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Educational Research in India—an Overview

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Introduction

Educational research, as one finds it today in India or elsewhere, has evolved over a long period of time, more or less, as a sequel to the changing concept of education and its role in the society. A closer examination reveals at least three significant phases in this process of evolution. However, as one would observe, these phases are neither strictly chronological nor totally contemporaneous; conceptually, they are sequential in origin but operationally, overlapping with one another to a great extent.

Education for long had remained an activity pursued privately by individual families, specific occupational groups and different religious denominations with or without the explicit patronage of the rulers. A significant change in this situation, marking the onset of the first phase, took place with the emergence of the State as the organizer of the public education system. Education came to be seen as a universal requirement for all citizens and it resulted in the establishment of an ever-widening network of educational institutions. This, in turn, necessitated the rulers, who directly or indirectly financed these institutions, to periodically appraise the educational system as to its adequacy, quality and impact. It is this factor which paved the way for the first efforts, however crude and rudimentary from the research point of view, for the collection of basic facts about the educational system. Such efforts in India began largely during the last century, and have continued and become more sophisticated as well as better organized in the post-Independence period. Data collected through these early exercises have been recorded in the State Gazetteers and other

public documents published periodically. Similar work is being accomplished presently by the Ministries of Education at the Centre and the States in a more regular fashion. The purposes of these efforts have been the accumulation of social statistics and the creation of the data base for administrative action. A higher level of methodological sophistication and a relatively wider scope and utility characterize the surveys undertaken in this direction by the NCERT including the four comprehensive educational surveys carried out on an all-India basis.

With the expansion of the network of educational institutions supported by public funds arose the need for ensuring the quality of work performed by the large number of teachers employed in these institutions. This led to the recognition of teaching as a specialized activity and resulted in the establishment of teacher training institutions, which marked the beginning of the second phase of the evolution. With the establishment of teacher training institutions, pedagogy became a full-fledged subject of study and training and provided the major substance for undertaking research. It is needless to mention that even now teacher-training and teaching-learning processes continue to be the main thrust of all research activities in the field of education. This phase also saw the entry of education as an independent subject of study at the university level and thereby added greater strength and credibility to educational research activities in the academic circles.

The third phase in the evolution is of a relatively recent origin not only in India but also in other parts of the world. This began with the recognition of education, by social scientists and administrators, as a

potent instrument for effecting socio-economic change and development. Education is seen as having a twofold characteristic—one as a basic indicator of personal and social development, and the other as a crucial input facilitating the process of change and development. The implications of this changed concept of education have been quite revolutionary. First of all, it made the researcher no more a mere purveyor of information to the planner and the administrator; instead he himself became a participant in the act of planning for change and development. Secondly, it liberated him from the confines of pedagogy and the entrenched image of a teacher-trainer. The concept of education as formal schooling got replaced by a broader concept, including under it a wide variety of activities which directly or indirectly influence the growth and development of the individual and the society. Thirdly, the change brought into the forefront the considerations of evolving appropriate educational structures and inputs keeping in view the desired goals of national development. This concept of education as a manipulable tool for ushering in desired transformations in the society has introduced a totally new perspective for conducting educational research. The focus now is on understanding the educational system, not in isolation, but in the context of the socio-economic and political structure of the society as well as on reorganizing and inventing new systems in order to achieve the desired impact on the society.

The above analysis possibly presents an oversimplified historical account of the growth of educational research. Nevertheless, it signifies, with a fair amount of clarity, the perspective in which the overall research endeavour in the country needs to be viewed. The perspective highlights three major roles to be performed by educational researchers. The first role is to evaluate the existing educational system, for making planning and administration effective and efficient. The second role is to contribute towards the improvement of practices adopted in various educational institutions. The third role is one of an innovator who evolves and experiments with alternative systems for effectively achieving the goals of socio-economic change and development. Whether educational researchers in the country have been playing these roles successfully or not is a question that cannot be answered categorically. However, an attempt will be made in this chapter to make an overall review of the educational research endeavour in the country keeping in focus, although implicitly, the above considerations.

At the outset it should be confessed that a critical evaluation of all educational research in the country

is not being attempted here; it would, in fact, be impossible to accomplish such a task in a single chapter without committing serious errors in the form of omissions and exaggerations. Critical reviews have been more appropriately presented area-wise for different aspects of education in the various chapters that follow. In the present chapter, the authors have only attempted to present a general overview of the trends of research in the field of education. Section I of the chapter presents a brief note about the early growth of educational research in the country and the institutional structures supporting educational research at the national level. Section II depicts the quantitative growth of educational research followed by an area-wise overview of the research work completed. Section III contains general remarks about the nature of research conducted, across different areas, in terms of content, methodology, relevance, gaps and priorities. Section IV includes a few observations about the need for and the means of strengthening educational research activities in the country.

I

THE GROWTH OF EDUCATIONAL RESEARCH IN INDIA

Educational research in the country does not have a very long history as, in the real sense, it made its beginning only in the 1940's. The initial development of research efforts in education, thereafter, was not all too encouraging. However, it has picked up considerable momentum during the last two decades and made impressive strides, both in quantity and coverage. These efforts have now resulted in the accumulation of huge amounts of research literature about the educational system in the country.

It should be worthwhile here to trace the early developments in this regard and discuss the major factors that have influenced the growth of educational research in the country. A retrospective analysis of the growth of educational research endeavour in the country brings to limelight three significant factors which have made decisive impact on its course of development. These are: (a) academic recognition to education as a subject of study at the university level, (b) establishment of national-level organizations with the explicit purpose of conducting educational research, and (c) provision of financial support for undertaking educational research. A more detailed discussion of these factors would

clarify the significant role played by them in the history of educational research in India.

Education as a Subject at the University Level

Education made its first entry into the university portals in 1917 when a department of education was established at the Calcutta University in accordance with the recommendations made by the Calcutta University Commission. The Commission, in fact, envisaged that the department would develop into a centre for studying the problems of education in a systematic way and in close collaboration with other allied areas of study. However, two more decades passed before education could be recognized as a subject of study at the Master's degree level. It was in 1936 that the Bombay University awarded the first M.Ed. degree. This was a major landmark in the history of educational research as the degree was given exclusively on the basis of a research thesis. Following this, several other universities instituted the Master's degree programmes in education. Now, almost all the universities provide facilities for instruction leading to the M.Ed. degree. An important feature of the M.Ed. degree programmes is that invariably all of them prescribe as compulsory both theory and practical courses in conducting research work. The quantitative contribution of research done at the M.Ed. level is undoubtedly stupendous although the quality may not be of a uniformly high degree. Nevertheless, in the early years this was a welcome development as M.Ed. dissertations helped create the initial batch of scholars, some of whom could continue to pursue and promote further research work in education.

Education received full recognition as an academic subject of study with the introduction of doctoral degree programmes. The first Ph.D. in education was awarded, again by the Bombay University, in the year 1943. After this, the Ph.D. programme in education made gradual entry into other universities also. Now, almost all the universities offer facilities for pursuing doctoral degree work in education. The number of Ph.D.s produced during the early years was quite modest. However, their academic value for the growth of the discipline cannot be underestimated. More recent developments in this regard and their contribution to the overall growth of educational research require a more detailed discussion, which will be presented in a later section of the chapter.

Apart from contributing to the quantitative expansion of educational research, the introduction of the

Master's and the doctoral degree programmes in education has had several crucial influences in the field. First of all, education acquired the much-needed academic respectability as a subject at par with other disciplines of study at the university. Secondly, it provided the necessary scope and incentive for individual scholars to engage themselves in the pursuit of knowledge and excellence in the field of education. Thirdly, it laid a strong and relatively permanent foundation for the training of researchers who could undertake independent investigations in the field.

Research Institutions

Until Independence, educational research was confined to the individual efforts made by researchers as part of their academic studies in a few universities. It was felt that educational problems, through this means, were not receiving their due attention by the few individuals taking up research work. Apart from this, the need for evolving an indigenous national system of education had also become a matter of concern for the planners. These considerations prompted the establishment of an independent institution, namely, the Central Institute of Education (CIE) in the year 1947. Being an institution exclusively devoted to education, the CIE had the objective of functioning at the all-India level to conduct researches on various problems that had emerged after Independence and to provide advanced-level training to teachers and other personnel engaged in the field of education. The CIE organized a model teacher education programme and provided an immense amount of help in policy-making, particularly in the initial years after Independence. The Institute not only utilized its own resources for conducting research but also drew upon the resources of several other institutions by extending the necessary leadership and involving them in collaborative research endeavours.

Following the large-scale expansion of educational facilities, the educational system grew more and more complex and threw up a variety of problems. Need was felt to create more specialized institutions which could apply themselves in a concerted manner to find research-based solutions to various educational problems. Consequently, the decade beginning from 1950 saw the establishment of a number of Central-level organizations specializing in various aspects of education. In 1954, two organizations came into existence, namely, the Central Bureau of Textbook Research and the Central Bureau of Educational and Vocational Guidance.

Following this, in the year 1955, the All-India Council for Secondary Education (AICSE) was established. Later on, in 1959, its functions were taken over by the Directorate of Extension Programme for Secondary Education. Research programmes of all these bodies were geared to the goal of bringing about qualitative improvement in the educational practices adopted at the school level. They were also supposed to provide, in-service education programmes to teachers and create the necessary skills and attitudes for promoting research and experimentation. In pursuance of this objective, the AICSE (1957-58) introduced the scheme of experimental projects in order to provide the necessary scope and facilities to schools for undertaking research studies and introducing innovations in the fields of teaching and evaluation. The latter half of the decade witnessed the establishment of three more national institutions. One was the National Institute of Basic Education the objective of which was to conduct and coordinate research on the Basic Education system. The underlying assumption was that it would result in the evolution of a national system of education. The second institution to be established in 1956 was the National Fundamental Education Centre. The purpose of this Centre was mainly to undertake research and development activities in the field of adult education. Later, in the year 1959, the National Institute of Audio-Visual Education was set up with a view to provide necessary facilities for training and research activities in the field and also to undertake the work of developing indigenous instructional aids and material.

A major landmark in the creation of institutional infrastructure for educational research was the establishment of the National Council of Educational Research and Training (NCERT) in 1961. While the various specialized institutions created in the previous decade could give a considerable fillip to the research and development activities in education, it was found that they were functioning in a relatively isolated fashion and had not been able to make any significant impact. In order to achieve better coordination among their efforts and provide a common direction for their work, the NCERT was created by amalgamating all the national-level specialized institutions in education that were existing at that time.

Besides NCERT, there are, at present, several other educational research institutions operating at the national level. One such institution is the National Institute of Educational Planning and Administration (NIEPA). Two other important institutions functioning at the all-

India level are the Indian Institute of Education (IIE) at Pune and the Centre of Advanced Study in Education (CASE) at Baroda. The IIE exemplifies voluntary efforts for building up an educational research institution whereas CASE is a department of a university performing the traditional roles of teaching, research and extension. It would be pertinent to describe in a little more detail the functioning of some of these major institutions devoted exclusively to the field of education.

The largest institution devoted to educational research in the country is the National Council of Educational Research and Training (NCERT), established in 1961. The NCERT is a multifaceted organization whose objective is to function as a national-level apex body giving leadership for improving school educational programmes all over the country. It combines in its work a variety of roles as its members conduct programmes of teacher education; undertake individual and institutional level research projects; organize training programmes for different kinds of educational personnel; offer consultancy services in the planning and administration of school education; promote educational research by other agencies through financial support, and disseminate information concerning educational research and development activities in the country. Research activities of the NCERT are mainly channelized through its specially constituted organ, the Educational Research and Innovations Committee (ERIC). The ERIC identifies priority areas in educational research and sanctions funds for the studies undertaken in these areas by its constituent departments and by the scholars working in various other institutions of the country. The number of research studies completed through the finances of the NCERT, both by its constituent departments and by outside institutions, is given in Table 1.

Table 1
NUMBER OF RESEARCHES FINANCED BY THE NCERT
(COMPLETED RESEARCH UP TO 31.3.1983)

<i>Years</i>	<i>NCERT Departments</i>	<i>Outside Institutions</i>	<i>Total</i>
1961-65	8	16	24
1966-70	49	39	88
1971-75	39	37	76
1976-80	19	38	57
1981-83	43	38	81
Total	158	168	326

Notes : 1. Sources : The Annual Reports of the NCERT.
2. This includes only those studies the reports of which are available.

The major research and development activities of the NCERT are directed towards curriculum development, teaching and training, evaluation and measurement, educational technology, non-formal education, and development of instructional material including textbooks. The present research work at the NCERT is specially focussed on the programmes related to universalization of primary education, equalization of educational opportunity, vocationalization of education and education of the weaker sections of the society.

An event of momentous significance in the growth of institutional facilities for educational research in the country is the establishment of the Centre of Advanced Study in Education (CASE). The CASE came into existence in 1963, when the University Grants Commission (UGC) selected the Department of Education at the M.S. University of Baroda under its scheme for strengthening a few institutions all over the country as Centres of Advanced Study in the respective fields. It was envisaged that the CASE, in addition to performing its traditional roles as a university department, would provide leadership for conceptual as well as methodological advancement in the field of educational research and develop itself into an institution of academic excellence at par with international standards. The Centre initially concentrated on four areas, namely, teaching and teacher behaviour, educational technology, achievement motivation, and innovation and change process in education. Subsequently, in view of the increased staff strength and their specializations, research work has been strengthened in certain other areas also such as educational management, higher education, sociology of education and science education. The main thrust of the research activities at the CASE has been for long the studies done at the doctoral level and some research studies undertaken by its staff, individually or jointly. However, during the last four years, in line with the policy of the UGC, the CASE has initiated a number of institutional-level research projects.

A noteworthy development in the voluntary efforts at building up educational research institutions is seen in the establishment of the Indian Institute of Education at Pune. This is a unique institution, only one of its kind in the country, devoting itself exclusively to the field of education. In its initial years, the Institute devoted itself primarily to the study of policy-making and planning in education with elementary education as its main focus. The activities currently envisioned by the Institute include developing alternative system of education, conducting studies on major educational

problems of national concern, identifying and encouraging voluntary institutions and individuals doing creative and challenging experiments and innovations in the field of education and undertaking collaborative research programmes with other institutions. During the last few years, it has done significant work with a major focus on education of the scheduled castes and scheduled tribes and universalization of primary education.

Yet another institution at the national level, working in the field of education, is the National Institute of Educational Planning and Administration (NIEPA). This Institute apart from conducting training programmes for educational planners and administrators, undertakes research studies in the field independently as well as in collaboration with other institutions. By now, it has completed a number of studies on the organization and functioning of the Directorates of Education in various States of the country.

A reference should also be made here to certain other educational research centres which are operating at the national level. One such institution is the Unit on Sociology of Education located at the Tata Institute of Social Sciences in Bombay. The Economics of Education Unit attached to the School of Economics of the Bombay University and the Unit on Social Psychology of Education attached to the Department of Psychology of the Allahabad University are two other centres of the same type. The Centre of Advanced Study in Psychology at Utkal University also has a major thrust in its work on educational psychology. Besides these, there are also a number of social science research institutions such as the Institute for Social and Economic Change at Bangalore, the Institute of Economic Growth at Delhi, Sardar Patel Institute for Economic and Social Research at Ahmedabad, and A.N. Sinha Institute of Social Studies at Patna, which have been undertaking a number of studies related to education. Apart from these national organizations the various university departments as also a number of colleges of education form a part of the network of institutional infrastructure for the pursuit of educational research. To this should be added the various State Institutes of Education and the State Councils of Educational Research and Training which have also been organizing and promoting educational research within their States.

It becomes very clear from the above description that the country has been able to develop a fairly adequate network of institutional infrastructure for conducting research in the field of education. It would

be too presumptuous to attempt here a detailed evaluation of the impact of these large-scale institutional facilities. However, it can be noted that the creation of national institutions has made certain positive contributions to the overall growth of educational research in the country. The creation of such institutional infrastructure has been of special value in providing a stable base for educational experimentation in the country. It has also facilitated taking up large-scale research projects with a single organizational base. They have greater freedom for trying out innovative approaches and practices, thus, creating the needed interface between research and practice. It has enlarged the scope for making educational research problem-centred which otherwise, as an academic work at the university, would tend to become pedantic and esoteric. Lastly, it has paved the way for initiating collaborative research projects and giving specific directions to the educational research endeavour in the country.

Promotion of Research through Financial Assistance

Prior to Independence, the educational researcher had to depend largely on his own personal resources or in some cases on the support extended by certain voluntary bodies. However, centralized schemes for promoting educational research by providing financial support to interested individuals and institutions came into operation almost immediately after Independence. During the first two five year plan periods, funds for the purpose were mainly channelized through the Union Ministry of Education. Also, during the same period, All-India Council for Secondary Education (AICSE) had the scheme of experimental projects wherein it extended financial assistance for experimenting with innovative practices at the school level. In the later period, procedures for granting financial assistance have got well streamlined and at present there are three major national-level organizations which have their own schemes for supporting educational research.

One of the national organizations directly promoting educational research is the National Council of Educational Research and Training. The NCERT offers financial assistance through the Educational Research and Innovations Committee (ERIC) which receives proposals from researchers from different institutions in the country and grants financial support to them after a scrutiny by a select panel of experts. As the NCERT is mainly concerned with school education, the relevance of research proposals to the

improvement of school education constitutes the main criterion adopted for granting support. The NCERT also supports research by individual scholars pursuing their doctoral work in education by awarding research fellowships.

The biggest promoter of educational research in the country has been the University Grants Commission (UGC), inaugurated in December 1953. At the outset it should be noted that the UGC assists only those studies which are undertaken through university departments. But it should be recognized that the contribution of non-university-based researchers to the total research output is yet very marginal in the field of education. The UGC has been promoting the growth of educational research in three ways. Every year, it awards a large number of research fellowships to the scholars who pursue their doctoral studies at various university departments. Secondly, it provides financial assistance to university departments and their staff for undertaking major and minor research projects in selected priority areas. A third major means by which the UGC has boosted educational research is through the schemes of centres of advanced study and departments of special assistance. Under these schemes, the recognized institutions receive large-scale assistance in the form of fellowships, staff positions and so on.

Another national organization promoting educational research on a fairly wide scale is the Indian Council of Social Science Research (ICSSR). The ICSSR, unlike the UGC, offers assistance to all institutions interested in research, including university departments. The Council periodically appraises the situation and sets priorities for research, which form the basis for providing grants for specific research projects. However, a major part of its support comes through fellowships and blockgrants provided to various social science research institutions in the country which conduct research studies related to education. The Council has also been endeavouring to organize collaborative research projects with an interdisciplinary character. The project on the education of scheduled castes and scheduled tribes covering different regions of the country is one such study completed by the Council.

Apart from these three national agencies, certain other bodies such as the Indian Council of Medical Research and the Indian Council of Historical Research have also been promoting educational research. Further, most of the universities and also a number of State governments and voluntary organizations offer support to individual scholars and institutions for undertaking educational research. Funds have also been flowing in

from certain international bodies such as UNESCO, UNICEF and Ford Foundation for conducting large-scale research projects in the country.

A significant point that becomes clear is that the country has been making conscious efforts to promote research on educational problems. Whether the extent of support provided is adequate or not is a question that needs to be examined in the larger context of national priorities and the competing demands placed by other areas of study. However, the positive value of creating such research promotional organizations is that it has given greater stability and continuity to the progress of educational research. Further, it has also provided the scope for channelizing research efforts to the problems and programmes of national importance in a more concerted manner. Again, whether this objective has been successfully achieved is an issue that needs closer scrutiny and it would be out of place here to indulge in such an exercise.

II

A. QUANTITATIVE GROWTH OF EDUCATIONAL RESEARCH

INTRODUCTION

Educational research in the country began, as was mentioned earlier, just forty years ago, in 1943. However, the quantitative growth of educational research during the last four decades, particularly after 1960, has been quite impressive. This is, of course, not surprising as the number of institutions providing infrastructural facilities for educational research has also increased tremendously during this period. In all, 3051 research studies in education have been completed by now. This includes the research completed at the Ph.D. level which carries the major share and the non-degree research completed at various university departments and research institutions of the country. The research at the Ph.D. level can further be categorized as doctoral studies in education and those conducted in other disciplines with topics related to education. The growth of these three categories of studies during the last four decades and their contribution to the total research output have been briefly discussed here.

Doctoral Degree Research in Education

In terms of number, the first decade, beginning in 1941, witnessed very few doctoral studies in education.

However, it progressed, although not very smoothly, in the later decades. In fact, the decade from 1971 to 1980 records a figure of 850, which is really very large as compared to the earlier periods. Decade-wise, the growth in the number of doctoral studies in education is indicated in Table 2.

Table 2
DECADE-WISE DISTRIBUTION OF PH.D.s IN
EDUCATION

<i>Years</i>	<i>Number</i>
1941-50	10
1951-60	63
1961-70	234
1971-80	850
1981-83	266
Total	1423

As can be observed from the distribution, there has been a sudden spurt in the number since 1971 onwards. The reasons for this are really not very difficult to imagine. First of all, during this period, the number of universities providing facilities to pursue educational research has also increased considerably. Also, financial assistance in the form of research fellowships has gone up. Lastly, many working college teachers and aspirants for university positions have taken up research studies due to the recommendations of the UGC which made Ph.D. an essential qualification for fresh appointment and a necessary condition for promotion to higher positions.

A study of the contribution of different universities to the doctoral work in education also reveals certain interesting points. While the Bombay University approved nine Ph.D. theses between 1941-50, the Lucknow University was the only other one to approve at least one thesis during that period. However, this number grew considerably faster in course of time. Now, in 1983, there are more than eighty institutions which have facilities to provide guidance to research scholars engaged in doctoral work. In the course of forty years from 1943 to 1983, a total of 1423 scholars have been awarded the Ph.D. degree in education. It is found that the M.S. University of Baroda has accepted the largest number of theses in education. This is followed by Bombay, Punjab, Sardar Patel, Kerala

and Kurukshetra universities. The number of Ph.D. degrees in education awarded till 1983 by the ten universities which have accepted the largest number of theses is indicated in Table 3.

Table 3

TOP TEN UNIVERSITIES WITH RESPECT TO NUMBER OF PH.D. THESES IN EDUCATION ACCEPTED

<i>Sr. No.</i>	<i>University</i>	<i>Year of First Award</i>	<i>Number of Ph.D.s in Education</i>
1.	Agra University	1959	41
2.	Bombay University	1943	106
3.	Delhi University	1954	47
4.	Gorakhpur University	1967	40
5.	Kerala University	1965	53
6.	Kurukshetra University	1971	53
7.	M.S. University of Baroda	1955	215
8.	Punjab University	1966	62
9.	Patna University	1961	42
10.	Sardar Patel University	1964	60

It may be observed that these ten universities have together awarded, in all, 719 Ph.D.s in education, which account for about 50 per cent of the total number of Ph.D.s in education produced in the country. This may apparently seem to be a peculiar situation since there are more than 80 universities giving doctoral degrees in education. But, in reality, it only highlights the fact that the provision for Ph.D. guidance depends on a number of factors related to institutional facilities and constraints. This becomes quite clear if the case of the M.S. University is more closely examined. The Centre of Advanced Study in Education has attracted a large number of doctoral students because (a) the CASE has a large faculty providing guidance for the Ph.D. work and (b) the CASE has been offering a large number of research fellowships and teacher fellowships. Further, it is difficult to conclude as to the optimum number of Ph.D.s to be produced in a specified period of time. For instance, even the Department of Economics of the Bombay University produced as many as 171 Ph.D. theses during a period of forty years from 1936 to 1975. However, the increased number of Ph.D. theses is a desirable situation only when it is coupled with quality. Also, comments on the work of an institution can be made only after making a thorough scrutiny of the research programmes offered by the particular institution.

Doctoral Studies in Education in Other Disciplines

Apart from the doctoral studies in education, a large number of studies on educational problems have been conducted by scholars pursuing their doctoral work in other allied disciplines. There are, in all, 611 studies of this type, which forms about one-fifth of the total research output in education. Such contributions have come from the disciplines of psychology, philosophy, sociology, economics, history, and a few other related areas. One of the reasons for this large number of studies on education in other departments is in a way inherent in the very nature of education as a subject of study. Education which inheres in its concept a multidisciplinary perspective, allows for heavy interface with other disciplines and provides wide scope for others to undertake studies on the problems of education. This trend has been further heightened by the policies of the financial agencies such as the UGC and the ICSSR which have been continuously advocating for undertaking interdisciplinary studies. In fact, the ICSSR has explicitly demonstrated the need for such studies by sponsoring a number of research projects on the educational problems of the weaker sections of the society through researchers working in the areas of sociology, economics, psychology and so on. The UGC has also made an open commitment to this trend by establishing its Departments of Special Assistance in institutions and departments primarily devoted to other disciplines. Discipline-wise classification of the studies in this category has been presented in Table 4.

Table 4

DISCIPLINE-WISE DISTRIBUTION OF DOCTORAL STUDIES IN EDUCATION

<i>Discipline</i>	<i>No. of Ph.D.s</i>
Psychology	401
Sociology	91
History	25
Economics	18
Others	76
Total	611

The discipline of psychology has contributed the maximum number of studies on education. This is quite understandable as the university departments in these two areas of study have grown more or less simul-

taneously and quite often under common leadership and guidance. More important than this is that the two subjects share a large number of topics as common areas of study such as learning, motivation, testing and measurement, guidance and counselling, and personality. The next area, namely, sociology, has also contributed a fairly large number of studies on education although its association with education has not been as old as that of psychology. The increased number of studies on education being taken up by the scholars from other fields is a welcome trend that should be further strengthened.

Non-Ph.D. Research

Conducting independent research projects in education, without any aspiration for a degree, has been a comparatively recent trend. Prior to Independence, there was possibly no incentive to scholars for taking up such studies either in the form of academic recognition or in terms of financial assistance. But, from 1950 onwards, the situation began to change and by now there are a large number of studies of this type. The total number of non-Ph.D. studies, by 1983, has gone up to 1017, contributing one-third of the total research output in education. Table 5 gives a picture of the growth of non-Ph.D. research in education over the last four decades.

Table 5
DECADE-WISE DISTRIBUTION OF NON-PH.D.
RESEARCH IN EDUCATION

<i>Years</i>	<i>No. of Studies</i>
1941-50	5
1951-60	56
1961-70	250
1971-80	556
1981-83	150
Total	1017

As can be observed, non-Ph.D. research in education, after making an insignificant beginning during the 1940's, grew in number at a considerable pace, recording as many as 556 studies during the decade 1971 to 1980. It may be noted that these include quite a number of studies completed by the scholars from areas of study other than education. Also, most of these

are projects financed after an expert scrutiny by various financing agencies. The most important value of such non-Ph.D. researches is that they can be less meticulous about the academic rigour and become, therefore, more concerned with relevant practical aspects of the problem under study. Also, this provides scope for organizing studies through teams of scholars instead of individuals, which is badly required in the field of education. The total number of researches in this category appears to be impressive, when seen in absolute terms. Yet, on closer examination in the context of the vastness of the country, the gigantic network of educational institutions, and the multiplicity of practical problems in the field of education, the number seems to be extremely small. It is essential that this category of research be more strengthened in quantity as well as quality instead of relying on studies leading to academic degrees for finding solutions to practical problems of education in the country.

B. QUANTITATIVE PICTURE OF RESEARCH IN DIFFERENT AREAS OF EDUCATION

It will not be an erroneous judgment to say that education as a subject of study, even after several decades of teaching and research, is still in a state of flux. Neither are its boundaries well demarcated nor are its content areas distinctly defined. Under such a state of uncertainty any exercise to classify the researches into different areas and study the growth of research in them, is bound to entail overlappings and vagueness and even confusion and controversies. Further, there is no one ideal way of classifying the studies into different areas that would be universally acceptable. Therefore, in order to minimize confusion and facilitate an easy comparability with the contents of other chapters of the volume, the authors have adopted in this chapter the same scheme of classification as the one followed for developing various trend reports presented in later chapters. Keeping these considerations in mind, an attempt has been made in the following paragraphs to analyse the growth of educational research in the country under seventeen different areas.

Overall Position

Before trying to trace the growth under individual areas, it should be worthwhile to gain an overall

understanding of the quantum of research completed across different areas. This would also help assess the extent of attention paid by the researchers to various dimensions of education and identify the inter-area disparities in coverage. Table 6 presents such an analysis of the research studies in education, also specifying therein the nature of the studies as Ph.D. studies and independent research projects.

Table 6
AREA-WISE CLASSIFICATION OF EDUCATIONAL RESEARCH

Sr. No.	Area	Doctoral Studies		Research Projects	Total
		Educational	Other Subjects		
1.	Philosophy of Education	71	12		83
2.	History of Education	96	29	10	135
3.	Sociology of Education	116	144	169	429
4.	Comparative Education	26	6	4	36
5.	Economics of Education	15	19	37	71
6.	Learning, Personality and Motivation	155	164	53	372
7.	Guidance and Counselling	48	37	44	129
8.	Tests and Measurement	91	85	61	237
9.	Curriculum, Methods and Textbooks	125	11	125	261
10.	Language Education	40	6	26	72
11.	Educational Technology	54	3	22	79
12.	Correlates of Achievement	110	34	31	175
13.	Educational Evaluation and Examinations	78	10	111	199
14.	Teaching and Teacher Behaviour	68	5	15	88
15.	Teacher Education	129	12	95	236
16.	Educational Management and Administration	173	23	181	377
17.	Non-formal Education	28	11	33	72
Total		1423	611	1017	3051

The distribution of researches over different areas brings to surface several interesting facts reflecting wide inter-areas disparities. While some areas have been

explored fairly extensively, some others have received negligible attention; in some areas the contribution of the scholars from other disciplines outnumbers that of researchers from the field of education; in yet another areas there are more number of independent research projects than Ph.D. studies.

It should be observe that of the seventeen areas listed, seven areas, namely, philosophy of education, history of education, sociology of education, economics of education, personality, learning and motivation, guidance and counselling, and tests and measurement, have a dual disciplinary character. It is easy to see that these areas share common conceptual bases with the disciplines of philosophy, history, sociology, economics and psychology. In contrast to these, the other ten areas can be considered core education areas as they provide the basic substance to education as a subject of study. In this context, several significant findings emerge from the figures given in Table 6, which have been presented below:

1. One would expect the major thrust of research in education, as in any other discipline, to be on the core areas. This would imply larger number of studies on topics under these areas so that the basic contents of education as a subject of study are explored extensively. However, in actuality, nearly half the number of studies till now completed are in dual disciplinary areas.
2. The area of personality, learning and motivation alongwith the areas of guidance and counselling and tests and measurement, which can be taken to constitute dual disciplinary area of educational psychology, contributes nearly one-fourth of all the studies. This clearly shows that educational researchers still depend very heavily on psychology for drawing problems for exploration. This, by itself, need not be an undesirable situation. But, what matters is whether these studies have a real relevance to the educational process or remain as mere academic exercises lying only on the periphery of the field of education. This observation applies not only to the studies on educational psychology but also to other studies with a dual disciplinary character.
3. Where individual areas are concerned, sociology of education has the biggest share comprising 429 studies. In comparison to this, the areas of philosophy of education and history of education have attracted very small number of research

chers. This is quite surprising in view of the fact that these latter areas have been a part and parcel of the curriculum in education right from the beginning whereas the sociology of education is a relatively new entrant to the field.

4. Even among core areas there seems to be no systematic basis for the choice of different areas. A vital topic as teaching and teacher behaviour has received very little attention of the researchers. So is the case with comparative education. In contradistinction, teacher education which represents a second-order activity in the field of education has received very high priority.
5. Two core areas which have received maximum attention are educational administration and correlates of achievement. The other area which has a large number of researches is curriculum, methods and textbooks. But this could be because the area itself is quite omnibus and amorphous as it includes a wide variety of topics beginning from a simple survey to a highly sophisticated experimentation with teaching methods or meticulously conducted curriculum evaluation studies.
6. It seems that although the concept of education has got significantly broadened in its scope, educational researchers have been unable to wean themselves away from the formal system. This becomes obvious from the extremely small number of studies conducted in the area of non-formal education.

Area-wise Overview

As has been noted, educational research in different areas seems to have grown at different paces. In some areas such as sociology of education beginning seems to have been made much more recently and yet the contributions have been the largest, while in some other areas such as comparative education and philosophy of education, even with a long-standing tradition, progress has been quite modest. The present subsection gives a brief overview for each area under separate heads. The decadal growth of research studies over the last four decades has been traced for each area. This is followed by a few general observations about the coverage of different problems and topics under each area. The objective is only to depict a broad outline indicative of the work done in each area. Therefore, the observations and references to particular

research studies will be neither exhaustive nor strictly critical and evaluative.

Philosophy of Education

As the title itself suggests, this is one of the foundational areas in the field of education. The study of philosophy in the content of education has been there right from the time education became an independent subject of study. In fact, the two subjects, philosophy and education, are invariably described as study of two dimensions of the same phenomenon. Further, India is acclaimed as having a long-standing philosophical tradition in all its academic endeavours. Under these conditions it would just be natural to expect a fairly large number of studies in this area. However, the actual situation in this regard totally belies all such expectations. There have been, in all, only 83 studies in this area, all being Ph.D. studies in education or philosophy. It is intriguing to note that no researcher or institution has considered it worthwhile to undertake research projects in this area.

Table 7

PROGRESS OF RESEARCH IN PHILOSOPHY OF EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	2	—	—	2
1951-60	11	2	—	13
1961-70	9	3	—	12
1971-80	36	5	—	41
1981-83	13	2	—	15
Total	71	12	—	83

Although the total number of studies completed in the area is very small as compared to that in other areas, there seems to be steady increase in the number of studies. While there were in all, only 27 studies completed in the first three decades, there were as many as 41 studies in the decade 1971-80. And, a good number of researches have been completed in just two years between 1981 and 1983. This is definitely an encouraging feature. However, in terms of the topics and problems studied by the researchers the position is quite disappointing. Indian researchers, by and large,

have, concentrated on mere explication of educational thoughts contained in the writings of leading personalities of the country. The other main trend has been to explore ancient Indian lores for highlighting the educational ideas contained in them. The studies dealing with the application of modern schools and methods of philosophical analysis to contemporary issues and educational problems of current concern to the country are practically absent. Exceptions to this are very few, such as the study of Equality of Educational Opportunities by Seshadri (1980) or the study by Sastry (1980) regarding relationship between philosophical beliefs and classroom behaviour of teachers.

History of Education

The studies in history of education in India began during the decade 1941 to 1950. Since then, it has considerably grown in number with as many as 135 studies reported till now. But when this is examined in the context of the Indian sub-continent which has a long heritage and a multiplicity of cultural and linguistic groups, this number is definitely too small as compared to the magnitude of the work needed. However, a heartening fact is that, unlike in philosophy of education, a considerably large number of studies have been carried out as independent research projects. As far as topics studied are concerned, quite a few scholars have tried to write an account of the ancient Indian education system as reflected in ancient scriptures and lores such as *upanishads*, *smritis*, *jataka kathas* and so on, and are similar in their approach as well as content to some of the studies reported under the philosophy of education. A second trend, which is quite welcome, is the interest shown by researchers for regional studies. The value

of such regional studies is that it helps the researcher to explore into greater depth and with better insights the specific regional contexts instead of just attempting to collate easily available information at the national level. One should note that the history of India is itself not such a unified one both from the political and the socio-cultural points of view. Another major trend has been to conduct sectoral studies with respect to primary, education, secondary education and so on. Also, a couple of studies have been done focussing on education as an instrument of change. The studies do represent a wide variety of topics. However, the methodology adopted needs to be considerably strengthened as most of the researchers have depended, more or less, exclusively on policy documents, reports of committees and commissions, all published by the government agencies. Often, the research reports happen to be a loose ensemble of facts collected from such documents and fail to reflect the necessary depth and authenticity.

Sociology of Education

Research in this area began much later as compared to other areas of education. The first study on sociological aspects of education was reported only in 1958. In all during the decade 1951 to 1960, ten studies were reported and interestingly nine of them were either independent research projects or doctoral studies in disciplines other than education. However, it soon picked up momentum and registered a phenomenal increase during the decade 1971-1980 with more than 250 studies. Particularly, the number of independent research projects contributed a large share to this. Probable reasons for this were the establishment of the ICSSR in 1968 and the national policy of focussing

Table 8
PROGRESS OF RESEARCH IN HISTORY
OF EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	3	—	—	3
1951-60	8	1	—	9
1961-70	23	15	1	39
1971-80	54	12	9	75
1981-83	8	1	—	9
Total	96	29	10	135

Table 9
PROGRESS OF RESEARCH IN SOCIOLOGY OF
EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	1	4	5	10
1961-70	15	38	30	83
1971-80	72	79	109	260
1981-83	28	23	25	76
Total	116	144	169	429

attention on sociological factors influencing the educational system. During this decade, ICSSR sponsored a large number of studies related to the educational problems of the weaker sections of society and the NCERT also included this under the list of priorities.

Making observations about the topics covered by more than 400 studies will be a difficult job. Anyhow, one would normally expect that these would include a fairly good number of studies viewing the whole of educational endeavour in the broader sociological context. But even a cursory glance at the studies reveals that the number of such studies is almost negligible. The studies are located in the formal institutional context with very few exceptions. A large number of studies are socio-psychological, exploring the relationship between several psychological variables and socio-economic status, all variables being measured through standardized tools administered to school or college students. A still larger number of studies essentially involve collection of data about the problems of education among minority and deprived communities using questionnaires. These studies also concentrate on the students already enrolled in schools and colleges. Another type of studies deals with student activism at the collegiate level. Still another area relates to the adoption of innovations and change processes at the school or college level. Many of the studies reflect neither a sociological perspective nor an educational perspective; their only qualification to be called educational is that the sample has been drawn from an educational institution. What is really required is to view the educational process in a macro-social perspective instead of dealing only with the individuals enrolled in or related to formal educational institutions. After all, education is not just confined to schools and colleges. The need is to take up such researches as the one taken by Mahale (1975) who studies education in a rural setting in the social-anthropological perspective or the study by Lakra (1976) who examines the impact of education in certain tribal communities.

Comparative Education

Comparative education has definitely remained a neglected area. The subject did not figure in the scheme of classification adopted in 'A Survey of Research in Education' (Buch, 1974) at all, perhaps because the number of studies completed by that time was too small to justify a separate category. Even the 'Second Survey of Research in Education' (Buch, 1979) includes only eleven studies under this area. By now,

in all, 36 research studies have been completed in this area. As can be seen the major contribution comes in the form of doctoral studies in education.

Table 10
PROGRESS OF RESEARCH IN COMPARATIVE
EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	—	—	—	—
1961-70	—	—	—	—
1971-80	24	4	4	32
1981-83	2	2	—	4
Total	26	6	4	36

Note : This does not include a few studies in this area which appear under different sections in 'A Survey of Research in Education' (Buch, 1974)

As far as topics covered are concerned there are quite a few studies comparing the educational systems at the school or the college level in two different countries. Also, a comparison of the educational and the social background of the student community in different countries has been attempted by quite a few scholars. Another topic covered is the comparison of teacher education programmes. An important observation to be made is that most of these studies have been executed in a few universities which have relatively a high foreign student enrolment. It may be mentioned that India with its diverse socio-cultural and historical settings is the ideal ground for conducting comparative education research with different approaches such as area studies approach, historical-sociological approach or case study approach in addition to the general inter-country comparisons. It is really surprising that educational researchers have almost completely failed to explore such a fertile area of study.

Economics of Education

It is interesting to note that a research study in this area leading to a university degree was completed in 1935 at the Bombay University. In spite of this, the progress of research in this area has been highly unimpressive. Till now, only 71 studies have been completed of which the share of the doctoral studies in education is only fifteen. The trend, anyhow, indicates

that the area has slowly started attracting more number of researchers. Educational researchers are shying away from this area possibly due to the requirement of considerable proficiency in econometric methods.

Table 11
PROGRESS OF RESEARCH IN THE ECONOMICS
OF EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	1	—	2	3
1961-70	2	7	7	16
1971-80	8	10	23	41
1981-83	4	2	5	11
Total	15	19	37	71

The study of institutional finances and cost effectiveness has attracted a number of researchers. The relationship between education and labour input has also been studied. A recent trend, beginning with Nair (1978), has been to analyse the role of education in the process of growth. A fairly good number of studies on the economics of education have been completed at the Economics Department of the Bombay University which has a Unit on the Economics of Education identified by the UGC for special assistance. Yet, there is a long way to go before studies in this area can really make an impact on policy-making with regard to educational finances. As in many other areas, here also the researchers have to extend the scope of their explorations bringing into their purview the problems related to non-formal education and thereby facilitate the evolution of low-cost alternative systems of education.

Learning, Personality and Motivation

The area comprises a variety of topics making it quite omnibus in nature. The value of these studies, many of which have been completed in psychology departments, is that they help understand and explicate the psychological process that underlines human growth and development. Thus, they would have import to the vital aspects of educational process leading to improvements in educational practices. Studies in this area began in the early fifties and

Table 12
PROGRESS OF RESEARCH IN LEARNING,
PERSONALITY AND MOTIVATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	9	7	—	16
1961-70	20	24	7	51
1971-80	92	105	41	238
1981-83	34	28	5	67
Total	155	164	53	372

slowly increased in number during the next decade, sharing the contributions, more or less, equally between education and other disciplines. In this field also as, in other cases, a maximum number of studies were conducted during the decade 1971-80. But, it should be noted that other disciplines have contributed a relatively larger share to this area than education. Also, as compared to many other areas, the number of research projects has been quite small and it appears to be further decreasing. In all, there are 372 studies conducted in this area till now in which nearly 45 per cent are doctoral studies conducted in disciplines other than education.

A majority of the researchers seem to be concerned with conducting either descriptive or correlational surveys of learner characteristics and environmental variables. In the last few years creativity has been explored in this context fairly extensively. Apart from test construction and correlational studies there have also been studies dealing with development and nurture of creativity. Exceptional groups such as the talented, slow learners, and disabled have been the sample for quite a few studies exploring personality characteristics. A new trend that seems to have evolved during the last few years is to study cognitive development processes in the Piagetian perspective. There are also a considerable number of studies involving sociometric analysis. The studies on motivation are quite conspicuous by their extremely low representation. Even in the studies dealing with motivation, no attempt has been made to understand the role of motivation in the context of learning process; they only refer to the achievement motive and the affiliation motive. It is necessary to design studies involving personality, learning and motivation but with

an educational perspective. Without this the studies would become more psychological in nature and perspective rather than educational.

Guidance and Counselling

The first research study on guidance and counselling was undertaken in the year 1952 when the Bureau of Psychology at Allahabad studied the allocation of junior high school leavers to different streams in the higher secondary education. Since then there has been a steady progress and by now 129 studies have been completed in this area. It can be seen that the Ph.D. work in other areas, particularly in psychology, has continuously contributed to this area. The pattern of growth in this area follows the pattern of growth of educational research in the country as a whole.

Table 13

PROGRESS OF RESEARCH IN GUIDANCE AND COUNSELLING

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	3	1	3	7
1961-70	12	15	18	45
1971-80	28	17	21	66
1981-83	5	4	2	11
Total	48	37	44	129

The researchers have concentrated their attention mainly on the students at the high school level. The topics include a variety of problems related to vocational maturity and development, guidance needs and problems faced by students, selection procedures and mental health. It is quite encouraging to note that educational researchers have paid special attention to the needs and problems of the exceptional children, including the gifted, the mentally subnormal or retarded as well as physically handicapped children. A significant development in the country which has missed the attention of the researchers is the unprecedented inflow of a large number of children from disadvantaged sections to the elementary schools. Somehow, practically no research has been done regarding the guidance and counselling needs of elementary school children. It is of immediate importance that

scholars turn their attention to the elementary school level. Similar is the case with the needs of the students at the collegiate level. At a stage when a beginning has been made by a few universities by establishing student service units, research studies exploring the field in a systematic way would contribute greatly to the strengthening of the student welfare programmes at the collegiate level.

Tests and Measurement

Test construction has received considerable attention of researchers in the fields of education as well as psychology. As many as 175 scholars in these fields have conducted doctoral studies culminating in the production of standardized tools for measuring various abilities. Also, 61 independent research projects have been completed in this area. Beginning in the decade 1951 to 1960, the progress in the area in terms of number of studies is quite considerable. The area, possibly, has grown mainly because of the strong influences made by psychology right at the early stage of development of education as an independent subject of study.

Table 14

PROGRESS OF RESEARCH ON TESTS AND MEASUREMENT

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	6	6	7	19
1961-70	32	34	20	86
1971-80	41	38	22	101
1981-83	12	7	12	31
Total	91	85	61	237

A maximum number of studies in this area have been on general intelligence followed by aptitude tests and personality and interest inventories. In the recent past, the measurement of creativity has been taken up in a serious fashion. This has resulted in more than ten creativity tests. Some attempts have also been made to psychometrize the Piagetian cognitive tasks for measuring cognitive growth of children. Again, the focus has been almost exclusively on secondary

schools. An important point to be noted is that these tests, although they specify age norms, are usable only with school children. This is because, in most cases, samples consisting of only the children already attending schools are used for standardization. It is necessary that research efforts in this area are carried out through teams of researchers by undertaking institutional-level projects; test development involves a lot of work involving a large-scale field testing which it is doubtful whether individual scholars pursuing their doctoral studies can do in a wholly satisfactory manner.

Curriculum, Methods and Textbooks

Curriculum, methods and textbooks form the central focus of all organized instructional programmes. So, it is of vital importance to conduct researches in this area which would provide concrete basis for evolving and adopting particular set of curricular material and specific approaches. Studies in this area have been reported even prior to 1950. In all, there are, by now 261 researches which include 125 research projects. An equal number of studies are found under the doctoral studies in education. Yet, considering the fact that this number represents researches on more than 20 school systems operating in different parts of the country with their own curricula and textbooks, the quantum of the research seems to have touched only the tip of the problem.

Table 15

PROGRESS OF RESEARCH IN CURRICULUM, METHODS AND TEXTBOOKS

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	4	1	—	5
1951-60	8	—	8	16
1961-70	16	3	32	51
1971-80	77	3	68	148
1981-83	20	4	17	41
Total	125	11	125	261

As mentioned earlier it includes a wide variety of topics ranging from simple textbook surveys to complex experiments on teaching. As a matter of fact, a very large number of studies completed are surveys of

textbooks in different parts. Such studies have got a big boost during the recent past due to the interest taken and the funds provided by several State organizations. The Maharashtra State Board of Textbook Production and Curriculum Research has, during the last two decades, contributed many useful researches on curriculum and textbooks. A common observation again is that the studies are mostly dealing with the middle and the high school levels. The lower primary education stage as well as the collegiate education stage have been grossly neglected. Further, as one would see many of the studies on curriculum and textbooks lack depth, analysing features only at the superficial level. The studies on methods include a number of classroom experiments, some of which adopt highly sophisticated designs. However, the relevance and impact of their findings to the improvement of classroom practices seems to be marginal. The main objective of these studies has been to evolve methods incorporating, obviously, better inputs and operations, and pit them against the vaguely described traditional method. They often arrive at trivial and obvious findings which perhaps do not require sophisticated experimentation. The need is that researchers should attempt large-scale validation studies with total curricular inputs, including relevant methods, through appropriate field experimentations instead of carrying out piecemeal experiments and opinionnaire-based curriculum evaluation studies.

Language Education

The language education in the country has remained as enigmatic as it was prior to Independence. Time and again, changes have been introduced both at the State and the national levels regarding the language education. But, these actions have been guided more often by expediency than research-based findings. At the same time it should also be mentioned that educational researchers themselves have remained unduly lax and unconcerned in tackling the vexing problems and issues related to the language education. Although certain studies related to the language curriculum in school had been undertaken earlier, research on the language education began in a serious manner only in the decade 1961 to 1970. From there onwards it has made considerable progress, particularly depending on the work done at three institutions, namely, the Central Institute of Indian Languages at Mysore, the Central Institute of English and Foreign Languages at Hyderabad, and the Central Hindi Directorate at

Agra. In all, seventy-two studies on the language education have been reported till now, out of which nearly forty per cent have been conducted as independent research projects. However, it should be heartening to observe that just during the last couple of years as many as sixteen doctoral studies and six research projects have been completed.

Table 16

PROGRESS OF RESEARCH ON THE LANGUAGE EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	—	—	—	—
1961-70	1	—	1	2
1971-80	25	4	19	48
1981-83	14	2	6	22
Total	40	6	26	72

A review of the completed studies indicates that a large number of them deal with analysis and evaluation of the language textbooks and curriculum prescribed at the school level. The other topic attracting the attention of researchers is reading in the mother tongue or English. There are also a few studies dealing with the classroom teaching of language. The singular drawback of the research effort in this area, with very few exceptions, is the failure of the researchers to utilize the psycholinguistic and sociolinguistic principles already explored by the researchers in the area of cognitive psychology and linguistics. Researchers should undertake studies involving curriculum development in the mother tongue based on the primary data about the linguistic status of children at various age levels instead of simply aping the English language primers for selecting and sequencing relevant inputs.

Educational Technology

The very concept of educational technology has evolved only after 1950, following the advent of the programmed learning. Therefore, it is not surprising that researches on educational technology began in India only during the decade 1961-70. In fact, the area has been represented exclusively as Programmed

Learning in 'A Survey of Research in Education' (Buch, 1974). However, the concept of educational technology has got broadened since then to include all attempts to apply systems approach for the improvement of instructional systems in terms of their effectiveness and efficiency. What was earlier referred to as audio-visual education has been integrated with the field of educational technology as representing the hardware components of the system. Researches in this area, although they began only during 1961 and 1970, increased considerably during the next decade mainly due to the efforts made by the Indian Association of Programmed Learning which came into existence in 1968. It is pertinent to note that the Association has changed the name and is now known as Indian Association of Educational Technology. The decade 1971-80 recorded as many as 44 studies.

Table 17

PROGRESS OF RESEARCH IN EDUCATIONAL TECHNOLOGY

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	—	—	—	—
1961-70	2	2	11	15
1971-80	37	—	7	44
1981-83	15	1	4	20
Total	54	3	22	79

Although the concept got broadened, researches in the area have largely remained confined to the programmed learning. A change in this trend can be observed only during the last few years. There are a few researches the preoccupation of which is to evolve specific instructional strategies, wherein the programmed learning is just one component, in order to improve instructional effectiveness and efficiency. It is high time to realize that mere experimental comparisons of two or more methods following the precepts of experimental psychologists would not yield the necessary results for effecting improvement in instructional practices. Another welcome trend in the field is represented by the media studies related to the use of the radio and the television. Yet, there is need for researchers to go in for evolving and experimenting

with alternative approaches for the use of these media instead of indulging in mere evaluation of official programmes and facilities in this regard.

Correlates of Achievement

The central focus of all formal educational efforts is academic achievement on the part of the students. Even though, it is desirable to have all-round development as the goal of educational process where academic achievement would be just one of the dimensions, in most educational institutions academic achievement continues to be the exclusive concern narrowing down the very concept of educational process. Nevertheless, it is important to note that achievement in school subjects is not an independent phenomenon. Rather, it is directly influenced by a number of factors, some of which are personal to the individual while many others are located in the environment in which the learning process takes place. Thus, in order to fully understand the concept as well as the process of academic achievement it is imperative to identify and explore various factors related to academic achievement. Studies pursuing such an objective began in the country during the decade 1951-60. However, the number increased quite speedily and by now, there are 175 studies completed in this area. A point that becomes obvious is that the area has been explored essentially as a topic of academic interest rather than of direct practical relevance, as very few independent research projects have been completed in this area.

Table 18

PROGRESS OF RESEARCH ON CORRELATES OF ACHIEVEMENT

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	1	1	—	2
1961-70	15	10	13	38
1971-80	72	22	16	110
1981-83	22	1	2	25
Total	110	34	31	175

Researchers have studied a large number of personality characteristics of the learners exploring their possible relationships with academic achievement. Creativity, adjustment, attitude and values are other psychological characteristics that have been explored. Socio-economic status, directly or indirectly, is one variable that finds a place in largest number of studies. Some have also studied institutional characteristics. A major trend discernible during the last few years is to make group-specific studies, particularly with respect to disadvantaged groups such as scheduled castes and scheduled tribes.

Educational Evaluation and Examination

The educational evaluation procedures and examination have been the subject of extensive research for the past three decades. The work on examination reforms done by the NCERT, the UGC and the Association of Indian Universities underscores the importance that has been attached to this area at the national level. This is quite understandable as under the present circumstances marked by the examination-oriented curricular programmes and the degree-linked job requirements, it is examinations which hold the position of premium-giving credibility to the whole system of education. Researches on educational evaluation began in the country in 1943, marking the beginning of educational research itself when the Bombay University awarded the Ph.D. degree in education to Chickermane (1943) for his work of factor analysis of arithmetical ability among school children. The area has

Table 19

PROGRESS OF RESEARCH IN EDUCATIONAL EVALUATION AND EXAMINATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	1	—	—	1
1951-60	5	2	13	20
1961-70	43	6	56	105
1971-80	21	2	35	58
1981-83	8	—	7	15
Total	78	10	111	199

made, thereafter, steady progress. Till now, 199 studies have been reported on the various aspects of evaluation and examination. An interesting feature is that about fifty per cent of these studies are independent research projects. The large number of research projects is possibly due to the examination research units that were functioning at various university centres and the committed work carried out by certain individual scholars such as Bokil, Gayen, Lele, Taylor and others. The small number of studies that have been reported after 1980 gives an impression that this enthusiasm has been on the wane among the researchers.

The construction of achievement tests for different school subjects has attracted a number of scholars. Also quite a few studies have been conducted analysing the factorial structure of achievement abilities. The procedures have been strictly guided by the traditional steps in psychological test development without an appropriate consideration to more recent developments in the field of achievement testing. The topic that has the biggest proportion of studies is examinations. Several aspects of examinations such as reliability, question types, internal assessment, grading system, and innovations have been covered. In the recent past quite a few studies have been conducted analysing the problems and issues related to mass copying.

Teaching and Teacher Behaviour

It is needless overemphasize the fact that the teacher and his actions in the classroom have the most decisive impact on the effectiveness of any instructional system, in a formal or non-formal set-up. Thus, an analysis of the teacher behaviour in a scientific manner and its relationship with the learning outcomes of the pupils is of central importance for effecting improvement in educational practices. This area of study which forms the most vital core area of pedagogy has, somehow, not been researched into in an adequate manner by the educational researchers. Although a few studies in this area were conducted prior to 1970, systematic work related to the study of teaching and teacher behaviour began only in the decade 1971-80. In all, 59 studies were completed during this period. Credit should be given to the Centre of Advanced Study in Education at Baroda for initiating the earlier attempts and creating a solid base through a number of research studies, national seminars and cooperative research projects. A mention should also be made of the sustain-

ed efforts that are being made during the later period at the NCERT and the Department of Education at the Indore University.

Table 20
PROGRESS OF RESEARCH ON TEACHING AND
TEACHER BEHAVIOUR

Years	Doctoral Studies		Research Projects	Total
	Education	Other Studies		
1941-50	—	—	—	—
1951-60	1	1	1	3
1961-70	4	2	3	9
1971-80	49	—	10	59
1981-83	14	2	1	17
Total	68	5	15	88

The topics covered under the studies reported in this area reveal that research has only just begun in this area as a wide variety of topics related to the area are yet to be explored in an adequate fashion. About seventy per cent of the studies deal with the influence of teacher factors such as personality characteristics, subject competence and professional qualifications on the behaviour of the teacher in the classroom. It is only in the remaining thirty per cent of the studies that pupils' learning outcomes figure as a criterion variable; even among them, in only seven studies the classroom teaching has been viewed in an integrated fashion bringing into simultaneous consideration all the three aspects, namely, teacher factors, teaching behaviour and learning outcomes. An important point that has not been taken seriously by the researchers is the content-related influences on teaching behaviour and the consequent effects on the pupils' learning outcomes. Further, the teaching-learning process is essentially an interactional affair, not a unidirectional one flowing from the teacher. Thus, it is also necessary to study the effect of pupil entry characteristics with respect to all domains of behaviour on the behaviour of the teacher in the classroom.

Teacher Education

It is a well-known fact that teacher education is the precursor of education as an independent subject of study at the university level. Even now, the main

preoccupation of a large number of university departments in the country continues to be teacher education. It is but natural therefore that educational researchers have conducted a good number of studies on teacher education. Research in the area made a modest beginning with only four studies during 1951 and 1960. However, the progress was quite impressive and received a big impetus during the decade 1971-80 which witnessed the establishment of the National Council of Teacher Education followed by the establishment of the State Boards of Teacher Education in a number of States. During this period the UGC also set up a panel on teacher education to steer the programmes of research and development in teacher education at various university departments and colleges. The result of all these efforts has been that as many as 146 studies on teacher education were completed during this decade. The trend has got further strengthened and 45 more studies have been completed during the last two years.

Table 21

PROGRESS OF RESEARCH IN TEACHER EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	—	—
1951-60	—	1	3	4
1961-70	19	3	19	41
1971-80	85	7	54	146
1981-83	25	1	19	45
Total	129	12	95	236

Most of the studies in the area involve sample surveys of the problems and issues related to teacher education programmes in the country. Some have addressed themselves to the task of evaluating teacher education programmes in different regions and some have studied innovations introduced into teacher education programmes. It is unfortunate that although teacher education is the mainstay of their regular activity, educationists have failed to make any decisive dent on the teacher education programme. Most of the studies conducted are superficial resulting in findings that are already known. In the midst of this, one topic that has made some inroads into regular

programmes through systematic research and development activities is microteaching. Research in microteaching which began as a small experiment in teaching school children at Allahabad has grown into considerably large proportions and it is now being explored in a number of institutions all over the country. Researchers seem to have grossly neglected some of the important topics that would give newer directions to the programme of teacher education in the country. For instance, there are a number of innovative programmes of teacher preparation operating in the country. There is need to conduct comparative evaluation of these institutions on the one hand, and in-depth case studies on the other.

Educational Management and Administration

The evaluation of administrative structures in education began almost with the initiation of public financing of educational efforts. Periodic reports prepared by various committees and commissions did incorporate in them the study of educational management and administration prevalent during the respective periods. However, systematic research work in the field began much later in the country when doctoral studies were taken up at different universities. The first three Ph.D. theses in education dealing with the problems related to educational administration were accepted in the year 1951, marking the beginning of research in this area. Although the progress in the initial period was slow and halting, it made great strides during the latter half of sixties and continued with the same trend during the later years. It may be

Table 22

PROGRESS OF RESEARCH IN EDUCATIONAL MANAGEMENT AND ADMINISTRATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	4	4
1951-60	8	—	15	23
1961-70	19	5	22	46
1971-80	110	17	104	231
1981-83	36	1	36	73
Total	173	23	181	377

safely concluded that this is by far the most attractive area for scholars from the field of education. This holds good with regard to doctoral studies as well as research projects. It has attracted very few persons from other areas for taking up doctoral work. As in other areas, the decade 1971-80 registered the maximum number of research studies.

A perusal of the topics studied reveals that a descriptive-evaluative study of administrative structures and authorities and their problems is the most explored topic. A number of studies focussing on universalization of elementary education have been conducted. Particularly, the NIEPA has completed the study of this problem with respect to Jammu and Kashmir, Uttar Pradesh, Madhya Pradesh, Orissa, Rajasthan, Bihar, Assam and Andhra Pradesh. Effective introduction of innovations has been the concern of yet another group of researchers. Another group of studies has been conducted with a social-psychological perspective covering such variables as organizational climate, classroom climate, teacher morale, leadership behaviour, job motivation, role conflict and role performance. It should be noted that all the studies are descriptive-evaluational focussing only on the existing structures. No research study has been done with regard to the use of innovative models of management and administration. Further, the studies have dealt mainly with the secondary school administration paying only scant attention to the primary stage and almost completely ignoring the collegiate stage. Also, in spite of the fact that the number of studies has been quite large, several regions of the country and several aspects of education have remained untouched by the researches. Also, it is necessary to undertake studies dealing with macro-level planning and administration of education.

Non-formal Education

Although, the terminology 'non-formal education' is new, educational programmes that belong to this category have been in operation in the country for a long time. These include programmes organized under the banner of social education, adult education, continuing education, extension education, lifelong education, farmers' functional literacy programme and so on. The first research study in this area came out in the form of a research project completed by Gadgil in 1945. During the next fifteen years only two studies were completed. However, after the

establishment of the National Fundamental Education Centre in 1956 which got merged into the NCERT in 1961, there has been a slow but steady growth of studies in this area. It is worth mentioning that during the seventies, the UGC started encouraging the universities and colleges to undertake programmes in the area of adult and continuing education. A number of universities opened full-fledged departments of continuing and adult education. This area got further impetus with the launching of the National Adult Education Programme in 1978 which envisaged monitoring and evaluation based on systematic research as forming an integral part of the programme. The result of these developments is seen in the relatively larger number of studies conducted during the decade 1971-80 and the last two years.

Table 23
PROGRESS OF RESEARCH ON NON-FORMAL
EDUCATION

Years	Doctoral Studies		Research Projects	Total
	Education	Other Subjects		
1941-50	—	—	1	1
1951-60	1	1	—	2
1961-70	2	2	12	16
1971-80	19	7	11	37
1981-83	6	1	9	16
Total	28	11	33	72

The major topics studied under this area belong to four distinct categories, namely, adult education, non-formal education for children, evaluation of adult education and other non-formal education programmes, methods and materials. An important observation to be made is that except for a few early attempts, most of the studies deal with superficial aspects of the programme and do not provide any insight. It may be pointed out that non-formal education programmes, being devoid of the rigidity that goes with formal education programmes, with regard to organization, scheduling, curriculum, etc., provide the ideal setting for the educational researchers to try-out innovative ideas. Yet, the researchers have done very little work to exploit this situation.

III

A GENERAL REVIEW OF EDUCATIONAL RESEARCH

The quantitative growth of educational research in the country with respect to individual areas of study has been traced in the previous section. The major trends in each area in terms of topics and problems covered by the studies have also been noted. No serious attempt was made to take a critical view of the nature of the topics covered or the methodology except for a few remarks. The omission was deliberate for two reasons. One is that it was not warranted as areawise critical reviews should be found in the respective trend reports which have the scope to provide better coverage as well as reflect more pointed evaluations and scholarly insights into each area. The second reason is that, in a way, such a review is what is being attempted at in this section. Yet, right at the outset, it should be noted that the ever-burgeoning research literature on education, by the very bulk of it, does not allow for a thoroughly studied critical assessment of the situation. The observations would, therefore, be necessarily of a general nature cutting across the wide spectrum of areas and topics covered by more than three thousand studies.

Reference to specific areas of research or studies is obviously inexhaustive. The selection of the specific areas or studies for reference has been deliberately designed to pinpoint an issue or illustrate a malady regarding the particular aspect of educational research being discussed. However, if any observation made appears to be overgeneralized and overcritical, the purpose has been only to highlight, with force, the malaise underlying the whole endeavour of educational research in the country and definitely not to disparage the contributions made by individual scholars or institutions. The value of such an exercise, notwithstanding the limitations mentioned above, needs no further elaboration. Such an understanding of the general status of research in the country serves as a prelude as well as a basis for designing and initiating concrete and palpable actions for effecting improvement in the organization and conduct of educational research at the national level. In the following paragraphs the authors have tried to discuss some of the major issues and problems that characterize the current status of educational research in the country.

Need for an Educational Perspective

Education, like all other social sciences, is concerned with human beings, their growth and development in an individual or social context. Yet, education is concerned with man in a very different way than other subjects of study. Education, unlike most other branches of knowledge, does not focus on a natural phenomenon but on a socially contrived phenomenon wherein environmental setting, human as well as physical, is manipulated in appropriate ways so as to achieve desirable changes in the status of other individuals. This applies equally well to formal and non-formal educational processes. And, it is this factor which may be called the educational perspective, that makes education a distinct subject of study. Thus, seen in this background, an educational researcher shares a common source with other social and behaviour sciences for drawing the substance for his studies. Yet, he approaches the problem or topic from a perspective that is unique to education. A refusal to hold such a unique educational perspective will defeat the very purpose of conducting educational research. The outcomes of studies without a clear educational perspective fail to throw any light on the educational process and thus contribute no new knowledge to the field of education either in theory or in practice, which is, after all, the fundamental objective of all research endeavours.

Therefore, the criterion against which the researches in the field of education needs to be viewed is whether they reflect educational perspective on the part of the researcher. The review of researches completed in the field of education does not reveal a very satisfactory position. This is particularly true with respect to a number of studies undertaken in the dual disciplinary areas related to sociology and psychology. It is important to realize that a mere inclusion of socio-economic status or attitude or value as a variable in the study of a sample of students belonging to a school or a college makes the study neither sociological nor educational. There are also quite a number of studies in the area of personality and learning wherein the researchers have studied the relationship of several characteristics such as anxiety, adjustment, neuroticism and academic achievement treating achievement indices in the same manner as others, as though it is also another personality characteristic of the students. The comments made above are also true of a number of studies even in the core areas such as teaching behaviour or correlates of achievement. Quite a few studies on teaching have attempted to analyse teaching in isolation as though

it is another natural psychological phenomenon; they have failed to recognize that bereft of its purposive nature connecting specific content inputs and learning outcomes with the act of teaching, teaching has no existence at all. It is obvious that such basic lacunae have crept into educational research mainly due to the absence of a clear perspective among the researchers as to how and to what aspect of education should the findings of their research contribute.

One of the reasons for this lack of an educational perspective has arisen due to the absence of a well-defined boundary for education as a subject of study. In fact, it is even argued that education has to necessarily remain a multidisciplinary subject, and cannot have a perspective of its own. But, the acceptance of such a position will be self-defeating as well as detrimental to the progress of research in the field of education. It is imperative that more serious thought is given evolving a proper definition of an educational perspective. What has been suggested by the authors as defining the educational perspective need not be accepted; yet educational researchers cannot avoid for long considering this issue seriously. Even in the absence of such a clear perspective as to the scope and characteristics of studies in education in contrast to those in other disciplines, educational research will progress but just as a rudderless ship without any purpose or direction.

Need for Appropriate Theoretical Framework

The importance of conceptualization and use of a theoretical framework for conducting research in any area is a well-recognized fact. An appropriate theoretical framework will not only help the researcher to organize the already available empirical findings but also provide him with the basis for interpreting his own findings. This is a matter of particular importance in the field of education where research studies quite often involve the use of several abstract concepts and theoretical constructs. An appropriate theoretical framework, in such a context, will guide the researcher in specific formulation of the problem, the choice of appropriate tools and techniques, and also of suitable designs for analysis.

The relevance and utility of a theoretical framework is, no doubt, well appreciated by all researchers. But, a perusal of the studies reveal that while formulating specific research questions, the approach, in many cases, has been *ad hoc* and arbitrary. The researchers have shown total disregard for any conceptual basis in

choosing variables of study and tools and techniques for obtaining the relevant data. Particularly, many of the studies in the area of personality as well as correlates of achievement use assortments of variables and tools the inclusion of which has been guided more often by expediency than by any conceptual framework or conviction. For instance, the variable socio-economic status has been used by a large number of researchers along with several other psychological variables but without visualizing its position in a theoretical framework linking all the variables in a meaningful way. This is also true of a number of studies on the correlates of achievement where different variables such as sex, age, anxiety, intelligence and so on have been correlated with achievement without any appropriate theoretical framework. This has resulted in the listing of a number of trivial conclusions such as age being positively related with intelligence or even spurious relationships such as mathematics achievement at school being related with the possession of radio at home or physical exercise as a factor positively influencing the development of intelligence.

Two factors seem to have led to this trend, viz., absence of theoretical framework, in the field of educational research. One of them is what has been already discussed earlier. In the absence of a distinct perspective, the educational researchers have been deprived of the scope for bringing different variables under closer scrutiny and examination as to their conceptual anchorings to the process of education. As a result, problems have been formulated in an arbitrary manner without any regard to conceptual considerations. A second factor is that while education has freely borrowed concepts and ideas from other disciplines such as psychology and sociology, it has failed to internalize the corresponding theories postulated in those fields. In fact, some scholars do openly advocate that educational researchers should remain eclectic in dealing with theoretical issues. This opposition for affiliation to specific theoretical positions has resulted in a sort of conceptual vacuum in the field of education. It should be pointed out that it may not be essential for a classroom practitioner to take any stand with respect to, say, the learning theories; but, a researcher on learning has to necessarily explicate his affiliations right in the beginning if his interpretations have to be properly understood. It is high time educational researchers gave up this taboo for theorization and worked towards providing educational variables with sound conceptual bases, leading to the formulation of appropriate theoretical frameworks.

Selection of Research Topics

Education is a practical activity contrived by the society in order to achieve certain desirable ends. Educational research has to help in improving the efficiency and effectiveness of the means of achieving these ends. Thus, a research topic, in order to satisfy the above criterion, has to be not only theoretically sound but also be pertinent to the practical aspect of organizing the educational process. This makes it clear that the selection of a suitable topic is a crucial step in the research process which, to a large extent, determines the nature of educational research carried out and also its potential to make positive impact on the educational system of the country.

The selection of research topics in actuality should be normally proceeded by two tasks. One task is to explore the already available research literature in the particular area which would help arrive at a theoretically sound topic for research. The other task is to explore the socio-cultural context with a view to identifying problems of practical relevance. How well these tasks are accomplished by educational researchers should constitute another criterion for assessing the status of educational research in the country. A reference to the first task has already been made, although indirectly, in the earlier paragraph. As far as the second task is concerned, one would not expect the educational researcher to face much difficulty as problems of education in the country are too many and also too apparent to demand any strenuous explorations. However, facts seem to go quite contrary to this expectation. The educational researchers seem to suffer from a sort of problem-blindness. Because of their insensitivity and inability to perceive relevant problems in the environment, educational researchers seem to indulge in fabrication of research topics purely based on an arbitrary combination of a few aspects or variables. This way of fabricating research topics without any relevance either to theory or to practice has resulted in a large number of studies which are neither socially relevant nor scientifically exact. For instance, a fairly large number of studies have been reported under curriculum and methods. But, not one of them really has addressed itself to a long-range evaluation of any curricular frame in real classroom conditions which would go a long way in developing curricular material adapted to Indian conditions instead of blindly including and deleting topics. This is true of almost all the areas of study.

Another important point about the nature of topics selected is the duplication of research efforts. Repeti-

tion of a research study by itself is not undesirable if findings of such studies can be meaningfully combined to draw generalizations. However, this would require implementation of planned programmes of research. But such efforts are almost completely absent in the country.

A third point to be made about the nature of research topics is that they invariably lack a long-range perspective. Each study is an isolated event, neither connected with other problems in the area, nor engendering a future perspective in terms of follow-up actions and feedback. One of the reasons for this is perhaps that two-thirds of the total number of studies are doctoral studies which are conducted with the limited purpose of obtaining degrees.

Except for a very few, almost all the studies conducted till now are related to the formal institutional setting. One would expect, at least in the sociology of education, studies with a macro perspective relating education to the broader issues of socio-economic change. Yet, such studies are really few and far between. More disappointing is that not a single study can be found involving direct social action and education under a common framework.

The situation requires serious actions on the part of the educational researchers if their work has to gain any acceptance in the larger society. There is an urgent need to strengthen the programme of research work carried out by various institutions in order to continuously review the work and set guidelines for the selection of problems in terms of appropriate areas and parameters. Of course, finally it depends on the individual researcher and his conscientiousness. Therefore, it is not sufficient to provide academic help but institutions should also create appropriate environment for imbibing the necessary attitudinal orientations.

Methodological Shortcomings

A major weakness of the educational research in India is its over-dependence on the use of questionnaires and test following the typical Anglo-American tradition. This is largely true of all the areas of research excepting the areas of history and philosophy of education. The reasons are easy to identify. The main reason is the facility they would provide for quantification and further processing, possibly through computers. It is really hard to come across studies in many of the areas which adopt other methods such as observation, case study, content analysis, and participant observation. A related point is that a great majority of the studies are descriptive surveys. One

can easily see that there is a real proliferation of studies in areas such as administration, sociology of education, examination and correlates of achievement where questionnaires and standardized tools are used for data collection. On the other hand, such areas as the philosophy of education and the history of education have received less attention as they require the use of other methods and sources.

This is an enigmatic situation in view of the fact that unlike other fields of study education has a long tradition of orienting the students in research methodology in a fairly elaborate manner. Yet, in comparison to other disciplines such as sociology or economics, education has remained least innovative in terms of methodological improvisations. It may have to be examined in depth as to whether the very emphasis on methodological formalism is restricting the researcher and curbing his initiative to try out new methods and approaches. If educational researchers do not take steps to expand the scope of methodology used by them and adapt it to the changing demands of the various problems, it would soon face a situation, critically affecting its progress as a meaningful activity.

Analytical Procedures

It is self-evident that the procedure adopted for analysing the research data is a matter of central importance. Inappropriate handling of the data will result in distorted findings and deceptive conclusions. Although researchers are, invariably, oriented regarding both quantitative and qualitative approaches for data processing, quantification seems to be the rule of the game as far as educational researches are concerned. First of all, this trend has greatly upset the balance of research work among different areas. It is not difficult to observe that researchers have preferred to conduct studies, many of them trivial, in areas which allow for the application of quantification. There are instances where even highly qualitative procedures like content analysis and case study have been reduced to a matter of coding and counting resulting in unreliable and invalid conclusions. The educational research in India seems to have become a mainly means-centred activity rather than a problem-centred one, with quantification as the *raison d'être* of the whole endeavour.

There is also another dimension to the use of quantification as part of data analysis in educational research. No one can deny the power of quantification, when appropriately used, for positively influenc-

ing the progress of research. But, Indian research literature is full of instances of ineptitude and inefficiency in the adoption of various analytical procedures in processing the data. For instance, product moment correlations have been freely used, with total disregard to the nature of the underlying distributions and, in many cases, in spite of well demonstrated curvilinear relationships among the variables. In fact, highly sophisticated statistical procedures such as factor analysis or analysis of variance have been used without ever bothering about the specific conditions that should be satisfied by the underlying distributions, particularly normality, in almost all the cases. Apart from this tendency to flout the basic ground rules which should be followed in using various statistical techniques, there is another equally disturbing factor. That is the obsession of the Indian researchers for the use of significance tests. Quite often significance of correlations is quoted and, further, far-reaching conclusions are drawn from them without realizing the fact that if a large sample is used even a negligibly small correlation can be statistically significant. It is necessary to note that statistical significance carries meaning only when the hypotheses being tested are grounded conceptually and the scope for alternative plausible hypothesis is controlled. What has been said about correlations is also true of the use of tests of significance of means and difference between means. There are instances where researchers have tested the significance of difference between means of two groups although the means have actually been derived from the whole population.

In addition to the use of unsuitable techniques, mention should also be made of the total failure of the Indian researcher to evolve and use newer techniques that are appropriate to the purpose of the study as well as the nature of the data. This is very well exemplified by the nature of the studies under correlates of achievement. The rationale for the whole area of correlates of achievement is that there are several environmental variables and conditions that enhance or hinder academic achievement; and, identification and isolation of the effects of major variables among them would help control and manipulate the environment so as to result in higher academic achievement. When seen from this angle, the studies in this area would seem to be not only of theoretical importance but also of profound practical significance. But, for meaningful conclusions to be derived from these studies it is essential to conceptualize a network of cause-effect relationship among the different variables

and achievement, and utilize appropriate analytical procedures for testing such cause-effect relation hypotheses. It is needless to say that simple correlations and oft-used regression analysis fall too short for analysing and interpreting such a network of relationships. A more appropriate approach would, perhaps, be to use such structural equation models as path analysis. But, one finds that, but for a couple of researches, all the studies have blindly gone through the rigmarole of product moment correlation and regression analysis.

It should be worthwhile to take a closer look at the situation and identify the possible reasons for this undesirable situation. It should be mentioned, right in the beginning, that the blame has to be placed not only on the individual researchers but also on the trends that are prevalent among the professionals carrying out research studies in the field of education. Very often the new comer in the field is in a dilemmatic condition. On the one hand, he finds himself inadequately equipped to properly handle various statistical techniques and, on the other, he is under pressure from the professional group in the field to use sophisticated statistical procedures. The undesirable consequence of this is that the researchers blindly use analytical procedures which are quite often inept to process the quantitative data obtained through some adapted (maladapted) versions of standardized tools developed mostly in the western countries. If such serious shortcomings are to be avoided, the professionals in the field should urgently take action to de-emphasize the use of quantitative methods and, at the same time, arrange for more rigorous training in the use of analytical procedures. Further, delay in this regard would, perhaps, result in a more serious crisis wherein the very honesty and sincerity of purpose among the educational researchers will be questioned.

Relevance of Educational Research

One of the hotly debated issues among researchers not only in the field of education but also in other fields of study is the question of relevance of the research work being carried out to the currently identified needs of the country. It is not unnatural to expect that the research efforts in the country, major portion of which is being supported by the public funds, address themselves to tasks which provide tangible support for improving the educational system of the country and effectively contribute towards solving the various problems encountered. Various

developments in the country during the past three decades have thrown up a host of problems for the educational researchers and it is obligatory for the researchers to apply their expertise for arriving at appropriate solutions for these. In a developing society aiming at egalitarianism and social justice, a continued allegiance to the ideal of research for research sake can not find full justification. This would only mean that the educational researcher has to be alive to his own environment instead of operating in an ivory tower in an isolated fashion.

The record of the educational researcher in making the research endeavour relevant to the national needs and priorities is not all that encouraging. A very large number of studies are pure academic exercises which have no relevance to the currently prevalent conditions in the country. It becomes quite obvious from a perusal of the completed studies that the educational researchers have addressed themselves exclusively to the problems at the micro level located in formal educational institutions, completely ignoring the wide range of macro level problems operating in the longer socio-economic context. Even among these, a large number of studies continue to result in outcomes and findings which have no utility for the schools and the colleges in the country. Seen from this angle the relevance of the whole lot of work done under certain areas, such as tests and measurement, has to be questioned. A large number of tests and other standardized measures continue to be developed by the educational researchers, presumably, with the objective that they will be useful for the practitioners in their regular routine work. However, even a cursory examination of the conditions prevalent makes it obvious that the use of standardized tools is almost non-existent and even, perhaps, non-usable knowing well the poor status of the physical and the human resources available in the country. The only users of these standardized tests are, possibly, the researchers themselves. The important action required is that the educational researcher has to become native in his perspective, problem choice as well as approaches; a blind adoption of trends prevalent in other countries would only result in the creation of huge amounts of dead wood as is illustrated by the above example.

There is another important point to be borne in mind while discussing the issue of relevant research. Conducting relevant research is not just synonymous with executing studies in support of officially accepted policies and programmes as it would lead to indiscriminate strengthening and aggrandizement of official

programmes which may or may not have been scientifically formulated. In making research relevant, the onus is actually on the educational researcher rather than on the bureaucracy for identifying areas and problems which are in tune with the socio-economic needs of the country. Thus, the educational researcher instead of just playing second fiddle to the bureaucrats should become bolder and venture to experiment with alternative systems and innovations which even serve as feedback for restructuring official programmes and policies. That educational researchers are not performing quite well in this regard is quite obvious as a large number of studies are only surveys and evaluations of officially supported programmes as illustrated by the work done in the fields of non-formal and adult education. Yet another point has to be noted about the studies some of which can be quite deceptive as to their relevance. This is clearly illustrated by quite a few studies particularly in the field of sociology of education. One of the recent trends, or more appropriately fads, is to study the educational problems of the weaker sections, especially the scheduled castes and the scheduled tribes. One can easily find a sizeable number of studies on this topic, including the series of research projects organized and funded by the ICSSR. No one would question the significance as well as relevance of studying this topic. Yet, a closer scrutiny of these studies, coupled with a little bit of soul-searching, would reveal the deceptive nature of these efforts. All these researches have studied only those people from these deprived communities who have already succeeded in enjoying some of the privileges to which a majority of others in these communities have no access. It is easy to see that the real need is to explore the educational problems not of the already privileged sections, but of the multitude who are really deprived having failed to make use of even the minimum educational facilities provided by the country. The danger of proliferating such deceptively relevant studies is that it gives an apparent feeling of achievement and complacency while the real problems remain untouched.

A last point to be made about relevant research is that it cannot progress only through the efforts of researchers. It has to be, necessarily, a two-way process. Just as the researchers have to concentrate on the problems related to social needs, progress in this regard can be achieved only when their findings and outcomes find fruitful implementation. This brings into focus a very important issue related to the essentiality of continuous interface between the researcher,

the planner and administrator and the practitioner operating at the grassroot level. Thus, if educational research has to become problem-centred and socially relevant, a constant participation of the consumers of research findings at all stages of the research process is imperative. The activities of educational researchers should be more akin to those of scientists and technologists working in the research and development centres than to the work pursued by pure scientists working in isolated research laboratories.

The general review of educational research, presented in this section, may sound highly pessimistic and brashly critical. Nevertheless, the purpose has not been to belittle or derogate the educational research work completed in the country. It should be taken more as an exercise in self-evaluation. It is hoped that this would stimulate the educational researchers to evolve creative ways of improving and elevating the sagging image of the educational research in India. This would require, possibly, radical changes in the current scene with respect to all the dimensions of the process, namely, organization, training, promotion and dissemination. This is being elaborated in the following section.

IV

IMPROVING THE STATUS OF EDUCATIONAL RESEARCH

During the early fifties when educational research was just beginning to take shape, to the pioneers of educational research, it all seemed straight-forward simply a matter of convincing all concerned in advance on objectives of education and the means of attaining them. Unfortunately, reality has not been as reasonable as that and the optimism of early fifties has given way to an equally ingenious pessimism. When the NCERT was established in 1961, the general expectation was that the decade would witness tremendous advances in the planning and organization of educational research in India. The research activities did increase, in fact, by leaps and bounds. Today, on an average, every third day a Ph.D. thesis in education is approved by an Indian university. Even the number of independent research projects has increased considerably. This rapid growth of research studies has resulted in increased skepticism concerning the standard or quality of research output in the field of

education. Of course, research developments have not been the same everywhere and exceptions can be found for this generalization. However, no one would deny the need for improving the status of educational research in the country. But there can be no single scheme of reform that can be implemented to achieve this end. Rather, it requires honest and consistent efforts to be made by every individual and institution concerned with the process of educational research. Also, the problem has to be examined and tackled on at least four fronts, namely, (a) the organization of educational research including the necessary institutional infrastructure, (b) the training of personnel for undertaking educational research, (c) the promotion of educational research activities and (d) the dissemination of educational research findings. Each of these aspects is being discussed, in brief, in the following paragraphs, describing the present status with regard to each aspect and making a few observations about the needed action.

Organization of Educational Research

There was a time when research was viewed as a purely individual activity in which the researches would be occasionally supported by the society or even sometimes face its wrath. However, research has long passed this stage. Now, it is an activity well approved and even supported by the society. Consequently, it is also recognized that if research has to be effective and useful it has to be undertaken as a planned, organized and socially relevant activity pursued in an institutionalized manner rather than being left to the whims and fancies of individual researchers. Educational research also has undergone these phases and has now become an institutionalized activity. Thus, if the status of educational research has to be improved, it necessarily has to begin with its organization at the institutional level. In this context, three important points need to be considered, namely, institutional infrastructure, need for planned efforts and academic leadership.

As has been mentioned in the introductory section, the building of institutional infrastructure began in a serious way after Independence. Today, the institutional facilities available for educational research include a large number of university departments and a handful of other institutions. It is quite obvious that the educational research in the country depends very heavily on the work done at the university departments as out of three thousand odd researches completed two-thirds are doctoral studies and a majority of the research projects have also been done by university-

based scholars. While it does have certain advantages, dependence on university departments alone would tend to make educational researches mere scholarly exercises. Also, with the rigidities of administration and stringency of finances it is doubtful that many of the education departments can really work at their full efficiency. What has been implemented in the fields of sociology and economics needs to be adopted in education also. It is necessary to develop a network of research institutions in education which interact with university departments and other institutions of higher education, and yet work as independent organizations. At present, the solitary example of such an institution is the Indian Institute of Education at Pune. Establishing such a network of institutional infrastructure mainly devoted to research would not only strengthen the existing educational research facilities but also provide greater scope of making the efforts well directed to the needs of the country.

Another important dimension related to organization is the planning of educational research programmes. It would be naive to believe that bits of research finding when allowed to accumulate will automatically form a beautiful theoretical pattern or suggest grand solutions for the vexing educational problems encountered in the country. This can be easily seen from the fact that even with more than three thousand studies it is difficult to draw generalizations about even a few of the areas explored. The main reason is the absence of proper planning at the institutional level. If educational research findings have to make any serious impact on the educational scene it is important that it is carried out in a more systematic way as a planned and sequential effort. This has to be achieved at every institution and department involved in educational research. Apart from this, attempts should also be made to organize research as a cooperative endeavour drawing personnel from different institutions at the regional and the national levels. Educationists should, perhaps, apply the concept of school complex in order to improve the efficiency and effectiveness of their own work by formulating similar institutional complexes.

A third important point to be mentioned in this regard is the need for academic leadership. If research should become an effective enterprise carried out on a cooperative basis, it is imperative that it is steered in the right direction through proper leadership. There is need to identify and/or establish a few institutions in different parts of the country which can effectively provide leadership for the identification of relevant problems in the respective regions. In the absence of such

leadership the work carried out at individual departments would remain as isolated events with no import for theory or practice. This would also help organize research as a planned, long-range activity relevant to the changing needs. It may be mentioned that it is with this purpose that certain institutions such as the NCERT and the CASE were established at the national level. Whether these institutions have been successful in providing such academic leadership is a question that needs to be examined more closely and it may not be pertinent to indulge in such an exercise, here. Yet, it should be observed that no great impact can be seen as the research efforts have continued to be *ad hoc* and arbitrary, possibly because the country with its proportions, diversities, and the magnitude of the work involved requires many more institutions which can give leadership for organizing research work in education.

Training of Researchers

The quality of research in the final analysis depends on the ability of individual researchers. Thus, proper training and orientation for those undertaking educational research becomes a matter of vital significance. The training for research in the field of education is given mainly through post-graduate courses leading to M.Ed. and Ph.D. degrees. The pattern of post-graduate programmes in education as imparted at various universities of the country leaves much to be desired. Most of the universities in India have M.Ed. programmes of one-year duration, and, in this short period, it is rather difficult to expect sound training required for undertaking educational research. The M.Phil. programme introduced in some universities holds out a good promise provided, of course, proficient teachers with conviction in the capability of research to influence educational practices are available to conduct these courses.

The crucial stage of training research personnel in education is at the Ph.D. level. Unfortunately, no formal training is provided at this stage either with respect to content areas or with respect to the research process. In fact, a dangerous tendency has been to emphasize and conduct exclusive courses on research methodology, which underplay the need and importance of mastery in the content of education. Some hard thinking is necessary in this regard. It seems that the training in research methods is being played upon to an extreme degree. This has made educational research appear as a mechanical rather than a creative endeavour. This has on the one hand deprived the

scope for evolving new methods and encouraged researchers to fit problems to the existing methodology, and, on the other hand, it has created a dangerous impression on the new initiates to the field that mastery in their area of research is only of secondary importance. It is necessary to realize that scholarship in the subject is essential if the status of educational research has to improve.

Another point in the training of researchers is regarding the creation of congenial atmosphere in the research institutions, for interaction among researchers. Emphasis should be placed on a periodic sharing of ideas through seminars and symposia, within each institution on a regular basis. Further, in order to formulate and improve the quality of input that goes into the training of researchers a periodic assessment of the programmes at the national level is of great importance. It is heartening to note that Indian educationists have become conscious of the need for such forums. This is seen in the fact that during a period of eighteen months between October 1981 and March 1983 four national seminars were organized at Delhi, Baroda and Allahabad where various aspects of the educational research process were analysed and discussed.

Promotion of Educational Research

In a country like India where demands outweigh resources, streamlining the flow of finances to different activities is of paramount importance. The educational research in India, as mentioned earlier, is financially supported by three major national agencies, namely, the NCERT, the UGC and the ICSSR. The promotional agencies have double roles to play. They have to identify individuals and institutions capable of carrying out research in education. And, secondly, they have to support and restrict research in different areas based on the national needs and priorities. Thus, they have to act as promoters as well as directors of research endeavour in the country.

As far as the promotion of research in education is concerned, it is difficult to conclude whether sufficient finances have been flowing in or not. While there are indications that the funds allocated for educational research often remain unutilized, there are also complaints that major research endeavours have been affected due to the lack of finances. Perhaps, it would be necessary to study the functioning of these promotional agencies in greater depth along with the various proposals received for assistance before any evaluative remark can be made in this respect.

The second function, namely, of providing direction to research activities is supposed to be achieved by these agencies by periodically specifying the areas of priorities for research. From an examination of the type of studies that have been till now financed by these agencies, serious doubts arise as to whether such priorities are being really set and followed in providing finances. Non-seriousness of the agencies in this regard gets further supported by the fact that the priorities listed often reflect *ad hocism* and indifference. For instance, a pamphlet published by the UGC in 1981 gives a suggestive list of priority topics under different disciplines and areas which includes a section on Teacher Education. But, it is quite appalling that the list of topics mentioned are such that they have absolutely no relationship with teacher education. It is time that the work of directing research activities through setting priorities is taken more seriously and operated with greater sincerity.

Dissemination of Research

If a research activity, in any area, has to progress in a smooth manner, proper dissemination of research findings becomes imperative. This acquires an added dimension in the field of education where research becomes meaningful only when it makes impact on educational practices. Thus, dissemination of research findings in education has to be done at two levels. One is at the level of researchers where information has to be documented and presented in a technical fashion appropriate for the trained researcher. This type of dissemination work has got fairly systematized with the publication of this series of surveys (Buch, 1974; Buch, 1979; and the present volume) along with the few journals published at the national and the regional levels. Yet, the number of journals published and the coverage provided in them is hardly satisfactory in proportion to the requirements of the country. Also, much remains to be done in terms of documentation facilities for researchers.

As far as the second type of dissemination is concerned, the work is yet to begin. This, in fact, demands the use of highly complex skills as the information has to maintain its research rigour and yet become comprehensible to the practitioner. The logistics of organizing such a programme of dissemination is also not simple as the presentation of information has to be necessarily in the regional languages. At present, one does find a few educational journals and magazines published in certain regional languages. But, either

they are technical in nature or they do not have research orientation. It is urgent that efforts are made to install agencies at the regional level for processing and publishing research findings for the consumption of practitioners. The value of such efforts lies in that they provide a forum for interaction among researchers, administrators and other practitioners at the field level. Thus, they will not only help improve educational practices but also serve as feedback channels for the researchers.

The magnitude of the work involved in organizing dissemination work for the whole country is really stupendous. This can, therefore, be achieved only if regional clearing-houses are set up in each region or State. These clearing-houses can systematically process all the researches done in the region in a continuous manner and periodically bring out pamphlets, brochures and magazines containing relevant research information for the practitioners in appropriate form. In fact, these clearing-houses should also provide documentation and reproduction services to the researchers in the respective regions. The establishment of such a network of clearing-houses all over the country will greatly facilitate the progress of research in education and also help enhance its impact on the educational practices.

Conclusion

It was observed in 1974 (Buch and Yadav, 1974) that "educational research in India had yet to attain maturity." This was about a decade ago. This characterization of educational research does not hold good any more as the position has changed considerably. If research fellowships and grants sanctioned by central agencies like the UGC, the NCERT or the ICSSR provide any indication, it is evident that the educational research in India has taken great strides during the last decade. There has been a significant increase in the allocation of funds for educational research. Several voluntary organizations have set up research centres in different parts of the country which have been undertaking research studies on educational problems. Further, between 1943 and 1983 alone about 2,500 researches have been completed. Many more researches are in the pipeline. Anyone would agree that there has been a phenomenal growth in the volume of educational research. But, one cannot say that the problems of education have been exhaustively explored. There are large gaps to be covered and many new areas yet practically unexplored. Still, it

would be sheer impetuosity to conclude that educational research has not made any useful contribution. A criticism often made is that research has made no impact on the system and has not solved the educational problems faced by the country. This is a blanket allegation which does not have full justification.

The question of making impact on the system needs a closer scrutiny and deserves to be examined here. First of all, it is totally inappropriate to lay the blame on the educational researcher for all the ills of the educational system. It is one thing to discover facts, diagnose problems and arrive at solutions. But, implementation is not in the hands of the researcher. It should be noted that larger policy matters are all centrally decided by the State or Central governments giving little scope for the individual to act. In fact, the research has revealed a number of facts about various educational problems and their causes but these are largely ignored by the official machinery. For instance, there are many problems related to school education which have been well explored. But, if one does not find much improvement in the situation it is essentially due to the lack of administrative action. In a situation as this where most of the matters related to education are decided at the governmental level, the role of educational researchers in the implementation process is very limited, not going beyond the role of an adviser. As a matter of fact, many problems continue to hamper educational progress in the country not because the solutions are not known but because there is the lack of political will and administrative action. Even regarding the role of research in improving educational practices adopted by the educational personnel, it would be wrong to accuse the educational researcher of ineffectiveness. Making inroads into the school systems wherein most of the institutions operate with less than minimum resources, ill-equipped and unmotivated personnel, and rigid curricula and scheduling, is not an easy job. Educational research has definitely thrown much light on several aspects of school practices, particularly the teaching-learning process. If these findings are not fully utilized it is

not within the limits of educational researchers to force their implementation. The problems faced by the educational system in the country are not unique to it. Quite often they just reflect the undesirable aspects in the larger society within which the educational system operates. The approach should be community action supported by educational research.

Yet, there is one point on which it is difficult to counteract the criticism. That is regarding the total inefficiency and indifference exhibited by the educational researchers to invent newer systems and practices which can serve as better alternatives in the existing conditions. Introducing changes and trying out new organizational arrangements at the macro level may not be fully within the scope of the educational researcher and thus he can be excused. But, no excuses can be given for his lack of concern for evolving and experimenting with innovative approaches at the micro level, the institutional level. Particularly, the non-formal education programmes, which are free from the rigidities that often go with the formal system, provide the best ground and perfect setting for the educational researcher to try out new practices. It is quite surprising that educational researchers have not made much headway in utilizing this situation to their advantage.

In conclusion, it may be observed that the educational research endeavour in the country has not failed, but definitely there are clear signs of cracking. This is both due to the internal failings and the external pressures. It is time for the professional in the field of education to act. First of all, they should try to set their own house straight. It is necessary that concrete actions are taken to mend and improve standards of research in education. At the same time they should also learn to withstand as well as ward off the external pressures through appropriate innovative actions. It is necessary to develop a strong lobby to ensure that planners and administrators do accept educational researchers as respectable partners in the common endeavour to improve education. The need is to build a strong sense of professionalism on the one hand, and imbibe a new research culture, on the other.