, yes=0, not sure=2, no=11]

Only seven said 'yes' to Postulate: Q85=(45), and only eight to Postulate: Q57=(91). This is not surprising since the experts were academic people, who did not see business as being able to train researchers. Some of the experts were living in countries under totalitarian rules; a spirit of peace might not be a solution to their problems, because they might have to fight for their freedom. The postulates under discussion were retained.

Most of the experts said 'yes' to all the retained postulates, and as long as they did that, validity is substantiated. The postulate statements were based on lifelong education and presented in the literature, while the contrasts did not have such support. Another study would have been needed, if the contrasts were to be rephrased to match the postulates. Yet the
consistency of postulates with contrasts as pairs might never be shown, for they might still not be perceived by respondents as opposite ideas.

Based on the above statistical evidence of 'yes' responses to the postulates and on the rationale just given, the postulates and contrasts were analysed separately in the study, so that even if the contrasts were not exact opposites of the postulates, the results of the responses on the postulates would not be affected by them. Besides, the reliability and validity of the postulates and contrasts as subsets or subtests had been satisfactory, and the implication statements, on which responses on career effects in the CE Scale were based, had been derived from the postulates not from the contrasts. Through the process of validity and reliability testing of the postulates associated with the seventeen characteristics the concept of lifelong education is thus defined, which is one of the main purposes of this study.

Procedures for Confirming Retention of Postulates and Contrasts

The retention of items from the LLE Scale for Experts was confirmed with those in the LLE Scale for Pilot Subjects. The process was based mainly on the consistency of the items within the subtests and total test. This was done as follows. (For detail, see Appendix E Table B - Results of Reliability Tests on LLE Scale for Pilot Subjects)

Step 1: LERTAP was run to find out the consistency of the
items of the LLE Scale for Pilot Subjects within the sub-tests (i.e. the postulates and contrasts considered separately), and total test (i.e. postulates and contrasts considered together). A correlation coefficient was given to each item with the sub-test \( r_{\text{sub}} \) and the total test \( r_{\text{tot}} \). The two correlation coefficients for the item were summed up and the result was rated \( R \) according to a seven-point scale, like that set for the experts to indicate the item from being poor to being excellent. The \( R \) of the postulate and that of the contrast formed a Pair Rate. A pair of postulate and contrast with a Pair-Rate of eight or more would be considered for selection. Out of the fifty-one pairs, only one pair had a Pair-Rate below eight, but that one was not among those retained from the experts' items. Therefore twenty-eight pairs, matching those retained from the experts' items, were confirmed by the pilot subjects.

Table 15 shows the original pairs of all the postulates and contrasts, the pairs that had passed the required rating and the pairs that were retained based on the above process of selection. The numerals are pair identifications that have been rated eight and above, and the ones with '?' are the weak ones with a rating of 5 or 6, as has been explained in the procedures for retaining postulates and contrasts from the LLE Scale for Experts.
Table 15

**Derivation of Item Pairs for LLE Scale**  
*(Final Version)*

| Item Pair Numbers |
|-------------------|----------------|----------------|
| Characteristic no. | Original draft | Passed criterion | Chosen for final |
| 1                 | 1              | 1               | 1               |
| 2                 | 3,5,7          | 3, 5?           | 3,5?            |
| 3                 | 9,11,13,15     | 9,1 1?,13      | 9,13            |
| 4                 | 17,19,21,23    | 17,19,23       | 17,19           |
| 5                 | 31,33,35       | 31,33?          | 31,33?          |
| 6                 | 35,37,39,41    | 35?,37,41      | 37,41           |
| 7                 | 43,45,47,49    | 43,45          | 43,45           |
| 8                 | 55,57,59       | 55,57,59       | 55,59           |
| 9                 | 67,69,71,73    | 69,73?         | 69,73?          |
| 10                | 79,81          | 79?,81         | 79?,81          |
| 11                | 83,85,87       | 85,87?         | 85,87?          |
| 12                | 89,91,93       | 91,93          | 91,93           |
| 13                | 25,27,29       | 25,27,29       | 27              |
| 14                | 51,53          | 53             | 53              |
| 15                | 61,63,65       | 63?            | 63?             |
| 16                | 75,77          | 75,77?         | 77              |
| 17                | 95,97,99,101   | 95             | 95              |

Table 15 shows the postulate and contrast pairs retained through the process of statistical analysis. There was one pair for the inherent characteristic, two for each of the fundamental and one for each of the advantageous characteristics.

**Step 2:** Comments from the pilot subjects were also used to improve the wording of the statements (see Appendix F). Comments from pilot subjects, like those of the experts, were also related to their giving explanations for their agreeing or disagreeing with the statements, and to the wording and phrasing of the statements.

Examples of explanations given by pilot subjects on responses to postulates were as follows.
Postulate: Q3=(85) - Education should prepare learners for a type of society which does not yet exist.

{Will that society exist one day? and when? If it will, then education should be forward-looking and my answer may be different from now. 'disagree'} (01006)

Postulate: Q11=(39) - Learners should be given the freedom to decide when to learn.

{Too much freedom creates confusion. 'disagree'} (03036)

Examples of pilot subjects' explanations on responses to contrasts were as follows.

Contrast: Q34=(28) - It is but natural that schools in urban areas should have better quality than schools in rural areas.

{I think it all depends on how one defines "better quality". It can be 'better' in terms of facilities and equipment. It can also be 'better' in being able to meet the needs of the learners. 'disagree'} (01016)

{Ideally this should not be, but circumstances make it so. 'disagree'} (03036)

{As far as Hong Kong is concerned, this is right. 'agree'} (03004)

Contrast: Q53=(94) - Through their programmes, learners should be given some awareness of the diversity of national interests.

{'Truth' only stays in the ideal. 'strongly agree'} (03036)

Such replies related to the postulates and contrasts only revealed whether the pilot subjects agreed or did not agree with the statements.

As for remarks related to wording and phrasing of the postulates, great attention was paid to them, as they were concerned with the clarity of the statements. Based on their comments the statements were modified or eliminated. The following were some of the examples.

Postulate: Q6=(79) - All learners should be allowed to play a
This postulate was rephrased to read, "Learners should be given a responsible role to play in the educational system", to make it clear.

Postulate: Q9=(21) - Specialists from other professions should be employed to work beside professional teachers.

{Does the question mean specialists should work together with professional teachers, or they should be employed besides professional teachers? I'm doubtful about what "specialists" and "other professions" mean. [nil response]} (01016)

This postulate was not among those retained.

So a number of the statements were rephrased or eliminated to ensure they were meaningful to the pilot subjects, who were lay people.

As for remarks related to wording and phrasing of the contrasts, attention was paid to them insofar as they were related to the postulates. Some of them were eliminated with the postulates. The following were examples of comments.

Postulate: Q14=(80) Learners should not be allowed to play any responsible part in the entire educational enterprise.

{Unclear. [nil response]} (03004)

This contrast was rephrased to read, "Learners should be deterred from playing a responsible role in the educational system". 'The entire educational enterprise' would mean 'the educational system' for the people of Hong Kong.

Postulate: Q89=(45) - Post-secondary education should be specialized in certain fields only.

{Unclear. [nil response]} (03004)

This contrast was not among the pairs of postulates and contrasts retained. Therefore, like the postulates, several of the contrasts were either rephrased or eliminated based on the
The pairs of postulates and contrasts retained are juxtaposed with the characteristics as shown in Chapter III. These form the content of the new LLE Scale. Implication statements derived from the retained postulates were used to form the CE Scale.

The Confirmed Pairs of Postulates and Contrasts

To show the situation of the retained pairs of postulates and contrasts, a frequency count of the pilot subjects' responses to the item pairs were run on their results of the LLE Scale (see also Appendix H). The results are reorganised as shown in Table 16.

Table 16
Percentage of Pilot Subjects Agreeing or Disagreeing with the Postulates or Contrasts

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree/agree (%)</th>
<th>No opinion (%)</th>
<th>Strongly disagree/disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postulates</td>
<td>75.86</td>
<td>14.14</td>
<td>10.00</td>
</tr>
<tr>
<td>Contrasts</td>
<td>39.85</td>
<td>16.29</td>
<td>43.58</td>
</tr>
</tbody>
</table>

For the postulates 75.86 percent of the pilot subjects replied 'strongly agree' or 'agree' as compared with ten percent who checked 'disagree' or 'strongly disagree', and 14.14 percent who had 'no opinion'. The result of t-tests run on the mean scores of the postulates agreed with the means of the postulates disagreed (i.e. the means of 'agree' and 'strongly agree' replies and the means of 'disagree' and 'strongly disagree' replies) showed the pilot subjects were significantly more inclined to agree with the postulates than to disagree with them.
As for the contrasts, 39.85 percent of the pilot subjects replied 'strongly agree' or 'agree', as compared to 43.58 percent who chose 'disagree' or 'strongly disagree', and 16.29 percent who had 'no opinion' and 0.29 percent 'missing'. A t-test run on the means of contrasts agreed and contrasts disagreed showed no significant difference, that is, the pilot subjects were not more inclined to agree than to disagree with the contrasts. The result could also mean that the pilot subjects agreed with some of the contrasts and disagreed with their postulates. Since the postulate and the contrast subtests were correlated at 0.96, it could be that they did consider many of the contrasts as opposites of the postulates. Thus the situation of the retained items from the pilot subjects was different from that of the experts. Nevertheless, the decision was maintained to analyse the postulates only, since there were experts who did not see some of the contrasts as opposites of their postulates.

Refining the CE Scale

The reliability of the CE Scale was established through analysis by LERTAP to produce Hoyt estimates and Cronbach's alpha to show internal consistency, as previously seen. The results were acceptably high. All the subtests (i.e. career effects on prestige, authority, security, difficulty and advantages, considered separately), as well as the total test (i.e. the career effects considered together), had Hoyt estimates of 0.70 and above. The Cronbach's alpha, showing the consistency
among the tests was also high (0.73). The results from Pearson correlation among the tests showed that 'difficulty' had a low positive correlation with the other career effects instead of the expected negative correlation. When the instrument was designed it was assumed that the respondents would perceive 'difficulty' decreasing if they perceived the effect of implementing the postulates of lifelong education on other career effects, such as prestige and security, to be increasing. But the result did not confirm this expectation. It showed that 'difficulty' could increase, even if 'prestige' and other benefits would increase. Therefore, 'difficulty' was retained.

The format of the questions was also changed. Instead of giving a tick to each of the questions on the likert scale, some respondents just circled the whole set of [0] or other numbers, since these numbers formed their own columns lending themselves to easy circling, as shown below.

<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree affected</td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

If education were to be free for all, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |

To prevent the main sample subjects just circling a column, the format was reset so that the questions were in the form of continuous statements, as shown below.
HOW WOULD IT AFFECT YOU?.................?

1. If education were to be provided for the entire life-span of all individuals,

MY PRESTIGE  very much moderately unchanged moderately very much
WOULD BE decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much
WOULD BE decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

The respondents had to give a reply or tick in response to each statement, thus circling similar answers for all the questions by simply circling a column of numbers was discouraged. The number of implication statements was 28, the same as the postulates. Accordingly, the CE Scale had been refined using the comments of the pilot subjects.

Refining the SD Questionnaire

The wording and presentation of the SD Questionnaire were also refined and modified based on the responses from the pilot subjects. Since many blanks had been left unfilled, instead of requesting the respondents to fill information in blanks left in statements, direct questions were asked. For better analysis purposes, teaching experience was divided into full-time and part-time. Positions were categorised as principal, assistant
to principal and teacher instead of administrators (i.e., principal/assistant to principal) and teachers, so that principals and their assistants could be analysed separately. The inclusion of assistants, who were partly administrators and partly teachers was done at this stage, because it was not certain whether a high enough response rate would be obtained from the principals. The SD Questionnaire was thus refined to obtain more precise information than did the original version.

Summary of Instrument Refinement

From the results of the validity and reliability testing of the LLE Scale by experts, 28 pairs of postulates and their contrasts were retained from the original 51 pairs. Based on the comments of the experts, the wording of the statements were modified.

The LLE Scale was also refined as a result of data derived from experts and pilot subjects. The format of the CE Scale and the SD Questionnaire was improved. Based on the pilot subjects' comments, the wording of these two instruments were also amended (see Figure 1 in Chapter I). A new LLE Scale, CE Scale and SD Questionnaire was produced for the study, in English and Chinese.
"Degree of agreement" with lifelong education was the dependent variable. One of the main purposes of this study was to explain variance in "agreement" through the use of various combinations of socio-demographic and "perceived career effects" variables. It was envisaged that respondents who felt threatened by the possible implementation of the various postulates concerning lifelong education would be less likely to agree with them than those who felt less threatened.

In this chapter, data analysis and testing of the hypotheses are reported. There is a description of the sample, based on the information obtained through the SD Questionnaire (the Socio-demographic Questionnaire). A summary of the chapter is also given.

Data Analysis

Table 17 shows the number of schools in the study, the number that received the questionnaire, the percentage of schools that responded, the number of individuals who were sent the questionnaire, and the number and percentage of individuals who responded.
<table>
<thead>
<tr>
<th>School categories</th>
<th>Total</th>
<th>sent</th>
<th>%sch.</th>
<th>resp.</th>
<th>resp.</th>
<th>sent</th>
<th>%indi</th>
<th>resp.</th>
<th>resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Govt. Anglo-Ch.</td>
<td>22</td>
<td>21</td>
<td>95.5</td>
<td>6</td>
<td>28.6</td>
<td>36</td>
<td>23</td>
<td>63.9</td>
<td></td>
</tr>
<tr>
<td>2. Govt. Chinese</td>
<td>4</td>
<td>4</td>
<td>100.0</td>
<td>2</td>
<td>50.0</td>
<td>16</td>
<td>6</td>
<td>37.5</td>
<td></td>
</tr>
<tr>
<td>3. Govt. Techn.</td>
<td>9</td>
<td>9</td>
<td>100.0</td>
<td>3</td>
<td>33.3</td>
<td>18</td>
<td>16</td>
<td>88.9</td>
<td></td>
</tr>
<tr>
<td>4. Aided Anglo-Ch.</td>
<td>230</td>
<td>30</td>
<td>13.0</td>
<td>16</td>
<td>53.3</td>
<td>96</td>
<td>72</td>
<td>75.0</td>
<td></td>
</tr>
<tr>
<td>5. Aided Chinese</td>
<td>26</td>
<td>20</td>
<td>76.9</td>
<td>11</td>
<td>55.0</td>
<td>66</td>
<td>37</td>
<td>56.1</td>
<td></td>
</tr>
<tr>
<td>6. Aided Techn.</td>
<td>9</td>
<td>9</td>
<td>100.0</td>
<td>6</td>
<td>66.7</td>
<td>36</td>
<td>26</td>
<td>72.2</td>
<td></td>
</tr>
<tr>
<td>7. Aided Prevoc.</td>
<td>13</td>
<td>13</td>
<td>100.0</td>
<td>10</td>
<td>76.9</td>
<td>60</td>
<td>50</td>
<td>83.3</td>
<td></td>
</tr>
<tr>
<td>8. Priv. Anglo.Ch.</td>
<td>104</td>
<td>35</td>
<td>33.7</td>
<td>8</td>
<td>22.9</td>
<td>48</td>
<td>33</td>
<td>68.8</td>
<td></td>
</tr>
<tr>
<td>9. Priv. Chinese</td>
<td>55</td>
<td>18</td>
<td>32.7</td>
<td>6</td>
<td>33.3</td>
<td>36</td>
<td>21</td>
<td>58.3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>472</td>
<td>159</td>
<td>33.6</td>
<td>68</td>
<td>42.7</td>
<td>412</td>
<td>284</td>
<td>68.9</td>
<td></td>
</tr>
</tbody>
</table>

The table shows 159 schools were sent the questionnaire, that is 33.6 percent of the total 472 Hong Kong school population. Responses were received from 68 schools, that is 42.7 percent of the schools chosen. In some categories of schools, every school was included, whereas in other categories a sample of the schools was randomly drawn. The number of individuals who responded from those 68 schools was 284, which was 68.9 percent of all the letters sent.

In Hong Kong, for research using mailed questionnaires, a return rate of 20 to 30 percent is usual, according to students and marketing personnel, such as those from the two universities of Hong Kong and big companies like Hutchison. Therefore, the above results were considered high, being 42.7 percent of the schools and 68.9 percent of the individuals selected. Of the 284 questionnaires returned, fourteen were discarded, because they were incomplete and showed obvious signs of carelessness in the
responses. Thus 270 were retained, i.e., 95.1 percent of all the respondents, and 65.5 percent of all the individuals who had been sent the questionnaire.

The analysis was done using SPSSx and LERTAP programmes. Personal data, types of school, and positions were first summarized through descriptive statistics. Then the data were analysed to assess relationships between "agreement" with lifelong education and "perceived career effects", using structured multiple linear regression and multiple correlation. Such analyses were required to determine the effects of independent variables (personal data, types of schools, position and perceived career effects) on the dependent variable.

Each postulate mean score was computed by averaging the response scores for each postulate. The degree of agreement with the postulates was computed by averaging the mean scores of all the postulates. These mean postulate scores ranged from one (denoting strong disagreement) to five (strong agreement). Henceforth, "agreement with lifelong education", or simply "agreement" are also used.

Characteristics of the Respondents

With respect to gender, 106 were women, 161 were men, and there were three non-responses. For the independent variables age, self-perceived progressiveness, part-time and full-time experience of the respondents, the distributions are shown in Table 18.
Table 18

Sample Characteristics: Age, Self-perceived Progressiveness, Part-time and Full-time Teaching Experience

<table>
<thead>
<tr>
<th>Variables</th>
<th>Valid cases</th>
<th>Mean</th>
<th>Std.Dev.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>266</td>
<td>37.41</td>
<td>8.13</td>
<td>23</td>
<td>60</td>
</tr>
<tr>
<td>Progressiveness</td>
<td>266</td>
<td>2.69</td>
<td>0.87</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Part-time experience</td>
<td>73</td>
<td>3.14</td>
<td>3.41</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Full-time experience</td>
<td>268</td>
<td>12.75</td>
<td>7.46</td>
<td>1</td>
<td>35</td>
</tr>
</tbody>
</table>

N=270

The youngest were 23 and the oldest were 60 years of age. Most of the subjects were in the 30's. Four did not reply on age. None of the subjects considered themselves very conservative. Most considered themselves moderately or slightly progressive.

Only 73 subjects reported having had part-time teaching experience, of which nine reported zero. There were 197 non-response cases. The missing cases might mean they actually did not have part-time teaching experience, but it might also mean they did not wish to give the information, since people working in government and funded schools have to request special permission for taking part-time teaching jobs. Only nine indicated zero, which might mean these respondents did not have part-time experience since they took the trouble to put '0', but they might also have put '0' to protect themselves. There could be some more educators among the missing replies that actually did not have part-time teaching experience, but did not think of
putting '0' as their replies. Since there were so few responses and the meaning of the '0' responses was uncertain, part-time experience was not analysed separately, but, each year of such experience was arbitrarily counted as 0.25 years and added to full-time experience.

The subjects were more ready to give information on their full-time experience than on their part-time. On an average, the 270 respondents had 12.75 years (S.D.=7.46) of experience, so they were experienced educators. Only two persons did not respond.

The distribution of the educators according to their position is shown in Table 19.

Table 19

<table>
<thead>
<tr>
<th>Position</th>
<th>Cases</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>48</td>
<td>17.8</td>
</tr>
<tr>
<td>Assistant</td>
<td>57</td>
<td>21.1</td>
</tr>
<tr>
<td>Teacher</td>
<td>165</td>
<td>61.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>270</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The respondents were principals, assistants to principals and teachers. There were 68 participating schools (see Table 17), and 48 responding principals. The number of assistants was 57, which was more than the principals. The number of teachers was 165. The total amounted to 270 for analysis, that is 65.5 percent of the 412 individuals who were sent the questionnaire (see Table 17). The response rate was considered acceptable for this study.
As position was one of the predicting variables, it was hoped that the inclusion of assistants could be a safeguard for lack of administrators. As they were partly administrators it was anticipated that they could be compared with teachers. But a sufficient number of principals responded. Subsequently it was learnt that in school the role of the assistant was usually more like that of a teacher than an administrator. Their teaching time was only twenty to 25 percent less than ordinary teachers, as revealed by friends who were assistants to principals. Therefore for regression purposes, it was decided that the assistants should be grouped with the teachers, through orthogonal contrasts, as explained latter on.

The number of valid cases from types of school according to government funding is shown in Table 20.

Table 20

Hong Kong Schools Main Sample Distribution: School Funding Category

<table>
<thead>
<tr>
<th>School Funding Category</th>
<th>Valid cases</th>
<th>Sub-cases total</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government funded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Anglo-Chinese</td>
<td>22</td>
<td></td>
<td>8.2</td>
</tr>
<tr>
<td>Govt. Chinese</td>
<td>5</td>
<td></td>
<td>1.8</td>
</tr>
<tr>
<td>Govt. Technical</td>
<td>16</td>
<td></td>
<td>5.9</td>
</tr>
<tr>
<td>Aided Anglo-Chinese</td>
<td>64</td>
<td></td>
<td>23.7</td>
</tr>
<tr>
<td>Aided Chinese</td>
<td>40</td>
<td></td>
<td>14.8</td>
</tr>
<tr>
<td>Aided Technical</td>
<td>25</td>
<td></td>
<td>9.3</td>
</tr>
<tr>
<td>Aided Prevocational</td>
<td>46</td>
<td>218</td>
<td>17.1</td>
</tr>
<tr>
<td>Non-government funded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Priv. Anglo-Chinese</td>
<td>31</td>
<td></td>
<td>11.4</td>
</tr>
<tr>
<td>Priv. Chinese</td>
<td>21</td>
<td>52</td>
<td>7.8</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

There were 218 (80.7%) respondents from government funded
and 52 (19.3%) from non-funded schools. The distribution was somewhat uneven, owing to the differences in number among the different types of schools (see Table 17). But as the schools were grouped into four main types, analysis could still be done. Table 21 shows the schools according to their orientation.

Table 21  

Hong Kong School Main Sample Distribution:  
School Orientation

<table>
<thead>
<tr>
<th>School Orientation</th>
<th>Valid cases</th>
<th>Sub-</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Anglo-Chinese</td>
<td>22</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>Govt. Chinese</td>
<td>5</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Aided Anglo-Chinese</td>
<td>64</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>Aided Chinese</td>
<td>40</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>Priv. Anglo-Chinese</td>
<td>31</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>Priv. Chinese</td>
<td>21</td>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td>Vocational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Technical</td>
<td>16</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Aided Technical</td>
<td>25</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Aided Prevocational</td>
<td>46</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

There were 183 (67.8%) respondents from academically oriented and 87 (32.2%) from vocationally oriented schools. The individuals from the different schools were further regrouped for various types of analysis later, e.g. since there was no non-funded vocational oriented schools, those in the academically oriented schools were regrouped according to their funding status, so that only three types resulted: academically oriented and funded, academically oriented and non-funded, and vocationally oriented and funded.
Testing of Hypotheses

There were three kinds of hypotheses. The variables: sex, age, experience in teaching, types of schools and positions, were encompassed by the ancillary hypotheses. The variables grouped under personal data, types of schools, positions and career effects were encompassed by the minor hypotheses. The combined groups of variables, personal data, types of schools, and positions as one group, and career effects as another group of variables were encompassed in the major hypothesis. The independent variables were personal data, school types, positions and career effects, and the dependent variable was agreement with the postulates of lifelong education.

ANOVA, t-tests and correlations were used to test the ancillary hypotheses. Multiple regression was used to test the minor and major hypotheses. Significance level was set at alpha equal to .05 throughout the study.

Ancillary Hypotheses

Six ancillary null hypotheses were formulated. They were so called because they offered no basis for predicting any directional outcomes.

Ancillary Hypothesis One: There is no significant difference between male and female educators in their agreement with the postulates of lifelong education.

The result of the t-test on sex by educators' agreement with lifelong education is shown in Table 22.
Table 22

**Sex Differences in Educators' Agreement with Lifelong Education**

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>x</th>
<th>S.D.</th>
<th>t</th>
<th>df</th>
<th>p (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>106</td>
<td>3.91</td>
<td>0.27</td>
<td>2.04</td>
<td>207.10</td>
<td>.04</td>
</tr>
<tr>
<td>Men</td>
<td>161</td>
<td>3.85</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Women were significantly more inclined to agree with lifelong education than men \((t=2.04, \ df=207, \ p=0.04)\). The null hypothesis was rejected.

**Ancillary Hypothesis Two:** There is no significant relationship between the age of educators and their agreement with the postulates of lifelong education.

A Pearson correlation was run to correlate 'age' with 'agreement' \((r=0.10, \ p=0.06)\). It meant the age of the educators was not significantly correlated with agreement; and the null hypothesis was supported. But the probability 0.06 indicated some relationship between age and agreement with lifelong education.

**Ancillary Hypothesis Three:** There is no significant relationship between educators' years of experience in the teaching profession and their agreement with the postulates of lifelong education.

Out of 270 subjects only 73 reported their part-time experience; 197 cases were missing for possible reasons given previously. Since there were so few responses, part-time experience was not analysed separately, but each part-time year counted as a quarter of a year and added to the years of full-time experience.

'Years of teaching experience' was correlated with
'agreement' (r=0.07, p=0.11). The null hypothesis was supported.

Ancillary Hypothesis Four: There is no significant relationship between educators' self-perceived progressiveness and their agreement with the postulates of lifelong education.

'Self-perceived progressiveness' was correlated with 'agreement' (r=0.25, p<.01). The more progressive the subjects perceived themselves, the more they agreed with lifelong education. The null hypothesis was rejected.

Ancillary Hypothesis Five: There is no significant difference between educators who work in vocationally oriented schools or academically oriented schools, non-government funded schools or government funded schools, in their agreement with the postulates of lifelong education.

The 'agreement' scores of educators in different types of schools were compared as shown in Table 23.
Table 23

Effects of School Variables on Educators' Agreement with Lifelong Education

<table>
<thead>
<tr>
<th>School Orientation</th>
<th>n</th>
<th>mean</th>
<th>S.D.</th>
<th>t</th>
<th>df</th>
<th>p (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>183</td>
<td>3.87</td>
<td>0.27</td>
<td>-0.31</td>
<td>194.17</td>
<td>.75</td>
</tr>
<tr>
<td>Vocational</td>
<td>87</td>
<td>3.88</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>n</th>
<th>mean</th>
<th>S.D.</th>
<th>t</th>
<th>df</th>
<th>p (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funded</td>
<td>218</td>
<td>3.87</td>
<td>0.26</td>
<td>0.32</td>
<td>81.63</td>
<td>.75</td>
</tr>
<tr>
<td>Non-funded</td>
<td>52</td>
<td>3.86</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean for respondents in academically oriented schools, 3.87, was not significantly lower or higher than the mean for those in vocationally oriented schools, 3.88 (p=0.75); and the orientation of schools did not differentiate their staff members' agreement with lifelong education. The subjects in vocationally oriented schools were neither more nor less in agreement with lifelong education than were those in academically oriented schools. Therefore the null hypothesis was supported.

Table 23 also showed that the mean for respondents in government funded schools, 3.87, was not significantly higher than the mean for those in non-government funded schools, 3.86 (p=0.75); and that funding of schools did not differentiate the degree of agreement with lifelong education. The subjects in non-government funded schools were neither more nor less likely to agree with lifelong education than the subjects in government funded schools. The null hypothesis was supported.
Ancillary Hypothesis Six: There is no significant difference between educators who are administrators and those who are teachers in their agreement with the postulates of lifelong education.

In the sample there were 48 principals, 57 assistants and 165 teachers. The data from the three positions were analysed through ANOVA to see if subjects in these three positions were significantly different from one another in their agreement with lifelong education. The results are shown in Table 24.

Table 24

Effect of Position on Educators' Agreement with Lifelong Education

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>0.44</td>
<td>2</td>
<td>0.22</td>
<td>3.34</td>
<td>.04</td>
</tr>
<tr>
<td>Within groups</td>
<td>17.43</td>
<td>267</td>
<td>0.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Position

<table>
<thead>
<tr>
<th>Position</th>
<th>n</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Principal</td>
<td>48</td>
<td>3.94</td>
<td>0.27</td>
</tr>
<tr>
<td>2. Assistant</td>
<td>57</td>
<td>3.81</td>
<td>0.24</td>
</tr>
<tr>
<td>3. Teacher</td>
<td>165</td>
<td>3.88</td>
<td>0.26</td>
</tr>
<tr>
<td>combined groups</td>
<td>270</td>
<td>3.87</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Since the result was p=0.04 the hypothesis could have been rejected. But the result included the means of principals, 3.94, assistants, 3.81 and teachers, 3.88. The differential result was due to three positions, not two (administrators and teachers). The analysis showed that the mean of the assistants was lower than that of the teachers. Their scores were not between the teachers' and the principals' scores as had been expected. They were more akin to the teachers than to the principals.
Since the means of the three positions were different from one another, a post hoc Duncan Multiple Range Test was run on pairs to show which pairwise differences were significant. The result is shown in Table 25.

**Table 25**

*Comparison of Differences in Mean Scores: Positions*

<table>
<thead>
<tr>
<th>Contrast</th>
<th>Group A</th>
<th>Group B</th>
<th>Mean (A)</th>
<th>Mean (B)</th>
<th>Mean Diff. (A-B)</th>
<th>Sig @ .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prin.</td>
<td>Assist.</td>
<td>3.94</td>
<td>3.81</td>
<td>.13</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Prin.</td>
<td>Teach.</td>
<td>3.94</td>
<td>3.88</td>
<td>.06</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Assist.</td>
<td>Teach.</td>
<td>3.81</td>
<td>3.88</td>
<td>-.07</td>
<td>No</td>
</tr>
</tbody>
</table>

The principals' mean of 3.94 and assistants' mean of 3.81 were significantly different. The mean of the principals was higher than the mean of the assistants in their agreement with lifelong education. The principals' mean of 3.94 and the teachers' mean of 3.88 were not significantly different. The principals were not significantly different from the teachers in their agreement with lifelong education. The assistants' mean of 3.81 and the teachers' mean of 3.88 were not significantly different. The assistants were not significantly different from the teachers in their agreement with lifelong education.

Since the mean degree of agreement of teachers was not significantly different from those of the principals or assistants, the null hypothesis was supported. There was no significant difference between the administrators and teachers in their agreement with lifelong education.

But since the assistants' agreement was the lowest of the
three, and next to the teachers', and also since the assistants' job in Hong Kong usually involved more teaching than administration, it was decided that their scores should be grouped with the teachers rather than with the principals. By orthogonal contrasts, the assistants' influence can be shown. Table 26 shows how the principals, assistants and teachers were grouped for orthogonal contrast.

Table 26
Orthogonal Contrast of Position: Principal, Assistant and Teacher

<table>
<thead>
<tr>
<th></th>
<th>Position</th>
<th>Posicon 1</th>
<th>Posicon 2</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>1</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Assistant</td>
<td>2</td>
<td>-0.5</td>
<td>1.0</td>
<td>-0.5</td>
</tr>
<tr>
<td>Teacher</td>
<td>3</td>
<td>-0.5</td>
<td>-1.0</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In orthogonal contrast, the positions were grouped and given new names: Posicon 1 and Posicon 2. Posicon 1 contrasted principals with combined groups of assistants and teachers. In analysing Posicon 1, principals were coded 1.0, while the code of -0.5 was assigned to assistants and teachers. In regression a positive result indicated that the principals had a higher mean on the dependent variable than the assistants and teachers combined; if negative the reverse was true.

On the other hand, Posicon 2 contrasted assistants with teachers; principals were excluded. In analysing Posicon 2, 0.0 was coded for principals, 1.0 stood for assistants, -1.0 stood for teachers. A positive regression coefficient would indicate
that assistants' mean on the dependent variable was higher than the teachers' mean; the reverse would be true if the coefficient were negative. (For detailed information, see Appendix L, Table on Stepwise Regression of All Variables, PO1=Posicon 1, PO2=Posicon 2).

Through regression analysis using orthogonal contrasts, it was shown that the position of assistants did not have any significant influence on agreement with the postulates. The variables for principals (Posicon 1) and teachers (Posicon 2) significantly predicted the results in Postulate 1, the variable for principals (Posicon 1) significantly predicted the results in Postulate 16. The variable for teachers significantly predicted the results in Postulate 7, but the variables for assistants (Posicon 2) did not significantly predict agreement with any postulate.

Detailed discussion on the prediction of individual postulates will be given in Chapter IX.

The results of testing the ancillary hypotheses are summed up in Table 27.
Table 27

Summary of Tests of Ancillary Hypotheses

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Effects Tested</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sex</td>
<td>male vs. female,</td>
<td>Fem. sig.&gt;male</td>
</tr>
<tr>
<td>age</td>
<td>young vs. old,</td>
<td>NSD</td>
</tr>
<tr>
<td>teaching experience</td>
<td>more experience vs. less experience</td>
<td>NSD</td>
</tr>
<tr>
<td>self perception of progressive-ness</td>
<td>more progressive vs. less progressive,</td>
<td>More progressive sig.&gt;less progr.</td>
</tr>
<tr>
<td>Types of schools:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>orientation (vocational &amp; academic)</td>
<td>vocationally oriented schools vs. academically oriented schools,</td>
<td>NSD</td>
</tr>
<tr>
<td>funding (government funded &amp; non-funded)</td>
<td>non-government funded schools vs. government schools</td>
<td>NSD</td>
</tr>
<tr>
<td>Positions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(administrators &amp; teachers)</td>
<td>administrators vs. teachers</td>
<td>NSD</td>
</tr>
</tbody>
</table>

NSD=No significant difference

Few personal variables significantly predicted agreement with lifelong education. The ancillary null hypothesis for sex was rejected, because females had a significantly higher degree of agreement than males (female mean=3.90, male mean=3.85, p=0.04). Those who perceived themselves as being more progressive also had a higher degree of agreement with the postulates than those who perceived themselves as being less progressive (r=.25, p<.01). From these two results, it appeared that women were the ones who perceived themselves as being more progress-
ive, but further analysis showed there was no significant difference between women and men in their self-perceived progressiveness (female mean=4.31, male mean=4.30, p=0.88).

The ancillary null hypothesis for position was confirmed, although agreement with lifelong education among principals, their assistants, and teachers was significantly different (F=3.34, p=0.04). For further analysis, the assistants' influence was accounted for through orthogonal contrast as shown in Table 26.

Minor Hypotheses

The minor hypotheses dealt with variables which were predicted to produce non-directional outcomes on agreement with lifelong education. There were three minor hypotheses. They dealt with relationships between the set of variables related to educators' perceived career effects, to personal data, to types of schools, and to positions, and agreement with lifelong education. A regression analysis was run to analyse the influence personal data, types of schools, positions and perceived career effects had on agreement with lifelong education. Multiple regression based on ENTER was first run. The method enabled the independent variables to enter as sets. There were five sets of independent variables which were potential predictors of agreement. Multicorr was run to compare the significant differences between the R squares, which were the coefficients of determination, expressing the amount of variance in the criterion variable that is predictable from a predictor variable or combination of predictor variables. This computer programme was developed by
Steiger and Brown (1984). It is a general procedure provided for comparing correlation coefficients between optimal linear composites. The procedure allows computationally efficient significance tests on independent or dependent multiple correlations, partial correlations, and canonical correlations, with or without the postulate of multivariate normality (Steiger & Brown, 1984, p. 11).

The independent variables were first grouped as sets: age, sex, years of teaching experience, self-perceived progressiveness as one set; types of schools as another set; positions as a third set; and a combination of personal data, types of schools, and positions as a fourth set, and perceived career effects (on prestige, authority, job security, job difficulty and other advantages) as a fifth set. Regression was run on the set with agreement as the dependent variable. The results were compared through Multicorr (see Appendix K), and the hypotheses tested.

Minor Hypothesis One: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of personal data (age, sex, years of teaching experience and self-perceived progressiveness) on educators' agreement with postulates of lifelong education.

Table 28 shows the regression results associated this hypothesis.
Table 28

Comparing Influence of Career Effects and Personal Data on Educators' Agreement with Lifelong Education

<table>
<thead>
<tr>
<th>Career Variables</th>
<th>n</th>
<th>df</th>
<th>$R^2$</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>prestige, authority, job security, job difficulty other advantages;</td>
<td>265</td>
<td>5</td>
<td>0.14</td>
<td>8.64</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

Standard error 0.24

<table>
<thead>
<tr>
<th>Personal data variables</th>
<th>n</th>
<th>df</th>
<th>$R^2$</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>age, sex, experience, progressiveness;</td>
<td>263</td>
<td>4</td>
<td>0.09</td>
<td>6.59</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

Standard error 0.25

Career effects accounted for 14.3 percent ($R^2=0.14$) and personal data for 9.3 percent ($R^2=0.09$) of the variance in educators' agreement with lifelong education. Multicorr results (Chi Sq=0.63, df=1, p=0.43) showed that the two $R^2$ squares were not significantly different. The influence of career effects (on prestige, authority, job security, job difficulty and other advantages) was not significantly different from that of personal data (age, sex, experience in teaching, and self-perceived progressiveness) on educators' agreement with lifelong education. Therefore, the hypothesis was confirmed. But still, the $R^2$ squares of 0.09 for personal data and 0.14 for career effects showed the difference was in the positive direction.
Minor Hypothesis Two: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of types of schools on educators' agreement with postulates of lifelong education.

Table 29 shows the results associated with this hypothesis.

Table 29

Comparing Influence of Career Effects and Types of Schools on Educators' Agreement with Lifelong Education

<table>
<thead>
<tr>
<th>Career variables</th>
<th>n</th>
<th>df</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>prestige, authority, job security, job difficulty other advantages;</td>
<td>265</td>
<td>5</td>
<td>0.14</td>
<td>8.64</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

Standard error 0.24

<table>
<thead>
<tr>
<th>Types of school variables</th>
<th>n</th>
<th>df</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>funding, orientation;</td>
<td>270</td>
<td>2</td>
<td>&lt;0.01</td>
<td>0.07</td>
<td>.94</td>
</tr>
</tbody>
</table>

Standard error 0.26

Career effects accounted for 14.3 percent (R =0.14), and types of schools for 0.10 percent (R =<0.01) of the variance in educators' agreement with lifelong education. Multicorr results (Chi Sq= 17.43, df=1, p<0.01) showed that the two R squares were significantly different. Career effects (on prestige, authority, job security, job difficulty and other advantages) had a significantly stronger influence on educators' agreement than types of schools. The hypothesis was rejected.
Minor Hypothesis Three: There is no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of positions on educators' agreement with postulates of lifelong education.

The regression results are shown in Table 30.

Table 30
Comparing Influence of Career Effects and Position on Educators' Agreement with Lifelong Education

<table>
<thead>
<tr>
<th>Career variables</th>
<th>n</th>
<th>df</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>prestige, authority, job security, job difficulty other advantages;</td>
<td>265</td>
<td>5</td>
<td>0.14</td>
<td>8.64</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Standard error</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position variables</th>
<th>n</th>
<th>DF</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>administrator, teacher;</td>
<td>270</td>
<td>2</td>
<td>0.02</td>
<td>3.34</td>
<td>.03</td>
</tr>
<tr>
<td>Standard error</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Career effects accounted for 14.3 percent ($R^2=0.14$) and positions for 2.4 percent ($R^2=0.02$) of the variance in educators' agreement with lifelong education. Multicorr results (Chi Sq=7.91, df=1, p<0.01) showed that the two $R$ squares were significantly different. Career effects had a significantly stronger influence than positions on educators' agreement with lifelong education. Therefore, the hypothesis was rejected.

Of the three minor hypotheses two were confirmed and one was rejected, showing that career effects was a stronger predictor of agreement with lifelong education than types of schools.
and positions, but not stronger than personal data.

**Major Hypothesis**

There was one major hypothesis, to which the six ancillary hypotheses and the three minor hypotheses were related.

There was no significant difference between the influence of perceived career effects (on authority, prestige, security, job difficulty and other advantages) and that of a combination of personal data (age, sex, years of teaching experience and self-perceived progressiveness), types of schools and positions on educators' agreement with postulates of lifelong education.

The regression results are shown in Table 31.

**Table 31**

<table>
<thead>
<tr>
<th>Career variables</th>
<th>n</th>
<th>df</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>prestige, authority,</td>
<td>265</td>
<td>5</td>
<td>0.14</td>
<td>8.64</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>job security,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>job difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other advantages;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard error</td>
<td></td>
<td></td>
<td>0.24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Combined variables</th>
<th>n</th>
<th>df</th>
<th>R</th>
<th>F</th>
<th>Sig.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>age, sex, experience,</td>
<td>263</td>
<td>8</td>
<td>0.11</td>
<td>3.10</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>progressiveness,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>funding, orientation,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>administrator, teacher;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard error</td>
<td></td>
<td></td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Career effects accounted for 14.3 percent ($R^2=0.143$), and the combination of personal data, types of schools and positions for 11.1 percent ($R^2=0.11$) of the variance in educators' agreement with lifelong education. Multicorr results (Chi Sq=0.26,
df=1, p=0.62) showed that the two R squares were not significantly different. The influence of career effects was not significantly different from that of a combination of personal variables (age, sex, years of teaching experience and self-perceived progressiveness), types of schools and positions on educators' agreement with lifelong education. Therefore, the hypothesis was confirmed.

**Summary of the Chapter**

The results of testing the minor and major hypotheses are summarized in Table 32.

<table>
<thead>
<tr>
<th>Variable source</th>
<th>Predicted Relative Influence on Postulates of Lifelong Education</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Effects on Career Aspects (D)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Data (A)</td>
<td>D = A</td>
<td>Confirmed (NSD)</td>
</tr>
<tr>
<td>Types of Schools (B)</td>
<td>D = B</td>
<td>Rejected</td>
</tr>
<tr>
<td>Position (C)</td>
<td>D = C</td>
<td>Rejected</td>
</tr>
<tr>
<td>(W)=combination of: (A), (B), (C)</td>
<td>D = W</td>
<td>Confirmed (NSD)</td>
</tr>
</tbody>
</table>

NSD=No significant difference

Of the three minor null hypotheses one was confirmed and two were rejected. The major hypothesis was confirmed. Career effects was not a stronger predictor of educators' agreement with lifelong education than personal data but stronger than
types of schools, and position. Career effects were not stronger predictors than personal data, types of schools and positions combined.

The next chapter describes the analysis of relationships between agreement with individual postulates concerning lifelong education and the predictors.
CHAPTER IX
SEARCHING FOR EXPLANATORY POWER OF INDEPENDENT VARIABLES

This chapter is related to Phase IV of the study (Results III) as shown in Figure I. One aim of this study was to identify variables that might predict educators' agreement with the postulates of lifelong education. Analyses were undertaken to assess the extent to which the various predictors were associated, individually and collectively, with educators' agreement with the postulates. Results are given for variables that were found to be significant predictors in stepwise linear regression analyses. This chapter first reports the nature of educators' agreement with the postulates, which was the dependent variable, then the predictors', or the independent variables' relationships towards them. This relationship is dealt with first from the perspective of the predictors, then from the perspective of the postulates.

Educators' Agreement with Lifelong Education

To assess educators' agreement with the postulates a frequency count was done (see Appendix L), which shows the extent to which respondents "strongly agree", "agree", "no opinion", "disagree", or "strongly disagree" with the 28 postulates. The results in Table 33 were obtained from Appendix L, from which responses stating 'no opinion' were eliminated through resetting the means.
<table>
<thead>
<tr>
<th>Postulates</th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. entire-life-span</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. self-fulfilment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. skill-to-learn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. teachable-moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. school-work-integrate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. no-art-sci-difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. unrank-manual-intelct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. learners-participate</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. relevance-to-life</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. choose-school</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. free-to-learn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. multiply-institutes</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. company-researchers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. flexible-path</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. exam-for-comparison</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. teacher-educator</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. teacher-learner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. responsible-system</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. learners-manage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. future-society</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. time-positive</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. spirit-of-peace</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. unity-mankind</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. similar-schools</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. workplace-facility</td>
<td>++</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>26. self-learning</td>
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<td>27. paid-ed-leave</td>
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<td>Total</td>
<td>15(++)</td>
<td>12 (+)</td>
<td>1 (-)</td>
<td>0 (--)</td>
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Means reset at 1.01 - 2.00=Strongly disagree
2.01 - 3.00=Moderately disagree
3.01 - 4.00=Moderately agree
4.01 - 5.00=Strongly agree

Most of the respondents either "strongly" or "moderately" agreed with 27 of the 28 postulates, and moderately disagreed with only one, which advocated the abolition of the distinction between arts and science (Postulate 6). There were reasons for
the rejection of Postulate 6, because dividing learners into science and arts streams was the practice in Hong Kong, so to abolish that would mean upsetting the arrangement of the timetable, curriculum, workshops, laboratories, and staffing. Probably it was considered too much to be asked. Yet, the use of early streaming is criticized by both parents and educationists. As Postulate 6 is associated with one of the fundamental characteristics of lifelong education, and the postulates are interdependent, the rejection of Postulate 6 would create difficulty for carrying out other postulates. For example, if learners were rigidly streamed into arts and science classes it would be difficult to let learners choose what they want to learn.

One possible factor here was the fact Hong Kong was under very strong political influences while this study was being done. This influence could have affected the responses to postulates that reflected a democratic ideology. From the time of predicting the hypotheses early in 1985 to the time of data collection in late 1987 three major events took place. First, "A Draft Agreement between the Government of United Kingdom of Great Britain and Northern Ireland and the Government of the People's Republic of China on the Future of Hong Kong" (Hong Kong Government, 1984) had just been published, changing Hong Kong from a colony under Britain since 1842 to a Special Administrative Region under China in 1997. The Sino-British Joint Declaration confirming the Agreement was signed on December 19, 1984 (Hong Kong Government, 1987, p.40). Politics were the topics of the day, but the people's views on politics were
unpredictable. They had been under colonial rule for the past century, and had never known democracy as the people of the West understand the term. There were legislative and executive councils, which somewhat resembled the senate or parliament of the West, except that all members were either government officials or appointed by the Governor. But discussion of an elective government was in the air, so politics filled the media. An atmosphere of freedom still prevailed. The people enjoyed freedom of trade, speech, movement and lifestyle. The political atmosphere might have influenced the educators' attitudes towards those postulates concerning democracy such as allowing learners to participate in the management of the educational institution they attend (Postulate 19), and that they be given a responsible role in the educational system (Postulate 18).

The second and third events were discussions initiated by Government regarding the founding of a third university and an open learning institute. In fact, special preparatory committees had been formed in 1987 by Government for the establishment of these two institutions, and news of their progress often appeared in the media. This development might have helped boost educators' interest in and influenced their attitude towards further learning. Such influence would have made them favour those postulates related to democracy and continuing learning.

Discussion of Results from Analysing Educators' Agreement with the Postulates

The results can be looked at from the perspective of the educators' agreement with the postulates, and from the perspec-
tive of the predictive effects of the variables on their agreement with them.

**From Perspective of Educators' Agreement**

Of the 28 postulates, the educators strongly agreed with fifteen of them. They were as follows. The information in the parentheses is the reference for the origin of the postulate.

Postulate 1. Education should cover the entire life-span of an individual (D2 in Appendix A).

Postulate 8. The chief duty of a teacher is to facilitate active participation in the learning process (Cropley & Dave, 1978, p. 31).

Postulate 9. Learners should be taught to regard learning as something relevant to their lives (Cropley & Dave, 1978 p.12).

Postulate 10. Learners should be free to choose the school in which to learn (F20 in Appendix A).

Postulate 12. Educational institutions should be increased to offer the individual a diversified choice (F2 in Appendix A).

Postulate 14. Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling (F3 in Appendix A).

Postulate 17. Teachers should be learners throughout their lives (CD2 in Appendix A).

Postulate 20. Education should prepare learners for a society of the future (Faure, 1972, p.13).

Postulate 21. Learners should be taught to view time as being able to bring about human experience, discoveries and progress (Lengrand, 1975, p. 99).

Postulate 22. A spirit of peace should be inculcated in learners (Lengrand, 1975, p. 107).

Postulate 23. Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations (Faure, 1972, p. 240).
Postulate 24. Similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all (Gh in Appendix A).

Postulate 25. Educational facilities should be provided in places of work (L9 in Appendix A).

Postulate 27. Paid educational leaves should be provided by legislation (L10 in Appendix A).

Postulate 28. Education should be used as an instrument for individual and community advancement (Ge in Appendix A).

Four of the fifteen postulates which elicited strong agreement did not have any significant predictor. The five were related to qualitative and philosophical matters, or matters which the respondents thought would not affect their personal interests. For example, Postulate 21 stated that learners should be taught to view time as being able to bring about human experience, discoveries and progress, and in Postulate 28 that education should be used as an instrument for individual and community advancement. These are all philosophical statements, or ideals, with which the respondents simply strongly agreed, perhaps without considering whether they could easily be implemented, or whether they would not affect their personal interests. In Postulate 12 it was stated that educational institutions should be increased to offer the individual a diversified choice, and in Postulate 24 that similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. These postulates were also on matters that did not appear to have a direct effect on the respondents' personal interest.

Of the 28 postulates, only five did not have any significant predictor. Four were just described. The fifth one was
Postulate 4 which stated that there were 'teachable moments' in the different periods of learners' lives that teachers should discover and use. Respondents moderately agreed with this postulate. Maybe respondents were uncertain what these 'teachable moments' were, and could not think about how the implementation of lifelong education would affect their personal interests. These examples show that when the respondents did not perceive the postulates as having effects on their personal interests, such as their career effects, they strongly agreed with them, or when they were uncertain, they only moderately agreed, but did not think they would be affected.

Of the 28 postulates, respondents moderately agreed with twelve. This assessment was based on the adjusted means of their replies, which meant, of the twelve postulates they moderately agreed, there were mixtures of 'agree' and 'no opinion' replies. These postulates were:

Postulate 2. Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt (Faure, 1972, p. 143).

Postulate 3. Learners should be taught how to learn rather than to accumulate facts (L6 in Appendix A).

Postulate 4. There are 'teachable moments' in the different periods of learners' lives which should be discovered and used by educators (Cropley, p.102-103).

Postulate 5. Learners' initial training in school and subsequent training at work should be integrated (Gr in Appendix A).

Postulate 7. Any ranking between manual and intellectual disciplines should be abolished (Gj in Appendix A).

Postulate 11. Learners should be given freedom to decide what they want to learn (F20 in Appendix A).

Postulate 13. Business companies should train not only work-
ers, but researchers as well (F9 in Appendix A).

Postulate 15. Examinations should be used as a means of comparing method effectiveness rather than as an academic admission aid (F11 in Appendix A).

Postulate 16. Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula (F18 in Appendix A).

Postulate 18. All learners should be given a responsible role to play in the educational system (F21 in Appendix A).

Postulate 19. Learners should participate in the management of the educational institution they attend (Gq in Appendix A).

Postulate 26. There should be significant development of experiments in self-instruction (Gp in Appendix A).

There were mixed reactions towards these postulates. If these twelve were to be implemented, four of them were perceived by the educators as bringing about an increase to their prestige. These were postulates 2, 3, 19 and 26. Three would bring about a decrease to their authority. These were postulates 11, 15 and 26. Respondents said three of the twelve would bring about an increase to their job security. These were postulates 3, 16 and 18. The respondents perceived their job difficulty would be increased, if five of the twelve postulates were implemented (3, 5, 11, 15 and 19). The respondents perceived their other advantages would also be increased, if two of the twelve postulates (7 and 13) were implemented. These are discussed in detail in the paragraphs following Table 36.

There is still no guarantee that educators would accept the postulates of lifelong education. There might still be strong forces, visible or invisible at work which would combine to mitigate or enhance the educators' acceptance of the postulates. This study was limited to studying "agreement" with the hypothe-
tical implementation of lifelong education. It did not involve any attempt to actually implement any of the postulates. Even if educators agreed with all the postulates but one, there was no evidence to show that they had practised, were practising or would practise what the postulates entailed. Implementation might not be easy.

Testing for Significant Predictors

Variables that significantly predicted educators' agreement with the postulates were evaluated first. To test the significance of such variables, stepwise multiple regression was employed, assigning the mean degree of agreement with the 28 postulates of lifelong education collectively as the dependent variable. The thirteen independent variables used in this equation were: age, sex, years of experience, self-perceived progressiveness, position (represented as two dummy coded variables), types of schools (funding and orientation), career effects (on prestige, authority, job security, job difficulty, and other advantages).

In stepwise regression, predictors are incorporated into the equation in order of their significance, and deleted if they fail to continue making a significant contribution at successive stages of the analysis, until only significant predictors remain. Results of the regression analysis of the composite agreement variable are given in Table 34.
Table 34

**Significant Predictors of Educators' Mean Agreement with Postulates of Lifelong Education**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Job security</td>
<td>.31</td>
<td>&lt;.01</td>
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<tr>
<td>progressiveness</td>
<td>.17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Sex</td>
<td>-.21</td>
<td>&lt;.01</td>
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<tr>
<td>Authority</td>
<td>.14</td>
<td>.01</td>
</tr>
<tr>
<td>Age</td>
<td>.14</td>
<td>.02</td>
</tr>
</tbody>
</table>

Beta: standardized regression coefficient

Stepwise equation $R^2 = 0.22$

'Job security', 'self-perceived progressiveness', 'sex', 'authority' and 'age' were the most significant predictors. This combination of five variables accounted for 22 percent of the variance ($R^2 = 0.22$) in "agreement" with the postulates. When all thirteen predictors were "forced" into a regression equation (including: personal data, type of school, positions and career effects) the result was only very slightly higher ($R^2 = 0.23$).

Although agreement was predicted by these five variables, quite different and diverse patterns of predictors were significant when agreement with individual postulate was used as a dependent variable. A summary of these 28 stepwise regression equations is given in Table 35. (For full information, see Appendix L: Stepwise Regression Results.)

**Prediction from the Perspective of Predictors**

Every independent variable but one (years of experience) was a significant predictor of agreement with at least one of the postulates. Table 35 shows that nearly all predictors were found to be significantly associated with educators' agreement.
with one to eight of the postulates. Experience associated with none. There appeared to be an artifact in response to the questionnaire: many individuals omitted the question regarding part-time experience, and as the data were then questionable, so is this result in the regression analysis.
Table 35

Summary of 28 Stepwise Regression Equations
Showing Relationships between Predictor Variables and Individual Postulates

<table>
<thead>
<tr>
<th>POSTULATE</th>
<th>AG</th>
<th>SX</th>
<th>EP</th>
<th>PG</th>
<th>FU</th>
<th>OR</th>
<th>PO1</th>
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</tbody>
</table>

No. of postulates: 4 6 0 8 1 2 2 2 6 4 3 7 6

sig. predicted

Code for predictors:
AG=Age  SX=Sex
EP=Experience  AU=Perceived effect on authority
PG=Self perception of progressiveness  SE=Perceived effect on job security
FU=School (funding)  DI=Perceived effect on job difficulty
OR=School (orientation)  AD=Perceived effect on other advantages
PO1=Position:(principal vs. assistant, teacher)
PO2=Position (assistant vs. teacher)
A number of variables significantly predicted the responses to the postulates collectively and individually. The results are shown in Table 36.
Table 36

Summary of Relationships between Predictor Variables and Agreement with the Postulates of Lifelong Education: Simple Correlations, Regression Coefficients; and Associations with Individual Postulates

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Mean Agreement Pearson Correlation/ (t-test)</th>
<th>Stepwise Regression (Composite) Beta</th>
<th>No. of Individual Postulates Significantly Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.10</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>Sex: female</td>
<td>(2.04)</td>
<td>-.21</td>
<td>.01</td>
</tr>
<tr>
<td>Sex: male</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>.07</td>
<td>.05</td>
<td>.66</td>
</tr>
<tr>
<td>Progressiveness</td>
<td>.25</td>
<td>.17</td>
<td>.01</td>
</tr>
<tr>
<td>Funding: funded</td>
<td>(0.32)</td>
<td>-.02</td>
<td>.73</td>
</tr>
<tr>
<td>non-funded</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Orientation:</td>
<td>(0.31)</td>
<td>.04</td>
<td>.53</td>
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<tr>
<td>academic</td>
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<tr>
<td>vocational</td>
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<td>Positions:</td>
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<td>Posicon 1</td>
<td>.08</td>
<td>.19</td>
<td>2</td>
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<tr>
<td>Posicon 2</td>
<td>-.05</td>
<td>.45</td>
<td>2</td>
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<tr>
<td>Prestige</td>
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<td>&lt;.01</td>
<td>-.03</td>
</tr>
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<td>.14</td>
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<td>.33</td>
<td>&lt;.01</td>
<td>.31</td>
</tr>
<tr>
<td>Difficulty</td>
<td>.17</td>
<td>&lt;.01</td>
<td>-.10</td>
</tr>
<tr>
<td>Advantage</td>
<td>.26</td>
<td>&lt;.01</td>
<td>.08</td>
</tr>
</tbody>
</table>

Code: r=correlation coefficient
p=Probability; alpha=0.05
Beta=Standardized regression coefficient
t-tests were used to assess significance of dichotomous predictor variables.

The Pearson correlation column in Table 36 means the relation of the different variables to the mean degree of agreement with the postulates collectively. For independent variables that are continuous, the relation is shown through simple correlations, but for dichotomous variables t-tests were used.

The 'stepwise regression' columns in Table 36 indicates the
degree to which the variables acted as significant predictors of
mean agreement with the postulates. For example, age was posi-
tively correlated with mean agreement \((r=0.10, \ p=0.06; \ \text{Beta}=0.14,\ p=0.02)\). Beta weights are the regression weights in a multiple
regression equation in which all the variables are in standard
score form. A null hypothesis implies that there is no relat-
ionship between a predictor and mean agreement. A significant
Beta shows this null hypothesis should be rejected. Alpha was
set at 0.05. This analytic procedure was then replicated 28
times, using for each postulate as a dependent variable.

The right most column in Table 36 summarizes the role of
each predictor across these 'individual postulate' analyses. For
example, age predicted agreement with four of the postulates.
(For full details, see Appendix L).

From the analysis of the predictive function of the differ-
et variables on degree of agreement with the postulates it is
clear that all the variables had played different roles. The
following is an account of the predictive power of the different
variables, and the postulates affected by them. A rationale is
also given for retaining them for a modified model to be shown
in the next chapter.

**Age as predictor.** Agreement with five postulates was signi-
ficantly predicted by the variable age. The analysis showed
older people either strongly or moderately agreed with the
postulates advocating that the chief duty of a teacher is to
facilitate active participation in the learning process (Postu-
late 8), that learners be free to choose the school in which to
learn (Postulate 10), that teachers be learners throughout their lives (Postulate 17), and that a spirit of peace be inculcated in the learners (Postulate 22).

 Those postulates had an appeal for the older subjects most probably because they touched their life experiences. They knew it was difficult to facilitate participation in learning, difficult to accept a school not of your own choice for your children as is sometimes the case in Hong Kong. They also knew it was necessary to be learners throughout life in this age of computers and modern mathematics which many teachers have to learn. To inculcate a spirit of peace in the learners was appreciated, particularly with 1997 looming over Hong Kong.

 The prediction for young and old on their agreement with the postulates of lifelong education taken as a whole was non-directional, and the null hypothesis was supported. But regression on age by STEPS showed age was among the five significant predictors, as shown in the Pearson correlation column therefore, it should not be ignored. Item analysis showed age significantly predicted agreement with four of the postulates, as has been shown. Therefore age was retained as a predictive variable.

 Sex as predictor. Agreement with six postulates was significantly predicted by the sex of respondents (see Table 36). Women were significantly more inclined than men to either strongly or moderately agree with these six postulates advocating that learners be taught to regard learning as something relevant to their lives (Postulate 9), that learners should be
permitted to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling (Postulate 14), that teachers should be trained to be educators rather than specialists in transmitting pre-established curricula (Postulate 16), that all learners should be given a responsible role to play in the educational system (Postulate 18), that learners should participate in the management of the educational institution they attend (Postulate 19), that education should prepare learners for a society of the future (Postulate 20).

It seemed that women were more sensitive than men to practical issues, such as making learning relevant to life, letting learners choose their path of study in a flexible framework, being trained to be educators, sharing responsibility of management with learners and preparing them for a society of the future. Since it has been only in the last couple of decades that Hong Kong women have enjoyed equal opportunity for learning and legal equality with men, it was understandable that they favoured postulates related to learning and democracy. The political situation in Hong Kong might have been an influence on their responses also, since people there are now more aware of democracy and sharing of political responsibilities, and the future of the place being uncertain, to prepare for a society of the future was necessary. But then the political situation should also have influenced men. Therefore, those postulates must have been more appealing to women than to men.

The prediction of a difference between men's and women's
agreement with the postulates taken as a whole was atheoretical, and the null hypothesis was rejected. In Table 36 the column on correlation shows that sex significantly predicted the degree of agreement with the postulates as a whole. From the column on 'predicted items', it could be seen that sex significantly predicted agreement with six postulates. Therefore sex was retained as a predictor variable.

Years of teaching experience as predictor. Years of experience in the teaching profession failed to predict agreement with any of the postulates. A null hypothesis was given to years of teaching experience as a predictor of educators' agreement with lifelong education since it was not certain those with more teaching experience would have a higher or lower degree of agreement with the postulates of lifelong education than those with less experience. The result did not show any predictive power for the variable, because the responses on part-time teaching experience were incomplete, years of full-time experience alone without the data of part-time experience may not have been a true reflection of teaching experience. Also it did not significantly correlate with the degree of agreement with the postulates of lifelong education. But experience is often used as a predictor variable in attitude research, therefore, with improvement on the technique of asking for such information, teaching experience can be retained as a predictor variable.
Self-perceived progressiveness as predictor. There were eight postulates positively and significantly correlated with self-perceived progressiveness. Agreement with some postulates were predicted by self-perceived progressiveness and sex at the same time. For example, Postulate 9 advocating that learners should be taught to regard learning as something relevant to their lives, with which the respondents strongly agreed; Postulate 18 advocating that all learners should be given a responsible role in the educational system, with which the respondents moderately agreed; and Postulate 19 advocating that learners should participate in the management of the educational institution they attend, with which the respondents moderately agreed. Mention has been made of women tending to agree with the practical postulates, such as making learning relevant to life. But to agree with postulates that advocated allowing learners to have a responsible role to play in the educational system and to participate in the management of the institute they attend indicated a high self-perceived progressiveness, especially when sharing responsibility was often done with caution in Hong Kong. Such responses made one wonder whether women had a higher self-perceived progressiveness than men. A t-test of sex by self-perceived progressiveness showed they were not. The mean for women was 4.31 and for men 4.30 with two-tail probability of 0.88. Therefore the respondents to these postulates could be either women or men. But these postulates were appreciated by those who had a high level of self-perceived progressiveness.

Self-perceived progressiveness also acted as a significant
predictor of the respondents' agreement in the following: Postulate 3, advocating that learners should be taught how to learn rather than to accumulate facts; and Postulate 11 advocating that learners should be given freedom to decide what they want to learn. The respondents moderately agreed. They also strongly agreed with Postulate 23 which advocated that through their programmes learners should be given some awareness of the unity of mankind and its common aspirations. These postulates were rather new concepts for educators in Hong Kong, where students had long been required to accumulate facts for passing examinations, and learners' choice was limited to a choice of one or two elective subjects. As for any consideration of the unity of mankind and its common aspirations, even the lifelong education experts had to stop and imagine what these would include, judging from their responses (yes=10, not sure=3). Therefore it was not surprising that self-perceived progressiveness significantly predicted the outcome in the replies. It was also considered interesting to know whether principals, their assistants or teachers had a higher self-perceived progressiveness, so ANOVA on self-perceived progressiveness by position was done, but the differences in their means 4.51, 4.23 and 4.28 respectively was insignificant (df=2, F=1.60, p=0.20) Therefore, the principals, their assistants and teachers did not differ significantly from one another in their level of self-perceived progressiveness.

Postulate 8 advocating that the chief duty of a teacher is to facilitate active participation in the learning process and Postulate 17 advocating that teachers should be learners
throughout their lives were both strongly agreed with, especially by those who had a high degree of self-perceived progressiveness and the older educators. Were those having a high self-perceived progressiveness, young or old? Simple correlation showed that age was not significantly correlated with self-perceived progressiveness (r=0.04, p=0.29).

In conclusion, self-perceived progressiveness correlated positively with the respondents' agreement with some of the postulates irrespective of the respondents' age and sex. The prediction for self-perceived progressiveness on agreement with the postulates collectively was non-directional, but the null hypothesis was rejected. The more progressive the subjects perceived themselves, the more they tended to agree with the postulates of lifelong education. Self-perceived progressiveness was one of the five significant predictors of agreement with the postulates as shown in the column on regression. It also significantly predicted agreement with eight of the postulates. Therefore it was retained.

**Positions as predictor.** Agreement with three postulates was significantly predicted by positions (principals and teachers only, not the assistants): Postulate 1 advocating that education should cover the entire life-span of an individual. The respondents on an average strongly agreed with this. Postulate 16 advocating that teachers should be trained to be educators rather than specialists in transmitting pre-established curricula was moderately agreed with, especially by the principals and female educators. Postulate 7 advocating that any ranking between man-
ual and intellectual disciplines should be abolished was moderately agreed with, especially by the teachers. Both the principals and teachers agreed that education should be for life, the principals agreed that teachers should be trained to be educators, and the teachers agreed that the ranking between intellectual and manual labour should be abolished. The role of assistant did not significantly predict the respondents' agreement with any of the postulates. This result could be due to assistants having to adapt themselves to being administrators and teachers. So, they might have been uncertain of the position they should take regarding these postulates. Hence the lack of consistency. But on the whole they responded and their degree of agreement with the postulates was significantly different from those of the principals, but not significantly different from that of the teachers. The variable, positions, significantly accounted for 2.4 percent of the variance in agreement with the postulates of lifelong education (see Table 30). Therefore this variable was retained as a significant predictor.

Analysis of variance showed that agreement with the postulates of lifelong education expressed by the holders of three positions (principal, assistant to principal and teacher), were significantly different. A post hoc test showed the mean score of principals was significantly higher than their assistants', but not significantly higher than the teachers', and that the means of the assistants and teachers did not differ significantly. Even though the assistants were originally included on the ground that they would be more like the principals than the
teachers, further information from friends revealed that the assistants had more teaching load than administrative load. The assistants' agreement score with the postulates was more akin to that of the teachers than the principals. For analysis purpose, the assistants were grouped with the principals and with the teachers by orthogonal contrasts (Posicon 1 & Posicon 2). The results showed that the assistants, neither in Posicon 1 nor Posicon 2, significantly predicted agreement. But Posicon 1 (principal) significantly predicted agreement on two postulates and Posicon 2 (teacher) also predicted agreement on two postulates, as shown in columns on, 'number of predicted postulates'. Position was retained as a predictor variable.

Type of schools as predictor. Agreement with three postulates was significantly predicted by type of schools, two by orientation and one by funding. Agreement predicted by orientation were as follows. Postulate 5: Learners' initial training in school and subsequent training at work should be integrated. The respondents moderately agreed with this. This postulate was significantly predicted by those in vocationally oriented schools.

Postulate 17: Teachers should be learners throughout their lives. The respondents strongly agreed with this. Agreement with this postulate was significantly influenced by educators working in academically oriented schools and by older members and the self defined progressive members.

The influence of the groups stood out on only one item for each type. Since educators working in vocationally oriented
schools were likely to be concerned with job placement, it was reasonable that they agreed with Postulate 5. It was also reasonable that Postulate 17 should be attractive to educators working in academically oriented schools, since it advocated lifelong learning, and they were academically inclined.

Agreement with Postulate 27 was predicted by funding. The postulate advocated that paid educational leaves should be provided by legislation. The respondents strongly agreed, significantly those in government funded schools. This was understandable, since teachers in government funded schools were more familiar with the advantage of paid leave, whereas, those in non-government funded schools who seldom enjoyed this benefit, might think it too much to expect.

The hypothesis for types of school was null and supported. Neither types of schools by funding nor by orientation significantly predicted agreement. But funding significantly predicted agreement with one postulate, and orientation predicted agreement with two postulates, as shown in columns on 'number of postulates predicted'. Therefore, it was retained.

**Perceived effect on prestige as predictor.** The respondents' perceived effect on prestige predicted two of the nine postulates they strongly agreed with. These two postulates (1 and 20) were thought to bring about an increase in prestige. Postulate 1 advocated that education should cover the entire life-span of an individual. This was understandable since if all individuals were to have opportunity to learn throughout life, the teaching profession would be in great demand, and status of educators
would rise. Postulate 20 advocated that education should prepare learners for a society of the future. To do that would require foresight, but educators' prestige will increase.

Four of the postulates the educators' moderately agreed with were anticipated to bring about an increase in prestige and other effects if implemented. One postulate was perceived to bring about an increase in prestige alone; one an increase in job security and job difficulty; one an increase in job difficulty only, and one a decrease in authority. These postulates were as follows.

Postulate 2: Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt. The respondents moderately agreed with this. They thought that implementing this postulate would increase their prestige.

Postulate 3: Learners should be taught how to learn rather than to accumulate facts. The respondents moderately agreed, especially those who regarded themselves as being progressive. The respondents thought that implementing this postulate would bring them an increase in prestige and in other advantages even though they indicated their job difficulty would also increase.

Postulate 19: Learners should participate in the management of the educational institution they attend. The respondents, especially the women and the self-defined progressives, moderately agreed with this postulates. They anticipated that such a change would increase both their prestige and their job difficulty.

Postulate 26: There should be significant development of expe-
riments in self-instruction. The respondents moderately agreed with this postulate, indicating that it would increase their prestige, but decrease their authority.

These postulates sounded attractive, but respondents said they would find some of them difficult to implement. Nevertheless, they believed that if these postulates were implemented, they would increase their prestige. So prestige is gained only with a price.

Prestige was significantly positively correlated with the degree of agreement, as shown in the column on correlation in Table 36. As prestige increased agreement with those postulates also increased. Although perceived effect on prestige did not significantly predict agreement with the postulates as a whole, as shown in column on 'predicted Y' in Table 36, it significantly predicted agreement with six of the postulates. Therefore it was retained.

Perceived effect on authority as predictor. Three postulates were perceived to bring about a decrease, and one an increase, in authority if implemented. The former were postulates 11, 25 and 26.

Postulate 11 advocated that learners be given freedom to decide what they want to learn. The respondents moderately agreed, especially those with a high degree of self perceived progressiveness. The respondents thought this would decrease their authority, and increase their job difficulty.

Postulate 25 advocated that educational facilities should be provided in places of work. Probably the educators thought the
learners would have to attend classes in these places, hence they would be out of the school premises and out of the educators' jurisdiction, so the educators might have feared that their authority would be decreased.

Postulate 26 advocated that there be significant development of experiments in self-instruction. The respondents moderately agreed, but they thought this would decrease their authority, most probably because the learners might be beyond the educators' control, especially after a couple of incidents happened in Hong Kong when learners did science experiments in their own homes and accidents occurred. So to the respondents, experiments in self-instruction might mean laboratory experiments, and these might be done at home, and the respondents might not have control over the learners. So, their authority would decrease.

Therefore, a decrease in authority was accompanied by a decrease in control and an increase in job difficulty. But an increase in job difficulty did not always bring a decrease in authority, as the following example shows. Postulate 15 advocated that examinations be used to compare method effectiveness rather than as academic admission aid. The respondents moderately agreed. They thought this would increase their authority even though it would also increase their job difficulty. Compared with Postulate 11, the respondents' job difficulty was also thought to be increased, but giving learners freedom to learn would decrease authority, while using examinations to compare method effectiveness would increase authority. This was understandable, since the respondents might not be able to control
the learners with a fixed curriculum, but might be controlled by them instead, when being asked all kinds of difficult questions which, if not answered properly, would decrease the respondents' authority. Using examinations to compare method effectiveness would increase authority, because as administrators they could evaluate and compare the teachers' methods, thus having opportunities to exercise their authority. As teachers, comparing methods might bring about improved methods hence enhancing their authority in their profession.

Authority was significantly positively correlated with the degree of agreement with the postulates. The educators perceived an increase in their authority if the postulates were implemented. Authority significantly predicted agreement with four postulates as shown in the column on regression in Table 36. It is one of the five significant predictors on the overall degree of agreement with all the postulates. It also significantly predicted agreement on four of the postulates separately. As shown previously three of the predicted results were negative, meaning authority was perceived as being decreased, although the respondents' agreement with the postulates was positive. Authority was retained as a predictor variable.

**Perceived effect on job security as predictor.** Three postulates were seen to bring about an increase in job security if implemented. Postulate 27 which the respondents strongly agreed with, advocated that paid educational leaves should be provided by legislation. The reason was not difficult to find. Paid study leaves mean opportunity for further training, and also
subsequent promotion. Higher qualifications might also mean better job opportunities, although this was not always true in Hong Kong. Higher qualifications might mean more difficulty in getting the right job, because jobs requiring high qualifications might be fewer than those requiring ordinary qualifications.

Two other postulates the educators moderately agreed with were said to bring about an increase in job security. Postulate 16: Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula. The respondents agreed with this, especially the female members and principals. They also thought that implementing this postulate would increase their job security. This was also understandable, for teachers trained as educators would be suitable for general teaching jobs, while specialists in transmitting pre-established curricula would be suitable only for specialized subjects, and there might be more opportunities for general teaching jobs than for teaching specialized subjects. Thus job opportunities would be increased for them, if they were trained to be educators rather than specialists. Their job security would also be enhanced. Postulate 18: All learners should be given a responsible role to play in the educational system. The respondents agreed, especially the female members and the self-perceived progressives. On the whole the respondents thought that implementing this postulate would increase their job security. If all learners were given a responsible role to play in the educational system it would mean the learners might demand
more education, and more teachers would be needed, so job security would again be increased. It was clear from the responses that job security was positively correlated with agreement concerning postulates that would enhance job opportunities.

The column on Pearson correlation in Table 36 shows job security significantly positively correlated with agreement concerning the postulates. It means as the educators' perceived career effect on their job security increased, their agreement with the postulates also increased. Job security also significantly predicted agreement with the postulates and is among the five significant predictors, as shown in the columns on regression in Table 36. It also significantly predicted three of the postulates. Therefore it was retained as a predictor variable.

Perceived effect on job difficulty as predictor. Six postulates, when implemented, were said to increase job difficulty, while only one was said to decrease it. The six were as follows.

Postulate 3 advocated that learners should be taught how to learn rather than to accumulate facts. The respondents moderately agreed with this postulate. They thought their job difficulty would increase if this postulate were implemented. This was understandable since to teach learners how to learn would require more work and more careful lesson planning than just to feed them with facts.

Postulate 8 advocated that the chief duty of a teacher is to facilitate active participation in the learning process. The respondents strongly agreed even though they thought this would
increase their job difficulty if implemented. Again this was understandable, since it would not be easy to facilitate active participation, as educators well know. Intensive preparation would be needed.

Postulate 14 advocated that learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling. The respondents strongly agreed even though they thought this would bring an increase in their job difficulty. The respondents might have perceived this postulate as being beneficial to education, so they strongly agreed, yet they realized the difficulty its implementation would bring. If learners were admitted in a flexible way, their standard would not be the same, and this would make teaching difficult.

Postulate 19 advocated that learners should participate in the management of the educational institution they attend. The respondents moderately agreed. They thought its implementation would result in an increase in job difficulty. The responses to this postulate were possibly influenced by the political atmosphere prevailing in Hong Kong. The respondents were aware of difficulties while moderately endorsing the postulate.

Job difficulty was positively correlated with agreement concerning those postulates that the respondents considered difficult to implement even though they agreed with them. Only one postulate was said to bring a decrease in job difficulty if implemented. It was Postulate 5, advocating that learners' initial training in school and subsequent training at work
should be integrated. This integration was specially endorsed by those in vocationally oriented schools. The respondents thought their job difficulty would be decreased. Since teachers working in vocationally oriented schools were concerned with job placement, it is not surprising that they liked this postulate, such teaching would be easier if the lessons were job related, and the learners were kept interested.

Job difficulty significantly positively correlated with the degree of agreement with the postulates. It meant as the educators' agreement with the postulates increased their perceived effect on job difficulty also increased. Although respondents' perceived effect on job difficulty did not significantly predict the degree of agreement with the postulates as a whole, yet it significantly predicted agreement with seven of the postulates, only in one of which was the result negative, showing difficulty was decreased and the agreement was positive. Since the perceived effect on job difficulty was sometimes positive and sometimes negative, the influence of this variable as a predictor was probably undermined. Job difficulty also had the function of checking on response bias, since it made the respondents pause and think. It was retained as a predictor variable.

Perceived effect on other advantages as predictor. Five postulates were said to bring an increase to other advantages if implemented, but one a decrease. But the one was still strongly agreed with by the respondents, although it would bring a decrease in other advantages when implemented. This was as follows. Postulate 17 advocated that teachers should be learners
throughout their lives. The respondents strongly agreed. But, to be learners throughout life would involve hard work, time and money, so these might be the other advantages that would be decreased.

Four other postulates that were perceived as bringing an increase in other advantages if implemented, were as follows.

Postulate 3: Learners should be taught how to learn rather than to accumulate facts. The respondents, especially those who had a high degree of self-perceived progressiveness, moderately agreed with this postulate. They thought prestige and other advantages would be increased, along with job difficulty. The other advantages perceived might have been more interesting lessons, and more learner participation than if accumulation of facts was stressed.

Postulate 7: Any ranking between manual and intellectual disciplines should be abolished. The respondents moderately agreed with this postulate, especially the teachers. They thought other advantages would be increased. The other advantages perceived might have been higher pay for those in manual disciplines than was the practice in some vocational oriented schools in Hong Kong, where teachers of practical subjects were not as highly paid as teachers of academic subjects, owing to the fact that they did not have the same qualification.

Postulate 9 advocated that learners should be taught to regard learning as something relevant to their lives. The respondents strongly agreed. Learners would be interested in learning if they regard learning as something related to their lives, some-
thing they need or are interested in, and other advantages would be increased for the educators, such as job satisfaction. Postulate 13 advocates that business companies should train not only workers, but researchers as well. The respondents moderately agreed with this. The other advantages perceived being increased might have been more researchers being produced, and more research would be done than was currently done in Hong Kong.

Among the 28 postulates there was only one postulate to which the educators moderately disagreed. On all the rest they strongly or moderately agreed. But still that postulate was perceived as bringing an increase in other advantages. It was as follows.

Postulate 6 advocated that distinction between arts, science and technical streams of education should be abolished. They moderately disagreed. The other advantages which were perceived as being increased might have been more flexible time-tables, since learners would be allowed to choose different subjects, the subjects have to be arranged in such a way that it would suit those who choose these subjects.

Although the term, 'other advantages', might have been somewhat unclear, yet it gave the respondents a chance to express some positive or negative effects on their careers, the aspect of which had not been provided for in the questionnaire.

The variable 'other advantages' was significantly positively correlated with the degree of agreement with the postulates. As the educators' perceived career effect on other advantages in-
creased, their agreement with the postulates also increased. Although the variable other advantages did not significantly predict agreement with the postulates as a whole, it significantly predicted agreement with six of the postulates, and in only one of these was the result was negative. Therefore, the variable other advantages was retained.

The results of the item analysis showed perceived career effects (on prestige, authority, job security, job difficulty and other advantages) were statistically significant as predictors. But perceived career effects did not have a stronger influence on educators' agreement with the postulates than did their personal data, type of schools and positions collectively. The reasons could be personal data also consisted of variables that were powerful predictors as had been explained. But the underlying reason might be due to the fact that the response on many of the items related to career effects was 'unchanged', which, being mid point of the Likert scale, minimized the effect.

**Prediction from the Perspective of Postulates**

Prediction was also considered from the perspective of postulates. Table 37 shows the situation.
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No. of postulates: 4 6 0 8 1 2 2 2 6 4 3 7 6

sig. predicted

Code on next page.
Postulates 4, 12, 21, 24 and 28 were not predicted by any predictor. As mentioned previously this group of variables was concerned with philosophical ideas and ideals, and the respondents did not perceive them as having any effect on their careers. These postulates were: educational institutions should be increased to offer the individual a diversified choice. (Postulate 12); learners should be taught to view time as being able to bring about human experience, discoveries and progress. (Postulate 21); similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. (Postulate 24); education should be used as an instrument for individual and community advancement. (Postulate 28) and there are "teachable moments" in learners' lives which should be discovered and used by educators (Postulate 4).

Postulates 6, 10, 13, 22, 23, and 25 were each predicted by one predictor. No pattern could be discerned. Postulates 5, 7, 15, 20, 26 and 27 were each predicted by two predictors. Also no pattern could be discerned.

Postulates 1, 8, 9, 11, 14, 16 and 18 were each predicted by three predictors. Four of the seven postulates were predicted by sex (female) and four by self-perceived progress-

Code for predictors in Table 37:
AG=Age  SX=Sex  PR=Perceived effect on prestige
EP=Experience  AU=Perceived effect on authority
PG=Self perception of  SE=Perceived effect on job
  progressiveness  security
FU=School (funding)  DI=Perceived effect on job
OR=School (orientation)  difficulty
PO1=Position:(principal vs.
  assistant, teacher)  AD=Perceived effect on other
PO2=Position (assistant vs.teacher)  advantages
iveness and three by perceived effect on job difficulty. The postulates were concerned with education should cover the entire life-span of an individual (Postulate 1); the chief duty of a teacher is to facilitate active participation in the learning process (Postulate 8); teachers should be trained to be educators rather than specialists in transmitting pre-established curricula (Postulate 16); learners should be taught to regard learning as something relevant to their lives (Postulate 9); learners should be given freedom to decide what they want to learn (Postulate 11); learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling (Postulate 14); and all learners should be given a responsible role to play in the educational system (Postulate 18). Apparently female educators and those who perceived themselves as progressive favoured these postulates, but realized they would bring job difficulty if implemented.

Postulates 3, 17, and 19 were predicted by four predictors. All three were predicted by self-perceived progressiveness, two by perceived effect on prestige, two by perceived effect on job difficulty and two by perceived effect on other advantages. The three postulates were: teachers should be learners throughout their lives (Postulate 17); learners should be taught how to learn rather than to accumulate facts (Postulate 3); and learners should participate in the management of the educational institution they attend (Postulate 19). These postulates were perceived by the self-considered progressive
members as bringing an increase in prestige and other advantages, but also an increase in job difficulty.

From the analysis of the predictive function of the different variables on degree of agreement with the postulates it is clear that all the independent variables had an effect. Although there were only five significant predictors of agreement with all the postulates, all the variables were important in predicting the respondents' agreement with the individual postulates. Therefore, all of the eleven variables set out for the study: age, sex, years of experience in the teaching profession, self-perceived progressiveness, types of schools, positions, prestige, authority, job security, job difficulty and other advantages, were retained. Years of experience in the teaching profession was changed to years of experience in the education profession with ratio of full and part-time experience defined. These variables, together with the 28 postulates as criterion as shown in the next paragraph, were used in the modified model built as a result of this analysis.

Postulates of Lifelong Education as Criterion

Table 38 shows the experts' and the educators' agreement with the postulates, based on their adjusted mean scores.
Table 38

Experts' and Educators' Degree of Agreement
with the Postulates of Lifelong Education

<table>
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<tr>
<th>Postulates</th>
<th>Experts</th>
<th>Educators</th>
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<tbody>
<tr>
<td></td>
<td>Not sure</td>
<td>Strongly</td>
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<tr>
<td></td>
<td>Yes (+)</td>
<td>agree (+)</td>
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1. entire-life-span
2. self-fulfilment
3. skill-to-learn
4. teachable-moment
5. school-work-integrate
6. no-art-sci-difference
7. unrank-manual-intelct
8. learners-participate
9. relevance-to-life
10. choose-school
11. free-to-learn
12. multiply-institutes
13. company-researchers
14. flexible-path
15. exam-for-comparison
16. teacher-educator
17. teacher-learner
18. responsible-system
19. learners-manage
20. future-society
21. time-positive
22. spirit-of-peace
23. unity-mankind
24. similar-schools
25. workplace-facility
26. self-learning
27. paid-ed-leave
28. advancement

Total 28(+) 0(-) 0(--) 15(++) 12(+) 1(-) 0(---)

Code: 'Yes' mean =1.0 to 1.6 'Strongly agree' mean =1.0 to 2.0
'Not sure' mean =1.7 to 2.3 'Mod. agree' mean =2.1 to 3.0
'No' mean =2.4 to 3.0 'Mod. disagree' mean =3.1 to 4.0
'Strongly disagree' mean =4.1 to 5.0

Table 38 shows that the experts said 'yes' to all the 28 postulates, and all the respondents either strongly agreed or moderately agreed with 27 of the 28 postulates, and only
moderately disagreed with one of them.

In the actual responses of the experts some of the postulates received fewer 'yes' responses than others, 82.42 percent were 'yes', 13.46 percent were 'not sure' and only 2.75 percent were 'no'. Only one postulate had two 'no' responses and eight had one 'no' responses (see Appendix VII). But based on the adjusted means of the responses, all the postulates were considered 'yes'. This shows that although the concept of lifelong education had appeared to be amorphous, there was consistency in what experts believe concerning postulates associated with the concept.

As for the adjusted mean responses of the educators, there was only one postulate to which the respondents moderately disagreed, and the rest were either strongly or moderately agreed to. Using the foregoing analysis, a new model was developed, the elaboration of which is presented in the concluding chapter (see Chapter X, paragraph on Conclusions from Variables as Significant Predictors). As for the rest of the information from the analysis of predictors, it is shown in Appendix L. This was provided for future use and for the interests of other researchers.

Summary of the Chapter

In this chapter, analysis was done on all the variables in terms of their predictive power related to the respondents' agreement with each of the postulates. Analysis was reported from the perspective of the predictors and from the perspective
of the postulates predicted. Five variables: age, sex, self-perceived progressiveness, authority, and job security, significantly predicted the educators' agreement with the postulates collectively. All the variables, except 'years of teaching experience', had played their part in significantly predicting one or more of the postulates. Five postulates had no predictors, and some formed patterns of interest. The educators strongly agreed to fifteen of the 28 postulates and moderately agreed to twelve, while only moderately disagreeing with one.

In conclusion, all the variables were retained as predictors, or independent variables, and all the postulates were retained as criteria. The results showed women were more inclined to agree with the concept of lifelong education than men. Those who conceived themselves as more progressive were also more inclined to agree with the concept than those who conceived themselves as less progressive. Age was positively correlated with the degree of agreement with the postulates of lifelong education, and also with self-perceived progressiveness. Therefore, it can be said that: If educators were to be sought who would agree with the concept of lifelong education, and who might therefore be willing to implement the concept, women would be preferred to men, those who conceive themselves as being more progressive would be preferred to those who consider themselves as less progressive, and older persons would be preferred to younger persons.

The explanation just given was based on empirical results. The educators' perceived career effects, along with their per-
sonal data of sex, age, self-perceived progressiveness, positions and types of schools were significant predictors of their agreement with the postulates. A revised model for predicting the degree of agreement with the postulates of lifelong education is given in the next chapter, together with a summary, conclusions and recommendations.
CHAPTER X
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In the foregoing chapters, it has been noted that the concept of lifelong education was criticized by educators as being too loose and lacking definition. It was not certain whether educators agreed with the concept. Therefore, this study was done to derive postulates associated with the characteristics of lifelong education and thus contribute towards its definition, to develop an instrument to measure educators' agreement with it and to test an approach to predict their agreement. It has been found that 23 percent of the variance can be explained. This raises an important question. What accounted for the remaining 77 percent of the variance? First, it must be noted that it is quite usual to explain only about 25 percent of the variance in dependent variables used in educational research so, from this perspective, the present situation is not unusual. But, in speculating about alternative models that might explain greater amounts of variance, several perspectives might be useful. These, along with the modified model, are discussed in this chapter. The chapter also provides a summary of this study, recommendations, and conclusions.

Summary of the Study
The notion of lifelong education promulgated by Faure et.al. (1972) and subsequently elaborated by UNESCO encompasses many educational ideas, and often confused with 'lifelong learning', 'adult education' and 'recurrent education'. Lifelong education
also was difficult to implement, because many of the postulates and underlying expectations, such as vertical and horizontal integration of life and knowledge, and democratization, appear to bring a decrease to educators' authority and an increase to job difficulty (see Chapter IX).

At the time this study was begun little empirical research had been done on lifelong education. The concept had been defined in various ways and the term used freely. The extent to which educators agreed or disagreed with its postulates, and what factors could predict agreement was not known.

This study was launched to accomplish three purposes. The first was to clarify the concept through identifying its constituent elements and deriving postulates from them to develop a fairly comprehensive definition. The second was to construct an instrument to assess the degree of educators' agreement with the postulates as expressed in the definition. The third was to identify variables that predict agreement with those postulates.

This study was done in four phases. The first was to draw up the definition based on a review of literature; the second was to develop the Lifelong Education Scale and establish its reliability and validity, the third was to develop a method of the study and identify independent and dependent variables that might predict agreement, the fourth to test hypotheses and report on results.
Phase I - Developing a Definition

To develop the definition of lifelong education a thorough search of literature was done. The works written by authors directly connected with UNESCO, such as the works of Faure et. al. (1972), Lengrand (1975), Dave (1973, 1976, 1983) Cropley (1977, 1979) and Gelpi (1979), were found to be most useful. From their works seventeen characteristics in the form of 'is' statements were derived along with their associated postulates in 'should be' statements. The seventeen characteristics with their associated postulates delimit the concept and become the framework for lifelong education, as well as forming a fairly comprehensive definition of lifelong education.

Phase II - Constructing an Instrument to Measure Educators' Agreement with the Postulates of Lifelong Education

Before an instrument could be constructed for measuring and predicting educators' agreement with the postulates, independent variables were identified and a study conceptualized. ERIC searches were done and literature on attitude reviewed. Prediction of educators' agreement toward the postulates of lifelong education was suggested by the research literature and inspired by Apel's study (1966) and literature on human need to maintain 'internal balance', 'stability' or 'consonance'. Apel claimed that a respondent's expectation of the effects of a proposed change on personal interests could be used more accurately than a single measure of personality to predict attitudes towards change. The variables related to expectation of certain effects, such as a threat to decrease prestige and an increase in
job difficulty, were considered to be useful for the present study, since prestige and job difficulty were also the concerns of people in the locale chosen for this study, namely, Hong Kong. A model was developed. This consisted of four groups of variables, namely: personal data, types of schools, positions and career effects as independent variable, while agreement with lifelong education postulates formed the dependent variable. Agreement was assumed to depend on: personal data, the type of school educators work in, the position they hold, and on how they perceived lifelong education as affecting their careers. It was envisaged that what they perceived as the possible effects on their careers would exert a greater influence on their agreement with the postulates than their personal data, type of school, and position all together. These predictions formed the bases for three minor and one major hypotheses. Predictions involving personal data, types of schools and positions formed six ancillary hypotheses.

To test these ten hypotheses, an ex post facto design was employed. A mailed questionnaire was used to collect data needed to assess educators' agreement with the postulates. The questionnaire package, containing a set of three instruments, called the LLE Scale, CE Scale and SD Questionnaire, was developed for the purpose of measuring and predicting educators' agreement with the postulates.

The LLE Scale. The content of the LLE Scale consisted of postulates of lifelong education derived from the literature. This instrument was used to measure educators' degree of agree-
ment with the postulates. The postulates were in the form of 'should be' statements, and contrasts, in the form of contrasting statements to the postulates. Both the postulates and their contrasts were randomized in the LLE Scale, so that the respondents' replies could be studied, and possible response set cancelled. The internal consistency was established by 19 experts on lifelong education associated with UNESCO, and by 36 pilot subjects.

Content validity was the extent to which the postulates adequately sampled the domain of lifelong education, construct validity was the extent to which the postulates belong to the lifelong education concept, and face validity was the extent to which the statements expressing the postulates were meaningful to respondents. The content and construct validity of the LLE Scale was established by the experts, and its face validity by 36 pilot subjects. The content of the LLE Scale for Experts was the same as that of the LLE Scale for the Pilot Subjects, except experts were asked to say whether they thought the items were assumptions of lifelong education by replying 'yes', 'not sure' or 'no', and the pilot subjects were asked, on a five point Likert Scale, whether or not they agreed with the items.

The CE Scale. From the postulate statements, implications in the form of 'if' statements were developed and related to career effects (prestige, authority, job security, job difficulty, and other advantages). The implication statements served as the content for the CE Scale (Career Effects Scale) which was used to find the educators' perceived career effects (on pres-
The internal consistency and face validity of the CE Scale was established using data obtained from 25 pilot subjects.

The SD Questionnaire. This questionnaire consisted of questions on socio-demographic data, such as age, sex, years of teaching experience and self-perceived progressiveness, types of schools and positions. This instrument was used to investigate whether or not agreement with lifelong education was influenced by such socio-demographic variables. The face validity of the questionnaire was established on the basis of comments from pilot subjects.

Phase III - Developing a Method of the study

The population consisted of different types of secondary schools in Hong Kong. Since schools are a conspicuous place where lifelong education would be implemented, a well defined population from a secondary school system with different types of schools was needed, so that comparisons could be made among groups of educators working in those schools. Hong Kong, having such schools, and being the author's domicile, was chosen as the locale for the study. It had a well defined educational system which made comparisons possible. Hong Kong was also a dynamic society, receptive to changes and new ideas. But a drawback was that it was undergoing political changes which might have an influence on educators' attitude and on their responses.

Phase IV - Reporting on Prediction and Agreement

The educators' agreement with the postulates concerning lifelong education and the perceived effect of implementing the
postulates were measured and predicted by the three instruments, the LLE Scale, the CE Scale and SD Questionnaire. The population consisted of 472 secondary schools in Hong Kong. Out of this number, 159 schools were drawn. The principal and assistant plus four teachers of each school were sent the three instruments. The assistants, whose responsibility included both administration and instruction, were chosen because it was feared very few principals would take part in the study, because of their heavy work load. So, the assistants might, in their capacity as administrators, be compared with the teachers. A total of 412 questionnaires were sent. The total completed responses were 284 (i.e., a response rate of 68.9%).

Two ancillary null hypotheses were rejected. They were related to sex, self-perceived progressiveness, showing these variables have influence in predicting agreement. Females agreed with lifelong education significantly more than men. The more progressive the respondents, the more they agreed with lifelong education.

Four ancillary null hypotheses were confirmed. There was no difference in the educators' agreement with the postulates between the old and the young, between those with more teaching experience and those with less experience, between administrators and teachers, and between those working in academically oriented schools and vocationally oriented schools, those working in government funded schools and non-government funded schools. When the predictors were analysed separately with individual postulates, age, school and position, have variously
predicted educators' agreement with different postulates. So these variables had their role to play.

Two minor null hypotheses were confirmed. Types of schools and position were not stronger than perceived career effects as predictors of educators' agreement with lifelong education. This could be due to the fact that they were being tested as sole variables, whereas perceived career effects were a combination of variables. So, their separate influences were not as strong as the latter. But still, these variables played their role in significantly predicting the educators' agreement with one or more postulates.

One minor null hypothesis was supported. Perceived career effects were not stronger predictors of agreement with the postulates than personal data. This shows that variables when combined have more strength in predicting than when alone. Therefore, the major null hypothesis predicting that career effects were not stronger than a combination of all the demographic variables was also supported.

As for agreement with the postulates as a whole, not all variables related to career effects significantly predicted it. Authority and job security significantly did. Not all variables related to personal data significantly predicted it, only sex, age and self perception of progressiveness did. Through item analysis each variable significantly predicted agreement on one or more postulates, showing each variable had its predicting function. Therefore they were all retained. A model for predicting variance in agreement with the postulates was construct-
ed. A description of that model is given later on in this chapter.

Conclusions to be Drawn

The important conclusions to be drawn from this research relate to identification of postulates, to the instrument for measuring and educators' agreement with them, and to the identification of variables that are significant predictors of agreement with lifelong education.

Conclusion from Clarifying the Concept

Critics had complained that the concept of lifelong education is too loose and too broadly based. In going through the literature and grouping ideas together, it was found that there were interrelated elements in the concept. In clarifying the concept and framing it with seventeen characteristics with their associated postulates, the concept could be seen as being logical, and the postulates were validated by experts to be belonging to lifelong education. Although this study did not test the strength of the interrelationship of the postulates, it may still be advisable to consider all the characteristics with their associated postulates when putting lifelong education into practice.

The Instrument Measuring Agreement with Postulates

The LLE Scale was used to measure agreement with postulates of lifelong education. Its validity and reliability were established by experts and pilot subjects. In conjunction with the CE Scale and SD Questionnaire, it was found that agreement with the postulates was influenced by the effect the postulates had
on educators' personal interests. The perception of such effects were internal to the respondents. The analysis of the results from the LLE Scale and the CE Scale only exposed these internal perceptions.

The conclusion was, on its own, the LLE Scale can be used to measure agreement with lifelong education. Although the replies will be the results of a multitude of unknown factors influencing respondents, the information will be useful for staff development purposes. They show the kind of in-service training needed, since many of the postulates are applicable to educators in general, whether lifelong education is being practised or not.

Conclusion from Predicting Agreement

The research results showed that there was consistency among the experts on the constituent elements of the concept, which was complex; that educators' personal interests affected their agreement and consequently perceived career effects might affect implementation of the concept. If the postulates of lifelong education were implemented they were perceived as having effects on educators' various career effects. This information is important in the field of practice, and planners should be aware of them. For example, Postulate 11 advocated that learners be given freedom to decide what they want to learn. Respondents only 'moderately agreed' with this. They thought this would decrease their authority and increase their job difficulty if this postulate were to be implemented. Little success could be expected from the implementation, unless the
educators were assured that their authority would be protected, and job difficulty alleviated through other means, such as through quality control of the courses and additional staffing.

Five variables, age, sex, self-perceived progressiveness authority and job security were found to be significant predictors of agreement with the postulates collectively, but all variables but one (years of teaching experience) exerted their influence on the responses to the individual postulates. For this reason all the variables were retained, as well as all of the postulates. The variables and postulates serve as pointers in evaluating programmes related to lifelong education. They point to areas that could be the concern of government and educators, such as resource sharing and learners' participation in the learning process.

The Modified Model

The modified model shown in Figure III embodied the results of this study. Variables that predict agreement with lifelong education appear to be the respondent's sex, age, teaching experience, self-perceived progressiveness, type of school and position, as well as perceived career effects (on prestige, authority, job security, job difficulty and other advantages). Together these variables significantly predict agreement with the postulates. The model is shown in Figure III.
PERSONAL DATA

AGE ++
SEX (FEMALE) ++
EXPERIENCE IN TEACHING
SELF-PERCEIVED
   PROGRESSIVENESS ++
TYPES OF SCHOOLS +
POSITIONS +
$R^2 = 0.111$

PERCEIVED CAREER EFFECTS

PRESTIGE +
AUTHORITY ++
JOB SECURITY ++
JOB DIFFICULTY +
OTHER ADVANTAGES +
$R^2 = 0.143$

FIGURE III  A MODEL FOR PREDICTING VARIANCE IN EDUCATORS' AGREEMENT WITH
POSTULATES CONCERNING LIFELONG EDUCATION (2)
Based on the modified model, educators' agreement with the postulates of lifelong education can be predicted and assessed. The groups of demographic and career effect data are envisaged to predict 23 percent of the variance in agreement. Empirical data from the research has shown that age, sex, experience, self-perceived progressiveness, type of school and position, when entered into a regression equation as a group resulted in $R^2 = 0.11$, and career effects (on prestige, authority, job security, job difficulty and other advantages) also entered as a group, resulted in $R^2 = 0.14$ (see Table 3). Multicorr results (Chi Sq=0.26, df=1, p=0.62) showed that the two $R^2$ squares were not significantly different, which meant the two groups of variables were important in predicting the criterion, the degree of agreement with the postulates. When regression was run on the two groups of variables altogether, they yielded 22.6 percent of the variance ($R^2 = 0.23$).

Still 77.4% of the variance in agreement was not accounted for. Variables related to personal interests might also be added to heighten the perceived effects on career: such as those related to income and job convenience. Promotional prospects and job interests were used by Apel (1966). If the variables were not all related to career, for example to family life, and hobbies, they can simply be called perceived effects on personal interests instead of career effects.

Other types of variables potentially capable of predicting agreement would be those related to return on investment. Lifelong education is not only expensive for a government to imple-
ment, but is also costly to the individual. Following a course of study, whether at home or in class, would imply additional expenditure for the family or personal budget. Economic consideration is often one of the factors deterring participation in education. Therefore, questions related to an increase or a decrease in investment return would be pertinent towards prediction of agreement, particularly in Hong Kong.

Questions involving political issues might also have a direct relation to people's agreement with the postulates of lifelong education. People might see learning opportunities as a step to gain knowledge for self-government or democracy, or if they have had bad experience of compulsory political class attendance, they might see it as a barrier to freedom.

But perceived effects on one's career would be a crucial influence on agreement. Rosenberg (1956), who defined attitude as a "relatively stable affective response to an object (action or policy)", stressed that this attitude is "accompanied by a cognitive structure made up of beliefs about the potentialities of that object has of attaining or blocking the realization of valued states" (p. 367). Thus the more a given object (action or policy) was instrumental to obtaining positively valued goals (or consequences) and to blocking (or preventing) negatively valued goals, the more favourable the person's attitude would be toward the object. Thus attitude formation and change is viewed in terms of the functions that objects (actions or policies) serve for the individual. Empirical evidence has shown that educators' perceived career effects are significant in predict-
ing their agreement with those postulates. If their perception of those effects should change, then their attitude towards those postulates would also change. In other words, the more a given postulate (action or policy) is instrumental in obtaining positively valued goals (or consequences), in this case more positive effects on, say, authority and job security, and to blocking (or preventing) negatively valued goals, in this case lessening job difficulty, the more favourable the person's agreement toward that postulate, and vice versa. Based on this rationale, the model stands to predict educators' agreement with lifelong education.

**Contributions of this Study**

The contributions of this study are related to clarifying and validating the concept, to developing an instrument to assess secondary school educators' agreement with its postulates, and to predicting their agreement.

**The Definition**

The seventeen characteristics with their 28 associated postulates form a comprehensive definition of the concept. This definition also provides a framework for the assessing the acceptability of the concept. It gives an overall view of elements that should be considered for practice in lifelong education.

This study is part of an attempt to define the concept of lifelong education in a comprehensive manner by identifying postulates that have a relationship with one another. It has
shown from the responses of the experts that even though the literature on lifelong education appears to be loose and broadly based, there is in fact a high degree of agreement among the UNESCO authors on the constituent elements of the concept. Through the efforts of those who responded the content and construct validity of the postulates as belonging to the concept of lifelong education were strengthened. (Appendix G: Frequencies of the Experts' Replies to Postulates and Contrasts Retained)

An Instrument of Lifelong Education Developed

The LLE Scale can be used to obtain some indication as to peoples' acceptance of the concept. With modification it can be used for identifying true adoption of lifelong as contrasted to the piecemeal approach. It can also be used for evaluation purposes.

The Significant Predictors Identified

If the aim of scientific research is to explain, predict and control, it can be said of this study that it has made lifelong education better understood than before through the formulation of the characteristics and their associated postulates for the comprehensive definition, which has clarified the concept. The instrument has helped in predicting educators' agreement with these postulates. A model has been developed to facilitate future prediction of respondents' agreement with lifelong education.
The Nature of this Study

There are two parts to this study. One is the formulation of the definition, and the other is field test on the acceptability of the postulates in the definition among educators of Hong Kong.

Generalizability

Since the definition consists of constituent elements that would make learning throughout life possible and has the consensus of experts from twelve countries (see Appendix M), it can be appropriately generalized universally. Whereas generalizability of the results from agreement and prediction is limited to secondary school educators in Hong Kong.

Limitations of the Study

The limitations of this study are related to assessing the acceptability of the concept, in terms of the nature of the study, the responses, the sample and the questionnaire.

As the study was limited to studying "agreement" and did not study behaviour, so, even if the educators agreed with all the postulates, there was no evidence to show that they had practised, were practising or would practise what those postulates entailed. Further research would be needed to find relationships between "agreement" and behaviour. This assessment was based on the adjusted means of their replies, which meant of the twelve postulates they moderately agreed with, there were mixtures of 'agree' and 'no opinion' replies, and therefore a good deal of uncertainties. Even if all the educators agree and like
all the postulates, implementation may still be far away, as there are still policy and financial matters to consider by people outside the field of education.

As for the results of the field test, they are generalizable only to Hong Kong, since the sample was drawn from there, and local circumstances might have affected their responses. But the variables adopted as predictors would prove useful for other places.

The Sample. It consisted of educators in secondary schools in Hong Kong, as such they might not have perceived the impact on finance that the implementation of those postulates would make. The views of policy makers, such as legislative councillors and government officials, would be needed to make a more accurate assessment of the acceptability of the concept of lifelong education. Thus the sample could have included different job categories.

A systematic random sampling method could also have been adopted, as would have been the case if all categories of educators were represented. It would have been better than this one for assessing educators' attitude towards the postulates of lifelong education.

The sample is limited to educators in secondary schools in Hong Kong. Thus the generalizability of the results on agreement and prediction are limited to that population.

The LLE Scale. Regarding the LLE Scale, the presence of contrasts, some of which were not exact opposites of the postulates, produced some confusion. It might have been better if
either the contrasts had been direct opposites of the postulates, or some other totally different ideas, not related to education, were used to take the place of the contrasts for cancelling the possible response set, then confusion would have been avoided.

**Recommendations to Researchers**

Recommendations for research are related to the field of practice, since the postulates are expressions of ideals that should be put into practice when lifelong education is implemented.

**The LLE Scale and Modified Model to be Used**

The modified model has shown that perceived career effects and personal data were significant predictors of educators' agreement with the postulates of lifelong education. Using the instruments, a series of research studies can be done on attitude or evaluation. The modified model can also be used in predicting educators' agreement with the postulates. Knowledge of educators' agreement with any particular postulate would be valuable for planning purposes. For if educators feel aspects of their careers would be threatened by the implementation of the postulate, they will resist any implied change required, and successful results will not ensue.

**Research Related to the Field of Practice**

The postulates can be used to find out the gap between actual practice and the ideals of lifelong education in a school or a country. It is important that such studies should deal with peoples' behaviour and not only with attitudes, for action is
required to implement the concept. Through case studies, it may be possible to find out whether the concept of lifelong education can be implemented, and if part of the concept has already been implemented, whether a gap exists between actual practices and the ideals of lifelong education. The characteristics and postulates of lifelong education developed for this study can be points of reference.

Recommendations for UNESCO

Attempts have been made by UNESCO, either through the Office of Lifelong Education, headed by Ettore Gelpi in the Paris Headquarters or through the UNESCO Institute of Education in Hamburg, headed by R.H. Dave, to clarify the concept of lifelong education through monographs and other publications. From the review of literature reporting on implementations there is insufficient evidence to show that countries said to be using lifelong education as the 'master concept' for planning are treating it in a comprehensive manner. In this study a fairly comprehensive definition for the concept of lifelong education has been developed. The emphasis was not so much on the kinds of postulates to be developed for the characteristics, but on the postulates as a whole. The inherent characteristic shows that the essence of the concept, namely education, should be lifelong. This characteristic with those that are fundamental are important to successful implementation. The desirable characteristics should also be present to facilitate the functioning of the whole lifelong education concept. The postulates were also
formulated (see Chapter IV) based on their inter-relationship. Neglecting one might affect the effectiveness of the whole or part of the whole. UNESCO may make use of this framework in doing evaluation research. The following suggestions to UNESCO are related to concept and practice.

1) If lifelong education were to be adopted, and there would be a need to move beyond using it as a slogan possibly for political reasons. The concept with its postulates could be stressed. UNESCO can disseminate the information on lifelong education as a comprehensive and integral concept. The interdependence of the different characteristics can be studied.

2) Training opportunities for planners and educators could be provided, so that the meaning and spirit behind those characteristics spelt out in this study can be better put into practice, if lifelong education is to be used as a 'master concept'. Given its reduced budget, UNESCO can try to influence governments into setting aside certain funds for the training of educators in the concept of lifelong education. It can also organize training courses or conferences in such a way that governments or organizations sending participants can pay for them.

3) Lifelong education as defined here has not been tested in implementation. Indeed, it is not known whether it can be implemented, or that it will bring the desired results. A field test is needed to see whether the results of implementing the concept of lifelong education will produce the desired ends.
Concluding Remarks

Lifelong education has become a school of educational thought taken from different philosophical approaches. Although in this study, attempts have been made to impose a framework or boundary on the concept, yet in actual practice the postulates associated with the seventeen characteristics can be modified to suit local situations, so long as they reflect the characteristics under which those postulates are formed, for the seventeen characteristics have summed up the concept and act as ribs of an umbrella for the postulates.

For governments lacking a comprehensive plan, characteristics and postulates of lifelong education may prove useful, because they provide ideals for learners, teachers, curriculum, teaching methods, and management. For organizations lacking in defined aims and objectives, the concept of lifelong education with all that it entails may be an inspiration. For individuals wanting to maintain their mental alertness and intellectual agility, the concept of lifelong education is a support and encouragement. As regards implementation, there will always be resistance from those used to the status quo and reluctant to change, and those who feel their culture, power and control being threatened. Therefore, it is important that the concept be understood before being implemented.

In conclusion nothing can be better said than what was said in the final proposal of Faure et al. (1972):

We propose that agencies assisting education, national and international, private and public, review the
present state of 'research and development' in educa-
tion with a view to strengthening the capacities of
individual countries to improve their present educa-
tional systems and to invent, design and test new
educational experiments appropriate to their cultures
and resources (Faure, 1972, p. 263).

Perhaps reviewing the educational system in the light of
lifelong education would be a good start, since lifelong
education would entail spending more money on education,
although it might not bring the desired results for certain
cultures.

It is hoped that governments will be enlightened enough to
do educational planning in a comprehensive manner, put education
on their priority list in the budget, and not be stringent
towards providing for it, whether they adopt lifelong education
or not. The richest mine lies in the mind of man which should be
developed to think properly, constructively and progressively,
and the will should be developed to act properly. In the words
of Populorum Progressio by Pope Paul VI (1967, p.3), "better
education -- in brief, [means] to seek to do more, know more and
have more in order to be more". Education is essential to the
development of peoples.
REFERENCES


241
The world of education today and tomorrow. Paris: UNESCO.


Delhi: Vidya Mandal.


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Appendix A

The Original Version of Faure's Recommendations, Dave's Characteristics, Gelpi's Indicators and Other Points Stressed by Cropley and Lengrand from which Seventeen Characteristics of Lifelong Education and the Postulates of the LLE Scale and CE Scale for this Research were Derived.

Code: F=Faure et al's recommendation  
FA=Faure et al's additional point  
D=Dave's characteristic  
G=Gelpi's indicator  
CD=Cropley & Dave's additional point  
L=Lengrand's additional point  
Ch=Characteristics developed for this study  
PCh=Postulate,Characteristics (e.g.P45Ch17=Postulate45,Characteristic17)

Faure et al's 21 recommendations on lifelong education.  
(Faure et al, 1972, pp. 181-222)

F1 We propose lifelong education as the master concept for educational policies in the years to come for both developed and developing countries. (Ch1)

F2 Educational institutions and means must be multiplied, made more accessible, offer the individual a far more diversified choice. Education must assume the proportions of a true mass movement. (Ch13, P13Ch13, Ch7, P22Ch7)

F3 Each person should be able to choose his path more freely, in a more flexible framework, without being compelled to give up using educational services for life if he leaves the system. (Ch8, P28Ch8)

F4 Artificial or outdated barriers between different branches and levels of education and between formal and non-formal education should be abolished; recurrent education should be gradually introduced and made available in the first place to certain categories of the active population. (Ch3, P6Ch3, P8Ch3, Ch4)

F5 The development of education for pre-school-age children should become one of the major objective for educational strategies in the 1970s. (Ch1)

F6 Universal basic education, in a variety of forms depending on possibilities and needs, should be the top priority for educational policies in the 1970s. (Ch13)

F7 Rigid distinctions between different types of teaching general scientific, technical and professional -- must be
dropped, and education, from primary and secondary levels, should have a combined theoretical, technological, practical and manual character. (Ch4, P9Ch4)

F8 Professional and technical training colleges must be developed in conjunction with the secondary education system. The instruction they give must be followed by practical training at places of work, all of which must, above all, be completed by recurrent education and vocational training courses. (Ch4, Ch7)

F9 Efforts must be made to bridge the gap, still found in all too many cases, between educational establishments and business companies, whether privately or publicly owned, for the latter constitute a key element in the overall education system. Their role should not be limited to training workers, but extended so far as possible to training technicians and researchers. (Ch7, P23Ch7)

F10 Throughout the post-secondary educational system, structures, subject-matter and student categories must be very broadly diversified. (Ch7, P24Ch7)

F11 As educational systems become more diversified and as possibilities for entry, exit and re-entry increase, obtaining university degrees and diplomas should become less and less closely linked to completing a predetermined course of study. Examinations should serve essentially as means of comparing skills acquired under varying conditions by individuals of different origins, a mark not of conclusion but of a starting point, helping each individual to assess the effectiveness of his own study methods. Evaluation procedures should measure an individual's progress as much as the extent to which he conforms to externally fixed standards. (Ch8, P29Ch8, P30Ch8)

F12 Educational strategies in the coming decade should have rapid development of adult education, in school and out of school, as one of their priority objectives. (Ch1)

F13 In all areas where there is widespread illiteracy, programmes organized for the adult population must include a strong literacy campaign. Action must be taken in two ways: it must aim firstly at functional literacy among strongly motivated sections of the working population and secondly at mass literacy when conditions are appropriate and, above all, when social development conditions--political, economic and cultural--are suitable for active large-scale participation by the people. (Ch13, P15Ch13)

F14 Institutions and services of a new kind, intended to help people teach themselves--language laboratories, technical training laboratories, information centres, libraries and related services, data banks, programmed and personalized
teaching aids, audio-visual aids, etc.—should be integrated into all education systems. (Ch15, P31Ch15)

F15 1. In the conception and general planning of education systems, allowance must be made for the possible contribution of new techniques with a view to developing a unified process aimed at using available means and resources in the most efficient ways. (Ch15)

2. When getting systems with technological support under way, strategies should be differentiated according to different levels of economic development. (Ch15)

F16 1. Modify teacher-training programmes so that teachers are equipped for the different roles and functions imposed by new technologies. (Ch15, Ch9, P34Ch9)

2. Reserve a fixed part of the increase in execution budgets for the rational development of sophisticated techniques. (Ch15, P33Ch15)

F17 Legislative, professional, labour union and social action should gradually reduce and finally abolish hierarchical distinctions maintained for no valid reason among the various categories of teachers. (Ch16, P38Ch16)

F18 Conditions in which teachers are trained should be profoundly changed so that, essentially, they become educators rather than specialists in transmitting preestablished curricula: the principle of a first, accelerated training stage, followed by in-service training cycles, should be adopted. (Ch9, P35Ch12, P36Ch9)

F19 Auxiliaries and specialists from other professions (workers, technicians, professional and executive personnel) should be called in to work beside professional teachers. Authorities should also enlist the co-operation of pupils and students, in such a way that they teach themselves while instructing others, and become imbued with the idea that acquiring an 'intellectual capital' involves its possessor in the duty of sharing it with others. (Ch4, P11Ch4, P12Ch4)

F20 It should be made a principle to centre educational activity on the learner, to allow him greater and greater freedom, as he matures; to decide for himself what he wants to learn, and how and where he wants to learn it and take his training. Even if the learner has to accept certain pedagogic and socio-cultural obligations as to subject-matter and methods, these should still be defined more in terms of free choice, of psychological propensities and drives among learners than hitherto. (Ch6, P18Ch6, P19Ch6, P20Ch6, P21Ch6)
All learners, whether young or adult, should be able to play a responsible part not only in their own education but in the entire educational enterprise. (Ch10, P40Ch10)

Additional points stressed by Faure et al, 1972)

FA1 Education should be conceived as a process of selffulfillment rather than as a curriculum to be learnt. (Faure, 1972, p.143)

FA2 Education should prepare learners for a type of society which does not yet exist. (Faure, 1972, p.13)

FA3 Through their programmes learners should be given some awareness of the unity of mankind and the common aspirations. (Faure, 1972, p. 240)

Dave's 20 characteristics of lifelong education. (Dave, 1983, pp. 3-11)

D1 The three basic terms upon which the meaning of the concepts is based are "life", "lifelong" and "education". The meaning attached to these terms and the interpretation given to them largely determine the scope and meaning of lifelong education. (Ch1)

D2 Education does not terminate at the end of formal schooling but it is a lifelong process. Lifelong education covers the entire life-span of an individual. (Ch1, P1Ch1)

D3 Lifelong education is not confined to adult education but it encompasses and unifies all stages of education - pre-primary, primary, secondary and so forth. Thus it seeks to view education in its totality. (Ch1)

D4 Lifelong education includes both formal and non-formal patterns of education, planned as well as incidental learning. (Ch1, Ch7)

D5 The home plays the first, most subtle and crucial role in initiating the process of lifelong learning. This continues throughout the entire life-span of an individual through a process of family learning. (Ch17)

D6 The community also plays an important role in the system of lifelong education right from the time the child begins to interact with it, and continues its educative function both in professional and general areas throughout life. (Ch17)

D7 The institutions of education, schools, universities and training centres are of course important, but only as some of the agencies for lifelong education. They no longer enjoy the monopoly for educating the people and can no longer
exist in isolation from other educative agencies in the society. (Ch7)

D8 Lifelong education seeks continuity and articulation along its vertical or longitudinal dimension. (Ch3)

D9 Lifelong education also seeks integration at its horizontal and depth dimensions at every stage in life. (Ch4)

D10 Contrary to the elitist form of education, lifelong education is universal in character. It represents democratization of education. (Ch13)

D11 Lifelong education is characterised by its flexibility and diversity in content, learning tools and techniques, and time of learning. (Ch6)

D12 Lifelong education is a dynamic approach to education which allows adaptation of materials and media of learning as and when new developments take place. (Ch15)

D13 Lifelong education allows alternative patterns and forms of acquiring education. (Ch7)

D14 Lifelong education has two broad components: general and professional. These components are not completely different from each other but are inter-related and interactive in nature. (Ch4)

D15 The adaptive and innovative functions of the individual and the society are fulfilled through lifelong education. (Ch1)

D16 Lifelong education carries out a corrective function: taking care of the shortcomings of the existing system of education. (Ch1)

D17 The ultimate goal of lifelong education is to maintain and improve the quality of life. (Ch17)

D18 There are three major prerequisites for lifelong education, namely, opportunity, motivation, and educability. (Ch13)

D19 Lifelong education is an organizing principle for all education. (Ch1)

D20 At the operational level, lifelong education provides a total system of all education. (Ch1)

Gelpi's 19 indicators of lifelong education. (Gelpi, 1979, pp. x-xi)

Ga Participation of workers' children at all levels of education. (Ch13)
Gb Participation of workers themselves at all levels of education. (Ch13)
Gc Use of educators who are not teachers in the education system. (Ch4)
Gd Active participation of workers (in industry, farming) as educators. (Ch4)
Ge Education as an instrument not only of individual advancement but also of community advancement. (Ch17)
Gf Decompartmentalization of the different streams of secondary education. (Ch4)
Gg Abolition of the different streams of secondary education. (Ch4)
Gh Abolition of inequalities in the quality of schools in urban and rural areas. (Ch13, P14Ch13)
Gi Introduction of folk culture, oral and written, as an integral part of the school curriculum. (Ch17)
Gj Abolition of any ranking between the so-called manual disciplines and the so-called intellectual disciplines. (Ch4, a10Ch4)
Gk Integration of general education and vocational education. (Ch4)
Gl Progress in the consumption of cultural goods (books, newspapers, films etc.). (Ch17)
Gm Progress in participation in community life (political parties, trades union, village associations, district associations, etc.). (Ch17)
Gn Improvement in the cultural content and methods of the mass media programmes. (Ch17)
Go Making work experience more interesting from the educational point of view. (Ch4)
Gp Significant development of experiments in self-instruction. (Ch15, P32Ch15)
Gq Participation of schoolchildren and students in the management of educational institutions. (Ch10, P41Ch10)
Gr Integration between initial training and subsequent training. (Ch3, P7Ch3)
Gs Provision of facilities (paid leave, scholarships, instruc-
tional materials, etc.) to underprivileged groups to enable them to profit from the educational system. (Ch13)

Additional points stressed by Cropley (1977)

C1 Educational activities should be learner centred rather than subject centred. (Cropley, 1977, p. 124) (P4, Ch2)

C2 There are teachable moments in learners' lives which should be discovered and used by educators. (Cropley, 1977, p. 120) (P5, Ch3)

Additional points stressed by Cropley and Dave (1978)

CD1 The aim of lifelong education is to develop in the learners a positive attitude towards learning throughout life. (Cropley & Dave, 1978, p. 12) (Ch5)

CD2 Teachers in lifelong education are required to be lifelong learners. (Cropley & Dave, 1978, p. 36) (P37, Ch9)

CD3 In lifelong education all types of teaching methods and educational technology are encouraged. (Cropley & Dave, 1978, p. 46) (Ch15)

CD4 The chief duty of a teacher is to facilitate active participation in the learning process. (Cropley & Dave, 1978, p. 31) (P14, Ch5)

CD5 Learners should be trained to regard learning as something relevant to their lives. (Cropley & Dave, 1978, p. 12) (P17, Ch5)

Additional points stressed by Lengrand (1975) (Lengrand in Cropley, 1979)

L1 In lifelong education it is believed there is no other knowledge than the relationship the learners establish with the object they want to know. (Lengrand in Cropley, 1979, p. 32) (Ch2)

L2 Lifelong education is intended to be forward looking and optimistic. (Lengrand, 1975, pp. 99-102) (Ch11)

L3 In lifelong education a sense of the world community is developed in learners. (Lengrand, 1975, pp. 107) (Ch12)

L4 In lifelong education the restriction of limited educational resources is overcome through maximum utilization. (Lengrand in Cropley, 1979, p. 28) (Lengrand, 1975, p. 32) (Ch14)

L5 It is the aim of lifelong education to lead to improved quality of life. (Lengrand, 1975, p. 103) (Ch17)
L6 Learners should be trained to acquire the skill to learn, rather than to accumulate facts. (Langrand, in Cropley, 1979, p.35) (P3Ch2)

L7 The financing of education should be a responsibility shared by all sectors of society. (Langrand, 1975, p.74) (Ch7)

L8 Schools should be built for multiple use of different age groups in education. (Langrand in Cropley, 1979, p. 28) (Ch14)

L9 Educational facilities should be provided in places of work. (Langrand, 1975, p. 76) (Ch14)

L10 Paid educational leaves should be provided by legislation. (Langrand, 1975, p.76) (P39Ch16)

L11 Learners should be trained to meet the challenges of change. (Langrand, 1975, p. 102) (P42Ch11)

L12 Learners should be trained to view time as something positive bringing human experience, discoveries and progress. (Langrand, 1975, p. 99) (P44Ch11)

L13 Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (Langrand, 1975, p. 107) (P45Ch12)

L14 A spirit of peace should be inculcated in the learners. (Langrand, 1975, p. 107) (P46Ch12)

L15 Morality should form a part of education. (Langrand, 1975, p. 104) (P51Ch17)

The 17 characteristics developed for this study.

Ch1 In lifelong education it is advocated that education covers for the entire life-span of individuals. (D1, D2, D3, D4, D15, D16, D19, D20, F1, F5, F12)

Ch2 The concept of knowledge in lifelong education is held to be tentative and related to life situations. (FA1, L1, L6)

Ch3 In lifelong education it is required that the different stages of life and knowledge be vertically integrated. (D8, Gr, F4, F8)

Ch4 In lifelong education it is required that the different aspects of life, subject disciplines, institutions and educators be horizontally integrated. (D9, D14, F4, F7, F8, Gc, Gd, Gf, Gg, Gj, Gk, Go, F19)

Ch5 The aim of lifelong education is to develop in the learners
a positive attitude towards learning throughout life. (CD1, CD4, CD5)

Ch6 In lifelong education students are given freedom of choice in how, where, when, and what to learn. (D11, F20)

Ch7 In lifelong education diversification of educational provisions is stressed. (D4, D7, D13, F2, F9, F10)

Ch8 In lifelong education entry-exit-re-entry opportunities are provided all kinds of qualifications and experiences are taken into account. (F3, F11)

Ch9 Teachers in lifelong education are required to be lifelong learners. (F16, F18)

Ch10 In lifelong education learners are given a share of responsibility in the management of educational institutions they attend. (F21, Gq)

Ch11 Lifelong education is intended to be forward looking and optimistic. (L2, L11, L12, FA2)

Ch12 In lifelong education a sense of the world community is developed in learners. (L3, L13, L14, FA3)

Ch13 In lifelong education it is assumed that equal opportunity is provided for all who want to learn. (D10, D18, F2, F6, F13, Ga, Gb, Gh, Gs)

Ch14 In lifelong education the restriction of limited educational resources is overcome through maximum utilization. (L4, L8, L9)

Ch15 In lifelong education all types of teaching methods and educational technology are encouraged. (D12, F14, F15, F16, Gp, CD3)

Ch16 In lifelong education paid educational leaves, scholarships, and other necessary legislation to support lifelong education are recommended. (F17, L10)

Ch17 It is the aim of lifelong education to lead to improved quality of life. (D5, D6, D17, Ge, Gi, Gl, Gn, Gm)

The postulate statements developed under the 17 characteristics.

P1Ch1 Education should cover the entire life-span of an individual. (D2)

P2Ch2 Education should be conceived as a process of self-fulfilment rather than as a curriculum to be learnt. (C2, FA1)
P3Ch2 The learners should be taught the skill to learn rather than to accumulate facts. (L16)

P4Ch2 Educational activities should be learner centred rather than subject centred. (C1)

P5Ch3 There are teachable moments in learners' lives which should be discovered and used by educators. (C2)

P6Ch3 Recurrent education should be introduced to enable learners to spend the given number of years of free education whenever it suits them during their lives. (F4)

P7Ch3 Initial training and subsequent training should be integrated. (Gr)

P8Ch3 Artificial distinctions between different levels of education should be abolished. (F4)

P9Ch4 Artificial distinctions between arts, science and technical streams of education should be abolished. (F7)

P10Ch4 Any ranking between manual disciplines and intellectual disciplines should be abolished. (Gj)

P11Ch4 Specialists from other professions should be employed to work beside professional teachers. (F19)

P12Ch4 The co-operation of learners should be enlisted to instruct other learners. (F19)

P13Ch13 Education should assume the proportions of a true mass movement. (F2)

P14Ch13 Similar quality for all schools in urban and rural areas should be maintained to ensure fair opportunities. (Gh)

P15Ch13 In areas where there is widespread illiteracy, adult programmes should include a strong functional literacy campaign. (F13)

P16Ch5 The chief duty of a teacher is to facilitate active participation in the learning process. (CD4)

P17Ch5 Learners should be trained to regard learning as something relevant to their lives. (CD5)

P18Ch6 Learners should be given freedom to decide how they want to learn. (F20)

P19Ch6 Learners should be given freedom to decide where they want to learn. (F20)
P20Ch6 Learners should be given freedom to decide when they want to learn. (F20)

P21Ch6 Learners should be given freedom to decide what they want to learn. (F20)

P22Ch7 Educational institutions should be multiplied and made accessible to offer the individual a diversified choice. (F2)

P23Ch7 Business companies should train not only workers, but researchers as well. (F9)

P24Ch7 Post-secondary education should be diversified. (F10)

P25Ch7 The financing of education should be a responsibility shared by all sectors of society. (L7)

P26Ch14 Schools and colleges should be built for multiple use in lifelong education. (L8)

P27Ch14 Educational facilities should be provided in places of work. (L9)

P28Ch8 Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave the system. (F3)

P29Ch8 Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study but more based on knowledge gained through different means. (F11)

P30Ch8 Examinations should serve as a means of comparing method effectiveness rather than an aid to decide on academic admission. (F11)

P31Ch15 Services to facilitate self-instruction should be integrated into all education systems. (F14)

P32Ch15 There should be significant development of experiments in self-instruction. (Gp)

P33Ch15 A fixed part of the increase in education budgets should be reserved for the rational development of sophisticated techniques. (F16)

P34Ch9 Teachers should be equipped for the different roles and functions imposed by new technologies. (F16)

P35Ch9 Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula. (F18)
The principle of initial training followed a cycle of in-service training should be adopted. (F18)

Teachers should be learners throughout life. (CD2)

Legislative and other pressures should abolish the hierarchical distinctions maintained among the various categories of teachers. (F17)

Paid educational leaves should be provided by legislation. (L10)

All learners should be able to play a responsible part in the entire educational enterprise. (F21)

Learners should participate in the management of the educational institution they attend. (Gq)

Learners should be trained to meet the challenges of change. (L11)

Education should prepare learners for a type of society which does not yet exist. (FA2)

Learners should be trained to view time as something positive, bringing human experience, discoveries and progress. (L12)

Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (L13)

A spirit of peace should be inculcated in the learners. (L14)

Through their programmes learners should be given some awareness of the unity of mankind and the common aspirations. (FA3)

Education should be used as an instrument not only of individual advancement but also of community advancement. (Ge)

National culture should be introduced as an integral part of the school curriculum. (Gi)

The quality of education provided in the family should be the chief concern of those responsible for education. (D5)

Morality should form a part of education. (L15)
Appendix B

Original Characteristics, Postulates Contrasts

Characteristic 1) In lifelong education it is advocated that education covers the entire life-span of individuals. (Faure et al., 1972, p. 182; Cropley, 1979, p. 9; Dave, 1983, p. 3)

1. Education should cover the entire life-span of an individual. (D2 in Appendix A)

Education should cover mainly the youthful years of an individual.

Characteristic 2) The concept of knowledge in lifelong education is held to be tentative and related to life situations: (Faure et al., 1972, p. xxx; Lengrand in Cropley, 1979, p. 32.)

2. Education should be considered as a process of self-fulfilment more than as a curriculum to be learnt. (FA1, C2 in Appendix A)

Education should be considered as a curriculum to be learnt more than a process of self-fulfilment.

3. Learners should be trained to acquire the skill to learn more than to accumulate facts. (L16 in Appendix A)

Learners should be trained to accumulate facts more than the skill to learn.

4. Educational activities should be learner centred more than subject centred. (C1 in Appendix A)

Educational activities should be subject-centred more than learner centred.

Characteristic 3) In lifelong education it is required that the different stages of life and knowledge be vertically integrated. (Dave, 1983, p. 6; Cropley, 1977, p. 79)

5. There are teachable moments in learners' lives which should be discovered and used by educators. (C2 in Appendix A)

Learners learn best while they are young.

6. Recurrent education should be introduced to enable learners to spend the given number of years of free education whenever it suits them during their lives. (F4 in Appendix A)

Free education is best given to learners between 6 and 24 years of age.
7. Initial training and subsequent training of the learners should be integrated. (Gr in Appendix A)

Initial training and subsequent training of the learners should be separated.

8. Artificial distinctions between different levels of education should be abolished. (F4 in Appendix A)

There should be distinctions between different levels of education.

Characteristic 4) In lifelong education it is required that the different aspects of life, subject disciplines, institutions and educators be horizontally integrated. (Faure et al., 1972, p.189; Gelpi, 1979, p.x; Dave, 1983, p.6)

9. Artificial distinctions between arts, science and technical streams of education with regard to learners of different subjects should be abolished. (F4 in Appendix I)

Classes should be divided into arts, science and technical streams.

10. Any ranking between manual disciplines and intellectual disciplines should be abolished. (Gj in Appendix A)

Intellectual disciplines should be ranked higher than manual disciplines.

11. Specialists from other professions should be employed to work beside professional teachers. (F19 in Appendix A)

Specialists from other professions should be barred from working beside professional teachers.

12. The co-operation of learners should be enlisted to instruct other learners. (F19 in Appendix A)

Learners are unqualified to instruct other learners.

Characteristic 5) The aim of lifelong education is to develop in the learners a positive attitude towards learning throughout life. (Faure et al., 1972, p.xxix; Cropley & Dave, 1978, pp.12, 20, 31)

16. The chief duty of a teacher is to facilitate active participation in the learning process. (CD4 in Appendix A)

The chief duty of a teacher is to pass on knowledge.

17. Learners should be trained to regard learning as something
relevant to their lives. (CD5 in Appendix A)

Learners should be trained to regard learning as something not necessarily relevant to their lives.

Characteristic 6) In lifelong education students are given freedom of choice in how, where, when, and what to learn. (Faure et al., 1972, p.220; Dave, 1983, p.7)

18. Learners should be given freedom to decide how they want to learn. (F20 in Appendix A)

Learners should be taught how to learn as a member of a class.

19. Learners should be given freedom to decide where they want to learn. (F20 in Appendix A)

Learners should be restricted in deciding where they will be taught. (F20 in Appendix A)

20. Learners should be given the freedom to decide when to learn. (F20 in Appendix A)

Learners should abide by a time-table established by the educational institution.

21. Learners should be given freedom to decide for themselves what they want to learn. (F20 in Appendix A)

Learners should abide by the curriculum of the school.

Characteristic 7) In lifelong education diversification of educational provisions is stressed. (Faure et al., 1972, p. 183; Cropley, 1979, p.74; Dave, 1983, p.7)

22. Educational institutions should be multiplied and made accessible to offer the individual a diversified choice. (F2 in Appendix A)

Educational institutions should be multiplied according to the need of the job market.

23. Business companies should train not only workers, but researchers as well. (F9 in Appendix A)

Only tertiary educational institutions should be permitted to train researchers.

24. Post-secondary education should be diversified. (F10 in Appendix A)

Post-secondary education should be specialized in certain fields only.
Characteristic 8) In lifelong education entry-exit-re-entry opportunities are provided and all kinds of qualifications and experiences are taken into account. (Faure et al., 1972, pp. 186, 203; Lengrand, 1975, p. 50; Cropley & Dave, 1978, p. 14)

28. Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave the system. (F3 in Appendix I)

Once learners leave the school system they should not expect the society to maintain open access for them to other educational programmes for the rest of their lives.

29. Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study but more based on gaining knowledge through different means. (F11 in Appendix A)

Degrees and diplomas should be closely linked to learners' having completed the required set courses.

30. Examinations should serve as a means of comparing method effectiveness rather than as an aid to deciding on academic admission. (F11 in appendix A)

Examinations should be used to judge whether learners are fit for admission.

Characteristic 9) Lifelong education requires special training for teachers. (Faure et al., 1972, p. 217; Cropley & Dave, 1978, p. 36)

34. Teachers should be equipped for the different roles and functions imposed by new technologies. (F16 in Appendix A)

Teachers should have freedom to choose whether to use new technology or not.

35. Teachers should be trained to be educators more than specialists in transmitting pre-established curricula. (F18 in Appendix A)

Teachers should be trained chiefly to transmit knowledge of the curricula.

36. The principle of initial training followed a cycle of in-service training should be adopted. (F18)

A teacher once trained should be regarded as permanently trained.

37. Teachers should be learners throughout their lives. (CD2 in Appendix A)
Teachers should be learners only during their initial training.

**Characteristic 10)** In lifelong education learners are given a share of responsibility in the management of the educational institutions they attend. (Faure et al., 1972, p. 222; Gelpi, 1979, p.xi)

40. All learners should be allowed to play a responsible part in the entire educational enterprise. (F21 in Appendix A)

Learners should not be allowed to play any responsible part in the entire educational enterprise.

41. Learners should participate in the management of the educational institution they attend. (Gq in Appendix A)

Learners should be kept out of the management of the educational institution they attend.

**Characteristic 11)** Lifelong education is intended to be forward looking and optimistic. (Faure, 1972, p. 13; Lengrand, 1975, p.99)

42. Learners should be trained to meet the challenges of change. (L11 in Appendix A)

Learners should be trained to maintain social stability.

43. Education should prepare learners for a type of society which does not yet exist. (FA2 in Appendix A)

Education should prepare learners to maintain the contemporary society.

44. Learners should be trained to view time as something positive bringing human experience, discoveries and progress. (L12 in Appendix A)

Learners should be trained to view time as being possible to bring about old age, boredom and decay.

**Characteristic 12)** In lifelong education a sense of the world community is developed in the learners. (Lengrand, 1975, p.105-107; Faure et al., 1972, p. 240)

45. Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (L13 in Appendix A)

Learners should be taught to regard foreigners as people with their unique problems.

46. A spirit of peace should be inculcated in the learners. (L14 in Appendix A)
A readiness for war should be inculcated in the learners.

47. Through their programmes learners should be given some awareness of the unity of man-kind and common aspirations. (FA3 in Appendix A)

Through their programmes learners should be given some awareness of the diversity of national interests.

Characteristic 13) In lifelong education it is assumed that equal opportunity is provided for all who want to learn. (Faure et al, 1972, p. 192; Dave, 1983, p.6; Gelp, 1979, p.x)

13. Education should assume the proportions of a true mass movement. (F2 in Appendix A)

Education should be only for those who can benefit from it.

14. Similar quality for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. (Gh in Appendix A)

It is but natural that schools in urban areas should have better quality than schools in rural areas.

15. In areas where there is wide-spread illiteracy, adult programmes should include a strong functional literacy campaign. (F13 in Appendix A)

Even in areas where there is wide-spread illiteracy, adult programmes should not be mixed with functional literacy campaign.

Characteristic 14) In lifelong education the restriction of limited educational resources is overcome through maximum utilization. (Lengrand, 1975, p.32; Lengrand and Cropley, 1979, p.28)

25. The financing of education should be a responsibility shared by all sectors of society. (L7 in Appendix A)

The financing of education should be the responsibility of government.

26. Schools should be built for multiple use of different age groups in education. (L8 in Appendix A)

Schools should be built for the single purpose of one age group.

27. Educational facilities should be provided in places of work. (L9 in Appendix A)

Work places should be kept for work not for education.
Characteristic 15) In lifelong education all types of teaching methods and educational technology are encouraged. (Faure et al., 1972, p.209-210; Dave & Stiemerling, 1973, p.83; Gelpi, 1979, p.xi; Dave, 1983, p.7)

31. Services to facilitate self-instruction should be integrated into all education systems. (F14 in Appendix A)

Services for self-instruction should be installed only if they are cost effective.

32. There should be significant development of experiments in self-instruction. (Gp in appendix A)

There should be limited development of experiments in self-instruction.

33. A fixed part of the increase in education budgets should be reserved for the development of sophisticated techniques. (F16 in Appendix A)

The development of sophisticated teaching techniques should be considered only if they are cost effective.

Characteristic 16) In lifelong education paid educational leaves, scholarships, and other necessary legislation to support education throughout life are recommended. (Faure et al., 1972, p.216; Gelpi, 1979, p.xi)

38. Legislation should abolish the hierarchical distinctions maintained among the various categories of teachers between primary and secondary schools. (F17 in Appendix A)

Teachers in secondary schools should be given higher positions than primary teachers.

39. Paid educational leaves should be provided by legislation. (L10 in Appendix A)

Paid educational leaves should be a privilege not a right.

Characteristic 17) It is the aim of lifelong education to lead to improved quality of life. (Lengrand, 1975, p. 103; Cropley, 1979, p.104; Dave, 1983, p.9)

48. Education should be used as an instrument not only of individual advancement but also of community advancement. (Ge in Appendix A)

Education should be viewed primarily as an opportunity for personal advancement.

49. National culture should be introduced as an integral part of the school curriculum. (Gi in Appendix A)
National culture should be introduced as extra-curriculum only.

50. The quality of education provided in the family should be the chief concern of those responsible for education. (D5 in Appendix A)

The quality of education provided in the family should be the chief concern of parents and not of those responsible for education.

51. Morality should form a part of education. (L15 in Appendix A)

Morality should be left to the free choice of the individual.
Dear Lifelong Education Expert,

Do you agree the following statements are assumptions underlying lifelong education? Please indicate your opinion by giving a tick to the appropriate space [ ] provided. If you have any remarks for any of the statements please write them on the back pages of this questionnaire, or on any other paper. Thank you very much.

Note: Figures in brackets refer to original listing.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>Not sure</th>
<th>No</th>
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<tbody>
<tr>
<td>1. Once learners leave the school system they should not expect the society to maintain open access for them to other educational programmes for the rest of their lives. (56)</td>
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<td>2. Educational institutions should be multiplied and made accessible to offer the individual a diversified choice. (43)</td>
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<td>3. Education should prepare learners for a type of society which does not yet exist. (85)</td>
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<td>5. Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (89)</td>
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<td>6. All learners should be allowed to play a responsible part in the entire educational enterprise. (79)</td>
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9. Specialists from other professions should be employed to work beside professional teachers. (21)

10. Learners should be given freedom to decide where they want to learn. (37)

11. Learners should be given the freedom to decide when to learn. (39)

12. Learners should be restricted in deciding where they will be taught. (38)

13. Education should be considered as a curriculum to be learnt more than a process of self-fulfilment. (4)

14. Learners should not be allowed to play any responsible part in the entire educational enterprise. (80)

15. Learners should be trained to meet the challenges of change. (83)

16. Educational activities should be subject-centred more than learner-centred. (8)

17. Learners should be trained to view time as being possible to bring about old age, boredom and decay. (88)

18. Teachers should be trained chiefly to transmit knowledge of the curricula. (70)

19. Education should be only for those who can benefit from it. (26)

20. National culture should be introduced as extra-curriculum only. (98)

21. Learners should be trained to maintain social stability. (84)
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<td>30.</td>
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<td>31.</td>
<td>There should be distinctions between different levels of education. (16)</td>
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<td>Through their programmes learners should be given some awareness of the unity of man-kind and common aspirations. (93)</td>
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<td>Schools should be built for multiple use of different age groups in education. (51)</td>
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<td>34.</td>
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35. Paid educational leaves should be provided by legislation. (77)  
[ ] Yes  
[ ] Not sure  
[ ] No

36. Education should cover the entire life-span of an individual. (1)  
[ ] Yes  
[ ] Not sure  
[ ] No

37. Artificial distinctions between different levels of education should be abolished. (15)  
[ ] Yes  
[ ] Not sure  
[ ] No

38. Education should cover mainly the youthful years of an individual. (2)  
[ ] Yes  
[ ] Not sure  
[ ] No

39. Initial training and subsequent training of the learners should be separated. (14)  
[ ] Yes  
[ ] Not sure  
[ ] No

40. Learners are unqualified to instruct other learners. (24)  
[ ] Yes  
[ ] Not sure  
[ ] No

41. Learners should be given freedom to decide how they want to learn. (35)  
[ ] Yes  
[ ] Not sure  
[ ] No

42. Classes should be divided into arts, science and technical streams. (18)  
[ ] Yes  
[ ] Not sure  
[ ] No

43. Teachers should be trained to be educators more than specialists in transmitting pre-established curricula. (69)  
[ ] Yes  
[ ] Not sure  
[ ] No

44. Post-secondary education should be diversified. (47)  
[ ] Yes  
[ ] Not sure  
[ ] No

45. Learners should be trained to accumulate facts more than the skill to learn. (6)  
[ ] Yes  
[ ] Not sure  
[ ] No

46. Degrees and diplomas should be closely linked to learners' having completed the required set courses. (58)  
[ ] Yes  
[ ] Not sure  
[ ] No

47. Work places should be kept for work not for education. (54)  
[ ] Yes  
[ ] Not sure  
[ ] No

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48. Schools should be built for the single purpose of one age group. (52)  [ ] Yes  [ ] Not sure  [ ] No

49. Education should assume the proportions of a true mass movement. (25)  [ ] Yes  [ ] Not sure  [ ] No

50. Educational facilities should be provided in places of work. (53)  [ ] Yes  [ ] Not sure  [ ] No

51. Educational institutions should be multiplied according to the need of the job market. (44)  [ ] Yes  [ ] Not sure  [ ] No

52. Artificial distinctions between arts, science and technical streams of education with regard to learners of different subjects should be abolished. (17)  [ ] Yes  [ ] Not sure  [ ] No

53. Through their programmes learners should be given some awareness of the diversity of national interests. (94)  [ ] Yes  [ ] Not sure  [ ] No

54. Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave the system. (55)  [ ] Yes  [ ] Not sure  [ ] No

55. Learners should be kept out of the management of the educational institution they attend. (82)  [ ] Yes  [ ] Not sure  [ ] No

56. Educational activities should be learner centred more than subject centred. (7)  [ ] Yes  [ ] Not sure  [ ] No

57. A spirit of peace should be inculcated in the learners. (91)  [ ] Yes  [ ] Not sure  [ ] No

58. The co-operation of learners should be enlisted to instruct other learners. (23)  [ ] Yes  [ ] Not sure  [ ] No

59. Teachers should be learners throughout their lives. (73)  [ ] Yes  [ ] Not sure  [ ] No

60. The chief duty of a teacher is to pass on knowledge. (32)  [ ] Yes  [ ] Not sure  [ ] No
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<td>61.</td>
<td>Learners learn best while they are young.</td>
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<td>62.</td>
<td>Intellectual disciplines should be ranked higher than manual disciplines.</td>
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<td>63.</td>
<td>Learners should abide by the curriculum of the school.</td>
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<td>64.</td>
<td>Education should prepare learners to maintain the contemporary society.</td>
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<td>A readiness for war should be inculcated in the learners.</td>
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<td>Learners should participate in the management of the educational institution they attend.</td>
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<td>70.</td>
<td>There should be limited development of experiments in self-instruction.</td>
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<td>72.</td>
<td>Services to facilitate self-instruction should be integrated into all education systems.</td>
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74. Only tertiary educational institutions should be permitted to train researchers. (46)

75. Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study but more based on gaining knowledge through different means. (57)

76. A teacher once trained should be regarded as permanently trained. (72)

77. Any ranking between manual disciplines and intellectual disciplines should be abolished. (19)

78. The development of sophisticated teaching techniques should be considered only if they are cost effective. (66)

79. Even in areas where there is wide-spread illiteracy, adult programmes should not be mixed with functional literacy campaign. (30)

80. Learners should be trained to view time as something positive bringing human experience, discoveries and progress. (87)

81. Learners should be trained to acquire the skill to learn more than to accumulate facts. (5)

82. Learners should be taught to regard foreigners as people with their unique problems. (90)

83. Learners should be given freedom to decide for themselves what they want to learn. (41)

84. There should be significant development of experiments in self-instruction. (63)

85. Business companies should train not only workers, but researchers as well. (45)

86. Learners should be trained to regard learning as something not necessarily relevant to their lives. (34)
87. In areas where there is wide-spread illiteracy, adult programmes should include a strong functional literacy campaign. (29)  

88. The chief duty of a teacher is to facilitate active participation in the learning process. (31)  

89. Post-secondary education should be specialized in certain fields only. (48)  

90. Paid educational leaves should be a privilege not a right. (78)  

91. The principle of initial training followed a cycle of in-service training should be adopted. (71)  

92. The quality of education provided in the family should be the chief concern of parents and not of those responsible for education. (100)  

93. Recurrent education should be introduced to enable learners to spend the given number of years of free education whenever it suits them during their lives. (11)  

94. Morality should form a part of education. (101)  

95. Education should be considered as a process of self-fulfilment more than as a curriculum to be learnt. (3)  

96. Initial training and subsequent training of the learners should be integrated. (13)  

97. Services for self-instruction should be installed only if they are cost effective. (62)
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>98. The financing of education should be a responsibility shared by all sectors of society.</td>
<td>[ ] Yes</td>
<td>[ ] Not sure</td>
<td>[ ] No</td>
</tr>
<tr>
<td>99. Morality should be left to the free choice of the individual.</td>
<td>[ ] Yes</td>
<td>[ ] Not sure</td>
<td>[ ] No</td>
</tr>
<tr>
<td>100. Teachers should be equipped for the different roles and functions imposed by new technologies.</td>
<td>[ ] Yes</td>
<td>[ ] Not sure</td>
<td>[ ] No</td>
</tr>
<tr>
<td>101. Teachers in secondary schools should be given higher positions than primary teachers.</td>
<td>[ ] Yes</td>
<td>[ ] Not sure</td>
<td>[ ] No</td>
</tr>
<tr>
<td>102. Teachers should have freedom to choose whether to use new technology or not.</td>
<td>[ ] Yes</td>
<td>[ ] Not sure</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>

- END -
LLE Scale for Pilot Subjects

Dear Respondent,

The statements in this part of the questionnaire represent different educational ideas. Whatever your feelings about these ideas, you may be sure that many people feel the same as you do.

Direction

1. Read the statements carefully.

2. Give a tick to the space [ ] provided according to your degree of agreement with that idea.

3. If the expression of any of the ideas is not clear to you, please give your comment on the back pages of the questionnaire.

Note: The figures in brackets belong to original listing.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>No opinion</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Once learners leave the school system they should not expect the society to maintain open access for them to other educational programmes for the rest of their lives. (56)</td>
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<tr>
<td>2. Educational institutions should be multiplied and made accessible to offer the individual a diversified choice. (43)</td>
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<td>3. Education should prepare learners for a type of society which does not yet exist. (85)</td>
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<td>4. Learners should abide by a timetable established by the educational institution. (40)</td>
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</tbody>
</table>
5. Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (89)

6. All learners should be allowed to play a responsible part in the entire educational enterprise. (79)

7. There are teachable moments in learners' lives which should be discovered and used by educators. (9)

8. Education should be used as an instrument not only of individual advancement but also of community advancement. (95)

9. Specialists from other professions should be employed to work beside professional teachers. (21)

10. Learners should be given freedom to decide where they want to learn. (37)

11. Learners should be given the freedom to decide when to learn. (39)

12. Learners should be restricted in deciding where they will be taught. (38)

13. Education should be considered as a curriculum to be learnt more than a process of self-fulfilment. (4)
14. Learners should not be allowed to play any responsible part in the entire educational enterprise. (80)

15. Learners should be trained to meet the challenges of change. (83)

16. Educational activities should be subject-centred more than learner centred. (8)

17. Learners should be trained to view time as being able to bring about old age, boredom and decay. (88)

18. Teachers should be trained chiefly to transmit knowledge in the curriculum. (70)

19. Education should be only for those who can benefit from it. (26)

20. National culture should be introduced as extra-curriculum only. (98)

21. Learners should be trained to maintain social stability. (84)

22. The financing of education should be the responsibility of government. (50)
23. Education should be viewed primarily as an opportunity for personal advancement. (96)

24. The quality of education provided in the family should be the chief concern of those responsible for education. (99)

25. Similar quality for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. (27)

26. A fixed part of the increase in education budgets should be reserved for the rational development of sophisticated techniques. (65)

27. National culture should be introduced as an integral part of the school curriculum. (97)

28. Learners should be trained to regard learning as something relevant to their lives. (33)

29. Examinations should serve as a means of comparing method effectiveness rather than as an aid to deciding on academic admission. (59)

30. Teachers should be learners only during their initial training. (74)

31. There should be distinctions between different levels of education. (16)
<p>| | | | | | | |</p>
<table>
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<tr>
<td>32. Through their programmes learners should be given some awareness of the unity of mankind and common aspirations. (93)</td>
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<td>33. Schools should be built for multiple use of different age groups in education. (51)</td>
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<td>34. It is but natural that schools in urban areas should have better quality than schools in rural areas. (28)</td>
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<td>35. Paid educational leaves should be provided by legislation. (77)</td>
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<td>36. Education should cover the entire life-span of an individual. (1)</td>
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<td>37. Artificial distinctions between different levels of education should be abolished. (15)</td>
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<td>38. Education should cover mainly the youthful years of an individual. (2)</td>
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<td>39. Initial training and subsequent training of the learners should be separated. (14)</td>
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<td>40. Learners are unqualified to instruct other learners. (24)</td>
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280
41. Learners should be given freedom to decide how they want to learn. (35)

42. Classes should be divided into arts, science and technical streams. (18)

43. Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula. (69)

44. Post-secondary education should be diversified. (47)

45. The learners should be trained to accumulate facts more than the skill to learn. (6)

46. Degrees and diplomas should be closely linked to learners' having completed the required set courses. (58)

47. Work places should be kept for works not for education. (54)

48. Schools should be built for the single purpose of one age group. (52)

49. Education should assume the proportions of a true mass movement. (25)
<p>| | |</p>
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</table>
| 50. Educational facilities should be provided in places of work. (53) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 51. Educational institutions should be multiplied according to the need of the job market. (44) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 52. Artificial distinctions between arts, science and technical streams of education with regard to learners of different subjects should be abolished. (17) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 53. Through their programmes learners should be given some awareness of the diversity of national interests. (94) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 54. Learners should be able to choose their path in a flexible framework without being compelled to give up using educational services for life if they leave the systems. (55) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 55. Learners should be kept out of the management of the educational institution they attend. (82) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 56. Educational activities should be learner centred more than subject centred. (7) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 57. A spirit of peace should be inculcated in the learners. (91) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |
| 58. The co-operation of learners should be enlisted to instruct other learners. (23) | [ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree |

282
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>No opinion</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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<tbody>
<tr>
<td>Teachers should be learners throughout their lives.</td>
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<td>(73)</td>
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<td>The chief duty of a teacher is to pass on knowledge.</td>
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<td>(32)</td>
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<td>Learners learn best while they are young.</td>
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<td>(10)</td>
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<td>Intellectual disciplines should be ranked higher than manual disciplines.</td>
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<td>(20)</td>
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<td>Learners should abide by the curriculum of the school.</td>
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<td>(42)</td>
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<td>Education should prepare learners to maintain the contemporary society.</td>
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<td>(86)</td>
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<td>Examinations should be used to judge whether learners are fit for admission.</td>
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<td>(60)</td>
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<tr>
<td>Free education is best given to learners between 6 and 24 years of age.</td>
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<td>(12)</td>
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<td>A readiness for war should be inculcated in the learners.</td>
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<td>(92)</td>
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<td>No.</td>
<td>Statement</td>
<td>Strongly agree</td>
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<td>No opinion</td>
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<tr>
<td>68</td>
<td>Learners should participate in the management of the educational institution they attend. (81)</td>
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<tr>
<td>69</td>
<td>Learners should be taught how to learn as a member of a class. (36)</td>
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<tr>
<td>70</td>
<td>There should be limited development of experiments in self-instruction. (64)</td>
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<tr>
<td>71</td>
<td>Legislation should abolish the hierarchical distinction maintained among the various categories of teachers between primary and secondary schools. (75)</td>
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<tr>
<td>72</td>
<td>Services to facilitate self-instruction should be integrated into all education systems. (61)</td>
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<tr>
<td>73</td>
<td>Specialists from other professions should be barred from working beside professional teachers. (22)</td>
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<tr>
<td>74</td>
<td>Only tertiary educational institutions should be permitted to train researchers. (46)</td>
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<tr>
<td>75</td>
<td>Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study but more based on gaining knowledge through different means. (57)</td>
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<tr>
<td>76</td>
<td>A teacher once trained should be regarded as permanently trained. (72)</td>
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</tr>
</tbody>
</table>

284
77. Any ranking between manual disciplines and intellectual disciplines should be abolished. (19)

78. The development of sophisticated teaching techniques should be considered only if they are cost effective. (66)

79. Even in areas where there is widespread illiteracy, adult programmes should not include any functional literacy campaign. (30)

80. Learners should be trained to view time as something positive bringing human experience, discoveries and progress. (87)

81. The learners should be trained to acquire the skill to learn more than to accumulate facts. (5)

82. Learners should be taught to regard foreigners as people with their unique problems. (90)

83. Learners should be given freedom to decide for themselves what they want to learn. (41)

84. There should be significant development of experiments in self-instruction. (63)

85. Business companies should train not only workers, but researchers as well. (45)
86. Learners should be trained to regard learning as something not necessarily relevant to their lives. (34)

87. In areas where there is widespread illiteracy, adult programmes should include a strong functional literacy campaign. (29)

88. The chief duty of a teacher is to facilitate active participation in the learning process. (31)

89. Post-secondary education should be specialized in certain fields only. (48)

90. Paid educational leaves should be a privilege not a right. (78)

91. The principle of initial training followed a cycle of in-service training should be adopted. (71)

92. The quality of education provided in the family should be the chief concern of parents and not of those responsible for education. (100)

93. Recurrent education should be introduced to enable learners to spend the given number of years of free education whenever it suits them during their lives. (11)

94. Morality should form a part of education. (101)

286
95. Education should be considered as a process of self-fulfilment more than as a curriculum to be learnt (3)

96. Initial training and subsequent training of the learners should be integrated. (13)

97. Services for self-instruction should be installed only if they are cost effective. (62)

98. The financing of education should be a responsibility shared by all sectors of society. (49)

99. Morality should be left to the free choice of the individual. (102)

100. Teachers should be equipped for the different roles and functions imposed by new technologies. (67)

101. Teachers in secondary schools should be given higher positions than primary teachers. (76)

102. Teachers should have freedom to choose whether to use new technology or not.
Dear Respondent,

This part of the study seeks your opinions on how you think various aspects of your job would be affected if certain educational ideas were put into practice.

Each question begins with a statement for some action.

Across the pages are shown columns containing scores reflecting the degree to which you might be affected.

Below the statement are listed 5 aspects of your job which could be affected.

First, read the statement.

Then, consider each aspect of your job in turn and circle the column which represents the degree to which you think that aspect would be affected if the change were made, giving 5 circles for each statement.

There are no right or wrong answers, please give your honest opinion, and if any statement is not clear to you, please give your comment on the back pages of the questionnaire.

<table>
<thead>
<tr>
<th>Degree affected</th>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
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<tbody>
<tr>
<td></td>
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<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
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</tbody>
</table>

Example

If education were to be free for all, the effect would be:

My prestige [-2] [-1] [0] [+1] [+2]
My authority [-2] [-1] [0] [+1] [+2]
My job security [-2] [-1] [0] [+1] [+2]
My job difficulty [-2] [-1] [0] [+1] [+2]
My total advantage [-2] [-1] [0] [+1] [+2]
<table>
<thead>
<tr>
<th>Degree affected</th>
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<tbody>
<tr>
<td>Educational activities</td>
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</table>

1. If education were to be provided for the entire life-span of all individuals, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
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</thead>
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2. If education were to be considered as a process of self-fulfilment more than as a curriculum to be learnt, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
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</table>

3. If learners were to be taught the skill to learn more than to accumulate facts, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
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4. If educational activities were to be learner-centred more than subject-centred, the effect would be:

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<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
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<td>Degree affected</td>
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</tbody>
</table>

5. If the teachable moments in learners' lives were to be discovered and used by educators, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]

6. If recurrent education were to be introduced to enable learners to spend the given number of years of free education whenever it suits them during their lives, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]

7. If initial training and subsequent training of the learners were to be integrated, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]
<table>
<thead>
<tr>
<th>Degree affected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Educational activities</strong></td>
</tr>
<tr>
<td>affected</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

8. If the artificial distinction between different levels of education, such as grouping learners into forms, were to be abolished, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

9. If the artificial distinction between arts, science and technical streams of education with regard to learners of different subjects were to be abolished, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

10. If ranking between manual disciplines and intellectual disciplines were to be abolished, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>Educational activities</td>
<td>Degree affected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very much</td>
<td>Moderately</td>
<td>Makes no</td>
<td>Moderately</td>
<td>Very much</td>
</tr>
<tr>
<td></td>
<td>decreased</td>
<td>difference</td>
<td>increased</td>
<td>increased</td>
<td></td>
</tr>
<tr>
<td>[-2]</td>
<td>[-1]</td>
<td>[-2]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td>[-1]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[-2]</td>
<td>[-1]</td>
<td>[-2]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td>[-1]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

11. If specialists from other professions were to be employed to work beside professional teachers, the effect would be:
My prestige        [-2] [-1] [0] [+1] [+2]
My authority       [-2] [-1] [0] [+1] [+2]
My job security    [-2] [-1] [0] [+1] [+2]
My job difficulty  [-2] [-1] [0] [+1] [+2]
My total advantage [-2] [-1] [0] [+1] [+2]

12. If the co-operation of learners were to be enlisted to instruct other learners, the effect would be:
My prestige        [-2] [-1] [0] [+1] [+2]
My authority       [-2] [-1] [0] [+1] [+2]
My job security    [-2] [-1] [0] [+1] [+2]
My job difficulty  [-2] [-1] [0] [+1] [+2]
My total advantage [-2] [-1] [0] [+1] [+2]

13. If education were to assume the proportions of a true mass movement, the effect would be:
My prestige        [-2] [-1] [0] [+1] [+2]
My authority       [-2] [-1] [0] [+1] [+2]
My job security    [-2] [-1] [0] [+1] [+2]
My job difficulty  [-2] [-1] [0] [+1] [+2]
My total advantage [-2] [-1] [0] [+1] [+2]

14. If similar quality for all schools in urban and rural areas were to be maintained to ensure fair opportunities for all, the effect would be:
My prestige        [-2] [-1] [0] [+1] [+2]
My authority       [-2] [-1] [0] [+1] [+2]
My job security    [-2] [-1] [0] [+1] [+2]
My job difficulty  [-2] [-1] [0] [+1] [+2]
My total advantage [-2] [-1] [0] [+1] [+2]
<table>
<thead>
<tr>
<th>Degree affected</th>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

15. If in areas where there is widespread illiteracy, adult programmes were to include a strong functional literacy campaign, the effect would be:

- My prestige: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My authority: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job security: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job difficulty: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My total advantage: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

16. If teachers were to facilitate active participation in the learning process, the effect would be:

- My prestige: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My authority: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job security: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job difficulty: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My total advantage: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

17. If learners were to be trained to regard learning as something relevant to their lives, the effect would be:

- My prestige: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My authority: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job security: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job difficulty: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My total advantage: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

18. If learners were to be given the freedom to decide how they want to learn, the effect would be:

- My prestige: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My authority: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job security: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My job difficulty: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]

- My total advantage: 
  - [-2] 
  - [-1] 
  - [0] 
  - [+1] 
  - [+2]
<table>
<thead>
<tr>
<th>Degree affected</th>
<th>Very much</th>
<th>Moderately</th>
<th>Makes no</th>
<th>Moderately</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational activities</td>
<td>decreased</td>
<td>decreased</td>
<td>difference</td>
<td>increased</td>
<td>increased</td>
</tr>
<tr>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
<td></td>
</tr>
</tbody>
</table>

19. If learners were to be given the freedom to decide where they want to learn, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My authority</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job security</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job difficulty</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My total advantage</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

20. If learners were to be given the freedom to decide when to learn, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My authority</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job security</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job difficulty</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My total advantage</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

21. If learners were to be given freedom to decide what they want to learn, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My authority</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job security</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job difficulty</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My total advantage</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

22. If educational institutions were to be multiplied and made accessible to offer the individual a diversified choice, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My authority</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job security</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My job difficulty</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>My total advantage</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
<tr>
<td>Degree affected</td>
<td>Educational activities</td>
<td>Very much</td>
<td>Moderately</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>decreased</td>
<td>[-2]</td>
<td>[-1]</td>
</tr>
</tbody>
</table>

23. If business companies were to train not only workers, but researchers as well, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

24. If post-secondary education were to be diversified, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

25. If the financing of education were to be a responsibility shared by all sectors of society, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>

26. If schools were to be built for multiple use of different age groups in education, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>My prestige</th>
<th>My authority</th>
<th>My job security</th>
<th>My job difficulty</th>
<th>My total advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
<td>[-1]</td>
</tr>
<tr>
<td></td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
<td>[0]</td>
</tr>
<tr>
<td></td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
<td>[+1]</td>
</tr>
</tbody>
</table>
### Degree affected

<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

27. If educational facilities were to be provided in places of work, the effect would be:

| My prestige            | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority           | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security        | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty      | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage     | [-2] | [-1] | [0] | [+1] | [+2] |

28. If learners were to be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave the system, the effect would be:

| My prestige            | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority           | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security        | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty      | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage     | [-2] | [-1] | [0] | [+1] | [+2] |

29. If obtaining university degrees and diplomas were to become less closely linked to completing a predetermined course of study but more based on gaining knowledge through different means, the effect would be:

<p>| My prestige            | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority           | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security        | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty      | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage     | [-2] | [-1] | [0] | [+1] | [+2] |</p>
<table>
<thead>
<tr>
<th>Degree affected</th>
<th>Educational activities</th>
<th>Very much</th>
<th>Moderately</th>
<th>Makes no</th>
<th>Moderately</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>decreased</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
</tr>
<tr>
<td></td>
<td>difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>increased</td>
<td>[1]</td>
<td>[2]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. If examinations were to serve as a means of comparing method effectiveness rather than an aid to decide on academic admission, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]

31. If services to facilitate self-instruction were to be integrated into all education systems, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]

32. If there were to be significant development of experiments in self-instruction, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]
<table>
<thead>
<tr>
<th>Degree affected</th>
<th>Very much</th>
<th>Moderately</th>
<th>Makes no</th>
<th>Moderately</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational activities</td>
<td>decreased</td>
<td>decreased</td>
<td>difference</td>
<td>increased</td>
<td>increased</td>
</tr>
<tr>
<td>[†-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
<td></td>
</tr>
</tbody>
</table>

33. If a fixed part of the increase in education budgets were to be reserved for the rational development of sophisticated techniques, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |

34. If teachers were to be equipped for the different roles and functions imposed by new technologies, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |

35. If teachers were to be trained to be educators rather than specialists in transmitting pre-established curricula, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |
### Degree affected

<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

36. If the principle of initial training for teachers were to be followed by a cycle of in-service training, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |

37. If teachers were to be learners throughout life, the effect would be:

| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |

38. If legislation were to abolish the hierarchical distinctions maintained among the various categories of teachers in primary and secondary schools, the effect would be:

<p>| My prestige | [-2] | [-1] | [0] | [+1] | [+2] |
| My authority | [-2] | [-1] | [0] | [+1] | [+2] |
| My job security | [-2] | [-1] | [0] | [+1] | [+2] |
| My job difficulty | [-2] | [-1] | [0] | [+1] | [+2] |
| My total advantage | [-2] | [-1] | [0] | [+1] | [+2] |</p>
<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree affected</td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

39. If paid educational leaves were to be provided by legislation, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[-2]</th>
<th>[-1]</th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My total advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

40. If all learners were to be able to play a responsible part in the entire educational enterprise, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[-2]</th>
<th>[-1]</th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My total advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

41. If learners were to participate in the management of the educational institution they attend, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[-2]</th>
<th>[-1]</th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My total advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

42. If learners were to be trained to meet the challenges of change, the effect would be:

<table>
<thead>
<tr>
<th></th>
<th>[-2]</th>
<th>[-1]</th>
<th>[0]</th>
<th>[+1]</th>
<th>[+2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>My prestige</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My total advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Degree affected

<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
</table>

43. If learners were to be prepared for a type of society which did not yet exist, the effect would be:
- My prestige: -2 [-1] 0 [+1] [+2]
- My authority: -2 [-1] 0 [+1] [+2]
- My job security: -2 [-1] 0 [+1] [+2]
- My job difficulty: -2 [-1] 0 [+1] [+2]
- My total advantage: -2 [-1] 0 [+1] [+2]

44. If learners were to be trained to view time as something positive, bringing human experience, discoveries and progress, the effect would be:
- My prestige: -2 [-1] 0 [+1] [+2]
- My authority: -2 [-1] 0 [+1] [+2]
- My job security: -2 [-1] 0 [+1] [+2]
- My job difficulty: -2 [-1] 0 [+1] [+2]
- My total advantage: -2 [-1] 0 [+1] [+2]

45. If learners were to be taught to see foreigners not as an abstract entity, but as human beings with common problems, the effect would be:
- My prestige: -2 [-1] 0 [+1] [+2]
- My authority: -2 [-1] 0 [+1] [+2]
- My job security: -2 [-1] 0 [+1] [+2]
- My job difficulty: -2 [-1] 0 [+1] [+2]
- My total advantage: -2 [-1] 0 [+1] [+2]

46. If a spirit of peace were to be inculcated in the learners, the effect would be:
- My prestige: -2 [-1] 0 [+1] [+2]
- My authority: -2 [-1] 0 [+1] [+2]
- My job security: -2 [-1] 0 [+1] [+2]
- My job difficulty: -2 [-1] 0 [+1] [+2]
- My total advantage: -2 [-1] 0 [+1] [+2]
<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
</tr>
</tbody>
</table>

47. If through their programmes learners were to be given some awareness of the unity of mankind and the common aspirations, the effect would be:

| My prestige             | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My authority            | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job security         | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job difficulty       | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My total advantage      | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |

48. If education were to be used as an instrument not only of individual advancement but also of community advancement, the effect would be:

| My prestige             | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My authority            | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job security         | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job difficulty       | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My total advantage      | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |

49. If national culture were to be introduced as an integral part of the school curriculum, the effect would be:

<p>| My prestige             | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My authority            | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job security         | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My job difficulty       | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |
| My total advantage      | [-2]                | [-1]                 | [0]                | [+1]                 | [+2]                |</p>
<table>
<thead>
<tr>
<th>Educational activities</th>
<th>Degree affected</th>
<th>Very much decreased</th>
<th>Moderately decreased</th>
<th>Makes no difference</th>
<th>Moderately increased</th>
<th>Very much increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[-2]</td>
<td>[-1]</td>
<td>[0]</td>
<td>[+1]</td>
<td>[+2]</td>
<td></td>
</tr>
</tbody>
</table>

50. If the quality of education provided in the family were to be the chief concern of those responsible for education, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]

51. If morality were to form a part of education, the effect would be:

- My prestige: [-2] [-1] [0] [+1] [+2]
- My authority: [-2] [-1] [0] [+1] [+2]
- My job security: [-2] [-1] [0] [+1] [+2]
- My job difficulty: [-2] [-1] [0] [+1] [+2]
- My total advantage: [-2] [-1] [0] [+1] [+2]
Appendix D.3

SD Questionnaire for Pilot Subjects

Directions

Please answer each question by circling the appropriate number given below.

1. The school you work in is:
   A government Anglo-Chinese school.......1
   A government Chinese middle school.......2
   A government technical school.............3
   An aided Anglo-Chinese school.............4
   An aided Chinese middle school............5
   An aided technical school..................6
   An aided prevocational school..............7
   A private Anglo-Chinese school............8
   A private Chinese middle school...........9

2. Your position in school is:
   School administrator........................1
   (e.g. principal/ assistant to principal)
   Teacher........................................2

3. You have in the worked in the teaching profession for how many years? (Please give the nearest round number of years you have completed teaching.) [   ]

4. Which of the following do you consider yourself to be?
   Very progressive..................1
   Moderately progressive............2
   Slightly progressive...............3
   Slightly conservative.............4
   Moderately conservative...........5
   Very conservative...............6
5. Your sex is: Female ......................... 1

Male ................................. 2

6. The year of your birth was: ________ (e.g. 1936)
Appendix E

Results of Reliability Tests on LLE Scale by Experts and Pilot Subjects

Codes: E=Excellent
       G=Good
       Q=Questionable
       P=Poor

r Sub =Coefficient Correlation of Sub-test
r Tot =Coefficient Correlation of Total Test
(R) =Rating on Item
Pair Rate =Total Rating of Postulate and Contrast from Experts and Subjects

* =Selected
*- =Qualified for selection but not chosen
x* =Weak but chosen

Rating scale:

<table>
<thead>
<tr>
<th>P+P</th>
<th>Q+P</th>
<th>G+P/</th>
<th>E+P/</th>
<th>E+Q/</th>
<th>E+G</th>
<th>E+E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q+Q</td>
<td>G+Q</td>
<td>G+G</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1 = both poor
2 = 1 questionable + 1 poor
3 = 1 good + 1 poor; both questionable
4 = 1 excellent + 1 poor; 1 good + 1 questionable
5 = 1 excellent + 1 questionable; both good
6 = 1 excellent + 1 good
7 = both excellent

Note: Excellent : r >0.30
       OK : r 0.15 < or r=0.30
       Questionable : r.00 < or r=0.15
       Poor : r < 0
## Appendix E Table A on Results of Reliability Test on LLE Scale by Experts

<table>
<thead>
<tr>
<th>Exp.</th>
<th>Random items=</th>
<th>Item no.</th>
<th>X</th>
<th>Experts r.Sub</th>
<th>r.Tot</th>
<th>Pair Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Q36(1)</td>
<td>20</td>
<td>2.77</td>
<td>-0.32</td>
<td>0.07</td>
<td>2</td>
</tr>
<tr>
<td>40</td>
<td>Q38(2)</td>
<td>17</td>
<td>2.54</td>
<td>0.57</td>
<td>0.69</td>
<td>7</td>
</tr>
<tr>
<td>97</td>
<td>Q95(3)</td>
<td>48</td>
<td>2.77</td>
<td>0.08</td>
<td>0.51</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Q13(4)</td>
<td>4</td>
<td>2.69</td>
<td>0.50</td>
<td>0.44</td>
<td>7</td>
</tr>
<tr>
<td>83</td>
<td>Q81(5)</td>
<td>39</td>
<td>2.77</td>
<td>0.20</td>
<td>-0.02</td>
<td>3</td>
</tr>
<tr>
<td>47</td>
<td>Q45(6)</td>
<td>21</td>
<td>2.85</td>
<td>0.05</td>
<td>0.13</td>
<td>3 (6)*</td>
</tr>
<tr>
<td>58</td>
<td>Q56(7)</td>
<td>29</td>
<td>2.47</td>
<td>0.09</td>
<td>0.07</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>Q16(8)</td>
<td>6</td>
<td>2.46</td>
<td>-0.32</td>
<td>-0.42</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Q7(9)</td>
<td>5</td>
<td>2.62</td>
<td>0.15</td>
<td>0.15</td>
<td>5</td>
</tr>
<tr>
<td>63</td>
<td>Q61(10)</td>
<td>29</td>
<td>2.39</td>
<td>0.69</td>
<td>0.43</td>
<td>7 (12)*</td>
</tr>
<tr>
<td>95</td>
<td>Q93(11)</td>
<td>46</td>
<td>2.54</td>
<td>-0.01</td>
<td>0.30</td>
<td>3</td>
</tr>
<tr>
<td>68</td>
<td>Q66(12)</td>
<td>34</td>
<td>2.31</td>
<td>0.26</td>
<td>0.09</td>
<td>4</td>
</tr>
<tr>
<td>98</td>
<td>Q96(13)</td>
<td>49</td>
<td>2.85</td>
<td>0.35</td>
<td>0.24</td>
<td>6</td>
</tr>
<tr>
<td>41</td>
<td>Q39(14)</td>
<td>18</td>
<td>2.39</td>
<td>0.47</td>
<td>0.65</td>
<td>7 (13)*</td>
</tr>
<tr>
<td>39</td>
<td>Q37(15)</td>
<td>21</td>
<td>2.31</td>
<td>-0.02</td>
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Total: 58 items considered
### Appendix E Table A on Results of Reliability Test on LLE Scale for Experts (cont.)

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Appendix E Table A on Results of Reliability Test on LLE Scale for Experts (cont.)

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### Appendix E Table B on Results of Reliability Tests on LLE Scale by Pilot Subjects

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### Appendix E Table B on Results of Reliability Tests on LLE Scale by Pilot Subjects (cont.)

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Appendix E Table B on Results of Reliability Tests on LLE Scale by Pilot Subjects (cont.)

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(The end)

Postulate Item Code Chosen (*)

- Q36=(1) Education should cover the entire life-span of an individual. (D2 in Appendix I)
- Q38=(2) Education should cover mainly the youthful years of an individual. (*)
- Q95=(3) Education should be considered as a process of self-fulfilment more than as a curriculum to be learnt. (FA1, C2 in Appendix I)
- Q13=(4) Education should be considered as a curriculum to be learnt more than a process of self-fulfilment. (*)
- Q81=(5) Learners should be trained to acquire the skill to learn more than to accumulate facts. (L16 in Appendix I)
Q49=(25) Education should assume the proportions of a true mass movement. (F2 in Appendix I)
Q19=(26) Education should be only for those who can benefit from it.
Q25=(27) Similar quality for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. (Gh in Appendix I)
Q34=(28) It is but natural that schools in urban areas should have better quality than schools in rural areas.
Q87=(29) In areas where there is wide-spread illiteracy, adult programmes should include a strong functional literacy campaign. (F13 in Appendix I)
Q79=(30) Even in areas where there is wide-spread illiteracy, adult programmes should not be mixed with a functional literacy campaign.
Q88=(31) The chief duty of a teacher is to facilitate active participation in the learning process. (CD4 in Appendix I)
Q60=(32) The chief duty of a teacher is to pass on knowledge.
Q28=(33) Learners should be trained to regard learning as something relevant to their lives. (CD5 in Appendix I)
Q86=(34) Learners should be trained to regard learning as something not necessarily relevant to their lives.
Q41=(35) Learners should be given freedom to decide how they want to learn. (F20 in Appendix I)
Q69=(36) Learners should be taught how to learn as a member of a class.
Q10=(37) Learners should be given freedom to decide where they want to learn. (F20 in Appendix I)
Q12=(38) Learners should be restricted in deciding where they will be taught. (F20 in Appendix I)
Q11=(39) Learners should be given the freedom to decide when to learn. (F20 in Appendix I)
Q4=(40) Learners should abide by a time-table established by the educational institution.
Q83=(41) Learners should be given freedom to decide for themselves what they want to learn. (F20 in Appendix I)
Q63=(42) Learners should abide by the curriculum of the school.
Q2=(43) Educational institutions should be multiplied and made accessible to offer the individual a diversi-
fied choice. (F2 in Appendix I)
Q51=(44) Educational institutions should be multiplied according to the need of the job market.

Q85=(45) Business companies should train not only workers, but researchers as well. (F9 in Appendix I)
Q74=(46) Only tertiary educational institutions should be permitted to train researchers.

Q44=(47) Post-secondary education should be diversified. (F10 in Appendix I)
Q89=(48) Post-secondary education should be specialized in certain fields only.

Q98=(49) The financing of education should be a responsibility shared by all sectors of society. (L7 in Appendix I)
Q22=(50) The financing of education should be the responsibility of government.

Q33=(51) Schools should be built for multiple use of different age groups in education. (L8 in Appendix I)
Q48=(52) Schools should be built for the single purpose of one age group.

Q50=(53) Educational facilities should be provided in places of work. (L9 in Appendix I)
Q47=(54) Work places should be kept for work not for education.

Q54=(55) Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave the system. (F3 in Appendix I)
Q1=(56) Once learners leave the school system they should not expect the society to maintain open access for them to other educational programmes for the rest of their lives.

Q75=(57) Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study but more based on gaining knowledge through different means. (F11 in Appendix I)
Q46=(58) Degrees and diplomas should be closely linked to learners' having completed the required set courses.

Q29=(59) Examinations should serve as a means of comparing method effectiveness rather than as an aid to deciding on academic admission. (F11 in appendix I)
Q65=(60) Examinations should be used to judge whether learners are fit for admission.
Q72=(61) Services to facilitate self-instruction should be integrated into all education systems. (F14 in Appendix I)

Q73=(62) Services for self-instruction should be installed only if they are cost effective.

Q74=(63) There should be significant development of experiments in self-instruction. (F14 in Appendix I)

Q75=(64) There should be limited development of experiments in self-instruction.

Q76=(65) A fixed part of the increase in education budgets should be reserved for the development of sophisticated techniques. (F16 in Appendix I)

Q77=(66) The development of sophisticated teaching techniques should be considered only if they are cost effective.

Q100=(67) Teachers should be equipped for the different roles and functions imposed by new technologies. (F16 in Appendix I)

Q102=(68) Teachers should have freedom to choose whether to use new technology or not.

Q43=(69) Teachers should be trained to be educators more than specialists in transmitting pre-established curricula. (F18 in Appendix I)

Q18=(70) Teachers should be trained chiefly to transmit knowledge of the curricula.

Q91=(71) The principle of initial training followed a cycle of in-service training should be adopted. (F18 in Appendix I)

Q76=(72) A teacher once trained should be regarded as permanently trained.

Q59=(73) Teachers should be learners throughout their lives. (CD2 in Appendix I)

Q30=(74) Teachers should be learners only during their initial training.

Q71=(75) Legislation should abolish the hierarchical distinctions maintained among the various categories of teachers between primary and secondary schools. (F17 in Appendix I)

Q101=(76) Teachers in secondary schools should be given higher positions than primary teachers.

Q35=(77) Paid educational leaves should be provided by legislation. (L10 in Appendix I)

Q90=(78) Paid educational leaves should be a privilege not a right.

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Q6=(79) All learners should be allowed to play a responsible part in the entire educational enterprise. (F21 in Appendix I)

Q14=(80) Learners should not be allowed to play any responsible part in the entire educational enterprise. (*)

Q68=(81) Learners should participate in the management of the educational institution they attend. (Gq in Appendix I)

Q55=(82) Learners should be kept out of the management of the educational institution they attend. (*)

Q15=(83) Learners should be trained to meet the challenges of change. (L11 in Appendix I)

Q21=(84) Learners should be trained to maintain social stability.

Q3=(85) Education should prepare learners for a type of society which does not yet exist. (FA2 in Appendix I)

Q64=(86) Education should prepare learners to maintain the contemporary society. (*)

Q80=(87) Learners should be trained to view time as something positive bringing human experience, discoveries and progress. (L12 in Appendix I)

Q17=(88) Learners should be trained to view time as being possible to bring about old age, boredom and decay. (*)

Q5=(89) Learners should be taught to see foreigners not as an abstract entity, but as human beings with their common problems. (L13 in Appendix I)

Q82=(90) Learners should be taught to regard foreigners as people with their unique problems.

Q57=(91) A spirit of peace should be inculcated in the learners. (L14 in Appendix I)

Q67=(92) A readiness for war should be inculcated in the learners. (*)

Q32=(93) Through their programmes learners should be given some awareness of the unity of man-kind and common aspirations. (FA3 in Appendix I)

Q53=(94) Through their programmes learners should be given some awareness of the diversity of national interests. (*)

Q8=(95) Education should be used as an instrument not only of individual advancement but also of community advancement. (Ge in Appendix I)

Q23=(96) Education should be viewed primarily as an opportunity for personal advancement. (*)

Q27=(97) National culture should be introduced as an inte-
gral part of the school curriculum. (Gi in Appendix I)

Q20=(98) National culture should be introduced as extra-curriculum only.

Q24=(99) The quality of education provided in the family should be the chief concern of those responsible for education. (D5 in Appendix I)

Q92=(100) The quality of education provided in the family should be the chief concern of parents and not of those responsible for education.

Q94=(101) Morality should form a part of education. (L15 in Appendix I)

Q99=(102) Morality should be left to the free choice of the individual.
Comments from Experts

Comments from experts could be categorized into two groups: explanations on what had been considered as 'yes', 'not sure' or 'no' to the questions, and remarks related to the wording or phrasing, i.e. the meaning of the statements.

Explanations given for responses to the postulates. The examples were as follows:

71. Legislation should abolish the hierarchical distinctions maintained among the various categories of teachers between primary and secondary schools.

{This is a complicated question. What about higher education. One should distinguish the distant objective from the realizable accomplishments in the foreseeable future. [nil reply]} (Kaddoura)

77. Any ranking between manual disciplines and intellectual disciplines should be abolished.

{Very complicated question. Exciting as an ideal, but when will it become possible? and how? [nil reply]} (Kaddoura)

85. Business companies should train not only workers, but researchers as well.

{They are already doing so in some industrialized countries. It is a process which could bring both positive and negative effects. [nil reply]} (Kaddoura)

33. Schools should be built for multiple use of different age groups in education.

{'not sure', adult learners need other places for learning than schools of our times.} (Pfluger)

29. Examinations should serve as a means of comparing method effectiveness rather than as an aid to deciding on academic admission.

{'no', only when nothing else available.} (Stock)
So they only elaborated on why they were not sure about the statement, not so much as to whether the statements were postulates of lifelong education, but whether they agreed or not agreed with them.

Explanations given for responses to contrasts. The examples were as follows:

20. National culture should be introduced as an extra-curriculum only.

{should it strictly be 'extra curricular'? 'not sure'} (Duke)

60. The chief duty of a teacher is to pass on knowledge. (32)

{help the learners learn by themselves and enjoy it. [nil response]} (Kaddoura)

90. Paid educational leaves should be a privilege not a right.

{'no', but economic conditions are the final judge.} (Kaddoura)

92. The quality of education provided in the family should be the chief concern of parents and not of those responsible for education.

{The family must remain sovereign, but should receive help if it wishes. 'no'} (Kaddoura)

99. Morality should be left to the free choice of the individual.

{Of course, but we are all influenced by our societies. What is important is that there should be no coercion and no deception. [nil response]} (Kaddoura)

101. Teachers in secondary schools should be given higher positions than primary teachers.

{'no', but, again, this is a long-term objective.} (Kaddoura)

102. Teachers should have freedom to choose whether to use new technology or not.

{Teachers and learners should be together, free to design the educational process, including the use of new technology. Cost will be the final master. [nil response]} (Kaddoura)

21. Learners should be trained to maintain social stability.

{'not sure', it depends in what kind of society you are taught.} (Pfluger)
40. Learners are unqualified to instruct other learners.
{'yes', but they may still usefully do it.} (Stock)

69. Learners should be taught how to learn as a member of a class.
{'yes', but also as individuals} (Kaddoura)
{and in other ways too! 'yes'} (Stock)

70. There should be limited development of experiments in self-instruction.
{Why limited? 'not sure'} (Stock)

82. Learners should be taught to regard foreigners as people with their unique problems.
{fellow human beings, similar and different, and likeable because of both qualities. [nil response]} (Kaddoura)
{should be taught, 'not sure'} (Stock)

In their responses to contrasts they also elaborated on why they agreed, were not sure or disagreed with the contrasts more than whether they thought these were postulates of lifelong education or not.

Since they had already indicated their responses with a tick in the questionnaires, their responses were taken care of in the statistical analysis.

Remarks related to wording or phrasing of postulates.
Great attention was paid to these remarks, since they involved content and construct validity. The examples were as follows:

37. Artificial distinctions between different levels of education should be abolished.
[This is a tautology. If there are different levels, they are, perforce, distinct.] [nil] (Kaddoura)

This postulate was eliminated.

94. Morality should form a part of education.
What do you call morality? For me education is morality. [nil] (Kaddoura)

This postulate was eliminated.

26. A fixed part of the increase in education budgets should be reserved for the development of sophisticated techniques.

{Badly put - perhaps means "innovation"} (Stock)

This postulate was eliminated.

81. Learners should be trained to acquire the skill to learn more than to accumulate facts.

{Learners should acquire skills to learn more than the accumulation of facts. This statement is long-winded and pedestrian. [nil response]} (Stock)

96. Initial training and subsequent training of the learners should be integrated.

{What does this mean? 'not sure'} (Stock)

{The major problem I have is in the interpretation of your use of the word 'training'. Are you meaning industrial training or vocational education or just ordinary instruction or performance-related instruction - or what? Obviously if there are ambiguities for me, there probably are for others.} (Stock)

28. Learners should be trained to regard learning as something relevant to their lives.

{trained, as commented before} (Stock)

80. Learners should be trained to view time as something positive bringing human experience, discoveries and progress.

{trained, as commented before.} (Stock)

The word 'trained' was substituted by the word 'taught' in such sentences.

Remarks related to wording or phrasing of the contrasts. Attention was paid to these remarks in so far as they involved the postulates. The examples were as follows:

17. Learners should be trained [x] to view [the passage of time as being possible to bring about [conducive to] old age, boredom and decay.
This contrast was rephrased to read, "Learners should be taught to view time as being able to bring about old age, boredom and decay.

21. Learners should be trained to maintain social stability.

45. Learners should be trained to accumulate facts more than the skill to learn.

65. Examinations should be used to judge whether learners are fit for admission.

66. Free education is best given to learners between 6 and 24 years of age.

78. The development of sophisticated teaching techniques should be considered only if they are cost effective.

97. Services for self-instruction should be installed only if they are cost effective.
{Does this mean cost beneficial too? b) This should not be the main criterion. [nil response]} (Stock)

This contrast statement was eliminated together with the postulate.

19. Education should be only for those who can benefit from it.
{This is a loaded sentence and therefore misleading as all can benefit from education.} (Stock)

{What does this mean? 'not sure'} (Skager)

This contrast statement was eliminated together with the postulates.

So like the postulates, the contrasts were either rephrased or eliminated based on the experts' comments.

The general remarks. The following were the general remarks:

{I found it difficult to answer to some of your entries by, 'yes' or, 'no' as in some cases the right answer would be yes and not.} (07, Lengrand)

{I would like to know which is the aim of this questionnaire. May the answers serve to inform about opinions concerning lifelong education, or may they help the deciders to take some decisions.} (Suchodolski)

Because the experts did not know how the statements in the questionnaire were going to be used, they sometimes forgot they were only asked to say whether the statements were postulates of lifelong education or not, and not asked to agree or disagree with the statements. This was one of the reason why some of the postulates did not correlate well with the contrast, because the respondents took a different approach to the questions.

{The random ordering of the questions undoubtedly results in inconsistencies of answers. The reason for this inconsistency is because the significance of an earlier question only becomes apparent when one has read a later one. Given the kind of
statistical analysis that I assume you are doing, such inconsistencies will present no problems. However they may cause some unease in the minds of some of your respondents.} (Williams)

{Q10 & Q12, Q6 & Q14 are too close together, negatives and positives should be formulated more differently to avoid memory effect.... In principle, it is good to have positives and negatives formulated items. But I am not sure it is adequate for experts to get the same items formulated positively and negatively. I would propose to select from each pair the 'better one' also to shorten the questionnaire. In principle (again) it is good to have redundant items. But especially teachers easily became angry (and hence, may reject the questionnaire) if they were asked the same again and again (at least, this is my experience). ... My guess would be, that 51 items could do the same job better. In general, I think this is an interesting questionnaire, and you have very carefully constructed items. I'm looking forward to hearing the results of your study.} (J. Rost, assistant to Hameyer) (Hameyer)

Indeed, many of the items were eliminated. Only 28 out of the 56 pairs were retained.

{I am sure that your work will be of interest to many people. I suspect that there are other variables than the area that you mention in your abstract, but the areas that you cover are important ones. I wonder if, in your introduction, you are going to quote the UNESCO statement and say that your work is about this? Another factor that you might consider is where the respondent is concerned with school (initial) education or with adult education. The point about this is that many school teachers view their role as the most significant element in education and will define education in terms of children. If school teachers/administrators of initial education are to constitute a part of your sample, then you should not cite the UNESCO statement in your introduction. If they are not part of your sample it might be worth your considering them.} (Jarvis)

The source of the items were not given in the LLE Scale for the sample subjects at all. The items were simply referred to as educational ideas.

{Therese, it occurs to me from the list that you have provided me, that all of theses with few exceptions have published in the excellent UNESCO series. While it is commendable to go for the top people in this way, do you think it wise to have a panel all of whom have written for the same school of thought about lifelong education? If you would like to think about other thinkers who do not necessarily espouse the UNESCO line on lifelong education, I would also be happy to provide you with more names
and addresses. I am sure that a panel of international repute and differing perspectives would be useful.

Thinkers with different approaches from those of the UNESCO authors were looked at as mentioned in the literature review. But since they generally de-emphasized the organizational aspect of lifelong education their works were not of much use.

Based on the comments from the experts the LLE Scale was modified. The separate consistency of the two sub-tests with the total test shown by the Hoyt estimates and their correlation coefficient with the total test was accepted as being sufficient for validity purposes showing the two tests were taken to be different in construct and content.

Comments from Pilot Subjects

Comments from pilot subjects were related to their giving explanation to their agreeing or disagreeing with the statements, and to the wording and phrasing of the statements.

Explanations on responses to postulates. The following are some examples of postulates on which the pilot subjects explained their own responses.

3. Education should prepare learners for a type of society which does not yet exist.

{Will that society exist one day? and when? If it will, then education should be forward-looking and my answer may be different from now. 'disagree'} (01006)

{Without knowing what "type of society" is meant here, it is difficult to comment. [nil response]} (01016)

25. Similar quality for all schools in urban and rural areas should be maintained to ensure fair opportunities for all.

{While I believe in fair opportunities for all, I'm not sure if this can be achieved by maintaining quality" for all schools. 'disagree'} (01016)
11. Learners should be given the freedom to decide when to learn.

{Too much freedom creates confusion. 'disagree'} (03036)

75. Obtaining university degrees and diplomas should become less closely linked to completing a predetermined course of study, but more based on gaining knowledge through different means.

{It is too uncertain to just gain knowledge. 'disagree'} (03004)

Explanations on responses to contrasts. The following are some examples of contrasts on which the pilot subjects explained their own responses.

13. Education should be considered as a curriculum to be learnt more than a process of self-fulfilment.

{Can be both. 'disagree'} (03036)

34. It is but natural that schools in urban areas should have better quality than schools in rural areas.

{I think it all depends on how one define "better quality". It can be 'better' in terms of facilities and equipment. It can also be 'better' in being able to meet the needs of the learners. 'disagree'} (01016)

{Ideally this should not be, but circumstances make it so. 'disagree'} (03036)

{As far as Hong Kong is concerned, this is right. 'agree'} (03004)

62. Intellectual disciplines should be ranked higher than manual disciplines.

{Equally important. 'no opinion'} (03004)

64. Education should prepare learners to maintain the contemporary society.

{Depends on the time and the society of the place. [nil response]} (03004)

53. Through their programmes, learners should be given some awareness of the diversity of national interests. (94)

{'Truth' only stays in the ideal. 'strongly agree'} (03036)
Such replies only revealed whether the pilot subjects agreed or not agreed with the statements. They were taken care of by statistical analysis.

Remarks related to wording and phrasing of the postulates.
Great attention was paid to such remarks, as they were concerned with clarity of the statements. The following were some of the examples:

6. All learners should be allowed to play a responsible part in the entire educational enterprise.

[Unclear. [nil response]] (03004)

This postulate was rephrased to read, "Learners should be given a responsible role to play in the educational system".

9. Specialists from other professions should be employed to work beside professional teachers.

{Does the question mean specialists should work together with professional teachers, or they should be employed besides professional teachers? I'm doubtful about what "specialists" and "other professions" mean. [nil response]} (01016)

This postulate was eliminated.

10. Learners should be given freedom to decide where they want to learn.

{"Where" here is ambiguous. Does it refer to the place or location? Or their level of studies where they start learning? [nil response]} (01016)

{Unclear. It would be clearer if it is rewritten to be 'more places of learning should be provided.' [nil response]} (03004)

This postulate was rephrased to read, "Learners should be free to choose the school in which to learn".

49. Education should assume the proportions of a true mass movement.

{I can't quite catch the meaning of the entire statement.} (01040)
54. Learners should be able to choose their path in a flexible framework without being compelled to give up using educational services for life if they leave the [educational] system.

"educational" should be added to system. The expression is unclear. I don't understand the phrase "if they leave the system", what is meant by that system? their path? or educational services?} (01018)

This postulate was rephrased to read, "Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling".

100. Teachers should be equipped for the different roles and functions imposed by the new technologies.

{Unclear. [nil response]} (03004)

This postulate was eliminated.

So the statements were either rephrased or eliminated to achieve clarity.

Remarks Related to Wording and Phrasing of the Contrasts.
Attention was paid to such remarks in so far as they were related to the postulates. Some of them were eliminated with the postulates. The following were examples:

4. Learners should abide by a time-table established by the educational institution.

{The answer depends on the type and level of learners and the type of institution. 'no opinion'} (01006)
12. Learners should be restricted in deciding where they will be taught.

14. Learners should not be allowed to play any responsible part in the entire educational enterprise.

73. Specialists from other professions should be barred from working beside professional teachers.

89. Post-secondary education should be specialized in certain fields only.

Therefore, like the postulates the contrasts were either rephrased or eliminated based on the pilot subjects' comments and statistical analysis of internal consistency.
Appendix G

Frequencies of Experts' Replies to Postulates and Contrasts Retained

To show the situation of the retained pairs of postulates and contrasts, a frequency count was run on the item pairs from the experts as shown in Table A.

Appendix G Table: Frequencies on Experts' Replies

<table>
<thead>
<tr>
<th>Experts</th>
<th>Postulates</th>
<th>Contrasts</th>
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<tr>
<td>Item</td>
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Total 300 49 10 5 81 61 219 3
Percent 82.42 13.46 2.75 1.37 22.25 16.76 60.16 0.82

(To be elaborated on the next page)
Postulate and Contrast Statements:
Note:- OK=good matches
#=poor matches
?=good matches, but inconsistent responses
W=weak support to postulates

1. Postulate (Q36.1) Education should cover the entire life-span of an individual. (D2 in Appendix A) [cases=13, yes=11, not sure=1, no=1]

#1. Contrast (Q38.2) Education should cover mainly the youthful years of an individual. [cases=13, yes=3, not sure=0, no=10]

2. Postulate (Q95.3) Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt. (Faure, 1972, p. 143) [cases=13, yes=11, not sure=1, no=1]

OK2. Contrast (Q13.4) Education should be considered as a curriculum to be learnt rather than a process of self-fulfilment. [cases=13, yes=1, not sure=2, no=10]

3. Postulate (Q81.5) Learners should be taught how to learn rather than to accumulate facts. (L6 in Appendix A) [cases=13, yes=12, not sure=0 no=0, missing=1]

OK3. Contrast (Q45.6) Learners should be taught to accumulate facts rather than how to learn. [cases=13, yes=0, not sure=2 no=11]

4. Postulate (Q7.9) There are teachable moments in the different periods of learners' lives which should be discovered and used by educators. (Cropley, 1977, p. 102-103) [cases=13, yes=9, not sure=3, no=1]

OK4. Contrast (Q61.10) Learners learn best while they are young. [cases=13, yes=2, not sure=4, no=7]

5. Postulate (Q96.13) Learners' initial training in school and subsequent training at work should be integrated. (Gr in Appendix A) [cases=13, yes=11, not sure=2, no=0]

?5. Contrast (Q39.14) Learners' initial training in school and subsequent training at work should be separated. [cases=13, yes=3, not sure=2, no=8]

6. Postulate (Q52.17) Distinctions between arts, science and technical streams of education with regard to learners' different subjects should be abolished. (F4 in Appendix A) [cases=13, yes=12, not sure=1, no=0]

?6. Contrast (Q42.18) Classes should be divided into arts, science and technical streams. [cases=13, yes=2, not sure=6, no=5]
7. Postulate (Q77.19) Any ranking between manual disciplines and intellectual disciplines should be abolished. (Gj in Appendix I) [cases=13, yes=10, not sure=2, no=1]  

OK7. Contrast (Q62.20) Intellectual disciplines should be ranked higher than manual disciplines. [cases=13, yes=1, not sure=3, no=9]  

8. Postulate (Q88.31) The chief duty of a teacher is to facilitate active participation in the learning process. (Cropley & Dave, 1978, p. 31) [cases=13, yes=11, not sure=1, no=0, missing=1]  

#8. Contrast (Q60.32) The chief duty of a teacher is to pass on knowledge. [cases=13, yes=5, not sure=0, no=8]  

9. Postulate (Q28.33) Learners should be taught to regard learning as something relevant to their lives. (Cropley & Dave, 1978, p. 12) [cases=13, yes=12, not sure=1, no=0]  

OK9. Contrast (Q86.34) Learners should be taught that learning does not have to be relevant to their lives. [cases=13, yes=1, not sure=2, no=10]  

10. Postulate (Q10.37) Learners should be given freedom to choose the school in which to learn. (F20 in Appendix A) [cases=13, yes=10, not sure=3, no=0]  

OK10. Contrast (Q12.38) Learners should be restricted in their choice of school in which to learn. [cases=13, yes=0, not sure=5, no=8]  

11. Postulate (Q83.41) Learners should be given freedom to decide what they want to learn. (F20 in Appendix A) [cases=13, yes=11, not sure=2, no=0]  

#11. Contrast (Q63.42) Learners should abide by the curriculum of the school. [cases=13, yes=6, not sure=2, no=3, missing=2]  

12. Postulate (Q2.43) Educational institutions should be increased to offer the individual a diversified choice. (F2 in Appendix A) [cases=13, yes=10, not sure=3, no=0]  

#12. Contrast (Q51.44) Educational institutions should be increased according to the need of the job market. [cases=13, yes=10, not sure=3, no=0]  

13. Postulate (Q85.45) Business companies should train not only workers, but researchers as well. (F9 in Appendix A) [cases=13, yes=7, not sure=5, no=1]  

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W13. Contrast (Q74.46) Only tertiary educational institutions should train researchers. [cases=13, yes=2, not sure=1, no=10]

14. Postulate (Q54.55) Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling. (F3 in Appendix A) [cases=13, yes=12, not sure=0, no=0, missing=1]

14. Contrast (Q1.56) Learners should be left to fend for their own learning once they leave formal schooling. [cases=13, yes=2, not sure=2, no=9]

15. Postulate (Q29.59) Examinations should be used to compare method effectiveness than as an academic admission aid. (F11 in Appendix A) [cases=13, yes=9, not sure=3, no=1]

15. Contrast (Q65.60) Examinations should be used to judge whether learners are fit for academic admission. [cases=13, yes=6, not sure=2, no=5]

16. Postulate (Q43.69) Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula. (F18 in Appendix A) [cases=13, yes=11, not sure=2, no=0]

OK16. Contrast (Q18.70) Teachers should be trained chiefly to transmit knowledge of the curricula. [cases=13, yes=1, not sure=3, no=9]

17. Postulate (Q59.73) Teachers should be learners throughout their lives. (CD2 in Appendix A) [cases=13, yes=13, not sure=0, no=0]

OK17. Contrast (Q30.74) Teachers should be learners mainly during their initial training. [cases=13, yes=0, not sure=0, no=13]

18. Postulate (Q6.79) Learners should be given a responsible role to play in the educational system. (F21 in Appendix A) [cases=13, yes=13, not sure=0, no=0]

?18. Contrast (Q14.80) Learners should be deterred from playing a responsible role in the educational system. [cases=13, yes=1, not sure=1, no=11]

19. Postulate (Q68.81) Learners should participate in the management of the educational institution they attend. (Gq in Appendix A) [cases=13, yes=10, not sure=2, no=0, missing=1]

OK19. Contrast (Q55.82) Learners should be kept out of the management of the educational institution they attend. [cases=13, yes=0 not sure=2, no=11]
20. Postulate (Q3.85) Education should prepare learners for a society of the future. (Faure, 1972, p.13)
[cases=13, yes=9, not sure=3, no=1]

#20. Contrast (Q64.86) Education should prepare learners to maintain the contemporary society.
[cases=13, yes=6, not sure=2, no=5]

21. Postulate (Q80.87) Learners should be taught to view time as being able to bring about human experience, discoveries and progress. (Lengrand, 1975, p. 99)
[cases=13, yes=10, not sure=2, no=0, missing=1]

OK21. Contrast (Q17.88) Learners should be taught to view time as being able to bring about old age, boredom and decay.
[cases=13, yes=1, not sure=6, no=5, missing=1]

22. Postulate (Q57.91) A spirit of peace should be inculcated in learners. (Lengrand, 1975, p. 107)
[cases=13, yes=8, not sure=5, no=0]

W22. Contrast (Q67.92) A readiness for war should be inculcated in the learners. [cases=13, yes=0, not sure=2, no=11]

23. Postulate (Q32.93) Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations. (Faure, 1972, p. 240)
[cases=13, yes=13, not sure=0, no=0]

W23. Contrast (Q53.94) Through their programmes learners should be given some awareness of the diversity of national interests. [cases=13, yes=0, not sure=2, no=11]

24. Postulate (Q25.27) Similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all. (Gh in Appendix A)
[cases=13, yes=11, not sure=0, no=2]

OK24. Contrast (Q34.28) It is but natural that schools in urban areas should have better quality in resources than schools in rural areas. [cases=13, yes=2, not sure=1, no=10]

25. Postulate (Q50.53) Educational facilities should be provided in places of work. (L9 in Appendix A)
[cases=13, yes=13, not sure=0, no=0]

?25. Contrast (Q47.54) Work places should be kept for work not for education. [cases=13, yes=1, not sure=1, no=11]

26. Postulate (Q84.63) There should be significant development of experiments in self-instruction. (Gp in Appendix A)
[cases=13, yes=12, not sure=1, no=0]
26. Contrast (Q70.64) There should be limited development of experiments in self-instruction. [cases=13, yes=3, not sure=2, no=8]

27. Postulate (Q35.77) Paid educational leaves should be provided by legislation. (L10 in Appendix A) [cases=13, yes=9, not sure=3, no=1]

OK27. Contrast (Q90.78) Paid educational leaves should be a privilege not a right. [cases=13, yes=3, not sure=1, no=9]

28. Postulate (Q8.95) Education should be used as an instrument for individual advancement and community advancement. (Ge in Appendix A) [cases=13, yes=13, not sure=0, no=0]

#28. Contrast (Q23.96) Education should be viewed as an opportunity chiefly for personal advancement. [cases=13, yes=6, not sure=4, no=3]
Situation of Retained Pairs of Postulates and Contrasts from Pilot Subjects

A frequency count was run on the item pairs from the pilot subjects with the following results:

### Appendix H Table: Pilot Subjects' Agreement with Postulates and Contrasts

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Cases=25  mis=Cases missing
Code:Strg agr=Strongly agree;  Agr=Agree;  No opin=No opinion
Disgr=Disagree;  Strg disgr=Strongly disagree
The LLE Scale

Dear Respondent,

The statements in this part of the questionnaire represent different educational ideas. Whatever your feelings about these ideas, you may be sure that many people feel the same as you do.

Please read the statements carefully, then tick the category [ ] in which shows the extent to which you agree or disagree with the idea.

1. Learners should abide by the curriculum of the school.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree

2. Learners should be given freedom to choose the school in which to learn.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree

3. The chief duty of a teacher is to pass on knowledge.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree

4. Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree

5. Educational institutions should be increased to offer the individual a diversified choice.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree

6. The chief duty of a teacher is to facilitate active participation in the learning process.
   [ ] Strongly agree
   [ ] Agree
   [ ] No opinion
   [ ] Disagree
   [ ] Strongly disagree
7. It is but natural that schools in urban areas should have better quality in resources than schools in rural areas.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

8. Learners should be deterred from playing a responsible role in the educational system.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

9. Learners should be taught that learning does not have to be relevant to their lives.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

10. Learners' initial training in school and subsequent training at work should be integrated.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

11. Classes should be divided into arts, science and technical streams.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

12. Learners should be kept out of the management of the educational institution they attend.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

13. Paid educational leaves should be provided by legislation.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

14. Education should prepare learners to maintain the contemporary society.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion

15. Education should cover mainly the youthful years of an individual.  [ ] Strongly agree  [ ] Strongly disagree  
[ ] Agree  [ ] Disagree  
[ ] No opinion
16. Learners should be given a responsible role to play in the educational system.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

17. Only tertiary educational institutions should train researchers.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

18. Through their programmes learners should be given some awareness of the diversity of national interests.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

19. Learners should participate in the management of the educational institution they attend.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

20. Learners should be given freedom to decide what they want to learn.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

21. Education should be considered as a curriculum to be learnt rather than a process of self-fulfilment.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

22. Learners' initial training in school and subsequent training at work should be separated.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

23. Similar quality in resources for all schools in urban and rural area should be maintained to ensure fair opportunities for all.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

24. Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling.  
   [ ] Strongly agree  
   [ ] Agree  
   [ ] No opinion  
   [ ] Disagree  
   [ ] Strongly disagree

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25. Teachers should be learners throughout their lives.

26. Any ranking between manual disciplines and intellectual disciplines should be abolished.

27. Learners should be taught to regard learning as something relevant to their lives.

28. A spirit of peace should be inculcated in the learners.

29. Learners should be able to fend for their own learning once they leave formal schooling.

30. Education should prepare learners for a society of the future.

31. Work places should be kept for work not for education.

32. Education should be viewed as an opportunity chiefly for personal advancement.

33. A readiness for war should be inculcated in the learners.
34. Examinations should be used to compare method effectiveness rather than as an academic admission aid.

35. Learners should be restricted in their choice of school in which to learn.

36. Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula.

37. Learners should be taught to accumulate facts rather than the skill to learn.

38. Learners learn best while they are young.

39. Learners should be taught to view time as being able to bring about old age, boredom and decay.

40. Educational institutions should be increased according to the need of the job market.

41. Learners should be taught how to learn rather than to accumulate facts.

42. Examinations should be used to judge whether learners are fit for academic admission.
43. There should be limited development of experiments in self-instruction. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

44. There are "teachable moments" in the different periods of learners' lives which should be discovered and used by educators. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

45. Through their programmes learners should be given some awareness of the unity of mankind and its common aspirations. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

46. Educational facilities should be provided in places of work. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

47. There should be significant development of experiments in self-instruction. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

48. Intellectual disciplines should be ranked higher than manual disciplines. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

49. Teachers should be trained chiefly to transmit knowledge of the curricula. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

50. Education should be used as an instrument for individual and community advancement. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree

51. Paid educational leaves should be a privilege not a right. [ ] Strongly agree [ ] Agree [ ] No opinion [ ] Disagree [ ] Strongly disagree
52. Learners should be taught to view time as being able to bring about human experience, discoveries and progress.

53. Education should cover the entire life span of an individual.

54. Distinctions between arts, science and technical streams of education with regard to different subjects should be abolished.

55. Business companies should train not only workers, but researchers as well.

56. Teachers should be learners mainly during their initial training.
Appendix I.2

The CE Scale

Dear Respondent,

Now we want to know how you think you would be affected if certain ideas about education were implemented. We are mostly interested in knowing how their implementation would affect your "prestige", "authority", "security", "the difficulty of your job", and "other advantages".

Give a tick [ ] to the appropriate category (e.g. "very much decreased" to "very much increased") to indicate the extent to which each idea would affect your prestige, authority and so on, should it be implemented.

Tick five categories for each idea - one showing how it would affect your "prestige", one showing how it would affect your "authority", one for "security", one for "difficulty" and one for "other advantages".

There are no right or wrong answers. Please be frank.

How would it affect you.................?

1. If education were to be provided for the entire life-span of all individuals,

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<td>MY PRESTIGE</td>
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2. If education were to be considered as a process of self-fulfilment rather than as a curriculum to be learnt,
My Authority very much moderately unchanged moderately very much
W O U L D  B E decreased decreased increased increased

My Job Security
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

My Job Difficulty
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

My Prestige very much moderately unchanged moderately very much
decreased decreased increased increased

My Other Advantages
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

3. If learners were to be taught how to acquire the skill to
   learn rather than to accumulate facts,

My Job Security
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

My Job Difficulty
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

My Prestige very much moderately unchanged moderately very much
decreased decreased increased increased

My Authority very much moderately unchanged moderately very much
decreased decreased increased increased

My Other Advantages
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

4. If the 'teachable moments' in the different periods of learners' lives were to be discovered and used by educators,

My Job Difficulty
W O U L D  B E very much moderately unchanged moderately very much
decreased decreased increased increased

My Prestige very much moderately unchanged moderately very much
decreased decreased increased increased

My Authority very much moderately unchanged moderately very much
decreased decreased increased increased

My Job Security
W O U L D  B E very much moderately unchanged moderately very much
MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

5. If learners' initial training in school and subsequent training at work were to be integrated,

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased
WOULD BE decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased
WOULD BE decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

6. If distinctions between arts, science and technical streams of education with regard to learners' different subjects were to be abolished,

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased
WOULD BE decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased
WOULD BE decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

7. If any ranking between manual and intellectual disciplines were to be abolished,

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased
My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY PRESTIGE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY AUTHORITY very much moderately unchanged moderately very much
increased increased
decreased decreased
MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased

8. If teachers were to facilitate active participation in the learning process,

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY PRESTIGE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY AUTHORITY very much moderately unchanged moderately very much
increased increased
decreased decreased
MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased

9. If learners were to be taught to regard learning as something relevant to their lives,

MY PRESTIGE very much moderately unchanged moderately very much
increased increased
decreased decreased
MY AUTHORITY very much moderately unchanged moderately very much
increased increased
decreased decreased
MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased
My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
increased increased
decreased decreased

350
MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

10. If learners were free to choose the school in which to learn,
MY AUTHORITY very much moderately unchanged moderately very much
WOULD BE decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY PRESTIGE
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

11. If learners were to be given freedom to decide what they want to learn,
MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY PRESTIGE
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY AUTHORITY
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much
decreased decreased increased increased

12. If educational institutions were to be increased to offer the individual a diversified choice,
My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much
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13. If business companies were to train not only workers, but researchers as well,

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14. If learners were to be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling,

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352
MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

15. If examinations were to be used to compare method effectiveness rather than as an academic admission aid,

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE
WOULD BE decreased decreased increased increased

MY AUTHORITY
WOULD BE decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

16. If teachers were trained to be educators rather than specialists in transmitting pre-established curricula,

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE
WOULD BE decreased decreased increased increased

MY AUTHORITY
WOULD BE decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

17. If teachers were to be learners throughout their lives,

MY PRESTIGE
WOULD BE decreased decreased increased increased

MY AUTHORITY
WOULD BE decreased decreased increased increased
MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

18. If learners were to be given a responsible role to play in the entire educational system,

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

19. If learners were to participate in the management of the educational institution they attend,

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased
20. If education were to prepare learners for a society of the future,

**My JOB DIFFICULTY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY PRESTIGE**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY AUTHORITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY JOB SECURITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY OTHER ADVANTAGES**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

21. If learners were to be taught to view time as something positive bringing human experience, discoveries and progress,

**MY PRESTIGE**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY AUTHORITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY JOB SECURITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**My JOB DIFFICULTY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY OTHER ADVANTAGES**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

22. If a spirit of peace were to be inculcated in the learners,

**MY AUTHORITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

**MY JOB SECURITY**
- **WOULD BE** very much moderately unchanged moderately very much decreased decreased increased increased

355
My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

23. If through their programmes learners should be given some awareness of the unity of mankind and its common aspirations,

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

24. If similar quality in resources for all schools in urban and rural areas were to be maintained to ensure fair opportunities for all,

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

356
25. If educational facilities were to be provided in places of work,

<table>
<thead>
<tr>
<th>MY OTHER ADVANTAGES</th>
<th>very much</th>
<th>moderately</th>
<th>unchanged</th>
<th>moderately</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOULD BE</td>
<td>decreased</td>
<td>decreased</td>
<td>increased</td>
<td>increased</td>
<td></td>
</tr>
</tbody>
</table>

26. If there were to be significant development of experiments in self-instruction,

<table>
<thead>
<tr>
<th>MY OTHER ADVANTAGES</th>
<th>very much</th>
<th>moderately</th>
<th>unchanged</th>
<th>moderately</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOULD BE</td>
<td>decreased</td>
<td>decreased</td>
<td>increased</td>
<td>increased</td>
<td></td>
</tr>
</tbody>
</table>

27. If paid educational leaves were to be provided by legislation,

<table>
<thead>
<tr>
<th>MY OTHER ADVANTAGES</th>
<th>very much</th>
<th>moderately</th>
<th>unchanged</th>
<th>moderately</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOULD BE</td>
<td>decreased</td>
<td>decreased</td>
<td>increased</td>
<td>increased</td>
<td></td>
</tr>
</tbody>
</table>
28. If education were to be used as an instrument of individual and community advancement,

My JOB DIFFICULTY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY PRESTIGE very much moderately unchanged moderately very much decreased decreased increased increased

MY AUTHORITY very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY JOB SECURITY
WOULD BE very much moderately unchanged moderately very much decreased decreased increased increased

MY OTHER ADVANTAGES
WOULD BE very much moderately unchanged moderately very much decreased increased increased increased
Appendix 1.3

The SD Questionnaire

Directions

Please answer each question by circling the appropriate number given below.

1. Is your school ......? (please tick one)

   A government Anglo-Chinese school [ ]
   A government Chinese middle school [ ]
   A government technical school [ ]
   An aided Anglo-Chinese school [ ]
   An aided Chinese middle school [ ]
   An aided technical school [ ]
   An aided prevocational school [ ]
   A private Anglo-Chinese school [ ]
   A private Chinese middle school [ ]

2. what is your position in school ?

   Principal [ ]
   Assistant to the principal [ ]
   Teacher [ ]

3. Think back over the time you have worked in the teaching profession. How many years have you worked in the profession ?

   Part-time          Full-time
   ..........years     ..........years

4. When you think about your attitudes to education what do you consider yourself to be ?

   Very progressive [ ]
   Moderately progressive [ ]
   Slightly progressive [ ]
   Slightly conservative [ ]
   Moderately conservative [ ]
   Very conservative [ ]

5. What is your sex ?

   Woman [ ]
   Man [ ]

6. What was the year of your birth ? 19..........
## Multiple Correlation among All Variables

### Appendix J Table A on Correlation among Personal Data and Educators' Average Degree of Agreement with the Postulates of Lifelong Education

<table>
<thead>
<tr>
<th>Variables</th>
<th>Age</th>
<th>Sex</th>
<th>Experience</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.000</td>
<td>0.212</td>
<td>0.846</td>
<td>0.035</td>
</tr>
<tr>
<td></td>
<td>P= .</td>
<td>P=&lt;.001</td>
<td>P=&lt;.001</td>
<td>P=.285</td>
</tr>
<tr>
<td>Sex</td>
<td>0.212</td>
<td>1.000</td>
<td>0.187</td>
<td>-0.010</td>
</tr>
<tr>
<td></td>
<td>P=&lt;.001</td>
<td>P= .</td>
<td>P=.001</td>
<td>P=.439</td>
</tr>
<tr>
<td>Experience</td>
<td>0.846</td>
<td>0.187</td>
<td>1.000</td>
<td>-0.046</td>
</tr>
<tr>
<td></td>
<td>P=&lt;.001</td>
<td>P=0.001</td>
<td>P= .</td>
<td>P=.230</td>
</tr>
<tr>
<td>Progress</td>
<td>0.036</td>
<td>-0.010</td>
<td>-0.046</td>
<td>1.000</td>
</tr>
<tr>
<td>Funding</td>
<td>-0.135</td>
<td>-0.147</td>
<td>-0.115</td>
<td>0.087</td>
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<tr>
<td></td>
<td>P=.014</td>
<td>P=.406</td>
<td>P=.406</td>
<td>P=.079</td>
</tr>
<tr>
<td>Orientation</td>
<td>0.058</td>
<td>0.123</td>
<td>0.076</td>
<td>-0.141</td>
</tr>
<tr>
<td></td>
<td>P=.172</td>
<td>P=.022</td>
<td>P=.107</td>
<td>P=.011</td>
</tr>
<tr>
<td>Position</td>
<td>-0.429</td>
<td>-0.114</td>
<td>-0.398</td>
<td>-0.108</td>
</tr>
<tr>
<td></td>
<td>P=&lt;.001</td>
<td>P=.032</td>
<td>P=&lt;.001</td>
<td>P=.039</td>
</tr>
<tr>
<td>Prestige</td>
<td>0.047</td>
<td>0.105</td>
<td>0.062</td>
<td>0.193</td>
</tr>
<tr>
<td></td>
<td>P=.226</td>
<td>P=.044</td>
<td>P=.159</td>
<td>P=.001</td>
</tr>
<tr>
<td>Authority</td>
<td>-0.091</td>
<td>0.122</td>
<td>-0.094</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td>P=.069</td>
<td>P=.023</td>
<td>P=.063</td>
<td>P=.127</td>
</tr>
<tr>
<td>Security</td>
<td>0.051</td>
<td>0.067</td>
<td>0.063</td>
<td>0.199</td>
</tr>
<tr>
<td></td>
<td>P=.207</td>
<td>P=.140</td>
<td>P=.152</td>
<td>P=.001</td>
</tr>
<tr>
<td>Job Diff.</td>
<td>-0.077</td>
<td>0.037</td>
<td>-0.059</td>
<td>0.146</td>
</tr>
<tr>
<td></td>
<td>P=.105</td>
<td>P=.275</td>
<td>P=.168</td>
<td>P=.009</td>
</tr>
<tr>
<td>Oth. Adv.</td>
<td>0.089</td>
<td>0.063</td>
<td>0.105</td>
<td>0.157</td>
</tr>
<tr>
<td></td>
<td>P=.076</td>
<td>P=.157</td>
<td>P=.045</td>
<td>P=.005</td>
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<tr>
<td>Postulate</td>
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<td>-0.127</td>
<td>0.074</td>
<td>0.251</td>
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<td>agreement</td>
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<td>P=.019</td>
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<td>P=&lt;.001</td>
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continue in next table:
### Appendix J Table B on Correlation among Types of Schools and Positions, and Educators' Average Degree of Agreement with the Postulates of Lifelong Education

<table>
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<th>Positions</th>
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<td>Age</td>
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<td>-0.429</td>
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<tr>
<td></td>
<td>P=0.014</td>
<td>P=0.172</td>
<td>P=&lt;0.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.147</td>
<td>0.123</td>
<td>0.114</td>
</tr>
<tr>
<td></td>
<td>P=0.406</td>
<td>P=0.022</td>
<td>P=0.032</td>
</tr>
<tr>
<td>Experience</td>
<td>-0.115</td>
<td>0.076</td>
<td>-0.398</td>
</tr>
<tr>
<td></td>
<td>P=0.406</td>
<td>P=0.101</td>
<td>P=&lt;0.001</td>
</tr>
<tr>
<td>Progress</td>
<td>0.087</td>
<td>-0.141</td>
<td>-0.108</td>
</tr>
<tr>
<td></td>
<td>P=0.079</td>
<td>P=0.011</td>
<td>P=0.039</td>
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<td>Funding</td>
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<td>-0.337</td>
<td>0.080</td>
</tr>
<tr>
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<td>P=0.1</td>
<td>P=&lt;0.001</td>
<td>P=0.096</td>
</tr>
<tr>
<td>Orientation</td>
<td>-0.337</td>
<td>1.000</td>
<td>0.010</td>
</tr>
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<td>P=0.1</td>
<td>P=0.437</td>
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<td>Position</td>
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<td>0.010</td>
<td>1.000</td>
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<td></td>
<td>P=0.096</td>
<td>P=0.044</td>
<td>P=0</td>
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<tr>
<td>Prestige</td>
<td>0.052</td>
<td>0.079</td>
<td>0.036</td>
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<td>P=0.199</td>
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<td>P=0.282</td>
</tr>
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<td>Authority</td>
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<td>0.017</td>
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<tr>
<td></td>
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<td>Security</td>
<td>0.060</td>
<td>0.046</td>
<td>0.032</td>
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<td>P=0.163</td>
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<td>Oth. Adv.</td>
<td>0.335</td>
<td>-0.005</td>
<td>-0.013</td>
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<td>Postulate agreement</td>
<td>-0.19</td>
<td>0.018</td>
<td>-0.117</td>
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<tr>
<td></td>
<td>P=0.381</td>
<td>P=0.383</td>
<td>P=0.028</td>
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continue in next table:
### Appendix J Table C on Correlation among Career Aspects and Educators' Average Degree of Agreement with the Postulates of Lifelong Education

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<th>Variables</th>
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<th>Job Prestige</th>
<th>Security</th>
<th>Postulates Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
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<td>-0.91</td>
<td>0.051</td>
<td>-0.077</td>
<td>0.089</td>
</tr>
<tr>
<td>Sex</td>
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<td>0.122</td>
<td>0.0669</td>
<td>0.369</td>
<td>0.063</td>
</tr>
<tr>
<td>Experience</td>
<td>0.062</td>
<td>-0.094</td>
<td>0.064</td>
<td>-0.059</td>
<td>0.105</td>
</tr>
<tr>
<td>Progress</td>
<td>0.193</td>
<td>0.070</td>
<td>0.199</td>
<td>0.146</td>
<td>0.157</td>
</tr>
<tr>
<td>Funding</td>
<td>0.052</td>
<td>0.003</td>
<td>0.060</td>
<td>0.246</td>
<td>0.034</td>
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<tr>
<td>Orientation</td>
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<td>0.167</td>
<td>0.046</td>
<td>0.347</td>
<td>-0.005</td>
</tr>
<tr>
<td>Position</td>
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<td>0.324</td>
<td>0.105</td>
<td>-0.013</td>
</tr>
<tr>
<td>Prestige</td>
<td>1.000</td>
<td>0.080</td>
<td>0.881</td>
<td>0.660</td>
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<tr>
<td>Authority</td>
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<td>1.000</td>
<td>0.047</td>
<td>0.270</td>
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<tr>
<td>Security</td>
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<td>0.047</td>
<td>1.000</td>
<td>0.629</td>
<td>0.764</td>
</tr>
<tr>
<td>Job</td>
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<td>0.270</td>
<td>0.629</td>
<td>1.000</td>
<td>0.494</td>
</tr>
<tr>
<td>Other</td>
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<td>0.764</td>
<td>0.494</td>
<td>1.000</td>
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<tr>
<td>Postulates</td>
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<td>0.327</td>
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</table>

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Appendix K

Results from Steiger's Multicorr

<table>
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<th>D</th>
<th>W</th>
<th>Th</th>
</tr>
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<td>0.3718</td>
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</tr>
<tr>
<td>Th</td>
<td>0.3718</td>
<td>0.3355</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

X = 0.2523 df = 1 p = 0.6216

<table>
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<th>A</th>
<th>Th</th>
</tr>
</thead>
<tbody>
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<td>D</td>
<td>1.0000</td>
<td>0.1310</td>
<td>0.3718</td>
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<tr>
<td>A</td>
<td>0.1310</td>
<td>1.0000</td>
<td>0.3133</td>
</tr>
<tr>
<td>Th</td>
<td>0.3718</td>
<td>0.3133</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

X = 0.6092 df = 1 p = 0.4412

<table>
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<tr>
<th></th>
<th>D</th>
<th>B</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>1.0000</td>
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<td>0.3718</td>
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<tr>
<td>B</td>
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<tr>
<td>Th</td>
<td>0.3718</td>
<td>0.0225</td>
<td>1.0000</td>
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</tbody>
</table>

X = 16.78 df = 1 p = 0.0002

<table>
<thead>
<tr>
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<th>D</th>
<th>C</th>
<th>Th</th>
</tr>
</thead>
<tbody>
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<td>D</td>
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<td>0.1178</td>
<td>0.3718</td>
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<tr>
<td>C</td>
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<td>1.0000</td>
<td>0.1562</td>
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<tr>
<td>Th</td>
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<td>0.1562</td>
<td>1.0000</td>
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</tbody>
</table>

X = 7.62 df = 1 p = .0059

Note:

A = Personal data: sex, age, teaching experience, self-concept of progressiveness;
B = Types of schools: orientation (vocational & academic schools) funding (government funded & non-funded);
C = Positions: (administrators & teachers);
D = Career aspects: prestige, authority, job security, job difficulty and other advantages;
W = A combination of personal data, types of schools, positions and career aspects.
Frequencies on Responses and Step-wise Regression on All Variables Related to Postulate

Appendix L Table A on Frequency of Subjects' Responses on Postulates

<table>
<thead>
<tr>
<th>Postulates</th>
<th>Valid Strg cases</th>
<th>No Agr</th>
<th>Agr Agr</th>
<th>opin Disgr</th>
<th>Strg Disgr mis</th>
<th>Mean</th>
<th>Std. dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(Q36.1)</td>
<td>269</td>
<td>106</td>
<td>152</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>4.34</td>
</tr>
<tr>
<td>2(Q95.3)</td>
<td>269</td>
<td>71</td>
<td>138</td>
<td>26</td>
<td>29</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>3(Q81.5)</td>
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<td>52</td>
<td>99</td>
<td>18</td>
<td>89</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>4(Q7.9)</td>
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<td>169</td>
<td>55</td>
<td>20</td>
<td>2</td>
<td>3.74</td>
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<tr>
<td>5(Q96.13)</td>
<td>266</td>
<td>33</td>
<td>170</td>
<td>26</td>
<td>33</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>6(Q52.17)</td>
<td>269</td>
<td>8</td>
<td>76</td>
<td>65</td>
<td>111</td>
<td>9</td>
<td>1</td>
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<tr>
<td>7(Q77.19)</td>
<td>265</td>
<td>29</td>
<td>105</td>
<td>63</td>
<td>67</td>
<td>1</td>
<td>5</td>
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<tr>
<td>8(Q88.31)</td>
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<td>88</td>
<td>158</td>
<td>13</td>
<td>9</td>
<td>2</td>
<td>4.21</td>
</tr>
<tr>
<td>9(Q28.33)</td>
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<td>80</td>
<td>167</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>10(Q10.37)</td>
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<td>151</td>
<td>16</td>
<td>7</td>
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<td></td>
</tr>
<tr>
<td>11(Q83.41)</td>
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<td>166</td>
<td>24</td>
<td>43</td>
<td>4</td>
<td>3</td>
</tr>
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<td>12(Q2.43)</td>
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<td>136</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>4.37</td>
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<tr>
<td>13(Q85.45)</td>
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Postulates

1(Q36.1) - Education should cover the entire life-span of an individual.
2(Q95.3) - Education should be considered as a process of self-fulfilment rather than as a curriculum to be learnt.
3(Q81.5) - Learners should be taught how to learn rather than to accumulate facts.
4(Q7.9) - There are 'teachable moments' in the different periods of learners' live which should be discovered and used by educators.
5(Q96.13) - Learners' initial training in school and subsequent training at work should be integrated.
6(Q52.17) - Distinctions between arts, science and technical streams of education with regard to learners' different subjects should be abolished.
7(Q77.19) - Any ranking between manual and intellectual disciplines should be abolished.
8(Q88.31) - The chief duty of a teacher is to facilitate active participation in the learning process.
9(Q28.33) - Learners should be taught to regard learning as something relevant to their lives.
10(Q10.37) - Learners should be free to choose the school in which to learn.
11(Q83.41) - Learners should be given freedom to decide what they want to learn.
12(Q2.43) - Educational institutions should be increased to offer the individual a diversified choice.
13(Q85.45) - Business companies should train not only workers, but researchers as well.
14(Q54.55) - Learners should be able to choose their path in a flexible framework, without being compelled to give up using educational services for life if they leave formal schooling.
15(Q29.59) - Examinations should be used to compare method effectiveness rather than as academic admission aid.
16(Q43.69) - Teachers should be trained to be educators rather than specialists in transmitting pre-established curricula.
17(Q59.73) - Teachers should be learners throughout their lives.
18(Q6.79) - All learners should be given a responsible role to play in the educational system.
19(Q68.81) - Learners should participate in the management of the educational institution they attend.
20(Q3.85) - Education should prepare learners for a society of the future.
21(Q80.87) - Learners should be taught to view time as being able to bring about human experience, discoveries and progress.
22(Q57.91) - A spirit of peace should be inculcated in the learners.
23(Q32.93) - Through their programmes learner should be given some awareness of the unity of mankind and its
common aspirations.

24(Q25.27) Similar quality in resources for all schools in urban and rural areas should be maintained to ensure fair opportunities for all.

25(Q50.53) Educational facilities should be provided in places of work.

26(Q84.63) There should be significant development of experiments in self-instruction.

27(Q35.77) Paid educational leaves should be provided by legislation.

28(Q8.95) Education should be used as an instrument for individual and community advancement.

The general situation of all the variables are as follows:

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### Appendix L Table B on Frequency of Subjects' Responses on Contrasts

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Code for Contrasts

1(Q38.2) - Education should cover mainly the youthful years of an individual.
2(Q13.4) - Education should be considered a curriculum to be learnt rather than a process of self-fulfilment.
3(Q45.6) - Learners should be taught to accumulate facts rather than how to learn.
4(Q61.10) - Learners learn best while they are young.
5(Q39.14) - Learners' initial training in school and subsequent training at work should be separated.
6(Q42.18) - Classes should be divided into arts, science and technical streams.
7(Q62.20) - Intellectual disciplines should be ranked higher than manual disciplines.
8(Q60.32) - The chief duty of a teacher is to pass on knowledge.
9(Q86.34) - Learners should be taught that learning does not have to be relevant to their lives.
10(Q12.38) - Learners should be restricted in choice of school in which to learn.
11(Q63.42) - Learners should abide by the curriculum of the school.
12(Q51.44) - Educational institutions should be increased according to the need of the job market.
13(Q74.46) - Only tertiary educational institutions should train researchers.
14(Q1.56) - Learners should be left to fend for their own learning once they leave formal schooling.
15(Q65.60) - Examinations should be used to judge whether learners are fit for academic admission.
16(Q18.70) - Teachers should be trained chiefly to transmit knowledge of the curricula.
17(Q30.74) - Teachers should be learners mainly during their initial training.
18(Q14.80) - Learners should be deterred from playing a responsible role in the educational system.
19(Q55.82) - Learners should be kept out of the management of the educational institution they attend.
20(Q64.86) - Education should prepare learner to maintain the contemporary society.
21(Q17.88) - Learners should be taught to view time as being able to bring about old age, boredom and decay.
22(Q67.92) - A readiness for war should be inculcated in the learners.
23(Q53.94) - Through their programmes learner should be given some awareness of the diversity of national interests.
24(Q34.28) - It is but natural that schools in urban areas should have better quality resources than schools in rural areas.
25(Q47.54) - Work places should be kept for work, not for education.
26(Q70.64) - There should be limited development of experi-
ments in self-instruction

27(Q90.78)-Paid educational leaves should be a privilege not a right.

28(Q23.96)-Education should be viewed as an opportunity chiefly for personal advancement.
### Appendix L Table C on Regression by Steps on All Variables

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To be continued on next table:

- Page 370
### Appendix L Table C on Regression by Steps on All Variables (cont.)

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N.B. Predictor's Beta were set at alpha=.05
Postulate means reset at 1.01 - 2.00=Strongly disagree
2.01 - 3.00=Moderately disagree
3.01 - 4.00=Moderately agree
4.01 - 5.00=Strongly agree

Implication means reset at 1.01 - 2.00=Strongly disagree
2.01 - 3.00=Moderately disagree
3.01 - 4.00=Moderately agree
4.01 - 5.00=Strongly agree

Code on abbreviations:

Ch=Characteristic
AG=age
SX=sex (-)=woman (+)=man
EP=teaching experience
PG=self-concept of progressiveness
FU=funding of school
   (−)=government funded
   (+)=non-government funded
OR=orientation of school
   (−)=academically oriented
   (+)=vocationally oriented
PO1=administrators
   (+)=principal
   (−)=assistant
PO2=teachers
   (+)=assistants
   (−)=teachers
PR=prestige
AU=authority
SE=security
DI=difficulty
AD=other advantages
List of Experts

Panel of Lifelong Education Experts

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Von-Melle-Park 5
2000 Hamburg 13
FEDERAL REPUBLIC OF GERMANY

x Dr. R. H. Dave
Director
UNESCO Institute of Education
2000 Hamburg 13
WEST GERMANY

x Dr. Linda A. Dove
C/o UNESCO Institute for Education
Feldbrunnenstrasse 58
2000 Hamburg 13
FEDERAL REPUBLIC OF GERMANY

#Dr. Chris Duke
Professor
University of Warwick
Coventry
ENGLAND, U.K. CV4 7AL

*Dr. Edgar Faure
Senator
Region de Franche Comte
a M. le President du Conseil Regional
Hotel de la Region
25031 Besancon
FRANCE
*Professor James Lynch  
Dean of the Faculty of Education  
Sunderland Polytechnic  
Sunderland  
ENGLAND, U.K.  

Dr. Arthur V. Petrovsky  
Academy of Pedagogical Science of the USSR  
Pogodinskaya Street 8  
MOSCOW, U.S.S.R.  

*Dr. A. Pfluger  
Padagogische Arbeitsstelle des Deutschen Hochschulverbandes  
Holzhausenstrasse 21  
6000 Frankfurt/Main  
FEDERAL REPUBLIC OF GERMANY  

*Dr. R. Skager  
University of California  
Graduate School of Education  
Moore Hall  
Los Angeles CA 90024  
U.S.A.  

*# Mr. Arthur Stock  
Director  
NIACE  
19B, De Monfort Street  
Leicester, LE1 7GE  
ENGLAND, U.K.  

*Dr. Bogdan Suchodolski  
Smiala 63A  
Warsaw 01-526  
POLAND  

0 Dr. Frederick Champion Ward  
Program Advisor in Education  
The Ford Foundation  
320 East 43rd Street  
New York, N.Y. 10017  
U.S.A.
*Dr. Gareth L. Williams
Professor
Department of Economic, Administrative and Policy Studies in Education
University of London Institute of Education
56/59 Gordon Square
London WC1H ONT
ENGLAND, U.K.

*Dr. R. Wroczynski
University of Warsaw
School of Education
Warsaw, POLAND

* Answered questionnaire
# Made comments
## Answered questionnaire and made comments
x Did not respond
0 Could not be reached
List of Schools for Pilot Test

Each of the following schools were asked to randomly select 12 teachers to respond to the LEAI Scale Part I & Part II for Pilot Sample Subjects:-

1 Anglo-Chinese School:
   Raimondi College
   2, Robinson Road
   Hong Kong

1 Government School:
   Sha Tin Government Secondary School
   11-17, Man Lai Road
   Shatin, N. T.
   Hong Kong

1 Chinese Middle School:
   Nam Wah Middle School
   Wing Ming Street, Shamshuipo
   Kowloon
   Hong Kong
List of Main Sample Schools

01- Government Anglo-Chinese schools randomly chosen:

010501 Tin Kwong Road Government Secondary School
011201 Sir Ellis Kadoorie Secondary School
011301 Sir Ellis Kadoorie (Sookunpo) School
011401 Cheung Sha Wan Government Secondary School
011701 Chiu Lut Sau Memorial Secondary School
012101 Sha Tau Kok Government School

02-Government Chinese middle schools all chosen:

020101 Clementi Middle School
020301 Cheung Chau Government Middle School

03-Government technical schools all chosen:

030201 Jockey Club Government Secondary Technical School
030501 Lung Cheung Government Secondary Technical School
030801 Tsuen Wan Government Secondary Technical School

04-Aided Anglo-Chinese schools randomly chosen:

040101 Buddhist Fat Ho Memorial College
040201 Ho Fung College
040301 Hong Kong Buddhist Secondary School
041101 Sacred Heart Canossian College
041201 St. Peter's Anglo-Chinese Secondary School
041301 Yu Chun Keung Memorial College No. 2
041401 St. Clare's Girls' School
041801 St. Margaret's College
041901 St. Paul's Secondary School
042001 Ng Wah Secondary College
042201 Aberdeen Baptist Secondary College
042301 St. Stephen's College
042401 Buddhist Chi Hong College
043001 St. Paul's College
040001 Anonymous

05-Aided Chinese middle schools randomly chosen:

050301 Kowloon True Light Middle School
050401 Lutheran Middle School
050501 Ming Yuen Middle School
050601 Precious Blood Girls' Middle School
050701 Pui Ying Middle School
050801 True Light Middle School of Hong Kong
051101 Pui Ching Middle School
051301 Pui Shing Middle School
051701 Buddhist Tai Kwong Middle School
051901 Lingnan Dr. Chung Wing Kwong Memorial
052001 Queen Maud Middle School
052801 Anonymous

06-Aided technical schools all chosen:
060101 Aberdeen Technical School
060201 Don Bosco Technical School
060501 Kei San Secondary Technical School
060601 Maryknoll Technical Secondary School
060801 St. Benedict's Secondary Technical School
060901 Tang King Po School

07-Aided prevocational schools randomly chosen:
070201 Caritas St. Paul Prevocational School
070401 CMA Choi Cheung Kok Prevocation School
070501 C.M.A. Prevocational School
070601 Marden Foundation Caritas Prevocational School (Chai Wan)
070701 Marden Foundation Caritas Prevocational School (Shatin)
070801 Marden Foundation Caritas Prevocational School (Tuen Mun)
070901 St. Godfrey Vocational Training School
071101 Caritas St. Francis Prevocational School
071201 Cotton Spinners Association Prevocational School
071301 Caritas St. Joseph Prevocational School

08-Private Anglo-Chinese schools randomly chosen:
080201 Delia Memorial School
080301 Fung Kai No.2 Secondary School
080501 James Anglo-Chinese School
081101 St. Gloria College
081601 Po Kok Buddhist College
082101 Baldwin College
082701 Hong Kong Christian College
082801 Benevolence College

09-Private Chinese middle schools randomly chosen:
090101 All Saint's Middle School
090201 Ching Yih Girls' Middle School
090301 Confucious Hall Middle School
090601 Heung To Middle School
091101 Pak U Middle School (Yuen Long)
091201 Pui Chiao Middle School
Dear Sir,

I am a doctoral student at the Department of Administrative Adult and Higher Education of the University of British Columbia, CANADA. My field of interest is Lifelong Education. I am looking for some experts to validate my questionnaire.

Since Lifelong Education is a philosophy promulgated by UNESCO, I wonder if you could recommend some primary authors of the concept and also help me locate some of the following people so that I can write to them directly to invite them to sit on my panel. They are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Author of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herrera, Felipe</td>
<td>&quot;</td>
</tr>
<tr>
<td>Kaddoura, Abdul-Razzak</td>
<td>&quot;</td>
</tr>
<tr>
<td>Lopes, Henri</td>
<td>&quot;</td>
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<tr>
<td>Petrovsky, Arthur V.</td>
<td>&quot;</td>
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<tr>
<td>Rahnema, Majid</td>
<td>&quot;</td>
</tr>
<tr>
<td>Ward, Frederick Champion</td>
<td>&quot;</td>
</tr>
<tr>
<td>Hameyer, Uwe (1979)</td>
<td>School curriculum in the context of lifelong learning. Hamburg: UNESCO.</td>
</tr>
<tr>
<td>Lengrand, Paul</td>
<td>&quot;</td>
</tr>
</tbody>
</table>
Suchodolski, B.
Richmond, K.
Pfluger, A.


Hawe, H.W.R. Lifelong education, schools and curricula in developing countries. Hamburg: UNESCO.


Wolczyk, M. (1976)
Maciaszek, M. (1976)


Perhaps you know some of them, or perhaps you can direct me to someone who knows them.

I am sorry to give you all this trouble. Please accept my thanks for everything.

With best wishes.

Yours sincerely,

Therese SHAK (Miss)
Appendix Q

Sample Letters to Experts

a) Initial letter

March 11, 1986

Name
Address

Re: Research on Lifelong Education

Dear Dr./Mr.,

I am a doctoral student at the Department of Administrative Adult and Higher Education of the University of British Columbia, CANADA. My field of interest is Lifelong Education in which I know you are an authority. I am looking at the implications, the validation of which requires a panel of experts. The purpose of this letter is to invite you to sit on my panel of experts.

Before committing yourself perhaps you would like to know a little of me. I am the Co-ordinator in charge of Continuing and Adult Education in Caritas - Hong Kong. We have 20 day and evening adult education centres in 12 localities. Our annual full time enrolment is around 3,500 and part-time 60,000. When I took over the Service in 1969, I had very little knowledge of adult education, but somehow the figures grew 20 times.

My organization, sponsored by the Catholic Church, is financially supporting me to do a doctorate at U.B.C. where I discovered with interest the field of Lifelong Education, which I hope would prove useful in our new political situation.

I am now in Hong Kong getting some data for my sample and shall be here for a few months. Enclosed please find a copy of the letter from my university certifying my doctoral student status.

I have already completed the draft of my questionnaire. It will be forwarded to you for comments as soon as I receive the 'green light' from my professors, and your consent to sit on my panel.

Please accept my thanks in advance for everything.

Yours sincerely,

Therese SHAK (Miss)
c.c.Lifelong Education Experts
Dr. Malcolm S. Adiseshiah
Dr. R. H. Dave
Dr. Chris Duke
Dr. Pierre Furter
Dr. Uwe Hameyer
Dr. Peter Jarvis
Dr. Paul Lengrand
Dr. Arthur V. Petrovsky
Dr. R. Skager
Dr. Bogdan Suchodolski
Dr. Gareth L. Williams

Dr. A.J. Cropley
Dr. Linda A. Dove
Dr. Edgar Faure
Dr. Ettore Gelpi
Dr. J.B. Ingram
Dr. Abdul-Razzak Kaddoura
Dr. James Lynch
Dr. A. Pfluger
Mr. Arthur Stock
Dr. Frederick Champion Ward
Dr. R. Wroczynski
b) **Follow-up letter**

Date

Name

Address

Dear Dr./Mr.,

**Re: Validation of Lifelong Education Questionnaire**

I wrote you earlier on in the year asking if you would be kind enough to validate a questionnaire on lifelong education for me. At last after much hard-work and thinking I have come up with the attached questionnaire for my doctoral research on 'Educators' acceptance of lifelong education'. It is important that I get these statements validated by you, before using them for other purposes.

I am enclosing a brief abstract on my study, so that you will know what I am doing. You will see that it is essential that the questionnaire be validated by experts like you, before I can use it for my other respondents.

You will receive a copy of the results once I get through with this research.

Thank you very much for your valuable assistance. I hope to see you in Hong Kong some day.

I look forward to receiving your replies within 10 days or so.

Wish best wishes,

Yours sincerely,

Therese SHAK (Miss)
Appendix R

Samples of Reminder Letters to Experts

a) **Sample 1**

October, 1986

Name
Address

**Dear Dr./Mr. ,**

**Re:Reminder on Validation of Lifelong Education Questionnaire**

I am eagerly waiting for your return of the questionnaire on lifelong education. Perhaps it is already on its way. I am enclosing a brief abstract of my study, so that you will understand what I am doing. You will see that it is essential that the questionnaire be validated by experts like you, before I can use it for my other respondents.

Just in case you have misplaced it, I am enclosing another copy for your convenience.

I would be most appreciative if you could complete the whole questionnaire and return it to me by November 10, 1986.

Thank you very much for your valuable assistance.

With best wishes,

Yours sincerely,

Therese SHAK (Miss)
September 15, 1986

Name
Address

Dear Dr./Mr. ,

Re: Validation of Lifelong Education Questionnaire

I know you are a very busy person, but it is important that I obtain your opinion on the attached questionnaire, which I have developed after much hard-work and thinking.

My doctoral research on 'Educators' acceptance of lifelong education', and your works have been used a good deal.

I would be most appreciative if you could complete the whole questionnaire and return it to me by October 20, 1986.

Thank you very much for your valuable assistance.

Wish best wishes,

Yours sincerely,

Therese SHAK (Miss)
Sample Letter of Thanks to Experts

Name
Address

Dear Dr./Mr. ,

Re: Validation on Questionnaire of Lifelong Education

I am most grateful for your return of the questionnaire on lifelong education. Your replies are very interesting and essential for my study.

I am still waiting for the return from other experts. You will receive a copy of the results once I get through with this research.

Thank you very much for your valuable assistance. I hope to see you in Hong Kong some day.

Wish best wishes,

Yours sincerely,

Therese SHAK (Miss)
Correspondence from Experts

Letters were received from the following persons. Copies of their letters are attached herewith:

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
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<tbody>
<tr>
<td>Dr. Malcolm S. Adiseshiah</td>
<td>389</td>
</tr>
<tr>
<td>Dr. A.J. Cropley</td>
<td>390</td>
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<tr>
<td>Dr. Chris Duke</td>
<td>391</td>
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<tr>
<td>Dr. Edgar Faure</td>
<td>392-393</td>
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<tr>
<td>Dr. Pierre Furter</td>
<td>394</td>
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<tr>
<td>Dr. Ettore Gelpi</td>
<td>395</td>
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<tr>
<td>Dr. Uwe Hameyer</td>
<td>396-397</td>
</tr>
<tr>
<td>Dr. Hugh W. R. Hawes</td>
<td>398</td>
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<tr>
<td>Dr. J.B. Ingram</td>
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<tr>
<td>Dr. Peter Jarvis</td>
<td>400-403</td>
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<tr>
<td>Dr. Abdul-Razzak Kaddoura</td>
<td>404-406</td>
</tr>
<tr>
<td>Dr. Paul Lengrand</td>
<td>407-408</td>
</tr>
<tr>
<td>Dr. Henri Lopes</td>
<td></td>
</tr>
<tr>
<td>(replied by E. Brunswic)</td>
<td>409</td>
</tr>
<tr>
<td>Dr. A. Pfluger</td>
<td>410</td>
</tr>
<tr>
<td>Mr. T. M. Sakyta</td>
<td>411</td>
</tr>
<tr>
<td>Dr. R. Skager</td>
<td>412-413</td>
</tr>
<tr>
<td>Mr. Arthur Stock</td>
<td>414-415</td>
</tr>
<tr>
<td>Dr. Bogdan Suchodolski</td>
<td>416</td>
</tr>
<tr>
<td>Dr. Gareth L. Williams</td>
<td>417-418</td>
</tr>
<tr>
<td>Dr. R. Wroczynski</td>
<td>419</td>
</tr>
</tbody>
</table>
Miss T Shak,
Caritas House,
2, Caine Road,
Hong Kong

10.2.86

Dear Therese,

It was a great pleasure to hear from you again today, I feel somehow that I have lost contact with the friends that I made during my visit to Hong Kong and so to hear from you today has helped to bridge that gulf.

Naturally I am honoured to sit on your panel and will do all that I can to help you prepare for your thesis. Do let me know how I can assist and I will be only too pleased to do so. Of the list of people whom you mention, I can certainly help you with a few names and addresses:

James Lynch is Dean of Education at the Polytechnic of Tyne and Wear in Sunderland (?)
A.J. Cropley is Professor of Educational Psychology at the University of Hamburg, West Germany.
Ettore Gelpi is Head of Lifelong Learning, UNESCO Paris
Arthur Stock is Director of NIACE Leicester, U.K.
R Dave is Director of UNESCO Institute, Hamburg
G Williams is Professor of Higher Education, University of Lancaster, U.K.

Therese, it occurs to me from the list that you have provided me, that all of these with few exceptions have published in the excellent UNESCO series. While it is commendable to go for the top people in this way, do you think it wise to have a panel all of whom have written for the same school of thought about lifelong education? If you would like to think about other thinkers who do not necessarily espouse the UNESCO line on lifelong education, I would also be happy to provide you with more names and addresses. I am sure that a panel of international repute and differing perspectives would be useful.

In regard to your other point, I am in the process of trying to raise money so that our diploma/masters degree by distance learning might be launched and we are trying to do so in an international manner. However, I would welcome the opportunity to discuss your plans with you and with David when he returns from his travels. I will certainly keep you informed of our plans and developments.

Do you plan on travelling to the U.K. some time? We would welcome your coming to lead an international seminar on the education of adults in Hong Kong if you are in UK.

Apart from quite frequent trips to the US I am not travelling very much at present, how about you?

Do pass on my regards to David and to those excellent colleagues of yours who entertained me so well during my visit to Hong Kong.
With my best wishes for your work, and for a happy new year.

Albert Pfeifer, Frankfurt FRG

(I sent you the first copy about two months ago)
Sample Letter to Principals of Pilot Test

September 2, 1986

Dear Mr./Ms.,

Re: Research on Educational Concepts

It is very kind of you to agree to respond to my questionnaire related to my research study at U.B.C. Canada. It is essential that I have you and your assistant as well as four of your teachers to reply to this questionnaire.

I would be most appreciative if you and your assistant as well as the four teachers whose numbers on your teachers' register are 22, 19, 03, 23 (or 15, 09 if any of the four is not available), would be given this questionnaire.

Please give their names to my junior secretary so that she can address the personal letter to each in courtesy and appreciation of their co-operation.

Thank you very much for all your help. I look forward to receiving the completed questionnaires by September 15, 1986.

Yours sincerely,

Therese SHAK (Miss)
Sample Letter to Teachers of Pilot Test

September 17, 1986

Dear Mr./Ms. ,

Re: Research in Educational Concepts

Your principal, Mr. kindly gave me your name so that I could ask for your opinions and comments on the educational ideas expressed in the enclosed questionnaire for a research study at the University of British Columbia.

I should be most appreciative if you would complete the questionnaire and write down on the back pages your comments on any expression which appears to be unclear to you.

Your opinions and comments are important for this study.

Please return the completed questionnaire to your principal possibly before the end of this month, and I shall send someone to collect them.

Thank you ever so much for your help.

Yours sincerely,

Therese SHAK (Miss)
Sample Letter of Thanks to Pilot Subjects

October 3, 1986

Mr./Ms.,

Re: Research in Educational Ideas

Thank you ever so much for your prompt replies to my questionnaire. Your opinions and comments are important for this study. I shall keep you informed of the results once the study is finished.

Thank you very much for your help.

Yours sincerely,

Therese SHAK (Miss)
Appendix X.1

Sample Letter to Principals of Main Sample

May 1, 1987

Name
School address

Dear Mr./Ms.

Re: A Research Study on Educational Concepts

Currently I am being sponsored by Caritas Hong-Kong to do a research study at the University of British Columbia, Canada, on educational concepts among administrators and teachers of schools in Hong Kong.

The purpose of this study is to find out educators' degree of acceptance of certain educational concepts and how these are affected by environmental and personal factors. It is hoped that the results will be useful towards educational planning and research.

Participation in this research project is completely voluntary. If you agree to participate it is essential that I have you and your assistant as well as four teachers from your school, which falls within a random sample, to reply to the enclosed questionnaire, which will require approximately one hour to complete. I would be happy to have your school among my sample.

I am writing this letter to ask if you agree to participate in this research study, if so please complete the attached questionnaire, i.e. the LEAI Scale Part I and Part II & Other Information, and return it to me within a fortnight.

If you feel disinclined to participate, please also return the questionnaire to me. Your efforts will still be much appreciated.

However, your consent to participate in this research is assumed, if you complete the questionnaire.

I am obligated by the University of British Columbia to ensure confidentiality for the identity of all participants. All completed questionnaires will be destroyed once the data are recorded.

I should also be most grateful if you would give me the names of your assistant and four of your teachers whose numbers on your teachers' register are 8, 16, 18, 35 (or 33, or 47, or
others, if any of the four is not available) in the attached form as soon as possible. I shall send a personal letter and the questionnaire to each of them to request their voluntary participation.

I would appreciate an early reply from you, possibly in the form of a completed questionnaire in the attached postage-paid envelope on or before .........., and the above names before then.

I am counting on your help. Your participation is important to this study.

Thank you ever so much.

Yours sincerely,

Therese SHAK (Miss)

Encl: 1) LEAI Scale Part I & II & Other Information
2) Letter of reply form.
Letter of reply:

Miss Therese SHAK
Caritas House
2-8, Caine Road,
Hong Kong

Dear Miss Shak,

The names of my assistant and the four teachers whose numbers on the teachers' register are 8, 16, 18, 35 (or 47, 33 if any of the four is not available) are as follows:

Assistant: __________________________

Teachers: __________________________

With best wishes.

Yours sincerely,

Signed __________________________

Name in block letters __________________________

Name of school __________________________
有關教育理論研究

敬啟者：

本人願感謝明愛支持在加拿大修屬哥倫比亞大學進行一項教育研究工作，為了解一般教育專業人士對某種教育理想之觀念，及探求環境個人因素之影響。其結果可助於教育策劃和研究。

此次研究意屬全面變化。如間下願意參加則本人亦願意。欲投身之副校長或助理及四位老師之名稱，並作答附上的問卷。全部需花一小時填寫。

本人就此希望間下間下同意作答附上之問卷(即 scale part I + 及其他資料)。並請於兩個星期內用附上之回執封套寄回本人。

倘間下不願作答，亦請寄回問卷。本人心領間下之好意。

若間下作答則表示間下同意參加此次研究工作。

本人己向校方及哥倫比亞大學保證全部問卷一經處理便作廢棄。

現有本人還希望間知，欲投身之副校長或助理及四位老師之名稱(即在職員名冊上編號 8, 16, 18, 35 — 如令不願在冊 7, 33 或其他編號之老師亦可)，好使本人親
函請委員多懸此項研究，現附上回條及回郵信封。此研究之成功委否有賴閣下之惠議作答。謹此致謝，並請閣下於1987年×月日前將填妥之問卷寄回本人，同事之芳名請先寄。此致
校長

一九八七年×月×日

附件（1）LZAI SCALE PART I II III 及其他資料
（2）回條及大小回郵信封各一
石小姐：

我助手的姓名是：

先生／女士

(1) ____________
(2) ____________
(3) ____________
(4) ____________

住址：

香港堅道二號
明愛大廈
石慧嫺女士收

簽名

原名

校名

日期

428
Sample Letter to Teachers of Main Sample

Date

Name of teacher
Name of school

Dear

A Research Study on Educational Concepts

Currently I am being sponsored by Caritas Hong-Kong to do a research study at the University of British Columbia, Canada, on educational concepts among administrators and teachers of schools in Hong Kong.

The purpose of this study is to find out educators' degree of acceptance of certain educational concepts and how these are affected by environmental and personal factors. It is hoped that the results will be useful towards educational planning and research.

Participation in this research project is completely voluntary and will not affect your position in any way. If you agree to participate it is essential that I have your principal and the assistant to the principal as well as four teachers from your school, which falls within a random sample, to reply to the enclosed questionnaire, which will require approximately one hour to complete. I would be happy to have your school among my sample.

I am writing this letter to ask if you agree to participate in this research study, if so please complete the attached questionnaire, i.e. the LEAI Scale Part I and Part II & Other Information, and return it to me within a fortnight.

If you feel disinclined to participate, please also return the questionnaire to me. Your efforts will still be much appreciated.

However, your consent to participate in this research is assumed, if you complete the questionnaire.

I am obligated by my University to ensure confidentiality for the identity of all participants. All completed questionnaires will be destroyed once the data are recorded.
I would appreciate an early reply from you, possibly in the form of a completed questionnaire in the attached postage-paid envelope on or before ............

I am counting on your help. Your participation is important to this study.

Thank you ever so much.

Yours sincerely,

Therese SHAK (Miss)
有関教育理論研究

敬啓者：

本人於香港明愛支持在加拿大英屬哥倫比亞大學進行一項教育研究工作，為了解一德教育專業人士對某種教育思想之觀點及探求環境變個人因素三影響，

其結果可助於教育策劃和研究。

此項研究實屬合併顧問，對隔下之職位無影響，

如隔下願意參加則本人亦希望得資料和表，副

接表或助理及4位老師之名稱，並作答附上之問卷。

全部應若一週時填寫。

本人就此希望徵得隔下同意作答附上之問卷（即

LETI SCALE PART II及E及其他資料），並請於六星期內用

附上之回復信封寄回本人。

倘隔下不願作答，亦請寄回問卷。本人心領

隔下之好意。

若一問未作答則表示隔下同意參考此項研究工

作。

本人已作英屬哥倫比亞大學保全全部問卷一缺處

理便作廢稿。

此研究三成功與否有賴隔下之回覆作用。

詳此致謝，並附隔下於1987年月日前將填

寫三問卷寄回本人。

此致

一九八七年月日

乙塞

CARITAS HOUSE, 2 CAINE ROAD, HONG KONG  P.O. BOX 2332  CABLE: CARITAS, HONG KONG  TELEPHONE: 5242071 EXT. 246 & 247
Appendix Z.1

Sample of Reminder Letters to Principals of Main Sample

To principals:

Date

Name
School address

Dear Mr./Ms ,

Re: Research in Education

I am eagerly waiting for your response to my questionnaire on Educational Concepts. I know you are very busy, but I also know you will understand if I tell you that I plan to go back to U.B.C. possibly in June 1987 to make use of the summer vacation.

If there is any inconvenience about sending me the names of your assistant and the four teachers, please ask your good secretary to give a ring to:

Miss Patricia Fung
H-242071 ext.398

to let her know of the fact, and our Miss Fung will send the questionnaires directly to you. I only want to know the names so as to address a personal letter to them, but this may not be necessary.

Please accept my many thanks for your help. I look forward to receiving your completed questionnaire very much.

Yours sincerely,

Therese SHAK (Miss)
教育研究資料搜集事宜

啟者：

有閣下於一九八七年五月二十八日親函，具請示月十日，閣下填答有關研究之調查問卷，以便本人能於六月十日及暑期期間返回英國倫敦大學作分析處理的工作。

因本人故函謝貴處之有關協助人員及老師，故望能獲告知彼等姓名，但如有任何不便處，請略去之，並有煩貴處秘書電通知馮秀芝小姐，電話：五一二四二〇七一四三三九八

馮小姐自當馬上寄奉有關問卷，對閣下之哀誠合作，謹此致謝。此致

校長

乙雙儀

一九八七年五月二十八日
Sample of Reminder Letters to Teachers of Main Sample

To teachers:

Date

Name
School address

Dear Mr./Ms,

Re: Questionnaire on Educational Concepts

I am eagerly waiting for your response to my Questionnaire on Educational Concepts. Your reply is necessary to make up a valid number for my study. I know you are very very busy, but time is running short, and I cannot proceed without a valid number of returns. I hope to receive your completed questionnaire soon.

Thank you ever so much for your help. I shall send you a copy of the abstract of the results when ready, so that you will know the importance of your contribution. The educational concepts contained in the questionnaire have been validated by world known experts.

With best wishes.

Yours sincerely,

Therese SHAK (Miss)
有關教育研究資料之調查問卷

敬啟者，

因時間緊迫，本人極盼閣下能於百忙中抽空填答反場合有關教育理論研究資料之調查問卷，俾使本人可得到確實的數據以進行呈項研究工作。

此項調查之研究成果，閣下之支持及貢獻，研究完成後，自當專函報告有關之摘要報告。而此問卷所載之各項教育理論均經世界知名學者所鍾證者。

閣下之誠摯合作，本人深為銘感，並盼及早接獲賜覆。此致

石芝揮謹啟

一九八七年六月三日
Appendix AB.1

Sample Letters of Thanks to Main Sample

a) To principals and teachers with colleague(s) not yet responded:

Date

Name

School address

Dear Mr./Ms.,

Re: Thanks for Responding to Questionnaire

I am most grateful for your return of the Questionnaire on Educational Concepts. Your replies are very interesting. I shall send you an abstract of the findings upon completion. You will then see that it is essential that the questionnaire be completed by educators like you, who are research conscious.

I am still waiting for the returns from a few of your colleagues, who are no doubt very busy at this time of the year. I would be most grateful if you could pass on a gentle verbal reminder for me, if you know of any who still has the questionnaire on hand.

Thank you very much for your valuable assistance. I hope to have the chance to meet you and thank you in person one day.

Wish best wishes,

Yours sincerely,

Therese SHAK (Miss)
b) To principals and teachers whose colleagues have all responded:

Name
School address

Dear Mr./Ms. ,

Re: Thanks for Response to Questionnaire

I am most grateful for your return of the Questionnaire on Educational Concepts. Your replies are very interesting. I shall send you an abstract of the findings upon completion. You will then see that it is essential that the questionnaire be completed by educators like you, who are research conscious.

I look forward to the chance of meeting you and thanking you in person one day.

Wish best wishes,

Yours sincerely,

Therese SHAK (Miss)
敬謝填答調查問卷

敬啟者：

蒙承閣下於調查問卷中提出寶貴意見，切望取用，俾利研究作料。

敬謝

一九八七年六月二十四日
尊敬者：

承蒙閣下寄回填妥有關教育研究之調查問卷，本人深感欣慰。這份問卷能得到閣下的配合及提供寶貴意見，對這項教育資料的研宄及結果報告，甚感不勝感激。閣下的誠懇合作，深深感佩，他日若有機會，必盡前拜訪以表謝意。

此致

敬禮

一九八七年八月

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Edgar Faure, a brilliant French statesman hailed by friends and foes for his intelligence, wit and political savvy, died yesterday at 79.

Mr. Faure occupied every important post in the French government except the presidency during a career that spanned four decades. President François Mitterrand, a fellow Socialist, called Mr. Faure "a remarkable man who marked the history of our republic." Jean-Marie Le Pen, presidential candidate from the extreme-right National Front, praised Mr. Faure's "intelligence and tolerance," despite "our differing conceptions of political action."

Mr. Faure, a father figure known to the French simply as Edgar, was best remembered as one of the country's most progressive education ministers.

Under Charles de Gaulle during the 1968 student uprising, he masteredmind sweeping reforms that allowed French universities more autonomy.

Mr. Faure was a member of the French Academy and wrote books on subjects ranging from French oil policy to modern China.

Geoffrey Conway