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TITLE A PLAN FOR THE DEVELOPMENT OF VOCATIONAL EDUCATION IN THE STATE OF MYSORE, INDIA

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A PLAN FOR THE DEVELOPMENT OF VOCATIONAL EDUCATION IN THE STATE OF MYSORE, INDIA

by
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of the requirements for the degree of
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CHAPTER I

INTRODUCTION

Conditions in India. — This has been a period of great importance to the people of India, a period that has seen the end of foreign imperialism and exploitation, a period of enlightenment overcoming tradition and mystic spiritualism, and a period marked by far-reaching economic progress. Following the second world war, the political struggle in India met with success. India emerged as an independent nation with a new concept of non-violence and the freedom and equality of all human beings, which has been presented to the world as the only hope for survival. The people of India are ready and willing to promote the welfare of all people, irrespective of race, religion, or nationality. Within the country, the growth of science, technology and modern communications have transformed the outlook of the people. An urge to create a new social order has developed. The people are aware of the potential resources of the country and are eager to build a more prosperours nation. They envision a future with freedom, comfort and security, and stand hopefully on the threshold of an era in which they except the standard of living for all will reach a higher level.

The struggle to improve economic conditions in India is difficult and can only be won through proper planning and effort. India is fortunate in having rich mineral wealth which remains to be exploited for the benefit of its people. Industrial and technological advances are essential to the development of these resources. In view of this,

many economic development plans have been worked out using the vast experience gained in and outside India. However, progress in accomplishing these plans depends entirely on the skill and productive ability the people possess. To transform the great majority of the widely scattered agricultrual population into a well-trained army of industrial and technical workers is one of the major problems facing the leaders of the country and deserves a high priority among the development plans under consideration. Minoo Masani, one of the leading Indian economists, lays emphasis on this point, which is fundamental to the future of the country.

> National welfare, based on flourishing industry and agriculture, would be impossible if the minds of the people were not trained and developed. No far-reaching improvement in the economic condition of a people can be achieved unless the people are educated to perform the thousand and one tasks that are involved in the process of such improvement.[1]

Mysore State. -- Mysore is one of the important Indian states, situated centrally in the southern penninsula. It has an area of 29,458 square miles with a population of 7,329,140, according to the 1941 census. The state has been divided into nine districts for purposes of administration -- Bangalore, Kolar, Tumkur, Mysore, Chitaldrug, Hassan, Kadur, Shimoga and Mandya -- and the recent retrocession of the Bangalore civil and military station constitutes another major section. Although the state was formerly ruled by H.H.the Maharaja under the direct control of the foreign power, it was one of the first to accede to the

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[1] Minoo Masani, Picture of a Plan, p. 13. Bombay: Geoffrey Cumberlege, Oxford University Press, 1945.

dominion of India upon certain specified subjects, and has deputed its own representatives to the Constituent Assembly at New Delhi. Mysore has been fortunate in having a young, progressive ruler take such a forward step. Through a proclamation, the ruler has announced the establishment of a constitutional monarchy and has set up a responsible government. Power now lies in the hands of the Congress party, the major political organization in the state, which fought side by side with the rest of India for the liberation of the nation. Such a peaceful transformation in Mysore is of tremendous importance to the state and enables it to participate with the rest of India for the economic development of the entire nation.[1]

History of Mysore. -- Some of the problems connected with Mysore's composition, the distribution of its population, and its varying economic, social, and religious influences find their root in the historical development of the state. The earliest rulers of Mysore, before the Christian era, belonged to the mighty Mauryan empire. After the disruption of the Mauryan empire, Mysore cradled many dynasties, among them the Kadambas, the Hoysalas and the Vijayanagar kings, who dominated in the Deccan regions of India for many centuries. The ancestors of the present dynasty came to Mysore in 1399 and established themselves as feudatories of Vijayanagar. In 1668, however, Mysore declared its independence and under Chickadevaraja the state reached the height of its glory in 1704. Subsequent to his death the Maharatta

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[1] The Handbook of Mysore 1948, p.4. Bangalore; The Mysore Government Press, 1948.

invasions from the northwest became frequent and the state suffered much because of them. During this time there arose from the ranks of Mysore army a Muslim, Haidar Ali, who was able to check the onslaught of the Maharattas and who eventually came to power in Mysore. Under his rule Mysore had its greatest territorial expansion. Tippu, Haidar's son, lost the struggle and his life against the allied efforts of the Maharattas, the British, and the Nizam, and, by the treaty of Seringapatam, parts of the territories of Mysore were divided among the conquerors and in the rest of Mysore the old Hindu dynasty was restored. Mysore now became a land-locked country and because of this its prosperity was retarded.[1]

After the restoration of the Hindu dynasty in 1799, Mysore gradually rose to a pre-eminent position and became one of the most modern states, assisted by a succession of able administrators as well as British guidance. Due to their efforts far-reaching developments have been made in industry, agriculture, trade, and education. In 1940 the present ruler, Sree Jayachamaraja Wadiyar, ascended the throne after the death of his father, Krishnaraja Wadiyar IV. The progress of Mysore since then has been steady and has kept pace with the political developments in India.[2] (See Appendix, Map 1 - State of Mysore.)

Administration of the State. -- The state of Mysore may justly

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[1] P.H. Krishna Rao, Census of India, 1941, Mysore, Part I - Report, Volume XXIII, p. 4. Bangalore: The Mysore Government Press, 1943.

[2] The Handbook of Mysore 1948, op. cit.

be proud of being administered by its own citizens. Since the recent political developments, the state has been administered through a popularly elected interim ministry consisting of a chief minister and eight others. This ministry has been entrusted with the task of evolving a permanent constitution for the state through a constituent assembly. A well-organized secretariat assists the ministry, working under its direction and orders. Departmental heads control each important division of administration, such as the land revenue, excise, education, health, agriculture, industry, medical, and police departments. Each of the nine districts of the state is subdivided into taluks, (a county) hoblis (a group of villages) and villages. Each district is under the control of a deputy commissioner. Besides the deputy commissioner, who coordinates the various activities, other district officers of different departments, such as education or medical, control the administrative affairs related to their fields. The state's finances have been sound and its annual revenue is increasing from year to year. The total revenue in 1947-1948 was Rs.10,70.62 lakhs and the expenditure Rs.10,68.03 lakhs, including expenditures for many nation building activities. For purposes of legislation, there are two popular bodies, the Representative Assembly, consisting of 320 members, and the Legislative Council of 68 members. Justice is extended through a High Court (the highest court of appeal), 78 criminal courts, and 45 civil courts. The beginning of local self-government for the control of local affairs started in the year 1862. The first step in the constitution of local boards was made in 1917, as a result

of which the district boards, taluk boards, and the village panchayets (counselors) came into existence. Today there are nine district boards, two city municipalities, 101 town municipalities, and 12,264 village panchayets operating in the state. Thus the administration has been made more and more democratic and its responsibilities gradually transferred to the chosen representatives of the people. The progressive policies of the state during the last few decades have been generally formulated by its own elected officers. Mysore has always kept in mind the progress of its people and has earned a reputation throughout India as a model state.[1]

Present Problem. -- Mysore has prepared its own plans for the economic development of the state, involving an expenditure of two billion rupees in a period of fifteen years. For this purpose some power resources have been mobilised. Several industrial, building, and agricultural projects have been undertaken and many more are under consideration. However, one of the most serious difficulties in the way of planning has been to find the proper personnel to work in the various occupations that are likely to be created. A great number of skilled workers are required to erect buildings, set up industries, construct roads, and improve farms. Mysore has been predominantly an agricultural state and has very few workers who possess the skill and knowledge to build up the state. Moreover, adequate facilities for training workers do not exist. These difficulties are likely to hamper progress unless measures are taken to

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[1] G.L.Swamy, Handbook of the Mysore State, pp. 40 - 45. Mysore: The Bangalore Press Branch, 1946 (revised).

overcome them. Consequently, the training of skilled workers deserves immediate attention.

The existing system of education has failed to meet the challenge. Schools were originally set up by a foreign power, primarily to prepare the richer classes for higher learning. They have hardly reached the poorer classes. The youths who attend the schools and fail to enter higher education gain little from them since the practical aspects of life have been neglected in the curriculum. Little effort has been made to prepare the younger generation for their future careers and although plans have been made to expand the present system to provide free and compulsory education to all children, the prevailing theory of education has been continued unchanged. It is thus unlikely that the mere expansion of the existing system will help in solving the social and economic problems of the people. The time has come when the state must re-examine the present system and formulate sound policies leading to the reorganization of the existing schools in keeping with the needs of society.

The secondary schools are likely to play an important part in any system of education developed in the future. They are the most powerful institutions in the world for building a state in which men may live together peacefully and without fear of want and they are the only institutions which the majority of the people can hope to reach. Until recently, their objectives have been dictated almost entirely by college entrance requirements; if, however, they are to perform their function in society, a new orientation must be made with due regard to

modern social, political, and economic trends. Secondary schools must help the youth to live effectively, must prepare those who show promise for future study, and at the same time must train for employment those who wish to leave school.

The present problem is to evolve a plan for the development of vocational education in the state of Mysore primarily at the secondary school level, with the object of developing the native abilities of the younger generation and making them useful and productive citizens who may intelligently participate in the building of a new state. The major purpose of this thesis is to point out the need for vacational education in Mysore and to make recommendations leading to its inclusion in the educational program of the state. Compulsory education at the lower level, which hasalready been planned, is likely to increase the enrollment in high schools. The plan to be presented here provides for a wide range of interests and aims in this increasing high school population. However, there is a need for research in order to determine educational objectives, to discover the interests of youth, and to provide enriched experiences for all who are to benefit from education.

Method and Scope. -- The suggestions presented here are an outcome of three years of study at the University of Michigan. In order to provide a basis upon which to organize the practical and pre-vocational work in the schools of Mysore, the government assigned the author the task of studying the educational system of the United States. As a result an extensive study of the American secondary schools has been made. Several leading schools in different parts of the country were

visited and many of the leaders in the field of vocational education were consulted in an effort to throw light on the difficulties that were likely to arise in adapting American procedure to the conditions prevailing in Mysore. During the investigation it became clear that it would be unwise to attempt to transplant the practices found in American schools. However, the plan suggested points out how the problems similar to those found in India have been solved in United States, and the extent to which their methods are applicable to conditions in Mysore.

Educational leaders in India propose to build a national system of education and to this end they have laid the fundamental policies for directing the future growth of education. In preparing this plan for Mysore, the policies outlined in the post-war development of education in India have been kept in mind. Also, the pattern of schools suggested in this plan has been made to conform to the one recommended by the Central Advisory Board of Education.

The thesis describes the need for vocational education and suggests provisions to meet it. Source materials for the thesis come chiefly from government reports and bulletins. The occupations suggested for training in schools have been based on existing industries as well as on economic and industrial activities still in the planning stage. Problems of vocational guidance, organization of practical work, administration, curriculum and teacher education have been discussed. Vocational education for adults and college students however, is beyond the scope of this plan and is left to be dealt with by the separate agencies in charge. Even the question of continuation education for

students leaving school has been omitted in favor of discussing the all-day school programs more elaborately. The thesis does not probe into the question of finances as the state economic development plan has already made provisions for an expenditure of nearly 120 millions of rupees over a period of five years for the extension and reorganization of public schools in Mysore. However, it is assumed that an estimate of expenditure in a specific community will have to be determined by local needs and allocations will have to be made on that basis. This plan suggests only the broad policies for organizing vocational education on a state level and further details in planning the work in a community will have to depend on more authentic information concerning local needs.

CHAPTER II

SOCIAL AND ECONOMIC CONDITIONS IN MYSORE SHOWING THE NEED FOR VOCATIONAL EDUCATION

Mysore has been fortunate in having a favorable climate, huge man power, rich agricultural soil, and abundant mineral and power resources. However, the economic conditions are not in keeping with what nature has provided. A survey of the existing social and economic conditions in this chapter will point out how lack of organized vocational education has been largely responsible for the poor productivity of the people, and the need to take measures if the state expects to improve the existing conditions.

Physical Features and Climatic Conditions. -- Mysore, a part of the Deccan plateau, is a table-land situated in the angle where the western and the eastern ghats (mountain ranges) converge into the Niligiri Hills in the South. Situated between 11° 38' and 15° 2' North latitude and 74° 42' and 78° 36' East longitude, Mysore lies in a healthy tropical area. Its natural boundaries include the Niligiri Hills in the South and the Western Ghats and the Eastern Ghats on either side, both extending up to the river Thungabhadra in the North. The state is surrounded by Indian provinces. Although it is land-locked, the point nearest the sea on the West is within 10 miles of it; in general, however, the distance varies from 30 to 50 miles. In the East, the sea is nowhere less than 120 miles distant. Cape Comorin, the southern tip of India, is 250 miles from the southern extremity of the state. The general

elevation of the state rises from about 2000 feet above sea level along the northern and southern frontiers to about 3000 feet at the central watershed dividing the Krishna and the Cauvery river basins.[1]

Physically the state divides itself into two regions -- the Maidan, or plain country, comprising more or less the districts of Bangalore, Tumkur, Chitaldrug, Kolar, Mandya and Mysore; and the Malnad, or hill country, comprising the districts of Kadur, Hassan and Shimoga. The Malnad is the region of hills and mountains, evergreen forests and plantations, and scattered villages, with a rain-fall of more than 35 inches. These regions are extremely malarial and unhealthy. The Malnad comprises about one fifth of the area of the state, yet it supports less than one tenth of the population. The Maidan area, on the other hand, receives less rain-fall and supports most of the active and healthy population. Much of the agricultural cultivation is done in this region.[2]

Mysore has a very mild and temperate climate, and the temperature rarely goes below 45°, or, in summer, above 105°. The usual temperature ranges from 85° to 99° in the shade in summer and from 45° to 63° in winter. A year is divided into three seasons -- rainy, cold, and summer. The rainy season commences generally in the first week of June when the southwest monsoon bursts, and continues until the middle of November, closing with the northwest monsoon. The cold season is

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[1] P.H.Krishna Rao, op. cit., pp.1 - 4.

[2] Ibid.

almost free from rain, follows the rainy season, and lasts till the end of February. The summer, however, begins by the middle of March and ends by May. The major portion of the annual rainfall strikes during the southwest monsoon. The average rainfall in the eastern part of the state, the Maidan country, varies from 20 to 35 inches. The excessive rainfall in Malnad rapidly diminishes in the eastward direction until rain becomes quite scarce in the district of Chitaldrug.[1] (See Appendix, Map 2 - Rain-fall by Regions.)

In spite of these favorable physical features and the tropical climate, agricultural prosperity in Mysore is far from being satisfactory. Mr. P.H.Krishna Rao, commissioner for economic development and planning, describes the poor conditions and points out the possibilities of improving them.

> In Mysore, in spite of the Agricultural Department having demonstrated the advantages of better seeds, better implements, better manures and better methods of cultivation, these have not been applied so intensively by the people as to effectively increase production . . . . The present standards of yield, much to our regret, are the same as in 1918. The Agricultural Department estimates the standard yield at 1,280 lbs. per acre of paddy, 880 lbs. of ragi, 696 lbs. of Jawar and 480 lbs. of horsegram. Our actual yields, are only about 75 per cent of this or less. Improvement in yield appears to have great possibilities.[2]

Mysore farmers have very little understanding of the recent technical progress in agriculture and are therefore reluctant to deviate from their traditional methods of farming. Ignorance and lack of education are the chief causes for their attitude. If the youth as well as the

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[1] Ibid.

[2] P.H.Krishna Rao, A plan for the Economic Development of Mysore (Draft), pp. 9 - 10. Bangalore: The Mysore Government Press, 1944.

adults were taught modern methods of farming in schools, there would be every possibility of increasing the agricultural yield.

Population of Mysore. -- Mysore has a population of 7,329,140, yielding a mean density of 249 to the square mile. However, it is not so densely populated as some of the other states like Cochin (953), Travancore (792), Baroda (349), or Patiala (326). During a period of 60 years from 1881 to 1941, the population, which was 41.86 lakhs, (a lakh is a tenth of a million) has increased to 73.29 lakhs, an increase of 75 %. Although this increase has been neither uniform through the decades, nor uniform throughout the state, the problem is still a rapidly growing population rather than a stable or diminishing one. Considering the average density as being 200 - 300 per square mile, the density is below average in Malnad regions in the northwest, while it is average or above average in the Maidan regions in the southeast.[1] The variations in the density of the population in different regions of the state are shown in Map 3, Appendix.

The growth of population since 1881 has not been uniform throughout the different parts of the state. The contrast in the variation of population growth between the Malnad and the Maidan is very striking. In Maidan regions rural as well as urban populations show considerable increase. There are many factors that play an important role in the adjustment of the population to its environment. Some of the causes for the dwindling population in certain Malnad regions are excessive rainfall, unhealthy climate and diseases, inadequate communications and

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[1] P.H.Krishna Rao, Census Report, op. cit., pp. 11-18.

modern facilities, jungle encroachment, labor scarcity, and poverty.[1]

The distribution of population in the urban and rural areas is of significant value in educational planning.

> Out of a total population of 73.29 lakhs, nearly a third live in about 13,090 villages with a population of less than 500 each. The rest of the population live in larger villages with a population of above 500, or in urban areas which together number about 3700.[2]

These tiny villages have few modern facilities. Such a distribution presents tremendous difficulties in organizing an economic system of education for the entire state. According to the last census classification, out of the 108 towns in the state, 58 fall in the class containing less than 5000 each; 33 contain between 5000 and 10,000; 10 between 10,000 and 20,000; 3 between 20,000 and 50,000; none between 50,000 and 100,000; and the four big cities, Bangalore City, the Civil and Military Station, Kolar Gold Fields, and Mysore City contain more than 100,000. The town people constitute 18.4 % of the total population. Almost 57.4 % of the urban population is found in the four big cities and the three big towns. The 58 towns in the last class contain only 14.4 % of the urban population. The trend in Mysore seems to be that the urban population congregate in large towns whereas the rural population prefer small villages.[3]

The composition of the population by birth-place is also of importance and the census of 1941 considers it under two categories -- "Mysore born" (Indigenous) and others (Immigrants). The Mysore-born population

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[1] Ibid.

[2] P.H. Krishna Rao, Plan for the Economic Development, op. cit., p. iv.

[3] P.H. Krishna Rao, Census Report, op. cit., pp. 11-18.

is 69.29 lakhs out of 73.29 (94.5 %). About 4 lakhs, (5.5 %) came from provinces adjoining Mysore, and a very small number, 4,400, were born outside India. There is of course a great deal of internal movement of population -- from district to district and from rural to urban areas. The sex ratio of females to males has been steadily falling during the last fifty years and it is now 948 for every thousand men. The trend may be regarded as favorable to the state in checking the growth of the population.[1]

Even with a huge population of 7.3 millions, Mysore has not yet been able fully to develop its resources. The causes for this situation may be found by looking at the economic activities of the people. The Mysore census reports the occupational distribution in the state as follows:

> The "Production of raw materials" still supports 76.7 per cent of the population -- 75.9 per cent depending on "exploitation of animals and vegetation", and the rest on the "exploitation of minerals." The "preparation and supply of material substances" supports another 13.4 per cent, of which, "industry" supports 7.6 per cent, "trade" 4.9 per cent and"transport" .9 per cent. Miscellaneous occupations support 5.2 per cent, of which, "insufficiently described occupations" form 3.7 per cent, persons engaged in "domestic service" and "unproductive occupations", and "persons living on their income" constituting the rest. "Public Administration" and "Liberal Arts" support only 4.7 per cent, of which 2.1 per cent are engaged in "Professions and Liberal Arts," 1.9 per cent in "Public Administration" and the balance of .7 per cent in the "Public Force." The conntry is still thus preponderatingly agrucultural.[2]

While 75.9 per cent of the people depend on agriculture, only 0.8 per cent depend on exploitation of minerals and 7.6 per cent on industries.

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[1] Ibid.

[2] Ibid., p. 32.

This uneven distribution of the population explains why the resources still remain idle. Furthermore, the scattered distribution of a large proportion of the people in small villages has made it hard to develop big factories. According to the census, as much as 87 per cent of the population is illiterate and therefore may be assumed to lack the skill and knowledge for developing the state resources. However, the position could be improved if only the schools were to train the abilities of youth as well as of adults. Modern production needs man power and men need to be trained and mobilized to make satisfactory economic progress.

Social Conditions. -- Mysore is a part of Indian civilization and has its own cultural heritage. The achievements of the people in Kannada language and literature, arts, music, and sculpture have been very high. It is true that modern education has not touched the majority of the people and that consequently the level of literacy is very low. However, literacy is by no means the only indication of a people's culture. The spoken word has played an important part in transmitting the culture from generation to generation and moulding the behavior and character of the people.

The conflicts throughout the history of Mysore have retarded its progress, but the imposition of Islamic culture during the 18th century has left very little impression on the people. Even the impact of Western civilization and Christianity in more recent times has not affected the bulk of the population. The great mass living in villages know little of science, industry and modern ways of life. Economic deterioration has resulted in the stagnation of society. However, people

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seem gradually to be changing their ways and customs. Even during a short period there has been considerable improvement in the social conditions -- child marriage is disappearing, the marriageable age of the girl has shifted upward to fifteen, widow remarriage is encouraged, narrow sectarian caste regulations are dwindling, the depressed classes are given more privileges, and untouchability has been abolished. Yet, the extent of progress is far from being adequate to conform to the patterns of life in a modern world.[1]

Mysore has been endeavoring to spread literacy to all its people so that they may have access to the sources of knowledge. According to the 1941 census classification, Mysore occupies in literacy the eleventh place in India, with a percentage of 13. The overall literacy in Mysore has increased from 9.1 in 1931 to 13.00 in 1941. The male literacy is 20.4 and the female 5.3 and it is the Hindu community that is the most backward in this respect. It is interesting to note too that among the Hindus, the "depressed classes" have a percentage as low as 2.9. Better opportunities have been responsible for the high literacy (32.0 %) in the urban population. Occupation and tradition have tremendous influence on this question, and low literacy has been confined generally to the laboring castes like the farmers and the depressed classes, whose occupations are mostly in agriculture or other unskilled work.[2]

The state spent nearly 72 lakhs of rupees on education in 1940, 17.1 % of its total revenue, but the success has not been in proportion to the expenditure. The causes for such slow progress are numerous.

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[1] Ibid., pp. 29 - 47.

[2] Ibid.

Many communities who follow certain vocations by tradition are still not keen on the existing type of education. There is a great disparity in the opportunities between the rural and urban population. The working class are faced with many hardships and their economic conditions force them to withdraw their children from schools to help the family income. Among the other causes retarding the progress of education, the more important are opposition to co-educational institutions, demand for narrow communal schools, ill-health and inadequate nourishment for school children, lack of communications, and lack of schools within accessible distances. There has been a growing tendency on the part of the people to do little for themselves and to rely on government help. Moreover, industrial leaders and the rich have done little for education in Mysore, whereas they have been responsible for a more rapid progress in other parts of India.[1]

Education has reached a few women and has brought about many social repercussions. Women are now taking greater part in political, social, and literary activities. They are asserting their rights more vigorously and refuse to submit to man's domination any longer. They are now employed as teachers, doctors, and nurses and are demanding entry into every phase of public service. Then too, adult education, sponsered by government and private agencies, has made rapid progress by promoting literacy among the people.[2]

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[1] Ibid.

[2] Ibid.

Health conditions in Mysore and in India in general are far from being desirable and little has been done towards improving health in the nation. The average life is short (27). Epidemics and diseases are frequent and efforts to combat malaria have met with only meager success. Infantile and maternal mortality are very high. Sufficient hospitals with qualified doctors and nurses have not been provided. Maternity, child welfare, and school clinics are inadequate. The supply of food and water is not supervised in many parts of the state. Lack of modern sanitary systems, neglect of slum regions, cheap quality restaurants, and ignorance and superstition add to these difficulties. Attendance in school is very irregular since children suffer from poor health and undernourishment.[1]

Housing conditions are no better. The majority of families have a floor space between 100 and 300 square feet. The construction of new houses is hardly keeping pace with the growth of population. Many houses that are already in use are not adequate for living today. As towns are beginning to grow, housing conditions are deteriorating. Most of the homes found in the villages are hardly fit for human occupation. Only mass production of houses and planning on a large scale can avert even worse conditions, and this can be accomplished only if workers are trained for the task.[2]

Schools may be partly blamed for the social and economic backwardness in Mysore. One of the chief functions of education is to help

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[1] Ibid.

[2] Ibid.

individuals to adjust to the changing demands of a complex society. The slow progress in social conditions, the low literacy, the declining health situation, and the inadequate housing are evidences that the existing system of education has failed to meet the needs of society. Schools do not provide equal opportunities for the poorer classes or the rural population. Poverty deprives the people of the education they need for social advancement. Measures need to be taken to eliminate these defects in the future development of education. Economic and social conditions are closely inter-related and the progress of one depends on the other. One of the means of promoting economic prosperity is to provide in schools education for useful and productive occupations, and education for social welfare deserves equal emphasis.

Religion and Tradition. -- The constitution in India declares that India is a secular state and guarantees religious freedom to its citizens. Mysore is no exception in upholding this principle. The main religion in Mysore is Hindu; however, other religions are represented in the population as follows:

> Of the total population of 73 lakhs, 67 lakhs or 91.2 per cent is Hindu; 485,000 or 6.62 per cent is Muslim, 113,000 or 1.54 per cent is Christian and 33,000 or 0.45 per cent is Jain. The other communities together number 11,569 and form only 0.16 per cent.[1]

In addition a few primitive tribal groups are found here and there in the state. The introduction of people belonging to Islamic culture probably began in 1310 and since then the community has been growing in strength. The influence of Christianity came to Mysore through missionary work in

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[1] Ibid., p. 20.

the middle of the seventeenth century. The Christian community includes missionaries, most of the Europeans living in the state as planter or military personnel, Anglo-Indians, and Indian Christians. It is interesting to note that during the last few decades the Hindu population has gone down in proportion, whereas the Muslim, Christian, and Jain populations show an increase. The Hindus are found in greater numbers in rural areas than the other communities, and the Christian community is mostly urban with the exception of a few Indian Christians in rural areas.[1]

Among the Hindus there are a number of castes. The caste system originally started as an economic institution based on the division of labor, but later became associated with religious and social influences. One of the harmful effects of this great tradition is that society is split into a number of rigid sects. Some of the castes had their beginnings because of differences in language or in the place of origin. Many are of occupational origin -- for example, the Vokkaliga (tenant farmer), Agasa (washerman), Beda (hunter), Darzi (tailor), Devanga and Neygi (weaver), Gangakula (fisherman), Ganiga (oil monger), Idiga (tapper), Jogi (medicant), Kshatriya (warrior), Kumbara (potter), Kuruba (shepherd), Meda (basket weaver), Nayinda (barber), Uppara (salt manufacturer), Viswakarma (artisan), and Yadava (cowherd). The distribution of Hindu population by castes is shown in Map 4, Appendix. Some of these castes have a low status in society and unfortunately the manual

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[1] Ibid., pp. 20 - 22.

work associated with them is regarded as low. In more recent times, economic tides have forced many members of these castes to change their occupations. Education has become a pre-requisite to enter many occupations at the higher level. Modern life has created many new occupations and with them labor unions free from religious and social influences. These trends and many other factors, for example, compulsory education and intermarriage between castes, are rapidly reducing the sectarianism within the Hindu society and it may be expected that in the course of time the caste barriers may even disappear.[1]

Generally, within the caste system, the father teaches his sons his occupation and it is by this traditional process that some of the most skilled occupations in India have been preserved even to this day. However, this method of vocational training has certain disadvantages. Among these is a lack of training in occupations that have developed as a result of technological progress. The laboring castes cannot afford to obtain efficient and up-to-date training, and the schools do not provide it even if they could. This has tended to perpetuate the social and economic stratification of society. These conditions suggest the need for an organized program of vocational education based on scientific methods of training. If schools were to assume the responsibility for vocational education, there would be a chance for minimizing the existing disadvantages. Vocational training in schools might even help to bridge the gap between the rich and the poor and to eliminate the social

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[1] Ibid.

prejudices against manual work, by changing the attitudes of the future generation.

Languages. -- The fact that a number of languages are prevalent in Mysore creates a problem which is common throughout India. The principle language in Mysore is Kannada. This is spoken by 50,75,000, (i.e. 69.2 % of the people) and is therefore considered to be the official language of the state. Of the fifteen millions grouped together in the linguistic province of Karnataka in South India who speak Kannada nearly 42 % live in Mysore, and the state is now the most important center for the culture and literature of Kannada. The influences of the population of the neighboring provinces is also apparent in several parts of the state. The northeastern districts are influenced by the Telugu people; Telugu is next in importance to Kannada and is the mother tongue of 11,15,000 (15.2 % of the population). The mining and industrial areas are attracting Tamilian people and Tamil as a language is spoken by 3,91,000. Recently Hindi has gained considerable importance in the state. Since its acceptance as the national language of India, it is gaining momentum from day to day and several private organizations are promoting its popularity. In the western districts, the Tulu people from South Kanara and the Malayalam from Malabar are found as a result of the growth of plantations in those districts. However, the influence of their languages and the few others in the state is very limited. For the present, although Mysore is essentially a Kannada country, Telugu, Hindustani and Tamil occupy an important position. The census report points out one significant trend during the last decade (1930 - 1940),

that the proportion of people speaking the native languages Kannada and Telugu decreased, whereas the proportion of Hindustani and Tamil show an increase. This has been partly the result of increasing industry and business in the state, which is attracting a large number of people from outside. English, introduced by the British rule, still plays an important role in the state administration, higher education, and business circles and is the mother tongue of about 14,300 people.[1]

This diversity of languages in the state is the educator's most perplexing problem. There are three significant forces operating here. The sentiment and love for the mother tongue and Kannada culture is tending to make Kannada the only language for the state and even goes to the extent of organizing a province on a linguistic basis. The second force has emerged since the national awakening and aims at the unification of India through the medium of one national language -- Hindustani. The third influence, now declining, is English, which is still recognized as the language giving people access to Western civilization and modern scientific and technological advances throughout the world. Under present circumstances, the public educational system generally uses Kannada as the medium of instruction and introduces English as a second language at the secondary school level, while the medium of instruction at the university level is English. It has been generally accepted that the mother tongue should be the medium of instruction for children for their best development. However, the question

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[1] Ibid., pp. 22 - 24.

of a national language for uniting the people deserves emphasis and Mysore has to cooperate in evolving a common language for India.[1]

The language used within the state in many of the occupations involving manual labor is Kannada. But the traditional way of training for these occupations has not necessitated the use of books, with the result that very few books in science and vocational education are written in Kannada. This situation presents serious handicaps to the progress of society. The growth of the language in the scientific and technical field is as important as in the literary field and deserves encouragement. Books are essential for preserving and transmitting the vast store of knowledge available in science and technology. The introduction of vocational education in schools would promote the development of scientific and technical literature and enrich the language.

Natural Resources. -- The industrial growth of a country depends to a large extent on its natural resources. Mysore is very fortunate in having rich natural resources. However, these have been developed only to the extent that they satisfy the bare needs of the people. The extent to which the resources are utilized depends on the people's knowledge and training for productive work. As long as the mass of people remain ignorant and idle and fail to develop the resources of their country they are compelled to suffer from want. Vocational education plays its greatest role in imparting the necessary training for production and thus contributing towards bettering the standard of living.

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[1] Ibid.

The pressure of the population on the land in Mysore is not as bad as it is in other parts of India. Only research can reveal whether it has reached the optimum conditions or not. However, the state has limited resources and the growing population is rapidly diminishing the supply. The greater the number of people, the less there is for each individual and the greater is the need for conservation of resources. Therefore, better training facilities must be provided and men must be trained for efficient production. Mysore has to depend on a scientific program of vocational education to reduce the waste of human labor and natural riches.

The power resources chiefly come from the rivers of Mysore. There are three great river systems that flow into the Bay of Bengal -- the Thungabhadra in the north, the Cauvery in the south, and the two Pennars and the Palar in the east. Sharavathi is the only stream on the northwest which flows to the Arabian sea. Water power for Mysore comes mainly from the two rivers Cauvery and Sharavathi. The Cauvery power plant at Shivanasumudra generates 60,000 H. P. and the Shimsha power plant adjoining it generates 23,000 H. P. The growth of industries as well as future developments demands more and more power. The Jog Hydro-Electric works on the Sharavathi river, which was opened in the beginning of 1948 and is now in its first stage of development, is capable of producing 48,000 K. W. With the completion of the second stage at Jog, the total installed capacity of the station will be 12,000 K. W. The potential resources of Sharavathi permit the construction of additional hydro-electric works with a capacity of 12,000 K. W. There

are many more sites which these rivers can afford for the development of power. Coal and petroleum, the other forms of power, are not available in Mysore. Jungle wood and charcoal are available for purposes of fuel, but their use in industries is very limited. In addition to providing a source of power, the water from these rivers supports irrigation works throughout the state.[1]

If these power and irrigation projects belonging to the people are to be utilized efficiently or expanded, it is imperative that vocational and technical education be provided for the engineers and technicians who will be expected to operate them or develop them further. This type of training involves heavy expenditure and could only be made available at state cost in public schools.

Mysore is favored with many minerals, ranging from gold-bearing deposits to ordinary stone and clay. There are about forty different types of economic minerals. Among the more prominent of these are gold, iron, manganese, chromium, lead, and copper and numerous non-metallic minerals such as asbestos, corundum, magnesite, mica, beryl, kyanite, kaolin (China clay), and many varieties of ornamental stones. Recently sulphide ores (pyritic ores) have been found and even some rare earth minerals are suspected to occur. The discovery of these minerals has increased the importance of the mining industry in Mysore. The production of iron and steel is increasing. A number of different kinds of

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[1] Janab M. Hyath, "Hydro-Electric Development", pp. 146 - 149. Mysore Dasara Exhibition Official Handbook and Guide, 1948. Bangalore: The Mysore Government Press, 1948.

building stones are quarried in Mysore and quarrying is an industry found throughout the state. Some of these stones are used for structural work in the state and the rest are exported. The biggest mining industry in Mysore is the Kolar gold fields employing nearly 26,500 men and turning out almost the whole of the gold produced in India.[1]

The forests of the state are of considerable economic importance and cover an area of 3,796 square miles. They are roughly divided into three distinct belts -- the evergreen belt, the dry belt and the mixed belt as shown in Map 5, Appendix. Most of the timber and sandalwood come from the mixed belt. Sandalwood is a state monopoly and yields the largest share of the forest revenue. The timber from teak, blackwood, and nandi is chiefly used in structural work and furniture manufacture, and bamboo is used for paper manufacture and scaffolding in construction work. Jungle wood from the forests supplies a large portion of domestic fuel and charcoal. Besides, the forests yield a number of minor forest products -- tanning barks, spices and herbs for drugs, gums resins and oleo-resins, essential oils and oil seeds, animal products like lac, honey, fibres and flosses, and soap-nut. Some of these products are the basic raw materials for many cottage industries that are prevalent throughout the villages in the state and others are used in larger industries. The forests contain a diverse fauna which ranges from herds of elephants to wild dogs. Among them, elephants, black buck, wolves, bison, herds of sambur, spotted deer, tigers, wild pigs, and bear are quite

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[1] Charles Pichamuthu, "Geological Investigations," pp. 180 - 182. Mysore Dasara Exhibition Official Handbook and Guide, 1948. Bangalore: The Mysore Government Press, 1948.

common. The animal life has been responsible for recreational and tanning industries in some areas. Mysore has specialized in breeding some types of cattle, and the fishing industry is now being established on a modern basis.[1]

Agriculture in Mysore is primitive and, because of this, it is far from being prosperous. The state suffers from a deficit in its food materials to the value of more than 10 million rupees. There are large tracts of land in the state which are cultivable but still lying fallow. Out of the 189 lakhs of acres of land in Mysore (29,548 square miles), nearly 99 lakhs are uncultivable. (See Appendix, Map 6, showing the extent of cultivable, irrigated, and cropped land.) In the regions of very heavy rainfall the chief crops are rice and areca and in recent times sugar cane, pepper, cardamum, tea, coffee and rubber have begun to appear. Dry crops like cotton, jola and ragi (food crops) are grown in regions where the rainfall is less than 60 inches. Both commercial and food crops are raised in the Maidan regions. Most of the ragi, which is the mainstay of the poor, is grown in the red soil in the eastern districts, Bangalore, Mysore, and Mandya. Wheat is cultivated in Kadur. Mysore, Shimoga, and Hassan are mostly rice-growing regions heavily depending on the rain-falls there. The districts irrigated by water in the south and west grow mostly rice and sugar cane. Coconuts, betel vines, onions, potatoes, vegetables, and flowers are grown in lands which draw water from artificial tanks or wells. Kolar raises the largest amount of vegetables. Mysore is also known for products such as coffee,

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[1] P.M.Krishna Rao, Census Report, op. cit., pp. 2-3.

coconuts, groundnuts, areca, a large variety of pulses, and spices. The agricultural Map 7 in Appendix shows the principal crops in the state. Mysore has many industrially important agricultural raw materials. Chitaldrug, with its alluvial black soil, grows cotton. Mandya, Kolar, Shimoga, and Hassan are the principal sugar cane districts. Mulberry plants for the nourishment of silkworms come from the eastern part of the state. Mysore district produces most of the tobacco. Groundnuts and many other oil seeds are grown in southern parts of the state. In short, the area under food cultivation is being gradually replaced by commercially important agricultural products. The production of food is not keeping pace with the growth of population.[1]

Even with all these power, mineral, forest, and agricultural resources, Mysore now produces only a small proportion of its vital necessities and depends to a large extent on imports. Actual conditions can be described better in the words of Mr.P.F.Krishna Rao:

> Most of the exports from the State are raw materials, mostly agricultural produce, the main manufactured articles exported being the products of the Iron and Steel Works, the Sugar Factory, the textile mills and the Cigarette Factory. Manufacture of vessels from brass and other imported sheets and the extraction of oils from oil seeds are industries yet waiting to be developed. Mysore is still importing large quantities of boots and shoes, gold and silver lace, haberdashery and millinery, cement, lime and tiles, chemicals and manures, drugs and medicines, dyes, motor cars and motor cycles, cycles and spare parts glassware and bangles, matches, paper and stationary, scientific instruments, paints and colours and textiles. There is also a large scope for improving the output of superior wool in the State as local wool is meeting only a very small fraction of the demand from the woollen mills. . . . But the very fact of the large excess of imports over exports, even of the articles manufactured in the state, shows that we are not producing enough. While much has been achieved since 1911, much more has to be done by

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[1] Ibid., pp. 39-42.

> increasing both agricultural and industrial production, if we have to stop the alarming excess of imports, which cannot but impoverish the country.[1]

The need for educating the people for productive work is obvious from these conditions. The fact that the state is importing in excess of its export of raw materials shows the inability of the people to manufacture enough to meet their needs. Unless production is increased, the economic struggle in Mysore will be in vain. There is an opportunity to improve the output in every phase of production and to set up many more. The available technical knowledge of modern methods of production is so vast that some effort should be made to inculcate it into the minds of those responsible for production, if all the resources are to be fully developed on a scientific basis. Even agricultural production in Mysore is poor. Modern agriculture is a science. If the state hopes to develop the potentialities of this industry, it must provide education to insure that the farmer is familiar with the results of scientific research in farming and their application to his lands.

Industries and Industrial Development. -- It was recognised in Mysore early in the year 1881 that industries were essential to the prosperity of the state, and modern industries first made their appearance in 1882. Progress was rather slow until the hydro-electric power in Mysore was harnessed in 1901. The institution of the Mysore Economic Conference and the Department of Industries and Commerce, together with

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[1] P.H. Krishna Rao, Mysore Census, 1941, Industry in Mysore, p. 36. Bangalore: The Mysore Government Press, 1942.

the influence of some able administrators during the early period of this century gave impetus to industrial growth. However, the largest expansion took place during the last decade and this decade has even excelled the previous one. The census report in 1941 has classified the industries in Mysore as "organized" and "unorganized". An organized industrial establishment has been defined as "one in which paid labor is employed on definite remuneration."[1] The total number employed in these industries is 84,724. The unorganized industries consist mostly of the cottage industries prevalent in the villages. A cottage industry has been defined as "one which is practised by the members of the family and the profit shared by them."[2] Cottage industries in 1941 supported 41,413 families having 210,867 persons. Among the organized industries, gold mining is the most important, employing 26,500 persons. Textiles are next in importance, engaging 20,000 persons. Cotton is the chief raw material used by the people. The next most important industry is sericulture, employing nearly 50,000 families. The hand and power looms of textile industry, consume all the raw silk produced within the state. Wool is also produced within the state in sufficient quantities to justify the development of the industry. Finally, Mysore contributes 11 per cent of the total Indian exports of the skins of goats.[3]

The census report points out one significant trend in the employment of industrial personnel:

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[1] Ibid., p. 39.

[2] Ibid.

[3] Ibid., pp. 39 - 43.

> Out of 84,724 persons employed, 49,375 are Mysoreans and 35,349 non-Mysoreans, the number of non-Mysoreans being everywhere less than the Mysoreans except in Kolar Gold Fields where it is far in excess -- 20,761 against 7,059. Considered according to industries the the gold-mining industry, the tanning industry, the wood industry in Shimoga, and the textile industry in Chitaldrug employ an excess of non-Mysoreans. The proportion of outsiders in the textile industry in Bangalore city is also heavy, though it has not yet exceeded the Mysorean and the building industry in Bangalore City is progressively attracting non-Mysoreans.[1]

Evidentally the growth of industries is attracting more people from outside than from among the local people. Although it is true that where the control of an industry has fallen into the hands of outsiders, the natural tendency is to prefer outside labor, it should be admitted that the local people lack the initiative, skill, and training to exert their rights to find employment within the state. Mysore people could show themselves equally qualified if they could obtain the necessary skill and knowledge and it would seem to be the responsibility of the state to provide the requisite training and insist on their employment in local industries.

Unorganized or cottage industries are scattered in the villages all over the state. These industries have existed there for a long time. They have been helpful in giving employment to a large number of people in their own houses, sometimes as a subsidiary to agriculture. It has been claimed by many economists in India that these industries if organized on modern lines could thrive side by side with the modern industries and contribute to a large extent to the prosperity of rural life. In addition, they can provide the people with the joy of creative work, a

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[1] Ibid., p. 41.

feature which has disappeared from the mass production industries of the West. There are two kinds of cottage industries, the first kind involving handicraft to produce articles such as clothes, furniture, and other necessities of life. The second kind is situated in urban centers where luxury products are manufactured for export. Among the cottage industries, weaving, goldsmithy, sericulture, pottery, carpentry, blacksmithing, basket making, and mat and cane weaving are the most important. These industries have made little if any progress during the years. As a matter of fact, some of them have died out and a few others are surviving with difficulty in the face of threatening competition.[1]

There are many causes for the decline of these industries -- poor and primitive methods of production, inadequate training for the workers, and lack of organization and marketing facilities. Unless these defects are removed, it would seem difficult for them to thrive along with machine industries. There is a great need for the introduction of power appliances. By the very nature of their distribution and organization, it is very difficult for them to keep pace with technological developments. Huge centralized factories and extreme specialization in western industries have reduced the need for a high degree of knowledge and training for their worker, whereas the conditions are just the contrary in the case of cottage industries. If these cottage industries are to be continued and their advantages maintained, education will have to be provided to enable those employed in them to produce articles which can compete with factory-made goods in an open market.

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[1] Ibid., pp. 30 - 35.

A number of industries have been started during the past decade. The most outstanding are the Hindustan Aircraft Factory and the telephone manufacturing factory. The government is considering several schemes to encourage the development of new industries and to expand those already existing. The electric pig iron furnaces of the Mysore Iron and Steel works intend to treble the present out-put. Many chemical, cement, sugar, rayon, paper, and cycle factories have been planned.[1]

The development of these industries will demand a large number of skilled workers in construction and technical jobs. The existing industries have no means for training the workers. The present proportion of industrial workers is not in excess of 7.6 per cent and not much can be expected from them in the building of new industry. A broad program of vocational education should be launched to meet the pressing demands of industrial growth. The younger generation will be provided with many opportunities in industry and schools will have to assume the responsibility of meeting the needs of youth and society.

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[1] H. C. Dasappa, "Industries in Mysore," pp. 81 - 88. Mysore Dasara Exhibition Official Handbook and Guide, 1948. Bangalore: The Mysore Government Press, 1948.

CHAPTER III

THE NEED FOR VOCATIONAL EDUCATION IN MYSORE SCHOOLS

The account of social and economic conditions in Mysore has made apparent the need for vocational education in the State. Most students on leaving the schools have to find some gainful employment to earn a living. The purpose of this chapter is to examine the conditions in Mysore schools in order to find out the extent to which the schools serve the vocational objectives of youth.

Education in India. -- Many of the problems connected with the schools, courses of study, and educational practices find their root in the historical development of education. The growth of education in Mysore is closely inter-related with educational developments in the rest of the country. Because of this, a brief account of education in India should be helpful in understanding the origin of the present difficulties.

Education in India originated early. Professor F.W. Thomas, a noted British educator in India, writes:

> Education is not exotic in India. There is no country where the love of learning had so early an origin or has exercised so lasting and powerful an influence. From the simple poets of the Vedic age to the Bengali philosopher of the present day, there has been an uninterrupted succession of teachers and scholars.[1]

Though this is true, education in the early days was on a voluntary basis and restricted to a few select groups. Education of the masses of people

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[1] F.W. Thomas, The History and Prospects of British Education in India, p. 1. Cambridge: Deighton Bell and Company, 1891.

was never attempted in India. Education in those days seems to have rested mainly in the hands of a few individuals, teachers or philosophers, rather than in organized institutions. Later, groups of these teachers met at certain places which became centers of great learning and some of which even attained international fame. However, these schools did not flourish and develop, mainly because of the numerous invasions and the superposition of successive cultures from the West. To-day these indigenous schools have been replaced to a large extent by a skeleton system of western education.

Perhaps the first influence of western education in India was due to missionary efforts in the sixteenth century. But it was between 1781 and 1823 that the government policy had its greatest influence in the development of education. Next in importance was the influence that came from several Indian leaders as a result of national awakening, and their desire to promote learning through western sources of knowledge. The growth of education under British rule depended on many political developments in the country. India was politically divided into two regions -- the Indian provinces, which came under the direct rule of British power, and the Indian states under the native kings. Thus education in Indian provinces became the concern of the British government, while education in the states was left to the local rulers. This has been the source of many complex problems in the system. Modern education did not make its appearance at the same time in different parts of India and the extent of progress varies from place to place.[1]

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[1] Sir Philip Hartog, Some Aspects of Indian Education Past and Present, London: Oxford University Press, 1939. Pp. xi and 109.

In the middle of the last century, great strides were made as a result of the despatches of 1854 and 1859 from the English Parliament, which imposed on the government of India the duty of creating a system of education from the primary school up to the university, with the necessary administrative department. Thereafter the growth of schools was more rapid. Another important landmark was the transfer of central control to the Indian ministers and provincial legislatures by the Government of India Act in 1919. Since then there has been considerable progress, but with less closely coordinated efforts. The central government still retains the function of reporting on and advising the provincial governments. In general, the present system consists of primary schools, middle schools, high schools, and universities. The progress of education during the past hundred and fifty years has not been able to produce satisfactory results. Even compulsory education at the primary school level has not been achieved.[1]

Development of Education in Mysore. -- The pattern of educational growth in Mysore has been somewhat similar to that of India and has generally kept pace with the developments there. The early influence of western education before the middle of the nineteenth century was again due to missionary efforts. However, the foundations for an organized system were laid in 1858 by the government with the acceptance of a scheme drawn by Hon. Devereux on lines similar to those outlined by the despatch of 1854 for India. A high school was started in

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[1] Ibid.

Bangalore and some of the mission schools, which were formerly government-aided, were taken under government management. A number of schools began to appear, some government-supported and the rest assisted with grants-in-aid. Ten years later a more extensive scheme for education was drawn up by Mr. Rice, the administrative head of education. As a result of this, many Hobli (i. e. regional) schools were started. At the end of 1872, there were 314 Hobli schools, a vernacular school in each taluk, 11 district schools, and five high schools teaching up to Bachelor's degree level. The high school in Bangalore was raised to the standard of a college in 1875 and affiliated to Madras University as Central College. The famine of 1877 retarded education and even caused the abolition of all aided schools. But between 1881 and 1902, a steady progress was made in several ways. An attempt was made to transfer the primary education to local control; special encouragement was given to study Kannada and Sanskrit; scholarships for higher education abroad were provided; the education of women received more attention; many normal schools were opened for the education of teachers; an Oriental library was established; two industrial schools were opened, one at Hassan and the other at Mysore; and an Inspector General of Education was appointed for the administration of education.[1]

The Elementary Education Regulation was passed in 1913, introducing compulsory education in the state for the first time. The five years

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[1] A.C. Deve Gowda, "A General Survey of the Development of Education in Mysore," pp. 1-5. Souvenir, All-India Educational Conference XXIV Session -- Mysore 1948. Bangalore: The Mysore Government Press, 1948.

following 1917 showed the greatest expansion in elementary schools. Many village-aided schools were started. In 1919 there were 9596 schools, but later they began to decrease, because of the inadequate and unreliable contribution from the villagers. A survey was conducted in 1922 regarding the conditions in primary schools, which led the government to take certain measures to improve them. From 1922 to 1930, many of the village-aided schools were converted to government schools. All the primary schools were reorganized into four-year courses. The teaching of English was discontinued in primary schools.[1]

The Elementary Education Regulation Act in 1930 transferred the control of primary schools to twelve local education authorities, one for each of the eight districts and one for each of the four large municipalities in the state. Each local authority exercised control through a school board. Since progress became slow under the local boards, the government resumed control and appointed a Deputy Director to be in charge of elementary education. In 1944 another Act popularly known as "Partial Compulsion Scheme" was passed which made it binding on parents to see that children voluntarily sent to schools remain there up to the age of 12. Renewed efforts were made to introduce compulsory elementary education again in 1947 starting with one taluk in each district, with plans to extend it throughout the state.[2]

The secondary schools have undergone many changes in the course of their development. The middle schools were first reorganized in 1924

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[1] Ibid., pp. 5 - 13.

[2] Ibid.

with four-year course in which English was taught as compulsory second language and Kannada became the medium of instruction. Practical instruction was also introduced in them.[1]

The Secondary School Leaving Certificate (S.S.L.C) scheme came into effect in 1912 with the object of reducing the dominating influence of college preparation and literary learning in high schools. A Board was constituted for this purpose and was entrusted with the task of conducting a public examination at the end of the secondary school period. Still conditions were not satisfactory and a committee was appointed in 1922 to re-examine the policies in high schools. The committee recommended that:

1. There should "be no specialisation in the three year high school course and all pupils should uniformly study the same general subject of the standard to be prescribed in each of the syllabuses."

2. The "study of a technical or industrial subject be also made obligatory on all the candidates, but no public examination be required at the end."

3. "English be continued as the medium of instruction in high schools."[2]

These recommendations laid the foundation for a rigid curriculum in high schools, overlooked the differences in the abilities and interests of pupils, and reduced the importance of vocational education.

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[1] Ibid., p. 9.

[2] Ibid., p. 10.

Later in 1933, another committee was appointed by the Government for reconsideration of the pre-university education. The important recommendations were:

1. The Public schools should have six years of elementary schools, three years of middle schools and three years of high schools.

2. Separate schools should be provided for vocational education and general education in high schools and middle schools.

3. Pupils should be advised regarding their careers.

4. The medium of instruction should be the mother tongue.[1]

There seems to be no evidence of any practical measures taken as a result of these recommendations. However, the repeated efforts on the part of the Government to reorganize the secondary schools point out the unsatisfactory conditions in them.

The beginning of technical education in Mysore was made in 1902 according to a plan prepared by the Dewan, Sir P.K. Krishnamurthi. Manual training was introduced in the curriculum of the secondary schools though not with much success. Many industrial schools were established and there were in all twenty industrial schools in 1910. Later, in 1912, a Technical Education Committee headed by Sir M. Visveswariah put forward certain proposals as a result of which an agricultural school and a few more technical schools were opened. Since the transfer of control of industrial education to the Department of Industries and Commerce in 1922, its growth has been fragmentary.[2]

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[1] Ibid., pp. 11-12.

[2] Ibid., pp. 5-13.

The number of institutions in Mysore and the enrollment in them is shown in the following Table.

TABLE I*

NUMBER AND STRENGTH OF INSTITUTIONS IN MYSORE (MARCH 1, 1947)

Institutions	Number	Strength
Lower Primary Schools for Boys	8,105	386,648
Lower Primary Schools for Girls	453	42,540
New Type Middle Schools for Boys	366	45,797
New Type Middle Schools for Girls	60	7,517
Middle Schools for Boys	478	75,201
Middle Schools for Girls	92	14,553
High Schools for Boys	92	24,564
High Schools for Girls	20	3,001
Sanskrit Schools	87	2,431
Oriental Colleges	5	556
Commercial Schools	27	1,745
Industrial Schools	15	418
Agricultural Schools	4	97
Training Institutions	8	688
Special Schools for the Handicapped	2	125
Total	9,814	605,871

* Ibid., p. 13.

Two significant factors seem obvious from the previous table.

1. There are comparitively very few vocational schools in the state.

2. The enrollment per school seems to be far lower in vocational schools than in high schools.

Mysore was the first Indian state to establish a university, beginning in 1916 with only two colleges. Prior to this, the colleges in the state were affiliated with Madras University. The university was one of the few to introduce the vernacular as a compulsory language in its course of study. According to the recommendations of the Calcutta University commission the university was recognized and in place of college entrance courses two year intermediate colleges under the control of the university were established. After the intermediate college course is completed, the bachelor's degree course lasts two years and an honor's degree three years. The university now comprises twenty-seven institutions, besides four affiliated colleges managed by private agencies. During a period of little more than thirty years, the university has established several intermediate colleges, a few science and liberal arts colleges, and many professional colleges for engineering, teaching, medicine, commerce, agriculture, and law. The Technological Institute deals with the study of textiles and the university has recently instituted a degree course. Now the university has a student body of eight thousand.[1]

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[1] M. Sultan Mohiyuddin, "University of Mysore," pp. 251 - 255. Mysore Dasara Exhibition Official Handbook and Guide, 1948, Bangalore: The Mysore Government Press, 1948.

The Mysore State Adult Education Council is in charge of adult education, and the state spent nearly 500,000 rupees in 1947 - 1948 for this purpose. Among the Council's activities are conducting literary classes, maintaining rural libraries, providing audio-visual education, and publishing books and pamphlets for adult use.[1]

Although there has been considerable development in education, the policy of expansion has been subjected to severe criticism. The purpose here is not to exaggerate the existing defects nor to overlook what has been achieved, but to make a critical evaluation so as to formulate sounder policies for future planning. Fundamentally, the present system of education is a transplantation from the West and little attention has been paid to the needs of the Indian people. In addition to its own weaknesses, it has inherited many of the defects of Western education. Importance has been given to the education of the richer classes and urban population, while the education of the poorer and the rural has been neglected. Little has been done for the education of the workers, upon whom the country must depend for the production of goods. The committee headed by Zakir Hussain to develop Basic National Education for India says regarding the existing educational system:

> Indian opinion is practically unanimous in condemning the existing system of education in the country. In the past it has failed to meet the most urgent and pressing needs of national life, and to organize and direct its forces and tendencies into proper channels.

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[1] A.C. Deve Gowda, "Adult Education in Mysore," pp. 33 - 39. Souvenir, All-India Educational Conference XXIV Session -- Mysore 1948. Bangalore: The Mysore Government Press, 1948.

> Today, when quick and far-reaching changes are shaping both national and international life and making new demands on the citizens, it continues to function listlessly and apart from the real currents of life, unable to adapt itself to the changed circumstances. It is neither responsive to the realistic elements of the present situation, nor inspired by any lifegiving and creative ideal. It does not train individuals to become useful productive members of society, able to pull their own weight and participate effectively in its work. It has no conception of the new co-operative social order which education must help to bring into existence. . . .[1]

In other words, India lacks a philosophy of education. The present schools were originally meant to develop men to assist the foreigh power to run the state. Government employment is a great attraction for the men coming out of the universities. But since the abilities of the government to absorb men are not infinite, the present system of education is turning out an educated proletariat for whom the opportunities for employment are limited. Moreover, elementary and secondary education lack difinite objectives, except to provide students for higher education. Rigid curricula are dictated everywhere and very little attention is given to individual differences and choices.

Further, the diversity of languages in the provinces as well as the differing patterns of growth has failed to provide a uniform system of education for India. Difficulties are experienced in transferring a student from one institution to the other and sometimes it is done at a great loss to the student. The Central Advisory Board of Education, headed by John Sargent, recognises this fact and reports:

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[1] The Zakir Husain Committee, Basic National Education, p. 7. Segaor: Hindustani Talami Sangh, 1939.

> . . . it is inconceivable that within a reasonable period a really national system could be developed or evolved from what now exists or by the methods hitherto followed. Apart from the extremely slow progress which had been made before the war, the present system does not provide the foundations on which an effective structure could be erected; in fact much of the present rambling edifice will have to be scrapped in order that something better may be substituted.[1]

These conditions indicate the need to examine the present policies, set up definite objectives, and organize the schools in order to evolve a system of education more responsible to society.

Administration of Education. -- Education in Mysore is mostly state-supported and state-controlled. The Minister for Education is an elected representative of the people, and he is assisted by the Education Secretariat. For purposes of administration, education has been divided into Higher Education and Public Education. The University is directly in charge of Higher Education. Its constitution was set up by the Act of 1916, and later amended in 1933 and 1939. The head of the executive is the Vice-Chancellor, who is the chairman of the council, the Senate and the Academic Council. The government has vested in the University Council the responsibilities for supervision and control over all the institutions and personnel. The Senate is the statute-making body of the university, comprising official members, Academic Council representatives, and non-officials. The Act of 1933 makes the Academic Council responsible for maintaining the standards of teaching,

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[1] Report by the Central Advisory Board of Education, Post-War Educational Development in India, p. 2. Bureau of Education, India, January 1944. Delhi: Manager of Publications, 1944.

courses of study, examinations, and for promoting research.[1]

The Department of Public Education has undergone several changes and has grown along with the expansion of education in the state. The Director of Public Instruction is the executive head of public schools. As early as 1912 a board was constituted by the government to conduct the S.S.L.C. examination at the end of secondary schools. In 1946 the administrative system was reorganized for efficient control and unity in education and took its present form. Three Deputy Directors were appointed to the department to be in charge of high schools, middle schools, and elementary schools. The District Educational Officers, thirteen in all, were placed in charge of administration, including the inspection of schools of all types. The inspectors of schools continued to direct the primary schools. Recently several attendance officers have been appointed to help the inspectors in enforcing the Compulsory Education Act. Since 1926 the department has been assisted by a superintendent of practical instruction in the middle schools, an agriculture inspector, and two inspectors of physical education.[2]

The question of controlling vocational education and technical education has long been disputed in India. The Indian Industrial Commission recommended the transfer of industrial schools to the control of the Department of Industries and Commerce. Mysore followed India's lead

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[1] M. Sultan Mohiyuddin, op. cit., p. 251.

[2] A.C.Deve Gowda, "A General Survey of the Development of Education in Mysore," pp. 1 - 13. Souvenir, All-India Educational Conference XXIV Session -- Mysore 1948. Bangalore: The Mysore Government Press, 1948.

and the Department of Industries took control of industrial education and the Department of Agriculture, of agricultural education. The splitting up of vocational education thus into different branches and the decentralization of control has failed to achieve unity and co-ordination in education, and the growth of vocational education in the state has been fragmentary. The prestige of vocational education has been lowered and the industrial schools have failed to attract a sufficient number of pupils. It was argued that the Department of Industries, being in touch with industry, was best suited to administer the necessary training. Plausible as this appears, the efficiency in the existing industrial schools is doubtful and the State Committee for Coordination and Finance for Economic Developments has pointed out the need for improving it.[1]

There are many potential dangers in distributing the control of vocational education. At times vocational education may be overemphasized at the cost of general education. It is also possible that vocational education may be neglected, under the stress of the heavy responsibilities of the departments concerned. Experience in India has pointed out some of the disadvantages, which have mentioned in the report of the Central Advisory Board of Education:

> There can be little doubt that development hitherto has suffered from the lack of any unified direction either in the country as a whole or in individual Provinces. . . . It is obvious that such an arrangement cannot make either for efficiency or economy. Technical instruction, particularly in the more advanced

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[1] Report of the Committee for Co-ordination and Finance, p. 31. Mysore Economic Conference, Bangalore, 31st October 1946. Bangalore: The Mysore Government Press, 1946.

> stages, is expensive and the necessity for avoiding overlapping or dispersion of effort will be apparent. It is equally clear that this branch of education should be closely linked up with industry and commerce, whose needs it is designed to serve. Recognition of this no doubt led to the control of technical education being given to the Departments which deal directly with industry and commerce. In actual practice, however, the object in view has not been achieved.[1]

The report continues:

> . . . technical instruction regarded as a means of general education as well as a preparation for certain types of employment is acquiring a place of ever-increasing importance in the educational system. Since its function is primarily educative its direction should be in the hands of those responsible for education as a whole. As Mr. Abbott points out, "In nearly every great industrial country . . . . . technical education and general education are administered by the same department of State, i.e., the Ministry of Education."[2]

In United States, vocational education has been successfully organized under the control of the Department of Public Instruction or under a separate Board of Vocational Education. The conditions in Mysore show the need for administrative changes to bring all education under an unified control. Even the Central Advisory Board has expressed the same view:

> While recognising the importance of the closest collaboration between the department of education and the other departments of government concerned with industry and commerce as well as industrial and commercial interests, the committee was strongly of opinion that if overlapping and waste were to be avoided, all types of technical education, using the word in its broadest sense, should in all provinces be under the direct control of the department of education.[3]

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[1] The Central Advisory Board of Education, Post-war Educational Development in India, **op. cit.**, p. 44.

[2] Ibid.

[3] Report of the Technical Education Committee of the Central Advisory Board of Education in India, 1943, Together with the Decisions of the Board Thereon, p. 22. Bureau of Education, India, Pamphlet No. 23. Delhi: Manager of Publications, 1946.

Finances for Education. -- The greatest part of the educational expenses in Mysore is met by the state out of its revenues. The state has consistently increased the educational budget from year to year. The present popular government has undertaken a more progressive policy and given education a high priority in the national effort. In 1948, the education budget amounted to 275 lakhs of rupees which was 25.8 per cent of the total revenues. In addition to this, local and municipal funds provide a small proportion of the expenses. Local funds are raised by the district boards by levying an education tax, while municipal funds come from the revenues of the big municipalities. Fees, which come mainly from the high schools and the university, contribute nearly a tenth of the total expenses. Instruction in primary schools and middle schools is free, although a small fee is charged for registration. Endowments and donations from the public provide a small amount of money. The percentage of total expenditure met by different sources for the last few years is given in Table II.[1]

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[1] Report on Public Instruction in Mysore for the year ending 30th June 1947, pp. 10 - 11. Bangalore: The Mysore Government Press, 1948

TABLE II

TOTAL EXPENDITURE ON PUBLIC EDUCATION MET FROM DIFFERENT SOURCES IN MYSORE

Sources	1944-45		1945-46		1946-47	
	Amount in rupees	Percent	Amount in rupees	Percent	Amount in rupees	Percent
State Funds	8,329,007	80.00	10,184,488	82.38	13,326,009	86.35
Local Funds	749,659	7.21	405,475	3.28	461,687	2.96
Municipal Funds	47,059	0.45	91,535	0.74	110,861	0.75
Fees	993,657	9.54	1,372,845	11.10	1,334,229	8.64
Other Sources	292,365	2.80	308,590	2.50	200,251	1.30
Total	10,411,745	100.00	12,362,933	100.00	15,433,037	100.00

Expenses on education are divided into two classes -- Direct and Indirect. Direct expenses are those incurred in running the institutions, while indirect expenses are those incurred for buildings, furniture, equipment, and Scholarships. Details of direct expenditure incurred in the different grades of education are given in Table III.[1]

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[1] Ibid.

TABLE III

DIRECT EXPENDITURE ON DIFFERENT GRADES OF EDUCATION IN 1945 TO 1947

Grades	1944-45		1945-46		1946-47	
	Amount in rupees	Percent	Amount in rupees	Percent	Amount in rupees	Percent
University Education	11,61,445	11.16	17,51,987	14.17	16,39,232	10.62
Oriental Colleges	86,972	0.83	98,218	0.79	91,844	0.59
High School Education	9,54,837	9.17	10,13,204	8.29	10,86,194	7.03
Middle School Education	11,23,093	10.79	12,99,542	10.51	14,99,238	9.71
Primary Education	39,68,121	38.11	45,76,940	37.02	63,68,472	41.25
Teacher Training	1,76,842	1.70	1,88,800	1.53	1,73,430	1.15
Technical Education	2,43,744	2.34	3,01,661	2.44	3,18.922	2.07
Total	77,15,054	74.10	92,30,352	74.66	1,11,77,332	72.42

The percentage of expenditure on technical education varies from 2.34 in 1944 to 2.07 in 1946, which appears to be too low, and indicates a policy that has overlooked the importance of technical education. If the government expects to make education more functional for its youth, more money should be spent on vocational education.

Elementary Education. -- The elementary education in Mysore comprises a four-year course in the primary schools. However, the development plan

extends it by a year and expects to bring all children into schools in a period of thirteen years.[1] Although satisfactory literacy can be achieved in five years of schooling, it has been found in Western countries that these five years are not sufficient to make the youth intelligent and productive citizens. If Mysore expects to provide equal opportunities to every one and educate its people to the limit of their capacity, it would seem that five years of compulsory education is far below the ideal. Even the Central Advisory Board of Education has recommended at least eight years of compulsory education for India. The growth of primary schools in recent years is shown in Table IV.

TABLE IV

NUMBER OF PRIMARY SCHOOLS AND TOTAL ENROLLMENT IN THEM

Year	Number of Primary Schools	Enrollment	Average Number Per School
1938	6395	231,445	37
1944	7681	364,584	48
1947	8984	463,420	52
1948	9384	495,364	55

[1] Development Schemes of Mysore, Volume II, Groups X - XX, pp. 57-58. Bangalore: The Mysore Government Press, 1946.

The following table, compiled from the Reports on Public Instruction in Mysore for the years ending 1945, 1946, and 1947, leads to some important observation regarding the conditions in primary schools.

TABLE V

PUPIL ENROLLMENT IN PRIMARY SCHOOL CLASSES

Year	Class I	Class II	Percentage of Drop	Class IV	Percentage of Drop (From I to IV)
1941-1942	1,33,733	....*	....	....	....
1942-1943	1,65,329	63,895	52.2	....	....
1943-1944	1,96,737	74,655	54.8	....	....
1944-1945	2,15,000	87,546	55.5	42,466	68.2
1945-1946	....	....	....	48,071	70.9
1946-1947	....	....	....	54,205	72.5

(*Figures not available in the reports.)

Two significant trends are obvious. The enrollment in higher grades has shown a rapid decline and the percentage drop in primary schools has gone up since 1944. It is also evident that at present for every 1000 children entering the first year, only 300 reach the final year. This declining enrollment in higher grades indicates that the enforcement of compulsion has not been satisfactory, with the result that there is an enormous waste of effort and money in the schools. The fact that the percentage drop has increased while the number of schools has increased suggests a decline in the efficiency of schools. Expansion of schools

should never be made at the cost of efficiency. These undesirable trends in elementary education need to be checked in the future.

Middle School Education. -- Middle school is the intermediate stage between the primary school and the high school, and comprises a four-year course. There are nearly 1,110 middle schools, and on an average, there is a school for every 27.5 square miles, or for every eight primary schools in the state. The middle schools are better staffed and the teachers better paid than in the primary schools. Instruction in middle schools is free but it is not compulsory, and while scholarships are provided for the poor and deserving, middle school education is generally beyond the means of children coming from poor families. The medium of instruction is the mother tongue which, in most cases, is Kannada, while English, Tamil, Telugu, and Urdu are still prevalent in some places.[1]

The curriculum consists of two groups, of which one is compulsory and the other optional. The compulsory group is meant for general education and consists of language, history, geography, mathematics, and English. In addition to this, one subject is chosen from the optional group, which comprises hygiene, additional languages, music, domestic science for girls, or practical work for boys. Instruction is given in crafts like carpentry, tailoring, weaving, smithy, leatherwork, brasswork and agriculture. However, practical work has not been popular with

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[1] B. Rajeevalochanam, "Middle School Education," pp. 20 - 24. Souvenir, All-India Educational Conference XXIV Session - Mysore 1948. Bangalore: The Mysore Government Press, 1948.

the boys. The Deputy Director for Middle Schools, Mr. B. Rajeevalochanam, explains:

> Though "Practical Instruction" is provided for in the existing courses, comparatively very few pupils take this subject for the reason that Practical Instruction has not been adequately co-ordinated in the different schools and furhter there is not sufficient scope for continued study in the High Schools.[1]

Out of the 1,110 middle schools, only 62 of them have facilities to offer practical instruction in some of these crafts. Moreover, these activities have little relation to the future vocational goals of pipils. For these reasons, the pupils have been forced to neglect their vocational aims and concentrate on theoretical learning.[2]

The enrollment in middle schools has shown a definite increase, even though there has been no compulsion beyond the primary schools.

TABLE VI

NUMBER OF MIDDLE SCHOOLS AND TOTAL ENROLLMENT IN THEM

Year	Number of Schools	Enrollment		Total
		Boys	Girls	
1941-1942	330	49,253	3,477	52,730
1942-1943	361	51,003	3,828	54,831
1943-1944	381	54,308	3,805	58,113
1944-1945	411	57,772	3,666	61,438
1945-1946	440	64,242	3,762	68,004
1946-1947	478	71,067	4,134	75,201

[1] Ibid., p. 23.

[2] Ibid.

Table VII, compiled from the reports of the Department of Public Instruction shows a few healthy trends in middle schools. The percentage of drop is gradually being reduced, showing the tendency on the part of those who join the middle schools to continue until completion.

TABLE VII

PUPIL ENROLLMENT IN MIDDLE SCHOOL CLASSES

Year	Middle School Classes				Percentage of Drop
	I	II	III	IV	
1941-1942	19,153	....*	....	....	....
1942-1943	20,270	....	....	....	....
1943-1944	21,780	....	.....	....	20.00
1944-1945	22,611	18,355	16,505	15,489	19.13
1945-1946	24,729	20,230	17,704	18,007	11.16
1946-1947	27,806	22,167	19,743	20,038	8.03

(*Figures not available in the reports.)

It is estimated that about 60 per cent of those who finish the primary schools enter middle schools. Out of the 300 (in 1000) who reach the final year in primary schools, only 180 pupils join the first year of the middle schools. The percentage who pass the middle school examination varies; it was 61.4 % in 1946 and 66.7 % in 1947. If we assume the that there is a drop in enrollment by 10 per cent in middle schools and and that only 60 per cent complete the final year, then out of 180,

only 102 are capable of joining the high schools. Thus, nearly 90 per cent of the pupils are eliminated in the first eight years of their education.

Secondary School Education. -- High schools provide a three-year course of study. Their number has trebled since 1942, and now the state has 151 high schools. The sudden growth has been the outcome of increasing efforts by the municipalities, district boards, private management, and the government. The total enrollment in high schools was 31,736 in March, 1948. Although more schools are now in operation, they have been poorly equipped, and have been housed in inadequate buildings. Nearly twenty years ago Kannada was adopted as the medium of instruction along with English. English is still taught in high schools and Hindi is also compulsory in all the government high schools.[1]

The curriculum of the high schools, which for a long time was dominated by the idea of preparing boys for university education, has undergone many changes, but even now little importance is given to the abilities and aptitudes of high school pupils. The compulsory subjects in the high school curriculum consists of English, Kannada or any other second language, general science, biographical study of world personalities, history, geography, civics, and elementary mathematics. The optional group consists of four divisions: Science, Humanities,

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[1] M.V. Sunderesan, "High School Education," pp. 25-29. Souvenir, All-India Educational Conference XXIV Session - Mysore 1948. Bangalore: The Mysore Government Press, 1948.

Practical Arts for boys, and Domestic Arts for girls, of which one has to be elected by the pupils. Most high schools do not have facilities to provide either practical arts or domestic arts and very few pupils enroll in these two groups.[1]

This has again tended to perpetuate college preparation as the chief objective of high schools. The prescribed curriculum has disregarded individual differences in the interests and abilities of pupils. The narrow academic tradition has been maintained and those who possess practical abilities find little interest in them.

TABLE VIII

ENROLLMENT IN HIGH SCHOOLS

Year	Number of Institutions	High School Classes		
		I	II	III
1943-1944	62	....	....	....
1944-1945	80	7785	6955	5574
1945-1946	90	8673	7351	7252
1946-1947	112	11,118	8090	8356

(Compiled from Reports on Public Instruction in Mysore, 1945 to 1947.)

The enrollment in high schools is likely to increase in the years ahead. Students with a greater range of interests and abilities from various social and economic groups are likely to come to school.

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[1] Ibid.

The S.S.L.C final examination results during the last five years show that only 40 to 47 per cent of the pupils are eligible to enter colleges. Of these, the poorer are obliged to find employment for which they are little prepared. The majority of students who fail to go beyond high schools find little help in practical life from the existing curriculum. The importance given to high school as a preparatory agency for the university is more than it deserves. The vocational objectives of secondary schools cannot be ignored in the future, if the education given in public schools is to be improved.

Vocational Training in Homes. -- In many skilled occupations found in Mysore, the tradition of the son learning his father's occupation is still the most commonly followed in practice. Whether the son has the ability or not, the training starts at an early age and continues until he has acquired a degree of skill in keeping with his ability. This method of obtaining workers such as carpenters, jewelers, potters, tailors, masons, farmers, and many others to perform the different tasks of society has existed in India for a long time. In recent times, changing economic conditions and the advent of industries have forced many to change their occupations. However, the low prestige of many occupations involving manual labor exerts considerable influence on those seeking new ones. Perhaps the only other way to learn a new occupation is to work with one who knows and to practise it whenever there is an opportunity. But these methods have not yielded satisfactory results in training the number of workers needed at present.

The growth of science and technology has considerably affected

the old occupations. Technological advances have made some occupations obsolete and have created new ones. The increase in their number is so rapid that the traditional method of training in homes has completely failed to adapt itself to the changing demands. The modern worker, apart from having the appropriate manual skill, is expected to possess some knowledge related to his occupation. He has to have the aptitudes, abilities, and interests for the work he chooses, whether it be in industry or elsewhere. They are essential for his mental and physical well-being. These factors were generally overlooked in home training. Even literacy was not considered important. The hereditary occupation of the family or a matter chance determined the youth's choice. Moreover, inefficient methods failed to improve the quality or the productivity of workers. These inadequacies in the traditional method of vocational training show the need for schools to assume the responsibility for vocational education and provide an adequate program in keeping with modern technological progress.

Vocational and Technical Schools. -- Organized vocational education in Mysore started along with the development of modern industries in the state. As early as 1892, it was recognized that a continuous flow of skilled workers was necessary for the efficient operation of industry. The beginning was made then by opening two industrial schools. There are now twelve schools in the state. Generally, these schools train boys for occupations in the machine shop, smithy, or foundry, or in wood-work, cane work, silver work, metal work, clay modelling, engraving, and enamelling, fine arts, and painting. The training was

primarily meant to foster and improve the indigenous cottage industries. However, the facilities for training in the existing schools are quite inadequate to meet the present need of skilled workers for modern industries. The Department of Industries plans to increase their number to twenty.[1]

Agricultural education is under the control of the State Department of Agriculture. There are only four agriculture schools at the secondary education level. The Department proposes to have two more schools.[2]

The institutions providing commercial education in the state are all under private management. A large number of students are enrolled in the recognized commercial schools. However, no plans have been made for their further development.

There are two institutes in Mysore imparting technical education at a semi-professional level. The Krishnarajendra Silver Jubliee Technological Institute was opened in 1928 with the primary object of providing adequately trained personnel for the state textile industries, and to furnish technical advice to the modern as well as the cottage industries regarding textile technology. Besides a degree course, there are two other grades of instruction, one designed for those who have completed the secondary schools, and the other at secondary school level. The Sree Jayachamarajendra Occupational Institute at

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[1] Development Schemes of Mysore. Volume I, Groups I-IX, pp. 48-50. Bangalore: The Mysore Government Press, 1946.

[2] Ibid., pp. 166-167.

Bangalore was started in 1943. It has been the only one of its kind in the state for training boys for modern industrial and technical occupations. The institute accepts primarily boys who have completed high school. Training is given in machining, welding, drafting, automobile engineering, plumbing, tailoring, printing, mining, sheet metal work, leather work, electrical techniques, radio, motion pictures, and glass technology. Both the Institutes are under the control of the Department of Industries and Commerce. There is a proposal to start two more institutes in the state similar to the occupational institute, on at Mysore and the other at Davenegere to further technical education in the state.[1]

These vocational and technical schools in the state are usually overcrowded and many students are refused admission every year due to lack of facilities. Unless measures are taken to expand these schools, both at the secondary school and the post-secondary school level, the increasing demand for academic training will continue. Yet the university is turning out graduates who have no prospects of employment. If this trend is to be checked, technical courses designed to meet the economic needs of society must be provided side by side with general education courses.

Vocational education for women has been provided in a few institutions in Mysore. The profession of teaching seems to be most popular.

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[1] D.S. Venkanna, "Sri Jayachamarajendra Occupational Institute, Bangalore," pp. 49-55," Souvenir, All-India Education Conference XXIV Session -- Mysore 1948. Bangalore::The Mysore Government Press, 1948.

Three industrial schools for women provide training for skilled occupations in industries, but generally women are trained for dressmaking and tailoring, spinning and weaving, cooking and house-keeping, embroidery, hosiery, and lacquerware work. A few girls are enrolled in boys' industrial schools. The occupational institute at Bangalore trains a few girls for tailoring. The demand for training in modern occupations has been increasing and an occupational institute for women has been proposed at Mysore.[1]

Women are capable of many professional occupations provided they possess the necessary ability and training. Even to-day, there are not enough women in teaching, nursing, or the medical, social, and political fields. Yet the education of women for home and family living has not been emphasized in public schools. Failure to provide Home Economics at the college level has discouraged pupils from studying domestic science in secondary school. Mysore women have barely entered the field of business and clerical occupations, whereas in Western countries and the United States, women have relieved men from these occupations so that they could take up more productive jobs. Schools need to take the initiative in developing the abilities of woman in the best interests of the state.

Recent Proposals for Extending Education. -- The time had arrived when a national system of education was of paramount necessity

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[1] N.S. Venkataram, "Women's Education in Mysore," pp. 81-89. Souvenir, All-India Educational Conference XXIV Session -- Mysore 1948. Bangalore: The Mysore Government Press, 1948.

to India's progress and the welfare of its people. Careful planning was essential for accomplishing it. For this reason, the Central Advisory Board of Education was constituted in 1935 by the Indian Government to survey the existing facilities and to make recommendations for future developments on the basis of its findings. The report of the committee was published in 1944 with the object of elucidating the general policies upon which future education may be built, and to outline the minimum educational requirements of the country.

In general, the structure of the system recommended does not deviate much from what exists now. Some of the following recommendations, significant in planning vocational education in Mysore, are given below:

1. A system of universal, compulsory, free education of all boys and girls between the ages of six and fourteen (in two stages of 5 and 3 years) should be introduced as speedily as possible. The middle schools, being the finishing schools for the majority of the future citizens, should be generously staffed and equipped.

2. The high school course should cover six years and the normal age of admission should be about eleven. Entry to high schools be on a selective basis; the methods of selection to be employed will require the most careful consideration. High schools should be of two main types, (a) Academic (b) Technical. The objective of both should be to provide good allround education combined with some preparation in the latter stages for the careers which pupils will enter on leaving school.

3. A comprehensive system of technical education at all stages is necessary. The function of technical education is (a) to meet the needs of industry and commerce for properly trained workers of all grades and (b) to provide a suitable form of education for those boys and girls whose natural abilities can best be developed by instruction on practical lines. Technical education should be regarded as an integral part of any educational system. It must include commerce and art in relation to industry. Agriculture education must be regarded as an essential branch of technical education. Three types of technical institutions are suggested (a) Junior Technical or Industrial or Trade Schools. (b) Technical High Schools. (c) Senior Technical Institutes. The first two provide full-time instruction while the third provides part-time instruction for those already in employment. Technical high schools and junior technical trade or industrial schools should be administered by provincial governments. The administration of all education should be under the Department of Education of the concerned governments. The education departments should maintain close contact with the other departments concerned with industry and commerce. Technical education in its higher stages (beyond secondary schools) should be administered by a central body, and the financial responsibilities will have to accepted by the Central Government.

4. Adequate teacher training institutions must be provided to supply the need for teachers.

5. Employment Bureaus form an essential part of the educational administration. They are to be staffed by trained experts with practical

experience of teaching and of industrial conditions.

6. The Provinces should remain the main units for educational administration except in regard to university and higher technical education, the activities of which should be coordinated on a national basis. The Director of Public Instruction should be directly responsible for the general administration of education, other than university and higher technical education through-out the province.[1]

The report of the Central Advisory Board of Education is of great value as it lays down a bold progressive policy of educational development. The details of planning have been left to the provincial or state agencies, pointing out the need for co-ordination among the provincial and central agencies. The Board has also stressed the policy of expanding technical education in the country.

The novel ideas of Mahatma Gandhiji gave birth to the recent Basic Education movement in India. It is essentially an innovation in the curriculum of primary education designed for the rural population of India. The underlying principles are; Education up to a particular minimum standard should be universal for all citizens, men and women, even if compulsion is necessary. It should extend for seven years beginning at the age of seven, and should be imparted in the mother tongue. All intellectual instruction must be woven round some art or craft. The product of the craft must be marketable but it should not be used as a means of developing economic self-sufficiency. The scheme

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[1] The Central Advisory Board of Education, Post-War Educational Development in India, op. cit., pp. ii and 118.

should pay its own operating costs, while the state should provide buildings and equipment. Basic Education in India is concerned with elementary education and the most important feature is its emphasis on vocational objectives of the pupils right from the beginning.[1]

Mysore has drawn comprehensive plans for the development of education. The structure of education in the state is somewhat similar to the pattern outlined by the Central Advisory Board of Education. These plans are a preliminary step in examining the financial implications for the development of education. The policies and details for executing the plans have to be made by the departments in charge of education. Since the control of vocational education has been in the hands of various departments, a coordinated plan for its development has not been evolved.

Compulsory elementary education is to be enforced. The middle schools are to be increased and their curriculum reorganized. The state plans to reorganize the high schools and increase their number. Some of the other important features of the proposed plans are: extension of university education; introduction of physical education and the improvement of medical inspection in public schools; provision for teacher training; further development of adult education activities; introduction of Basic National Education in rural schools; and increasing the administrative officers of the Department of Education.[2]

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[1] The Zakir Husain Committee, op. cit., pp. ii and 206.

[2] Development Schemes of Mysore, Volume II, Groups X-XX, pp. 57-94. Bangalore: The Mysore Government Press, 1946.

These proposals have been presented to show the trends in the development of education in India as well as in Mysore. These trends are of significant value in developing a plan for vocational education in Mysore secondary schools.

SUMMARY OF SIGNIFICANT FACTORS

1. Education in Mysore has been a reproduction of the English system. Conditions now make it necessary to evaluate the existing system, re-orient policies, lay down specific objectives, and organize the system to serve the needs of society.

2. Lack of co-ordinated efforts point out the need for bringing all phases of vocational education under the unified control of the Department of Public Instruction. The low expenditure on technical education is a direct indication of its poor status in public schools.

3. Expansion in primary schools has led to a decline in their efficiency. Enforcement of compulsory education is slack. Conditions show scope for improvement.

4. The objectives of middle school and high school curricula are still largely college-preparatory. The majority of students who fail to go beyond high schools need adequate preparation for employment.

5. Vocational training in homes is inadequate to serve modern economic activities, which suggests the need for an organized program in schools.

6. Vocational and technical schools are crowded, and conditions indicate the need for expansion. Educational trends in India show an increasing emphasis on vocational education.

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CHAPTER IV

THE THEORY AND PRACTICE OF VOCATIONAL EDUCATION

Education in India reflects many of the attitudes prevailing in western schools. The pattern of education transplanted from the West through the English influence, coupled with the Indian tradition of occupational training in homes, did not encourage the public schools to assume the responsibilities for vocational education. This chapter traces the causes which led to the inclusion of vocational education in western schools during the last few centuries and presents the theory and practice underlying these developments, particularly in the United States, which have been used as a basis for preparing this plan.

Early History of Vocational Education in Western Countries. -- Vocational education was relegated to a place of secondary importance until recent times. The origin of such a tradition seems to have begun with the Greeks, who were the first to create a sound system of public education. Among the Greeks education for the first time became an instrument for making citizens. However, it was an education of intellectual nature meant primarily for the aristocratic classes, and the education of the poorer classes was ignored. Informal apprenticeship remained the basic means of handing down occupational skills. Intellectual knowledge, which could be organized into systematic bodies, became the content of education, whereas skills, which could not be organized and taught easily, were kept out of schools. Thus, education became identified with intellectual knowledge and, the ground-work was laid for a distinction between intellectual education suitable for

the aristocratic classes, and the practical training appropriate for the laboring classes. Such a distinction, developed in the early stages, has had untold effect upon the educational theory and practice of the western world down to the modern times. Professor R. Freeman Butts of Columbia University writes:

> The modern world has accepted too whole-heartedly the education of Hellenistic times and often has neglected such a vitally important phase of any culture as the handing down and improving of the practical arts and crafts.[1]

Further he points out:

> Our inherited tradition that a liberal education is something opposed to the preparation for earning a living grew out of an aristocratic conception of society and human nature and was firmly entrenched in Western education through the efforts of the followers of Plato and Aristotle.[2]

Greek education formed the basis for organization of Roman educational system which in turn laid the foundation of education in the medieval and modern world. For generations vocational education was unable to overcome this early set-back. The first step forward came during the middle ages when the increase in trade and the growth of cities gave rise to the guilds, which gradually took over the responsibilities of vocational training from the individual homes and informal apprenticeship.[3]

Factors Responsible for Introducing Manual and Vocational Education in Western Schools. -- Vocational education had to combat many

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[1] R. Freeman Butts, A Cultural History of Education, p. 83. New York: McGraw-Hill Book Company, Inc., 1947.

[2] Ibid., p. 77.

[3] Ibid., pp. 9-280.

conservative forces before it was accepted in public schools. For several centuries, many European educators and reformers had claimed that practical activity could be as valuable as an academic education to the intellectual development of a child, and in addition could bring about a uniform development of all his powers. Foremost among them to maintain this theory was John Amos Comenius in the seventeenth century. However, it was at the same period that A.H. Frankee put this theory into practice and introduced manual training in many schools of Europe. In the eighteenth century Rousseau had considerable influence, emphasizing practical work in educational methods. This was followed by the efforts of Pestalozzi, Fellenberg, and Froebel, which gave a further impetus to manual work. Finally the success of practical work was recognized and educators began to exploit the method.[1]

Next in importance were the changing ideals of political and educational philosophy. Along with the transfer of political power from the relatively few aristocrats to the common people, the ideal developed that education should serve the needs of society. The desire to provide equality of opportunity to every citizen and to make every one a productive citizen made it necessary to include vocational education in schools. Furhtermore, educators began to realize that vocational education was a part of general education and it was the only means to conserve human resources and make the best use of the general education provided. The advent of factory and machine production

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[1] Charles Alpheus Bennett, History of Manual and Industrial Education up to 1870, pp. 11-209. Peoria: The Manual Arts Press, 1926.

presented many difficulties and the traditional methods of vocational training failed to adjust themselves to the new demands. It was found to be no longer possible to provide training for the numerous skilled jobs that had appeared as a result of industrial development and the school appeared to be the only agency which could assume this task.

The growth of labor organizations and their demand for the education of workers and their children to suit their interests and abilities was another factor which tended to force upon the schools the responsibility of providing vocational education. Finally, in the twentieth century, the competition among the Western nations to capture world markets and to improve production at lower cost became so keen that industrial leaders began to deman that schools should train the youth for industrial jobs. This forced many countries to take special measures to provide vocational education. In addition to this, conditions during the two world wars compelled war industries to depend on public schools for the supply of skilled workers they needed. The Western countries have generally accepted the fact that vocational education is an integral part of general education and that it is the state's responsibility to maintain it in order to assure the security of a nation.[2] Mysore as well as India should not be an exception to this policy.

The Purposes of Education. -- The purposes which direct education

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[1] Ibid., pp. 210-439.

[2] Charles Alpheus Bennett, History of Manual and Industrial Education, 1870-1917. Peoria: The Manual Arts Press, 1937. Pp. 566.

are of the greatest significance in educational planning. They are a form of social policy pointing out what the schools have to accomplish and helping them to plan their activities. The social and economic trends in the society and the values and ideals people cherish determine the purpose of education. The United States Educational Policies Commission presents an excellent report on the purposes of education. The commission emphasized four groups of objectives for education in a democracy in terms of the characteristics of a well-educated person:

1. The Objectives of Self-Realization

The Inquiring Mind. The educated person has an appetite for learning.

Speech. The educated person can speak the mother tongue clearly.

Reading. The educated person reads the mother tongue efficiently.

Writing. The educated person writes the mother tongue effectively.

Number. The educated person solves his problems of counting and calculating.

Sight and Hearing. The educated person is skilled in listening and observing.

Health Knowledge. The educated person understands the basic facts concerning health and disease.

Health Habits. The educated person protects his own health and that of his dependents.

Public Health. The educated person works to improve the health of the community.

Recreation. The educated person is participant and spectator in many sports and other pastimes.

Intellectual Interests. The educated person has mental resources for the use of leisure.

Esthetic Interests. The educated person appreciates beauty.

Character. The educated person gives responsible direction to his own life.[1]

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[1] Educational Policies Commission, The Purpose of Education in American Democracy, p. 50. Washington: National Education Association of the United States, 1938.

2. The Objectives of Human Relationship

Respect for Humanity. The educated person puts human relationships first.

Friendships. The educated person enjoys a rich, sincere, and varied social life.

Cooperation. The educated person can work and play with others.

Courtesy. The educated person observes the amenities of social behavior.

Appreciation of the Home. The educated person appreciates the family as a social institution.

Conservation of the Home. The educated person conserves family ideals.

Homemaking. The educated person is skilled in homemaking.

Democracy in the Home. The educated person maintains democratic family relationships.[1]

3. The Objectives of Economic Efficiency

Work. The educated producer knows the satisfaction of good workmanship.

Occupational Information. The educated produder understands the requirements and opportunities for various jobs.

Occupational Choice. The educated producer has selected his occupation.

Occupational Efficiency. The educated producer succeeds in his chosen vocation.

Occupational Adjustment. The educated producer maintains and improves his efficiency.

Occupational Appreciation. The educated producer appreciates the social value of his work.

Personal Economics. The educated consumer plans the economics of his own life.

Consumer Judgement. The educated consumer develops standards for guiding his expenditures.

Efficiency in Buying. The educated consumer is an informed and skillful buyer.

Consumer Protection. The educated consumer takes appropriate measures to safeguard his interests.[2]

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[1] Ibid., p.72.

[2] Ibid., p. 90.

4. The Objectives of Civic Responsibility

Social Justice. The educated citizen is sensitive to the disparities of human circumstance.

Social Activity. The educated citizen acts to correct unsatisfactory conditions.

Social Understanding. The educated citizen seeks to understand social structures and social processes.

Critical Judgement. The educated citizen has defenses against propaganda.

Tolerance. The educated citizen respects honest differences of opinion.

Conservation. The educated citizen has a regard for the nation's resources.

Social Applications of Science. The educated citizen measures scientific advance by its contribution to the general welfare.

World Citizenship. The educated citizen is a cooperating member of the world community.

Law Observance. The educated citizen respects the law.

Economic Literacy. The educated citizen is economically literate.

Political Citizenship. The educated citizen accepts his civic duties.

Devotion to Democracy. The educated citizen acts upon an unswerving loyalty to democratic ideals.[1]

These objectives have a profound influence on the trends of education in the United States. If India expects to build a new social order and to bring about the desired changes in industrial and cultural life of the country, it has to depend on a sound system of education with specific purposes. The objectives recommended by the Educational Policies Commission will be of use in setting up the purposes of education in India as well as in Mysore.

Aims of Secondary Education. -- It was pointed out earlier that the chief purpose of secondary schools in Mysore was to prepare the youth for higher education --a tradition, common even in western schools. However, several factors in recent times have influenced the

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[1] Ibid., p. 108.

United States secondary schools to overcome this tradition. Among these the changes in society were an important factor. Industries grew up fast. The rural life gave way to a new pattern of urban life. Free and compulsory secondary education was provided in public schools. The increased secondary-school population showed a greater range of interests and abilities. The educational theory and the teaching methods changed on account of psychological advances. Subject values were re-interpreted. There was an emphasis on the importance of applying knowledge to life. Leaders in education stressed the need for continuity in the development of children from elementary education to secondary education. These changes in society and educational theory and practices led to the modification of secondary education in the United States. A commission was appointed by the National Education Association in 1918 for the re-organization of secondary education and the most outstanding statement concerning the aims of secondary schools was laid down by this commission in the report entitled, Cardinal Principles of Secondary Education. The seven aims and the role of secondary schools in developing these aims are largely quoted from the report.

1. Health: The secondary schools "should provide health instruction, inculcate health habits, organize an effective program of physical activities, regard health needs in planning work and play, and cooperate with home and community in safeguarding and promoting health interest."

2. Command of Fundamental Processes: Proficiency in many of

the fundamental processes, such as "reading, writing, arithmetical computations, and the elements of oral and written expression" should be increased more effectively by their application to new materials.

3. Worthy Home Membership: "Worthy home membership as an objective calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership."

4. Vocation: "Vocational education should equip the individual to secure a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationships towards his fellow workers and society, and, as far as possible to find in that vocation his own best development."

5. Civic Education: "Civic education should develop in the individual those qualities whereby he will act well his part as a member of neighbourhood, town or city, State and Nation and give him a basis for understanding international problems."

6. Worthy Use of Leisure: "Education should equip individual to secure from his leisure, the recreation of body, mind, and spirit, and the enrichment and enlargement of his personality."

7. Ethical Character: Education should develop"a sense of personal responsibility, initiative, and moral values, and above all the spirit of service and the principles of true democracy. "[1]

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[1] Commission on Reorganization of Secondary Education, Cardinal Principles of Secondary Education, pp. 11-16. Bureau of Education Bulletin, 1918, No. 35. Washington: Government printing Office, 1918.

These aims caused profound changes in the curriculum of secondary schools and a bold step was taken to emphasize vocational aims. At present the conditions in Mysore are not far different from conditions in America in 1918 and many changes are taking place in society. In schools, about ten out of every hundred who enter the first year of elementary education reach the final year of high school and of these, not more than five successfully complete the final examination to enter college. The time has arrived for Mysore to set up a group of objectives for secondary education on which to base the future programs in schools. In this, the work of the Reorganization Commission should be of immense value.

Principles of Vocational Education. -- Some fundamental principles are essential to determine the policies and procedures in planning vocational education. They are developed as a result of tested experience or scientific research in education. The following twelve principles are generally accepted by educators in United States and they are presented here for the purpose of assisting the educational authorities of Mysore in setting up a group of principles upon which to base whatever program they may decide upon.

1. The chief function of vocational education should be to prepare each individual for a socially useful occupation. Also, it should raise the standards of workmanship and promote better methods of production in an occupation.

2. Vocational education is a public responsibility. It is an integral part of the state program of education and should be provided

in public schools.

3. Vocational education supplements general education in training each individual to become a competent citizen.

4. Vocational education should be provided to those individuals who possess the appropriate interest, aptitude, and abilities for the vocation chosen.

5. The period of Vocational training and its place in the education of the individual depends on the individual, the kind of vocation sought for, and the economic conditions.

6. The training for a vocation should closely precede entrance into an occupation.

7. Adequate preparation for a vocation means practice in the skill of the occupation, and knowledge of definite related subjects and of working conditions in the Vocation.

8. The training environment should closely resemble the conditions of working.

9. Production work executed under working conditions is an essential factor in the preparation for a vocation and is an important consideration in measuring occupational success.

10. Only individuals possessing outstanding skill and knowledge in an occupation must be responsible for occupational training.

11. A program of Vocational Education should be dynamic and keep pace with the changing demands and conditions of occupations.

12. An effective program of Vocational Education should make adequate facilities for the placement and follow up of workers during

the early period of employment.[1]

Basis for Choice of Occupations in Secondary School Training Programs. -- In view of the fact that occupations range in difficulty from the simplest occupations, involving mere manual work, to the most difficult occupations, involving a high degree of mental work, it is necessary to select occupations of the same level of difficulty for different stages in any educational program. As a rule, the secondary schools in the United States provide training in skilled occupations, the occupations being classified as skilled or unskilled according to the work involved in them. Since there are other factors which might govern the choice of occupations to be included in a school program, it is essential to have certain criteria upon which to base the choice. The following considerations are suggested:

1. There should be a demand for the occupations and the demand should be fairly stable.

2. The occupations should be fairly well established, employing a large number of workers who need to be replaced from time to time.

3. The occupations should require certain skillful operations which could be taught to a satisfactory degree of competency during the school years.

4. There should be adequate related knowledge of the occupations suitable for teaching in schools.

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[1] F. Theodore Struck, Vocational Education for a Changing World, pp. 129-151. New York: John Wiley & Sons, Inc., 1945.

5. The teaching content of the occupations should suit the abilities and interests of secondary school pupils.

6. The occupations should provide opportunities for further advancement into higher technical education or more responsible positions.

7. The occupations in secondary school should be further specializations of occupational experiences previously provided in lower grades.

8. Occupations should not involve undue hazard to students.

Types of Vocational Schools in the United States. -- There are a great many types of vocational work being done in United States. They are described here to present the prevailing practices in Vocational Schools. These schools are organized in various ways, which are likely to vary with the community. This has led to considerable confusion. In general, however, the various types of schools or classes include the following:

1. Work designed to prepare secondary school pupils for entrance into an occupation.

2. Cooperative programs provided in the secondary schools which enable students to spend half-time on a job while attending school the other half of their time.

3. Continuation schools or classes intended for young people who, for any reason, must go to work at an early age. These young workers attend school for a definite number of hours a year to improve their occupational competency.

4. Evening classes conducted in different types of schools. The objectives of these classes vary with the conditions. In some cases the prupose is to aid students' progress in the occupations in which they are engaged during the day. In others students attend for the prupose of working on their hobbies. In still others, the objective is to enable student to add to their general education.

5. Terminal courses, provided in some schools, which are intended to prepare students for positions on a sub-professional level. These courses carry the student beyond what he received in high schools but do not cover certain material required in preparation for a professional career.[1]

Industrial Arts and Its Objectives. -- Since the advent of factories and machine production, Industrial Arts has developed as a new subject of study in the curriculum of United States secondary schools. The chief function of this subject is to impart the education essential to the youth to enable him to adjust himself to an industrial environment. Bonser and Mossman define industrial arts as "a study of changes made by man in the forms of materials to increase their values and of the problems of life related to these changes."[2] This subject is provided both in the junior high schools (similar to middle schools in Mysore) and academic high schools. It is not a theoretical study, however, it consists of a variety of manipulative experiences as well

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[1] Ibid., pp. 45-61.

[2] F.G. Bonser and L.C. Mossman, Industrial Arts for Elementary Schools, p. 5. New York: The Macmillan Company, 1927.

as a study of tools and materials used in industries and crafts. The work is generally carried on in school shops equipped with hand tools and simple machines, and the courses are usually chosen from many occupational areas. By this means it is hoped to introduce the boys to many different fields of human endeavor and thus give them an opportunity to discover their own abilities and interests. The pupils develop a reasonable dexterity in simple manipulative work as well as certain habits of neatness, persistence, accuracy, and methods of planning. Emphasis is placed upon exploration and participation than upon skill or efficiency.[1]

Some of the objectives of Industrial Arts curriculum are stated by Emanual E. Ericson as follows:

1. Self-discovery by the pupil of his own abilities and aptitudes, leading toward maturing life interest.

2. Satisfying experience in self-expression through creative effort leading to material accomplishments.

3. Understanding of industry and methods of production, and of the influence of industrial products and services upon the pattern of modern social and economic life.

4. Appreciation of good design and good workmanship in their application to construction and to manufactured products.

5. Judgement and resourcefulness in selection, purchase, use, and care of industrial products and services both in the home and in occupational life.

6. Ability to use tools and materials leading to household maintenance, leisuretime pursuits, and in some degree, to basic occupational skills.

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[1] Emanuel E. Ericson, Teaching the Industrial Arts, pp. 247-262. Peoria: The Manual Arts Press, 1946.

7. Ability to read and make sketches and drawings used for illustrative and construction purposes, including the ability to read graphic and technical illustrations in books and magazines.

8. Development of maturing work habits, feeling of responsibility and ability to plan and execute work alone and in cooperation with others.

9. Basic experience in the use of tools, machines, and materials of value in carrying on future educational and professional work on scientific and technological levels.

10. Development of safety habits and fundamental safety consciousness not only in the school but in the home and in future occupational life.[1]

One of the most important outcomes of Industrial Arts is that it enables the youth to discover his own abilities by evaluating his achievements in the different fields of occupation. Thus, it contributes to a great extent in the making of an intelligent decision regarding the choice of a career. In view of this, the introduction of Industrial Arts as a subject of study in Mysore schools deserves consideration.

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[1] Ibid., p. 250.

SUMMARY OF SIGNIFICANT FACTORS

1. In the United States, vocational education has gained considerable importance in modern public schools and has been accepted as a public responsibility to insure the economic well-being and the political security of the nation. It has been regarded as an integral part of general education. India need not be an exception to this policy.

2. Clearly formulated purposes of education direct educational development and the school activities. They form the foundations for building a system of education. Until such objectives are laid down in India, the objectives of education as given in the The Purpose of Education in American Democracy and the objectives of secondary education as laid down in Cardinal Principles of Secondary Education have been used as a basis for preparing this plan.

3. Principles of vocational education help to determine the policies and procedures in planning a program. The commonly accepted principles of vocational education and the prevailing types of vocational schools in the United States provide suggestions for planning a program of vocational education in Mysore.

4. The choice of occupations for training program has to be based on occupational demands, level of difficulty of occupations, content of occupations for instruction, and the needs and abilities of students.

5. Industrial Arts as a subject of study has many useful educational values and serves to make the program of vocational education more effective. Its inclusion in Mysore schools deserves consideration.

CHAPTER V

THE NEED FOR OCCUPATIONAL INFORMATION IN SCHOOLS AND A PROPOSAL FOR AN OCCUPATIONAL SURVEY IN MYSORE

Occupational information is of fundamental importance in planning an effective program of vocational education. This chapter points out the need for reliable information in schools and proposes an occupational survey for gathering the necessary information.

Importance of Occupational Information. -- With the advent of modern industrial and scientific technology, many new occupations have appeared and offer additional occupational opportunities to the youth who are ready to leave school. In order that the younger generation may be aware of these opportunities and thus be aided in choosing and preparing for their careers, occupational information must be included as a part of their education. If this is to be done effectively, a systematic survey of occupations must be conducted. In recent times the study of occupations for the purpose of providing pupils with useful information has been carried on by methods which have become more or less standardized. The information obtained as a result of these studies usually includes general information concerning individual jobs and occupations, plants and industries as well as the processes related to them. In addition, useful facts about occupational trends and the supply and demand of labor forces form a part of the information. Professor Carroll L. Shartle, a psychology professor in the United States, writes:

> Millions of decisions are made each day on the basis of occupational information. Sometimes the information is meager or it is nothing more than hearsay, while other occupational information has been carefully compiled and is authentic in every respect.
>
> Whether the occupational information is accurate or otherwise, its use may affect the personnel policies of an entire organization, it may change the wage structure of a plant or an entire industry. It may be the deciding factor whether a man goes into the armed forces or whether he is released from the Army or Navy for civilian work. It may affect the life career of one person or change the curriculum of a large school system.
>
> Occupational information may be the important evidence that causes the migration of a thousand workers, that sends thousands of students to leave school and accept jobs.[1]

Occupational information has been used for many purposes. In industry, it is essential for considering personnel programs, providing vocational guidance, and advertizing occupational requirements. It plays an important role in employee selection, determining lay-offs and transfer of workers from department to department within the industry, and also serves as a valuable aid in determining wage rates for different jobs. It is used to prepare replacement schedules and Manning tables as an aid to orderly transfer of workers from industry to industry. Sometimes it helps job re-engineering to simplify jobs and reduce hiring requirements. Then too, occupational information brings to the attention of those interested the extent of the labor turn-over in any area of employment. Civilian governments and military authorities make use of occupational information in their efforts to place their personnel in those activities for which they seem best fitted.[2]

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[1] Carroll L. Shartle, Occupational Information, p. 1. New York: Prentice-Hall, Inc., 1946.

[2] Ibid., pp. 1-12.

Need for Occupational Information in Schools. -- Educators use occupational information mainly for two purposes, first, to help students to choose their career and second, to plan and develop programs designed to prepare students for occupational life. A training program based on occupational needs saves both effort and money. In view of this, the need for reliable information becomes obvious. The greatest need for occupational information is in secondary schools, in which young people are trained for a wide range of skilled occupations. In order to assist schools in their efforts to plan their programs several agencies in the United States have been active in collecting and filing occupational information. As a rule these agencies offer guidance service as well as current information concerning vocational opportunities. Since this service is developed on a national scale it is useful to schools and communities in providing an authentic background for their guidance activities.[1]

Psychologists make use of occupational information for developing vocational tests which are used to evaluate an individual's aptitudes and abilities in terms of his performance. These are the tools with which potential occupational avenues are explored.[2]

Classification of Occupations. -- For convenience and practicality, the numerous occupations may be classified into a smaller number of groups. The classification, however, may be done in many ways, depending upon the similarities of duties performed, the

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[1] Ibid.

[2] Ibid.

educational requirements, the level of skill involved, the product manufactured, or the service rendered. The salary or wage paid may be another basis for classification. Occupations suitable for women may be grouped together. Occupations appropriate for handicapped people can be classified according to the nature and extent of handicaps. In preparing the census a study of occupations is made with the object of revealing the social and economic conditions of the population. In the organization of a program of vocational education occupations have to be grouped according to the level of difficulty and the nature of the skill and knowledge involved in them.[1]

Mysore Census Classification. -- The Mysore census of 1941 has classified all occupations into four main classes: Class A, Production of raw materials, Class B, Preparation and supply of material substances, Class C, Public administration and liberal arts, Class D, Miscellaneous. Class A supports 76.7 per cent of the total population in the state; Class B, 13.4 per cent; Class C, 5.2 percent; Class D, 4.7 per cent. The four main classes are divided into twelve divisions according to the nature of work involved in them.[2] Table IX shows the distribution of employed persons in these twelve divisions.

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[1] Ibid., pp. 95-132.

[2] P.H. Krishna Rao, Census Report, op. cit., pp. 32-47.

TABLE IX *

PERSONS ENGAGED IN GAINFUL OCCUPATIONS IN MYSORE

Divisions	Total number engaged in gainful occupations		Percentage of total workers	
	1931	1941	1931	1941
Class A	1,800,058	1,850,654	69.4	70.4
I. Exploitation of animals and vegetation	1,787,798	1,826,783	68.9	69.5
II. Exploitation of minerals	12,260	23,871	0.5	0.9
Class B	458,102	443,220	17.6	16.8
III. Industry	259,962	258,655	10.0	9.8
IV. Transport	38,654	28,728	1.5	1.1
V. Trade	159,486	155,817	6.1	5.9
VI. Class C	118,871	137,359	4.6	5.2
VI. Public Force	21,202	23,081	0.8	0.9
VII. Public Administration	51,732	58,839	2.0	2.2
VIII. Professions and Liberal Arts	45,937	55,439	1.8	2.1
Class D	216,090	200,223	8.4	7.6
IX. Persons living on Income	7,955	14,198	0.3	0.5
X. Domestic Service	41,531	26,965	1.6	1.0
XI. Insufficiently described occupations	147,157	142,403	5.7	5.5
XII. Unproductive	19,447	16,657	0.8	0.6
Total	2,593,121	2,631,436	100.0	100.0

* Compiled from P.N. Krishna Rao, Census Report, ibid., pp. 91-93

Women in Mysore are still largely confined to their homes, and home-making is still their predominant occupation. Of the few employed, the greatest number appear to be in the occupations concerned with Exploitation of Animals and Vegetation. However, the highest number of women for every thousand men employed are in Domestic Service. The following table shows the distribution of women employed in the different occupational groups.

TABLE X*

DISTRIBUTION OF EMPLOYED WOMEN IN THE DIFFERENT CLASSES OF OCCUPATIONS

Class	Number employed	Percentage to Total Employed	Number employed for every 1000 men
I Exploitation of Animals and Vegetation	263,418	67.9	169
II Exploitation of Minerals	835	0.2	36
III Industry	28,227	7.3	122
IV Transport	2,291	0.6	220
V Trade	23,177	6.0	174
VI Public Force	294	0.1	13
VII Public Administration	1,781	0.4	31
VIII Professions and Liberal Arts	5,087	1.3	101
IX Persons Living on Income	2,562	0.6	220
X Domestic Service	10,155	3.0	604
XI Insufficiently Described Occupations	44,563	13.2	455
XII Unproductive	5,711	1.7	522
Total	338,101	100.0	

* Compiled from P.H. Krishna Rao, Census Report, ibid., pp. 91-93.

The changing conditions in the country as a result of education have made many women self-reliant and economically independent. Their number in teaching, nursing, medicine, and other areas of work is increasing. In cottage industries, they share the work with their husbands. A large proportion of women in villages help their husbands in farm work.

While the census classification of occupations serves the purpose of presenting the general economic conditions in the state, it does not describe the occupations within groups. No information is available concerning the processes involved or the level of difficulty of the occupations. The names of economic activities alone are not reliable means of expressing occupational data in specific terms, since each group may involve a range of activities in which the nature of work may vary widely. Another disadvantage of the classification is that it has not been based on direct observation of occupations and so the groupings are not useful from the standpoint of education. However, they serve as a background for any future classification. But in planning educational programs, the skill, knowledge, and materials involved are essential considerations, and securing this information requires a detailed investigation of many occupations by job-analysts.

Furthermore, the census information does not indicate the demand for workers in a particular industry or economic activity. In the years ahead, some of the industries proposed by the government are to be planned by the state, but the majority of them are left to be

developed by private enterprise and initiative. On account of this, construction activities, industries dealing with metal, wood, leather, textiles, food, and transport industries, are likely to expand. The need is greater than ever before for a permanent Employment Service to provide reliable information and to help job-seekers to find suitable employment.

The need for information concerning the definition and classification of occupations was recognized in the United States and the responsibility was undertaken by the Employment Service, a division of the United States Department of Labor. The Job-Analysis and Information section belonging to the Division of Standards and Research of the Employment Service has prepared a dictionary of occupational titles.[1] The preparation of this volume involved the observation of the duties involved in jobs and the reporting of the facts observed. It included collecting facts about the qualifications for jobs and other pertinent data which could be obtained in conversation with workers, supervisors, and others who had information of value. In this publication each occupation has been defined by a concise statement which describes what the worker does and how he does it. In order to simplify the identification of the various jobs a coding system has been used in which each occupation has been designated by a number. The purpose of the dictionary has been to assist the public employment

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[1] Dictonary of Occupational Titles, Part I, Definition of Titles. United States Employment Service, June 1939. Washington: Government Printing Office, 1939. Pp. xxxii and 1287.

offices in the United States in the proper classification and placement of workers. A similar work had been done by the British Ministry of Labor in 1927. In view of the fact that both of these governments have considered it worth while to prepare such a book, it is believed that the government of India should compile similar information covering the occupations found in India. Until the Central Government is prepared to undertake this task, Mysore will have to survey its own occupational conditions and provide the necessary information for the use of schools.

Proposal for An Occupational Survey in Mysore. -- The following proposals for an occupational survey are made with the hope that the educational authorities in Mysore will be provided with the authentic information concerning occupations that is necessary for organizing programs of vocational education and guidance activities in schools. The methods employed by the United States Employment Service in developing the Dictionary of Occupational Titles have been used as a basis for the following recommendations:

1. The purpose of the survey should be to determine the number and nature of occupations in Mysore, the industrial trends, and the supply and demand for occupations, facts which are vital for organizing programs for the training and placement of young people.

2. The responsibility for gathering occupational information should rest with the Department of Industries and Commerce because of its close contact with the industrial and business concerns in the state. The Employment Service should be established as a part of this

department, with a division of Occupational Information and Research to maintain up-to-date information concerning occupations.

3. Job-analysts should be trained and employed in the Research division, and made responsible for making job analyses of the numerous occupations.

4. Information should be collected on standard forms by observing actual conditions of working.

5. From the information gathered, a list of industries and other areas of work should be developed and grouped according to the duties and processes involved. Occupations should be defined according to the nature of work done. Their level should be determined scientifically, considering educational requirements, skill involved, period of training required, and other factors. Proper designations should be attached to the occupations. A system of code numbers should be developed so as to make the filing and classification of jobs easier.

6. It is suggested that occupations should be divided into five major groups on the basis of the knowledge and skill necessary to perform them: (1) Professional, (2) Semi-Professional, (3) Skilled, (4) Semi-Skilled, and (5) Un-Skilled. A second classification of occupations based on the nature of work is also desirable: (1) Professional and Managerial Occupations, (2) Business and Clerical Occupations, (3) Service Occupations, (4) Agricultural Occupations, (5) Industrial Occupations. These classifications are similar to to those used in the United States and should be helpful in exploring further possibilities of grouping occupations prevailing in Mysore.

Some of the following definitions of the major groups in the classification of occupations based on the nature of work are largely quoted from Part II of the Dictionary of Occupational Titles, to serve as a guide.

1. Professional and Managerial Occupations: This group includes "Occupations that predominantly require a high degree of mental activity by the worker." They are "concerned with theoretical or practical aspects of complex fields of human endeavor." These occupations require for their performance "either extensive and comprehensive academic study or experience of such scope and character as to provide an equivalent background or a combination of such education and experience."

2. Business and Clerical Occupations: Occupations in this group divide themselves mainly into those involving selling of products and those involving business or clerical occupations. The former comprises shop-owners or their employees who sell goods to the consumers. The latter are "concerned with the preparation, transcribing, transferring, systematizing or preserving of written communications and records in offices, shops and other places of work where such functions are performed. Most of these occupations are performed by mental or manual processes."

3. Service Occupations: This group comprises a variety of occupations classified under different heads, which have to be defined individually. The five divisions in this group are, Protective, Postal, Personal, Domestic, and Building Services. Protective service

occupations are those "specifically concerned with the protection or guarding of the country or its political units, of buildings and other property and of individuals. The service performed by such workers range from the routine duties of a watchman who guards the property of some organization, to the more complicated duties of a traffic policeman or detective, or to those of soldiers and sailors." The postal-service includes occupations involved in operating the mail service. The personal service occupations are concerned with performing services to individuals. The domestic service occupations are "concerned with the usual functions in the maintenance of house-holds and their environs, the cooking of meals, the care of children and similar services that are performed in private houses." The building service workers "are concerned with cleaning the interior and equipment of buildings, offices, stores and similar places, and with moving or carrying equipment, baggage and other articles."

4. Agricultural Occupations: This group comprises those occupations "that are directly associated with the processes of growing and harvesting vegetables, fruits, grains and other farm crops; in the raising of poultry, live stock and other animals and fowls for consumption, for their products, for pets, or exhibition; and in the various phases of horticulture activities. The predominant types of workers covered are farmers who manage farms on an ownership, rental, or share basis." It also includes the occupations "which engage in catching or gathering all types of sea food and aquatic shells and plants." In Mysore, Sericulture, an important industry concerned with growing mulberry plants and raising silk worms, would be included in this group. Besides occupations " concerned with the

development and care of forests and the growing and gathering of forest products; also occupations of workers who guide hunting or trapping parties or who engage in the hunting and trapping of wild animals and game," logging occupations are included here.

5. Industrial Occupations: This group includes "craft and manual occupations that require predominately a thorough and comprehensive knowledge of processes involved in the work, the exercise of considerable independent judgement, usually a high degree of manual dexterity, and in some instances extensive responsibility for valuable products or equipment. Workers in these occupations usually become qualified by serving apprenticeships or extensive training periods."[1] Most of the occupations in this group are found in industries. Because of its wide range, this group of occupations has been treated under three main sub-groups: (i) Modern Productive Industries. (ii) Non-Productive Industries. (iii) Village or Cottage Industries. Productive industries are those in which some product is manufactured in a plant or factory where paid labor is employed. Non-Productive industries are those in which there is not production, but a service is rendered, as for instance in Transport. Cottage or Rural industries are those prevalent in the villages of Mysore in which the members of the family work mainly with their hands and share the profit. This classification of occupations affords an opportunity for the division of vocational education into its main fields of specialization, such as business, agricultural, and industrial education.

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[1] Dictonary of Occupational Titles, Part II, Titles and Codes, pp. 1-59. United States Employment Service, June 1939. Washington: Government Printing Office, 1939.

SUMMARY OF SIGNIFICANT FACTORS

1. The huge number of occupations and technological progress have increased the importance of occupational information. Reliable and accurate information has been found to be of vital importance to industries, schools, and employment services.

2. The increasing use of occupational information for guiding and planning school programs points out the need, for accurate information.

3. The available information concerning occupations from the Mysore Census Report describes the social and economic conditions in the State. However, its use is of limited value in educational planning.

4. Occupational research is necessary to define occupations, assign proper titles, and classify them in groups.

5. The Department of Industries and Commerce in Mysore should undertake a survey through its Employment Service to gather information for vocational guidance, the planning of school programs, and the placement of job-seekers.

CHAPTER VI

THE NEED FOR VOCATIONAL GUIDANCE AND A PROPOSAL FOR ITS ORGANIZATION IN MYSORE SCHOOLS

Meaning and Relationship of the Goals of Vocational Guidance. -- Vocational guidance is a term frequently used in the literature of modern education. It is an essential part of a comprehensive program of vocational education, giving necessary aid to youth in choosing, preparing for, and entering an occupational career. Concurrent with the acceptance of the public schools of their responsibility for vocational education, vocational guidance began to increase in importance in many industrially advanced countries. Although vocational guidance has existed in some form or other for a long time, it was not organized on a scientific basis until recent times. Some of the first attempts to develop a scientific and organized program of vocational guidance were in the public schools of the United States. In carrying out this program, it was necessary to have an acceptable definition of vocational guidance. The following definition generally accepted by most schools was formulated by the National Vocational Guidance Association of the United States in 1937:

> Vocational guidance is the process of assisting the individual to choose an occupation, prepare for it, enter upon and progress in it. It is concerned primarily with helping individuals make decisions and choices involved in planning a future and building a career -- decisions and choices necessary in effecting satisfactory vocational adjustment.[1]

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1 "The Principles and Practices of Educational and Vocational Guidance," Report of the Committee of the National Vocational Guidance Association, Occupations: The Vocational Guidance Magazine, XV (May, 1937), 772

The chief functions of vocational guidance are to determine occupational goals for individuals according to their personalities, aptitudes, and interests, to provide necessary education through guided learning, and to assist them in achieving these goals. In this way, vocational guidance helps to adapt the school curriculum to the needs and abilities of pupils by relating the occupational goals of individuals to the educational objectives of schools. It serves the purpose of bringing about better adjustments of individuals to the world in which they live.[1]

Vocational guidance seeks to utilize individual potentialities and may therefore be regarded as an effort to conserve the human resources of a society. Emphasis has been placed on the conservation of natural resources for a long time; the importance of the less familiar concept of the conservation of human resources came to the front during the two world wars when every country felt the need for more men. But even during peace time it is necessary to develop people to the best of their abilities, if society expects to derive the maximum benefit from their efforts. Dr. George E. Myers writes:

> Vocational guidance is fundamentally an effort to conserve the priceless native capacities of youth and the costly training provided for youth in the schools. It seeks to conserve these richest of all human resources by aiding the individual to invest

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[1] George E. Myers, Principles and Techniques of Vocational Guidance, pp. 1-11. New York: McGraw-Hill Book Company, 1941.

and use them where they will bring greatest satisfaction and success to himself and greatest benefit to society.[1]

Need for Vocational Guidance in Mysore. -- In an agricultural society such as exists in Mysore, where there are relatively few paying jobs and where the son traditionally accepts the father's trade, the need for vocational guidance has not been recognized. In schools there is no evidence of any organized program of vocational guidance. As long as the responsibility for vocational education rested outside the public schools, the schools did not feel obliged to assist pupils to choose the occupations appropriate to them. They generally assumed that youth should concentrate their efforts in intellectual pursuits and rather tended to neglect the practical aspects of life. Yet every year hundreds of individuals leave schools and go to work. The work they secure depends to a large extent on chance. Some are obliged to pass through a long and distressing period of unemployment before obtaining a job. Others feel obliged to take the first available job, regardless of their interests and aptitudes. Many individuals frequently change jobs, wasting their time and effort in order to find the job to which they are suited. These conditions have caused a great deal of wastage in time and human energy and have seriously affected the efficiency of almost every phase of occupational activity.

During the past few years conditions in Mysore have changed; industries have developed; the number of occupations has increased;

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[1] Ibid., p. 7.

education in public schools has become a prerequisite to the entry into an occupation; and vocational education has been gradually introduced in public schools. Pupils now have to make a suitable choice regarding their career if they are to receive the necessary educational preparation. They can no longer enter an occupation without adequate training for it. The problems of youth in Mysore in deciding upon their careers are the same as they are in any other part of the world; hence their need for guidance is just as acute as it is elsewhere.

Fundamentally the need for guidance exists because of the differences in individuals and in their occupational environments. On the one hand, there are well known differences among individuals in their physical characteristics, scholastic aptitudes, and special aptitudes and interests. On the other hand, there are differences in the requirement and opportunities of hundreds of occupations. The problem of vocational guidance is therefore to select the individuals who possess aptitudes consistent with the demands of the occupation which they desire to enter. However, it would not be appropriate to proceed on the assumption that every man has been fitted to a particular occupation. This would be overlooking the fact that many human beings can adjust themselves to a wide variety of occupations, within the range of their abilities.[1]

The need for vocational guidance can be further emphasized by

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[1] Ibid., pp. 3-7.

the valuable outcomes that an efficient system of guidance could achieve. Often young people who enter occupations with very little consideration of their suitability are compelled to shift from one occupation to another. In so doing they lose the experience they gain in each occupation and quite often have to pay for training to enter a new job. Thus they lose both time and money, which they might have saved had they received proper guidance. Even persons who remain in occupations for which they are not competent fail to progress in them and find themselves at a loss. Efficient guidance considerably reduces waste of effort and money, as well as other disadvantages to individuals.[1]

On the other hand, employers benefit when competent workers stay on their job for long periods of time. It saves them the cost of hiring new persons and disposing of those who want a change. Frequent occupational migration increases the cost of production and the consumer is obliged to pay for it. Even the cost of training workers for new jobs is increased. Thus society eventually pays for the lack of vocational guidance. An efficient system of guidance can prevent this to a large extent and improve the prosperity of society. It safeguards the physical and mental health of individuals and helps their social adjustment. From this point of view, vocational guidance contributes towards the social welfare of the people.[2]

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[1] Ibid., pp. 60-81

[2] Ibid.

Compulsory education requires every child to attend school before entering an occupation. The public schools have gradually accepted the responsibility for vocational education, and if pupils are to benefit by this type of education they must choose their vocations while still in school. The school personnel are directly in contact with the pupils and have sufficient information and training to judge them on a scientific, objective basis. The school can cooperate with other agencies like industries, employment services, and youth clubs, which are involved in similar vocational guidance tasks. Such considerations favor the school as the agency best suited for assuming the responsibility for the program of vocational guidance.[1]

Purposes of Vocational Guidance. -- Vocational guidance aims to help boys and girls to discover and develop their abilities for useful service to society. It is by no means a scheme for finding jobs for youth or forcing vocational decisions upon children. It involves a scientific approach to discover the abilities and traits of youth and to provide through trained specialists the necessary help in choosing their careers from the available opportunities, in keeping with their abilities, aptitudes, and personality traits. In view of this, an organized program of guidance is essential for achieving these aims. As early as 1921, the National Vocational Guidance Association in the United States set forth the following purposes to serve as a guide in setting up programs of guidance:

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[1] Ibid., pp. 83-89.

1. The purposes of vocational guidance are:

(a) To help adapt the schools to the needs of the pupils and the community, and to make sure that each child obtains the equality of opportunity which it is the duty of the public schools to provide.

(b) To assist individuals in choosing, preparing for, entering upon, and making progress in occupations.

(c) To spread knowledge of the problems of the occupational world and the characteristics of the common occupations.

(d) To help the worker to understand his relationships to workers in his own and other occupations and to society as a whole.

(e) To secure better cooperation between the school on the one hand and the various commercial, industrial, and professional pursuits on the other hand.

(f) To encourage the establishment of courses of study in all institutions of learning that will harmoniously combine the cultural and practical studies.

2. All vocational guidance should help to fit the individual for vocational self-guidance, and also for the cooperative solution of the problems of occupational life.[1]

Services in a Program of Vocational Guidance in Secondary Schools. -- A brief survey of the practices in the United States secondary schools indicates the services involved in a program of vocational guidance. According to the definition of vocational guidance, there are three major steps involved -- selection of an occupation, preparation for it, and entrance into it. Selection and entrance are the major concern of vocational guidance while preparation is the major concern of vocational education. Both vocational guidance and

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[1] Arthur B. Mays, Principles and Practices of Vocational Education, p. 204. New York: McGraw-Hill Book Company, Inc., 1948.

vocational education operate together to insure a successful transfer of youth from school to working life. Schools provide at least six services in the prevailing programs of vocational guidance in secondary schools of the United States: (1) Occupational Information, (2) Pupil Information, (3) Counseling, (4) Preparation, (5) Placement, (6) Follow-up. The functions and operations of each of these services present many suggestions for organizing similar work in Mysore schools.

1. Occupational Information Service: The occupational information service is concerned with helping individuals to obtain needed information about occupations, especially those in which they are most interested. The information normally comprises the following: The importance of the occupation, nature of the work, working conditions, personal qualities needed, necessary education and experience, preparation, opportunities for advancement, compensation, and advantages or disadvantages. Adequate information of this character is not obtained from regular school work or from home or other out-of-school experiences. Separate plans are devised to meet this specific need.[1]

There are many ways in which secondary school pupils gather occupational information. Schools have organized methods for collecting relevant information and for systematically filing it in the school libraries. Periodicals and books describing occupations, published by commercial agencies, are often kept in the libraries for the use of

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[1] Myers, op. cit., pp. 109-122.

pupils. Some schools provide courses for young people to introduce them to the working life of the community. Industrial arts classes frequently require pupils to use standard outlines to collect information about the occupations in which they are interested. Pupils often explore different occupational areas and collect data for other pupils. Teachers contribute to this effort by relating the courses which they teach to vocational outlets. Visual aids are often employed to show the different types of industries and the occupations contained therein. Reliable information from labor departments and employment services regarding the nature of work in the occupations, the demand for these occupations, and occupational trends are made available to schools. The task of gathering and organizing occupational information is the responsibility of those in charge of the school guidance programs as well as the pupils.[1]

2. Pupil Information Service: The purpose of this service is to provide the basis for counseling service. It is primarily concerned with compiling, interpreting, and using information regarding pupils. The information generally comprises the following: personal and family background, scholastic achievements, physical abilities, standard psychological test results for scholastic aptitude, personality traits, aptitudes, interests and attitudes, health and physical development, future vocational plans, hobbies, work experience, and other activities. This information is carefully compiled in cumulative records and

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[1] Ibid.

kept in schools for the use of counselors and others who are working with the guidance program. The record forms include space for reporting the results of placement and follow-up services.[1]

The personnel of the vocational guidance program of a school is responsible for gathering and recording this data. Since choice of a career depends on the accuracy of information concerning the pupil, the utmost care is exercised in its compilation. Information regarding individual and family background is obtained from parents or guardians. Scholastic achievements are obtained from school records showing the pupil's performance in the various courses of study at different grades. Standard psychological tests are administered under specific conditions by trained personnel at various intervals and their results are recorded. Other information such as the individual's vocational plans and his hobbies and activities are obtained from the pupil. Cumulative records are devised to standardise this information so vital for effective guidance.[2]

3. Counseling Service: The purpose of this service is to help the individual evaluate his assets and limitations in relation to the requirements of his occupational plans. It consists of a number of conferences between the counselor and the one counseled in which a frank discussion takes place in order to come to a decision regarding a career. The individual makes his own decisions without any compulsion. This he does by gaining insight through comparison of his assets

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[1] Ibid., pp. 125-246.

[2] Ibid.

and liabilities with those required for his career. The counselor knows the individual's abilities as well as the possible courses of action open to him. Sometimes parents are consulted during the counseling process. The counseling service is the most important part of the vocational guidance program. The counselor is generally trained at the university graduate level in techniques of counseling and methods of evaluating individual abilities and gathering relevent occupational and educational information. A study of economics, sociology, and psychology is needed in guidance work. School teachers are sometimes trained for the purpose of assisting in the counseling process.[1]

4. Vocational Preparation Service: The chief purpose of this service is to provide skills and knowledge adequate for entering the occupations which the pupils have chosen and thus to aid them in their transfer from schools to occupational life. The public schools in the United States have gradually assumed this responsibility. They work in cooperation with other agencies like industry and labor for extending vocational training. Federal aid promotes vocational education in public schools. The following three general types of vocational education have developed in American secondary schools: (1) preparation before employment, (2) preparation in connection with employment, (3) preparation for change of employment. All three are organized under public supervision in agriculture, business, homemaking, and industry.[2]

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[1] Ibid., pp. 248-266.

[2] Ibid., pp. 269-290.

5. Placement Service: The function of the placement service in schools is to furnish complete and reliable information to the pupils concerning the different employment openings in a given occupation: where these openings are, their requirements, the opportunities for promotion, the salary rate, Such a service secures more information than the individual could possibly obtain from his own efforts. This does not, however, in any way eliminate the pupil initiative in finding suitable employment. Entering occupational life advantageously and getting good start is equally as important as choosing and preparing for an occupation. The transfer from school to occupational life is the responsibility of the educational system; it should ensure that youth are so placed that their development and training in schools is put to the best use in the early years of their employment life. Placement is not mere job finding -- it involves careful study of the pupil in his new surroundings. The young worker is frequently visited to find out the difficulties he has encountered and to help him in his adjustment to working life.[1]

The United States Employment Service is a federal government organization concerned with the placement of adults as well as of youth. It extends its activities throughout the country by setting up regional offices. It is better financed than most school placement offices and renders great help to the school placement service. In the larger cities, the schools sometimes have a centralized system of

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[1] Ibid., pp. 293-310.

employment services for placing the young people who leave their schools. This agency often coordinates its activities with the Federal Employment Services. In small communities, the schools have their own placement offices with the counselor for vocational guidance generally responsible for the placement service. The success of the vocational guidance program depends to a large extent upon the placement service.[1]

6. Follow-up Service: The function of the follow-up service is to give the assistance needed by the worker in the months that follow induction into employment, in making the necessary adjustment and taking advantage of his opportunities. The most important adjustment needs are: assistance in making the adjustment to the new job, help in removing causes for dissatisfaction, aid in additional preparation for the job, if a change is necessary, assistance in finding a new job. Information regarding this is gathered from the individual or his employer or from direct observation of the worker. Reliable information is essential to aid the adjustment of the worker to the new conditions. The school guidance programs in the United States frequently make some effort to help their pupils become adjusted to their work. The follow-up service is the final stage of the vocational guidance program.[2]

Principles of Vocational Guidance.--The foregoing purposes of vocational guidance and the practices in the United States have suggested the following principles of vocational guidance, many of which are

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[1] Ibid.

[2] Ibid., pp. 312-326.

are accepted in the United States. These principles represent the author's own point of view and upon them, the recommendations for organizing vocational guidance in Mysore have been based.

1. Vocational guidance is the process of assisting the individual to choose an occupation, prepare for it, and enter upon and progress in it.

2. Differences in individuals and in the reqqirements of occupations create the need for vocational guidance.

3. Vocational guidance is fundamentally an effort to conserve the potentialities of human resources. It helps to promote the social welfare and the prosperity of society.

4. Vocational guidance is a state responsibility. Public schools are best suited to provide a program of vocational guidance. A state authority is necessary to administer and supervise the guidance activities in schools.

5. Vocational guidance is an essential part of vocational education and the two together are an integral part of the total educative process.

6. School programs should provide services such as (i) Occupational Information, (ii) Pupil Information, (iii) Counseling, (iv) Preparation, (v) Placement, and (vi) Follow-up Services, for the efficient operation of vocational guidance.

7. Trained specialists should be responsible for operating a program of vocational guidance and the training for such specialists should be given at the university graduate level.

8. All teachers in schools should be familiar with the problems of guidance and should cooperate with the guidance program.

9. Schools should cooperate with other agencies such as industrial, commercial, and agricultural interests, state employment services, and other youth agencies which carry on similar work of guidance and placement.

10. An employment bureau for placing the school-leaving youth is an essential part of an educational system.

Proposal for Organizing the Program in Mysore Schools. — A wide range of opportunities is available to Mysore youth today, as a result of industrial development throughout the country. The need for an effective system of guidance has become imperative. The following proposals are presented for the organization of vocational guidance in Mysore secondary schools on the basis of the principles stated earlier:

1. The Department of Public Education should have a Division of Vocational Guidance on a state level, to administer, supervise, and coordinate the programs in schools. The chief officer for this division should be responsible for organizing and supervising the work in schools. The chief functions of the divisions should be: (i) to classify occupations, to analyze them for developing the curriculum, to furnish information required by schools concerning occupations and their demand, (ii) to develop and recommend psychological tests for school use, to maintain records of information concerning pupils, (iii) to place students leaving-school in occupations appropriate

to them and help them to adjust to their new surroundings, (iv) to supervise the efficiency of all guidance activities in schools, (v) to conduct research to determine the success of programs and improve their methods.

2. Schools should provide the six services, Occupational Information, Pupil Information, Counseling, Preparation, Placement, and Follow-up, in their programs. School libraries should systematically compile occupational information for the use of pupils. Books and periodicals describing occupations should be provided in school libraries. Trained counselors should be responsible for the program in schools.

3. Provisions should be made for the training of counselors and teachers at the university graduate level in guidance work.

4. Efforts should be made to secure the cooperation of the school teachers to contribute towards the guidance program.

5. An Employment Bureau should be established as a part of the State Division of Vocational Guidance for helping the placement of school-leaving youth.

6. School authorities should secure the cooperation of industrial, agricultural, and business interests, and other agencies which deal with similar guidance work.

SUMMARY OF SIGNIFICANT FACTORS

1. Vocational guidance is the process of assisting the individual to choose, prepare, and enter an occupation and to progress in that occupation. It is an essential part of vocational education and is chiefly concerned with the conservation of individual human resources in a society.

2. Both the individuals and the society benefit by an effective program of vocational guidance. Therefore, vocational guidance should be a state responsibility. The schools are best suited for undertaking this responsibility.

3. There is a great need for guiding pupils leaving secondary schools in Mysore into occupations appropriate to their assets and liabilities.

4. A comprehensive program of vocational guidance includes six services: Occupational Information, Pupil Information, Counseling, Preparation, Placement, and Follow-up.

5. The proposals for setting up vocational guidance in Mysore schools are based on principles derived from the purposes of guidance accepted and the practices prevailing in the United States secondary schools.

6. Suggestions for a state agency for administration and supervision of vocational guidance programs, an employment bureau, programs in secondary schools, and provisions for training counselors and teachers for guidance work are offered for consideration.

CHAPTER VII

PROPOSALS FOR ORGANIZING VOCATIONAL EDUCATION IN MYSORE SCHOOLS

Mysore has planned to launch several schemes for the expansion of education in the state. These schemes were drawn up primarily in order to estimate the financial expenditure involved in them. An Abstract of Estimates for the educational developments in Mysore has been included in the Appendix. The details of execution have been left to the Department of Public Instruction. Among these schemes the reorganization and expansion of high schools and middle schools need more careful attention. The absence of a comprehensive plan for vocational education is strikingly noticeable. Therefore, the proposals in this chapter suggest a plan for developing vocational education in the secondary schools. These proposals have been based on the fundamental principles of vocational education which were presented for consideration in Chapter Four. It is believed that they will be of use in the future development of education in Mysore. Every attempt has been made to show their relationship to plans already prepared and to the recommendations made by the Central Advisory Board of Education.

Vocational education at the secondary school level may be divided into four main fields, depending upon the nature of the work: (1) Industrial Education, (2) Agricultural Education, (3) Business Education, (4) Education for Home-making and Family living. Proposals common to all the phases of vocational education have been

included under the heading "General Proposals" and problems peculiar to each field are discussed separately.

I. General Proposals

1. Provisions should be made to provide the youth with adequate preparation for vocations in secondary school.

This proposal is based on the principle that vocational education is a public responsibility and that vocational education is an integral part of general education. The traditional curriculum in high school has overlooked this aspect of education and has emphasized only academic learning. A radical change should be made and compulsory vocational preparation should be introduced in middle school and high school. The majority of the youth who are likely to finish their education at the end of secondary school need to be prepared for their careers.

2. Practical instruction should be provided in middle school for all young people with the object of providing (i) general education, (ii) exploratory experiences for discovering their abilities and interests.

Some of the middle schools in Mysore provide practical work, but this has not met with much success. This will continue to be the case unless opportunities are provided for further training in high school. It also seems that any defects in the program can be remedied most effectively by a complete reorganization. Each school should be equipped with a general shop in which thirty to forty students can participate in manipulative work. Only hand tools should be used at

this stage, since the primary purpose is to familiarize the pupils with the materials, processes, tools, and equipment involved in working life. Practical work in at least one occupational area should be made compulsory and the pupils should be free to choose the area they prefer. Shop facilities should be provided for instruction in six to eight occupational areas. Wherever agriculture is predominant, cultivable lands should be attached to the schools for practical work. The selection of occupational areas for school work should depend on the occupational activities of the community and the type of training provided in high school. At least two courses, one introductory and the other advanced, should be provided in each of these areas in middle schools. The following list suggests the possible occupational areas for practical instruction in middle school.

SUGGESTED OCCUPATIONAL AREAS FOR PROVIDING PRACTICAL INSTRUCTION IN MIDDLE SCHOOL

1. Industrial

   Blacksmithing
   Brass Work
   Electric Work
   Home Mechanics
   Lacquer Work
   Leather Work
   Machine Shop Work
   Mechanical Repair Work
   Mechanical Drawing
   Metal Work
   Rattan Work
   Sheet Metal Work
   Spinning and Weaving
   Tailoring
   Woodworking

2. Business

   Distributive Work

3. Agricultural

   Dairy Farming
   Gardening
   General Farming
   Poultry Farming

4. Home-making

   Clothing
   Foods
   Home and Family living

5. Fine Arts

   Music
   Painting
   Commercial Designing

3. The high school curriculum should be reorganized with a specific provision for vocational preparation. The curriculum intended for vocational preparation should be either pre-vocational or pre-professional .

The existing academic high schools should provide a broader service by making changes in their curriculum. The curriculum in high schools should have "common learnings" designed to impart a high standard of general education, and compulsory vocational preparation. Students should have a wide choice for the selection of their careers. The school program for vocational preparation should be based on the occupational needs of the community. Vocational preparation may be either pre-vocational or pre-professional. The former should be more practical, leading to a job while the latter should be more theoretical, leading to higher education. About a third of the school time should be devoted to vocational objectives in high schools. There should be at least one high school providing pre-professional education for every school giving pre-vocational education. Schools should be provided with the shops and equipment necessary for training.

In the high school, the function of preparing future leaders should not be overlooked. Some students, by virtue of their intelligence and abilities, are capable of faster progress in school work than others. Those who show promise and who wish to continue professional education in technical or engineering colleges must be provided with special courses in high schools in keeping with their abilities. Practical work leading to an immediate career may not be as important

to these pupils as it would be to the rest. Such courses must be offered in centrally located high schools. These schools should be similar to the "Technical high schools" suggested by the Central Advisory Board of Education.

4. The industrial, agricultural and commercial schools should be brought under the unified control of the Department of Public Instruction and they should be reorganized and expanded to serve the present needs of society.

These schools should be organized similarly to the Industrial schools or Junior Trade schools proposed by the Central Advisory Board of Education. The Board has also firmly expressed its desire to bring all education under the control of the Department of Public Instruction. These proposed schools may be regarded as full-time vocational schools, although an effort should be made to impart the necessary general education to the students enrolled in them. They should be reorganized by adopting modern practices to provide training in skilled occupations for both boys and girls in the four areas of vocational education. About half the school time should be spent acquiring practical skills.

5. The Occupational Institutes, the Engineering School and the Agricultural Institute should be reorganized and expanded for training students for semi-professional jobs at post-secondary school level.

These schools should be similar to the higher technical institutions proposed by the Central Advisory Board of Education. They should

provide training beyond that given in high schools for highly specialized jobs requiring relatively more technical knowledge than specific skills. Such schools will reduce the demand for university education and make education more purposeful.

6. State Advisory Commissions for each of the major areas of vocational education should be appointed to assist in planning the vocational education programs in the different types of schools.

The task of establishing vocational education programs on a state level involving nearly two hundred secondary schools is huge and needs careful planning. The cooperation of many agencies, community leaders, school principals, and teachers has to be mobilized for this purpose. It is probable that during the early period of developing the program a commission for each of the major areas of vocational education would be found helpful to deal with special problems pertaining to those areas.

For instance, the state commission on industrial education should consist of representatives from industry and labor, community leaders, and school administrators in charge of vocational education. Such a commission should be entrusted with the following duties: (i) to survey the needs and determine the occupations for training programs, (ii) to decide on the type of schools and the length of courses, (iii) to suggest policies regarding selection, qualification, training and employment of teachers, (iv) to set up requirements for selection and admission of students in industrial occupations, (v) to appoint occupational advisory committees to determine the content of courses,

shop plans, machines, and equipment needed, (vi) to investigate possibilities of cooperating with industries for furthering industrial education.

These proposals are equally applicable to the organization of programs in other areas of vocational education, since the nature of the work is more or less similar. Commissions for agriculture, business, and home-making education would undertake similar duties. The educational authority in the state should act on the recommendations from these commissions to formulate the policies and set up the necessary administrative structure to organize and supervise the work in schools.

II. Industrial Education

Nature and Purpose. -- Industrial education is one of the principal areas in vocational education, dealing with the training of workers in industries. Until fairly recently industrial workers acquired most of their skills on the job. But the need for scientific and technical knowledge in addition to manual skills which has grown with advancing technological developments has demanded systematic training. One of the chief functions of industrial education in secondary schools is to prepare the young people who are likely to leave schools to take jobs in skilled occupations in industry. Both the modern factories and the cottage industries in India offer a wide range of occupational opportunities. Because of this diversity there are many factors to be considered in any training program designed for the schools. The purpose

of training, the extent of training, and the range of occupations call for different types of programs.

The following occupations commonly found in United States secondary schools are presented for consideration in organizing industrial education in Mysore as they appear to fit into the conditions prevailing in the state and provide the type of training needed by young people who are preparing themselves to take their places in the expanding industries of India. However, the choice of occupations appropriate for training should be determined by a regional survey of employment conditions.

SUGGESTED LIST OF INDUSTRIAL OCCUPATIONS

For Technical Institutes

Mechanical Drafting
Building Drafting
Radio Servicing
Photography
Mining
Electrical Machine Servicing
Leather Technology
Printing
Machine Shop Work
Auto Servicing

For High Schools

Woodworking
Carpentry
Pattern Making
Drafting
Electrical Work
Machine Shop Work
Textiles Techniques
Commercial Art
Tailoring

For Vocational Schools

Carpentry
Wood Work
Cane Work
Machine Shop Work
Sheet Metal Work
Welding
Bricklaying
Plastering
Plumbing
Concrete Work
Electric Work
Weaving
Tailoring
Printing
Jewelry Work
Ceramics
Auto Mechanics
Watch Servicing
Modern Laundrying

Courses of Study. -- The courses of study in industrial education or in any other phase of vocational education are built by an analysis of occupations. An occupational analysis lists the skills and knowledge required for performing an occupation and a program of instruction is planned to involve training in the skills and knowledge related to the occupation. Practice for occupational skills in schools is provided in shops equipped with the necessary machines and tools. The various kind of knowledge that may be related to an occupation are generally classified as, (1) Blue Print Reading, (2) Drawing and Sketching, (3) Related Mathematics, (4) Related Science, (5) Knowledge of the Equipment, Tools and Materials of the occupation, (6) Knowledge of the Socio-Economic Problems of the occupation. This classification does not imply that subject-matter instruction should be isolated from practical work. However, it affords an opportunity for the systematic development of courses of study and units of work experience. Practical instruction should be correlated with the instruction of related knowledge as far as possible.

Organizing School Shops. -- School shops should be planned primarily to give worthwhile educational experiences with safety, but, regardless of their size, they should be planned with the future in mind as well as the present. It must also be kept in mind that the school shop may be used for other purposes in the community. For instance it is likely that adult programs outside school hours may be organized. This means that the needs of adults must also be taken into account in any plans that are made. Information concerning these factors

must be available, as well as a course of study outlining what is to be taught, before the architect can proceed intelligently with his plans.[1]

In addition, the type of shop depends to a large extent on the purpose of the course and the enrollment expected. To begin with, it is necessary to decide whether a unit shop or a general shop should be installed. This decision is usually made on the basis of the purpose of the course to be offered. If the purpose is to provide a general overview of industrial materials and processes then a general shop would seem to be desirable. On the other hand, if the purpose is to provide training in a specific occupation a unit shop is to be recommended. The number and type of units to be installed must also be determined. This will depend to a large extent on the occupational pattern prevailing in the community where the school is to be established. After this has been agreed upon, the space needed for the shop will be decided on the basis of the number of pupils expected and the machines and equipment that have to be provided. The shop should be so disigned to facilitate organization and supervision. The courses of study and the school's resources determine the machines and equipment necessary. There should be space in shops for planning, demonstration, and teaching. Locker space should be provided in which pupils may store their personal belongings. Windows should be so placed to permit maximum lighting and ventilation. Drinking water and washing

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[1] "Principles of Good Shop Planning," School Shop, VIII (April, 1944), 5-6.

facilities should be provided. One should take advantage of color in shops to indicate dangerous zones, reduce glare, and make the surroundings pleasant. Care should be exercised to minimize the sound from shops with adequate sound-proofing and cushioning materials. Provision should also be made for the necessary utilities, and for disposal of waste, dust, and fumes.[1]

Many difficulties are likely to arise in organizing school shops in Mysore as the existing schools often have not sufficient space available. In such cases, new buildings or extensions should be provided. Financial resources may limit the buying of machines and equipment at the beginning; however, shops should be planned to accommodate all the necessary machines and equipment so that the rest may be added as conditions permit. Another difficulty will arise in guessing the future enrollment. Enrollment in industrial schools has not been very satisfactory in the past. However, the introduction of compulsory education and the development of industries are likely to attract more pupils to vocational schools. This may be achieved if enough publicity is given to promote vocational education in the state.

Both the unit shop and the general shop could be used in Mysore schools, with certain modifications to meet local needs. Middle school shops require only hand tools. Typical examples of shops -- a unit shop for woodworking and a general shop -- recommended for United States schools have been inserted in the Appendix for guidance in

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[1] Ibid.

planning school shops.

Cooperation with Industries. -- In planning industrial education programs, the cooperation of industry and labor groups is necessary for the following reasons:

1. Information concerning the demand for occupations must be furnished by industry and this information governs the training program to be provided in schools.

2. The analysis of occupations which is necessary for course construction must be done in actual working conditions and for this, the cooperation of industry and labor groups is essential.

3. Industries are the concerns likely to employ the trained pupils and thus would be helpful in their placement.

4. Schools may not be in a position to afford all the costly equipment and machinery that are to be found in industries. If training has to be organized in operating such machinery, schools will have to make arrangements with industries.

5. Technical advances are likely to bring about rapid changes in industrial processes and methods with the result that school courses may not be able to keep pace with new developments. In general, schools have to seek the assistance of industry in arranging up-to-date training programs.

6. Labor groups and industries may be interested in training their own men. They would have to approach the schools for organizing courses for their needs.

7. Many young workers who are employed in industry desire to

improve their position by taking further training in their field. In such cases, schools may provide courses to fill the needs of these individuals.

8. Schools may influence industrial leaders to promote industrial education.

Some of these reasons have been responsible for an increasing trend in the United States for establishing close cooperation between industries and school agencies. Cooperative programs and apprenticeship training seem to be growing more popular. The purpose of the part-time cooperative training program is to give students effective training for employment in selected jobs and coordinate school instruction in subjects related to their employment. The pupils spend half their time working on the jobs and the other half in schools. Apprenticeship training is another form particularly suited for training in occupations requiring a high degree of skill and relatively less knowledge concerning the occupation. The apprentice often gets paid during his period of training and gives all his time to the job, spending a few hours in school during his spare time for related instruction. A coordinator is a school official generally responsible for effective cooperation with industry. Cooperative and apprenticeship programs are relatively less expensive and would be a possible means of extending industrial education in Mysore. Since there are many state-owned industries and education is state-controlled, there is a wide scope for organizing such classes. The organization of part-time industrial education deserves more careful consideration.

Laws Promoting the Welfare of Workers. -- Labor laws have profoundly influenced the welfare and progress of people since the advent of modern industries in many of the western nations. They have been instrumental in preventing certain undesirable practices in industry and have promoted the interests of workers. These laws are primarily concerned with employment and unemployment conditions, hours of labor, fair wages, safety and health, and good personal relationships between management and workers. The youth who leave school and go to work in industry come under the influence of these labor laws. It is possible that they may still retain their relations with the school in order to further their vocational education. Consequently those responsible for vocational education should be aware of any such laws and regulations that affect their pupils.

Many of the problems of workers in Mysore are not far different from those experienced by workers elsewhere. Investigations concerning (1) employment of minors, (2) wages of workers, (3) hours of work, (4) employment of women, (5) conditions in working areas, (6) injuries and accidents in industries, would throw light on the existing conditions in industries. If necessary, Mysore may have to take legislative measures similar to those prevailing in most western states. These laws are vital to the protection and perpetuation of democracy. The problem of vocational education does not end with the education of workers; it is equally concerned with the welfare and adjustment of those going to work.

III. Agricultural Education

Nature and Purpose. -- It was pointed out earlier that Mysore was predominantly an agricultural state, nearly 70.4 per cent of the working people being engaged in agriculture. It was mentioned also that the methods employed by its farmers are too simple and primitive to produce enough food for its people. Conditions could be improved if the farmers were to be taught modern methods of agriculture. Agricultural education in secondary school is intended for pupils who desire to become farmers and who have the abilities necessary to achieve reasonable proficiency in farming. A school program should provide training in activities in the operation and management of farms, to prepare pupils either to set up their own farms or to seek employment in farming occupations.

The application of science and machines has brought about many improvements in the methods of agriculture. In order to keep farmers informed of these developments a continuous program of agricultural education is desirable, starting early in high school and continuing into active adult life. In order to determine the experiences which the pupils might acquire in schools, it would seem desirable to set forth the aims of agricultural education. The United States National Standards Committee for Vocational Education in Agriculture has stated the following aims:

1. To make a beginning and advance in farming.
2. To produce farm commodaties efficiently.
3. To market farm products advantageously.
4. To conserve soil and other resources.

5. To manage a farm business.
6. To maintain a favorable environment.[1]

These objectives comprise all the phases of farming. Problems of economic and managerial nature, including agricultural economics, land management, marketing, and soil conservation are given equal emphasis. The last of these objectives contributes towards developing a favorable social and economic environment for the individual as well as the community. The attainment of these aims implies the development of abilities for proficient farming and for helping farmers to solve many problems affecting agriculture. It would seem that these objectives should serve as a guide in organizing a program of agriculture in Mysore schools.

Courses of Study. -- The courses of study in agriculture should be based on the needs of the pupils and the community in which they live. In order to determine these needs a survey must be made by visiting the farms to gather basic facts regarding farms and farm practices, type of agriculture carried on in the community, and the number of pupils likely to be absorbed by agriculture. These facts would then be used to determine the training program of a school. Generally there are many types of farms, depending on the nature of work done on them, the type of soil, the climate, and the cultural and industrial activities of the people.

The following list of courses of study in the secondary schools

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[1] Struck, op. cit., p. 376.

of the United States should be helpful in organizing the work in Mysore schools.

Farm Management
Farm Produce (Crops, Fruits, Vegetables, Grains, Dairy, Animals, or Poultry)
Soils
Agricultural Economics
Farm Shop
Individual Problems
Supervised Farming
Home Improvement and Beautification [1]

Although farming primarily centers on the production of crops and the raising of animals and poultry, the efficiency of production depends to a large extent upon an understanding on the part of the farmer of certain other factors and their application in farming. For example, agricultural economics deals with the business problems with which a farmer is likely to be faced. The knowledge gained in this field helps the farmer in selecting and buying farms, improving of farms, buying insurance, making farm inventories, giving credit statements, keeping business records, and planning cooperative enterprises.

Moreover, the mechanization of farm work has made it necessary for farmers to understand the operation and maintenance of machines used on farms. This involves the development of basic skills in wood-work, metal work, and electricity, all of which are useful in the activities carried on on the farm. Since this is true it is desirable

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[1] Ralph A. Woods, "Agricultural Education," pp. 205-206. Vocational Education. The Forty-Second Year Book of the National Society for the Study of Education, Part I. Chicago: The University of Chicago Press, 1943.

that consideration be given to provide experience in farm shop work in any vocational education program designed for the state. In addition, provision should be made for individuals to work on problems in which they have particular interest. By this means each pupil will get individual help in solving the difficulties he is likely to meet in planning, organizing, and executing the work. In each case the problem selected by the pupil should involve sufficient skills and knowledge to justify an instructor devoting time to it. The pupil should use his classroom experience in actual practice on the farm, under the supervision of a teacher, thus applying on the home farm what he is taught in class.

Organizing an Instructional Program. -- On the basis of practices in the United States,[1] it is suggested that each school in an agricultural community in Mysore should have a department of agriculture with classroom and farm shop facilities. If the community is large and there is a demand, auxiliary rooms for canning and other facilities must be provided. Classrooms should be large enough to demonstrate the many skills involved in agricultural operations. The equipment necessary for teaching in these schools will depend on the type of farming practiced in the community. The farm machanics shop should have facilities to provide training in woodwork, electrical work, and metal work as related to farming and home conditions. It

[illegible]

[1] Guide to Reimbursed Vocational Education Programs, Bulletin No. 292 (revised), pp. 27-32. Lansing: Office of Vocational Education, Michigan State Department of Public Instruction, 1948.

should have the machines and tools commonly used on farms to teach their operation.

The instruction in agriculture could be made more profitable by including some farming projects. It may be desirable that schools should have their own farms on which the pupils may work. If this is not feasible, the parents should be approached to provide enough land for pupil participation. The projects on a farm might be individual or group porgrams. Generally a project is a unit of work providing an opportunity for the pupils to gather experiences in both manipulative work and related knowledge. These projects should enable the pupils to learn the planning and execution of farm work. A project may be either a productive enterprise or an improvement project. Field trips may be arranged for demonstrating good methods of farming.

Cooperation with the Farming Community. -- The school must cooperate with the farming community and may seek community assistance for the following purposes: building courses of instruction, suggesting ways and means of equipping rooms and shops, providing employment to trained pupils, giving demonstrations of good farming to pupils, and organizing community-school cooperatives.[1] In recent times the school-community cooperative plan of operation has been increasing in the United States. School-sponsored community canning plants, cold storage, hatcheries, and cotton gins, in which both the farmers and the pupil participate, are extensively used. Such work seems to produce

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[1] Ibid., pp. 33-38.

better results for farmers and has given useful learning experience to pupils.[1] It also reduces the cost of equipment to be provided in schools. The possibilities of organizing these cooperative enterprises in Mysore should be considered in planning.

IV. Business Education

Nature and Purpose. -- Business education in secondary schools is concerned with equipping young people with the skill and knowledge required in the operation of business establishments. There are in this major area primarily two types of occupations which need consideration for a training program -- Distributive and Commercial occupations. Distributive occupations are those in which the workers are directly engaged in merchandising activities which deal with the distribution of products of industry and agriculture to consumers. These occupations require skill in retail selling, merchandising, credits and collection, advertising, and business management. Commercial occupations are purely clerical in nature, requiring skill in the performance of office duties such as secretarial work, book-keeping, accounting, and general clerical duties.

Since the future development of Mysore depends largely upon the further development of its industrial and business enterprises it is important that immediate steps be taken to train people to perform efficiently the many tasks found in the operation of modern business.

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[1] Struck, op. cit., p. 388.

And since the efficiency with which business is carried on depends upon the efficiency of the workers in the business, it would seem that the state should concern itself with the important problem of training these workers. If this fundamental truth is accepted it would seem that the public school, which is an agency of the state, should assume the responsibility of providing the type of training needed. The main purpose of business education should then be to prepare youth for satisfactory participation in business occupations. A sound business training program must insure that the students have a basic understanding of business principles essential to their advancement.

Courses of Study. -- The selection of courses depends to a large extent on the type of business establishments existing in a community and the opportunities they provide. In order to determine these opportunities representative stores must be visited to gather information concerning current business practices. Many stores are managed by the owners themselves while others employ workers to assist in operating the store. These two types of work require different training programs. The provisions made for commercial training in the State of Michigan afford some suggestions for organizing the work in Mysore. Students there divide their time between group instruction, dealing with problems of common concern, and individual instruction, dealing with their own problems. The following courses of study are recommended for group instruction:

Courses for Store Owners and Managers:

Personnel Problems
Merchandising
Advertising and Sales Promotion
Organization and Management Problems
Window and Interior Display
Store Arrangement and Layout
Credit and Collections
Consumer Relations
Budgeting and Expence Control Problems

Courses for Employee Groups:

Salesmanship
Effective Speech
Store Organization
Merchandise Information
Credit and Collections
Window Trimming
Advertising
Store Arithmetic
Consumer Relations
Fundamentals of Retailing[1]

The same general plan has been followed in the training programs for commercial occupations involving clerical duties. The courses of study are as follows:

Job Attitudes and Relationships
Personality and Grooming
Bookkeeping
Accounting
Filing
Typewriting
Office Machines Operation
General Office Practice and Procedures
Shorthand and Transcription
Business English[2]

These courses of study, with the necessary modifications, may be used in

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[1] Distributive Occupational Training, Bulletin No. 237 (revised), p.10. Lansing: Michigan State Board of Control for Vocational Education, 1939.

[2] Guide to Reimbursed Vocational Education Programs, op. cit., p. 47.

organizing business education in Mysore. However, the content of the courses must be developed on the basis of analysis of local jobs.

Organising an Instructional Program. -- A study of the current curriculum offerings in commercial schools and the existing facilities in Mysore schools should be made. Expansion and changes should be based on actual needs and modern business practices. The commercial schools under private management should be provided with adequate aid and supervision. A commercial education curriculum should be introduced in high schools if there is sufficient demand for it. There are a number of ways to make business education more practical. "Model Stores" providing a fac-simile of actual conditions of employment have been used in some United States high schools to give students experience in practical work. School business transactions have been used for the same purpose. Some of these methods might be employed in Mysore schools.

Cooperation with the Business Community. -- Schools must secure the cooperation of the business community for the following purposes: gathering information concerning the demand for occupations and the analysis of occupations in order to build courses of study, organising cooperative programs in which students may be employed part time, providing practical experience to trainees, and placing trained students in suitable employment. In view of this, efforts should be made to secure the help of business communities in developing programs of commercial education in Mysore.

V. Education for Homemaking and Family Living

Nature and Purpose. -- The family is the basic unit in the social structure of Indian life and plays an important role in shaping the character and behavior of the people. It is in the homes that the preparation of the younger generation to assume their role in society starts. The rich heritage of India has been preserved from a long time through these means. The ideal of Indian womanhood is to make the home a worthy and happy place to live. Very few women in India work outside their homes for a livelihood, and homemaking is still their major occupation. However, in rural districts, in addition to homemaking, women help their men in farming and cottage industries. The need for a pleasant home and a wholesome family life is fundamental to the progress of society and the education of women as home-makers deserves special attention.

In every home, the mothers train their girls in homemaking from an early age. This method appears to be far from satisfactory and a need for organized homemaking based on scientific principles is keenly felt. In view of this, courses in homemaking and family living should be organized in the schools to prepare girls to make better homes. Such courses would include instruction in the efficient management of time, energy, money, and other resources for the benefit of family well-being and the wise upbringing of children.

Any comprehensive program of homemaking education in school should have clearly defined purposes. The office of vocational education in the Michigan State Department of Public Instruction has given

the following list of objectives for Michigan schools. These objectives appear to be equally applicable to Mysore schools.

The objectives of homemaking education are to help individuals to:

1. Become better citizens through understanding and assuming responsibilities and privileges as members of the family and of the community.
2. Make more efficient use of available resources through wise planning of expenditures, wise selection, and learning how to save and conserve.
3. Guide children wisely through understanding their physical and emotional needs.
4. Establish a wholesome attitude toward other people through satisfying experiences with them and their families.
5. Adjust to changes in their personal lives and in the social and economic order.
6. Improve their health through an understanding of what constitutes good health and the practice of habits which contribute to it.
7. Acquire skills in managing a home and in performing necessary housekeeping duties.
8. Appreciate beauty which already exists in their environment and to make their homes, clothes, and food more attractive.
9. Enjoy social activities through gaining assurance by participation in family and community recreation, hobbies, and other activities.
10. Experience in sense of accomplishment through knowing how to do work well, and through acquiring skills and interests that enable them to express creative ability.[1]

Courses of Study. -- An effective homemaking program provides opportunity for participation in experiences which are based around individual and group problems relating to the school, home, and family life in the community. There are at least four major areas of subject matter in this field: food, clothing, shelter, and family and social

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[1] Guide to Reimbursed Vocational Education Programs, op. cit., p. 55.

relationships. In each of these areas the economic and aesthetic aspects of life are emphasized. Cooperative planning of instruction with other departments in the schools is essential to the success of the program. To serve as a suggestive list for organizing the work in Mysore schools, these four major areas are classified here into a number of courses of study as taught in United States secondary schools:

Areas	Courses
Food	Selection of Food Food Preservation Nutritional Requirements of the Infant, Child, Adolescent, and Adult Preparation of Food for Family Needs
Clothing	Selection of Clothes Designing and Making of Clothes Care and Repair of Clothes Textiles for Home Use
Shelter	House Planning Selection, Care and Arrangement of Home Furnishings Selection, Care and Up-keep of Home Equipment Improvement of Home Grounds
Family and Social Relationships	Child Development Home Nursing and First Aid Development of Personality Family and Community Relations Provision of Educational and Recreational Experience to Family Members.

Organizing Practical Work. -- The facilities for homemaking education should be appropriate to the home and family needs of the community. Each school should have a department for homemaking, preferably housed in a separate building. When this is not feasible, the objectives can be achieved by housing the department in the same school

building. The department should be provided with equipment and instructional materials for all the areas in homemaking and should have facilities to represent and study the different economic levels.

The amount of equipment needed depends on the number of students to be accomodated in a class, the space available, and the length of class periods. The financial resources will decide the equipment that can be bought. Furnishings and equipment are to be selected for utility. They should be simple and attractive, and separate rooms should be made available for each area. The following suggestions concerning equipment may prove helpful when planning a program.

Living Center: The home living center may be a room permitting flexibility in arrangements for furnishings like chairs, lamps, tables, rugs, pictures, and curtains. The space may also be used for the study of home management, child development, and for informal group discussions and social events.

Foods: The space for preparing and serving food may be equipped with ovens, sinks, work tables, storage cabinets, cooking utensils, and supplies, all arranged in the most efficient and convenient manner.

Clothing: Sewing machines, suitable chairs, tables, full-length mirrors, screens, irons, and ironing boards should be provided in the room for the selection and construction of clothing.

Necessary equipment for demonstrating and practicing child care and development, home laundrying, care of the sick, and first aid should be provided. Other courses in homemaking seldom require additional equipment. It may be profitable to provide experience in actual

home conditions.

Other Occupations for Women. -- The emphasis laid on home-making education does not necessarily mean that women should be confined to their homes. Their services in other fields of human endeavor are essential to the prosperity of the nation. The review of existing conditions in Mysore has shown that the greatest number of women are employed in agricultural pursuits. Some of them are employed in textile and construction industries. Many serve as domestic help. In many cottage industries they share the work with their men. Their number is also increasing in professional occupations such as teaching, medicine, nursing and social work. Provision for their vocational education must be based on more reliable information regarding the trends in the employment of women. At the professional level there are many avenues which they should enter in greater numbers. The demand for teachers due to the expansion of schools can be easily met if women were to come forward in sufficient numbers. Jobs in business and office management and distributive occupations have provided opportunities for women in western countries. Efforts should be made to encourage women to enter these occupations. Schools should not overlook the changing demands of society.

SUMMARY OF SIGNIFICANT FACTORS

1. The task of organizing vocational education should be undertaken by the state, assisted by an administrative unit. Commissions for each of the areas in vocational education should be appointed to help setting up the programs.

2. The chief purpose of vocational education in secondary school is to prepare young people who are ready to leave school to enter some gainful employment appropriate to their abilities.

3. Practical instruction in middle school should provide (i) general education, and (ii) exploratory experiences to the youth, in order to discover their interests and abilities.

4. Pre-professional education in high schools should be provided to students who show promise and plan on going to higher education.

5. Cooperation with industries and agricultural and business interests is extremely important for organizing training programs and for providing specialized programs to school pupils and young workers.

6. Education for homemaking and family life is essential to the progress of the nation and to aid women in fulfilling their role in society. Since this is true, the responsibility for training women as home-makers should be transferred from the home to the school in India.

CHAPTER VIII

ADMINISTRATIVE ASPECTS OF THE PROPOSED PLAN FOR VOCATIONAL EDUCATION IN MYSORE

No plan of education will give the desired results unless it is executed and operated by an efficient administrative organization. The establishment of a program of vocational education required attention from administrators who have been trained in the basic methods of administrative techniques. If the existing schools in Mysore have to be reorganized and their number increased, the present policies of administration need to be modified and the Department of Public Instruction should be expanded to enlarge its scope and functions. Basic to these changes there are certain fundamental requirements in the methods of organization which should be emphasized. Some of the aspects pertaining to the administration of vocational education, curriculum organization, and the training of vocational teachers, have been presented in this chapter.

I. Administrative Organization

Principles of Administration. -- The responsibility for the provision of public education in India rests primarily with the several provinces and states. Each province or state is at liberty to establish the administrative organization for the execution of public education. In order to set up an administrative agency which can operate with efficiency, some fundamental principles have to be observed. In view of

this, a series of principles upon which to base future educational administration in Mysore has been derived from the statements of educational purposes as well as from the widely accepted educational practices in the United States. Some of these principles have a wide acceptance in the United States.[1] They are essential to any culture which aspires to become democratic. Although there is no way of proving their validity they are based upon many years of practical experience in the organization of education. These principles, upon which certain recommendations in this plan have been made, represent a particular point of view, but it is believed that they are acceptable to the majority of those concerned with the progress of education in Mysore:

1. Education is a dynamic process within the culture and should conform to the evolving patterns of the culture. Its objective and methods are only a transitory expression and need to be reconsidered from time to time.

2. The purpose of education is to help individuals adjust themselves to the accepted pattern of life in the culture. Education should develop in the individual a sense of social and moral responsibility to the group. It should provide a means of training the individual for a useful vocation. In general, education should be a means to the improvement of culture.

3. The character, extent, and nature of education are

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[1] Arthur B. Moehlman, School Administration, pp. 121-153. Boston: Houghton Mifflin Company, 1940.

largely determined by the social and economic needs of society.

4. Education should provide equality of opportunity to every individual. Neither the social nor the economic status of the individual should deprive him of this opportunity.

5. Education should be concerned with the discovery of the inborn capacities of children and the development of these capacities so as to be of the greatest use to the society and to the individual.

6. Education should be a means to safeguard democracy, harmonize cultural differences, and prevent social, religious or group cleavage.

7. Schools are important agencies among the many social institutions which serve the function of education. In their common efforts, schools should cooperate with other educational and social agencies to realize the outcome desired.

8. Schools should operate upon a consensus of public opinion. They should be protected from the changing political and economic influences in the state. Professional personnel, teachers, and students should be free to think and act within the pattern of accepted social policies.

9. Planning, executing, and appraising, the three chief functions in an educational process, should be coordinated and organized on local, state, and national levels.

10. The state should provide the necessary legal basis and the financial aid; set up an adequate program of education; remove educational inequalities due to social and economic causes; promote

educational leadership and research; and in general further the cause of education.

11. In a democratic state the people should enact general policies through legislation regarding the conduct of public education and delegate the execution of these policies to a popularly chosen educational authority.

12. The educational authority in the state should consist of a representative state board of education to determine policies through legislation and a group of competent professional specialists selected and appointed on the basis of merit.

The following important recommendations made by the Central Advisory Board of Education for the future administration of education in India are in accordance with these principles:

> The Provinces should remain the main units for educational administration except in regard to University and higher Technical education, the activities of which should be coordinated on an All-India basis.
>
> In the event of the Indian States taking part in educational development on an All-India scale it may be necessary in order to form economic educational units to group the smaller ones or attach them to larger States or contiguous Provinces.
>
> A national system of education will require much closer co-operation financial and otherwise, between the Central and Provincial Governments.
>
> Provincial Governments should be left to make such changes in their administrative arrangements as the carrying out of education developments on the scale contemplated may require. Experience, however, suggests that they would be well-advised to resume all educational powers from local bodies, except where these are functioning efficiently.
>
> In order to enlist local interest in education, School Managing Bodies, School Boards and District Education Committees may

> be constituted, if and when sufficient people of the right type are available to serve on them. An Education Advisory Board for the whole Province may be desirable.
>
> The Director of Public Instruction should be directly responsible for the general administration of education, other than University and higher Technical education, throughout the Province. He should also be Secretary for Education, should it be thought necessary to keep in existence a separate post of this kind.[1]

In planning education for Mysore, these recommendations need stressing. The administration should be so organized and operated as to serve the best interests of the pupils and the needsof society. It was pointed out earlier,that local control of elementary education in Mysore has repeatedly failed and resulted in the inefficiency of schools. The causes for this must be determined and eliminated in the future, and efforts should be made to transfer the control to the local authority as soon as suitable people are available, as suggested by the Central Advisory Board.

Need for a State Board of Education in Mysore. -- Since until recently educational policies in Mysore were determined by a foreign government, the need for a State Board of Education was overlooked. However, under the present democratic government a State Board of Education would be helpful in formulating the policies for the development and conduct of education in Mysore. Such boards have been found to administer education with vision and efficiency in many democratic nations.

A State Educational Authority is essential to fulfil the

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[1] The Central Advisory Board of Education, Post-War Educational Development in India, op. cit., pp. 94-95.

purposes of education and to assume the responsibilities for its functioning..According to the principles of administration, the objectives and methods of education are transitory expressions which need to be reconsidered from time to time. Planning, executing, and upgrading are three continuous functions in an educational process. The policies regarding these activities should represent public opinion and they should be formulated by a permanant agency which holds the confidence of the people. Education is a powerful process in its potentialities and implications and should be kept as close to the people as possible. Education is a common enterprise between parents and the state, and the public should therefore take an active and intelligent part in the execution of an educational program. Democratic ideals should be promoted through democratic processes in schools. Moreover, the potential danger of autocratic control in education must be safegarded against through a representative state board. If the people of Mysore were to recognize these facts, the need for a State Board would become obvious. The Central Advisory Board of Education itself has recommended an Advisory Board of Education on a state or a provincial level.

In the United States there is at least one state education authority in each state. However, the methods of selection and the constitution of the state board in the several states vary. The State Board generally consists of six to eight members. These members are either elected from the state directly by the people for a long term with overlapping terms, or they are appointed by the governor. This fundamental difference in the method of selection is a result of two major

conceptions of the nature and organization of state education. One conception is that education is a major function of the government and should be free from civil control by civil officials; members of the board should be elected by the people. The other conception is that education is only one of a series of activities that should be integrated and coordinated as one aspect of government responsibilities; board members should be appointed by the governor. But whatever the differences, the board is the constitutional authority responsible for the development and conduct of education in the state.[1]

The chief functions of a State Board are planning the improvement of education, conducting research to discover the needs ofthe people, interpreting these needs to the legislature and the people, and evaluating educational conditions and needs. The Board is responsible for providing leadership to the teaching profession and for exercising control on the licensing of educational personnel. The Board delegates the executive work of the educational program to an Office of Administration.[2] These practices in the United States have been presented to serve as a guide if Mysore accepts the proposal for a State Board of Education.

Control of Vocational Education. -- As previously described, the control of vocational education in Mysore has been delegated to agencies other than the Department of Public Instruction. The Department

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[1] Arthur B. Moehlman, op. cit., pp. 597-649.

[2] Ibid.

of Industries and Commerce operates the industrial schools and the Department of Agriculture, the agricultural schools. The commercial schools are left to private management. This type of organization has not produced satisfactory results either in efficiency or economy. Furthermore, there has been among the various agencies concerned little coordinated effort to develop a comprehensive program of vocational education. The transfer of a student from an academic to a vocational school is a matter of chance rather than of merit, interest, or ability. These practices violate the fundamental principles of vocational education. Schools set up primarily for vocational education and placed under the control of agencies other than the Department of Education are likely to neglect certain aspects of general education. These disadvantages have been recognized and the Central Advisory Board of Education has recommended unified control of vocational education under the Department of Public Instruction. The separation of vocational education from general education is discouraged in the United States, as may be seen from the report of the Educational Policies Commission:

> Vocational education should be thought of as an integral part of the program made available for young people. There is no good reason why in its administration this phase of educational opportunity should be separated from general education.[1]

Further the report says:

> The essential unity of human life and its activities suggests

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[1] Educational Policies Commission, The Structure and Administration of Education in American Democracy, p. 18. Washington: National Education Association of the United States, 1938.

> the desirability of developing vocational education along with all other aspects of education. The unity of the educational program should not be destroyed by the domination of a program adapted to only one of the needs of those enrolled in the schools. The goal of the curriculum and of the program of general education should be a highly unified, socially constructive, and significant educational experience for every boy and girl.[1]

In view of the Central Advisory Board's recommendation and the desirable measures for unity and coordination for the education of the youth, Mysore should take immediate measures to unify the control of vocational education and place it under the Department of Public Instruction.

There are a few other recommendations made by the Central Advisory Board which propose to transfer the control of education to a central government authority. These recommendations are:

> Technical High Schools and Junior Technical, Trade, or Industrial Schools should be administered by Provincial Governments, but all technical education beyond this stage other than that given in the technological departments of Universities should be placed under a central controlling body which would have on it representatives of all the interests concerned. This body should be set up as soon as possible.
>
> It is essential that subject to the recommendation in the above, the administration of all technical education should be under the Education Department of the Central or Provincial Government or State, as the case may be. There should be a separate inspectorial staff for this purpose. The Education Department should maintain close contact with the other Departments concerned with Industry and Commerce.
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> As a corollary to technical education in its higher stages being administered by a central body, the financial responsibility will have to be accepted by the Central Government.[2]

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[1] Ibid., pp. 18-19.

[2] The Central Advisory Board of Education, Post-War Educational Development in India, op. cit., p. 47.

Education is a public responsibility and should serve the needs of the people, and it should be based on public opinion. However, the Central Advisory Board has stressed the setting up of a central controlling agency for the administration of all technical education beyond the high schools, chiefly on the grounds that the provincial agencies may not be in a position to assume the prohibitive cost of technical education, and that local control would mean unnecessary duplication of work. Though these reasons appear significant, the difficulties may be overcome by carefully planned financial aid from the central government, which should make it binding on provincial or state agencies to ensure proper coordination and the elimination of duplicate effort. In this connection, the federal grant provided in the United States to the individual states for the promotion of vocational education suggests how guidance and financial aid may be provided to the states without the exercise of any control by the central authority.

The control of technical education by a central authority is a direct threat to the autonomy of the provincial or state agencies. The note by the Honorable Mr. Tamizuddin Khan and the Honorable Khan Bahadur Sayidur Rahman does not favor the recommendation for central authority:

> . . . we are not in favour of the centralization proposed, which, we think, will be a retrograde step. The immensity of the size of this country, which is as large as the whole Europe minus Russia, and the racial, linguistic and cultural differences in the vast mass of its population comprising one-fifth of the entire human race, must rule out such proposals for centralisation based on the analogy of what may obtain in England or other European

> countries. Further-more, irrespective of whether the country is politically partitioned or not, its future constitution must be, to all appearances, of a federal character and the units constituting the Federation or Federations, viz., the Provinces, must be, in themselves, fully autonomous states. Proposals calculated to detract from the autonomy of the Constituent States such as the establishment of controlling central authorities cannot therefore be acceptable.[1]

Technical education is primarily the concern of local people. The central authority may overlook the needs of the local community and its industries. It is possible to provide financial aid to provincial agencies so as to ensure provincial as well as national interests. In view of this, the following proposals are presented for consideration.

1. All public education, including every aspect of technical or vocational education, should be under the control of the provincial or state agency.

2. All technical education, including education at the post-secondary level, should be placed under the control of the State Education Authority; however, higher technical education may be provided a separate unit of administration on a provincial or state level.

3. Financial aid from the central government should be given to the provinces or states, on condition that proper coordination on a national basis be maintained and that duplication of effort be eliminated.

4. The central authority on technical education should remain as an advisory agency to secure desirable coordination on a national

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[1] Ibid., p. 103.

level and promote educational leadership in the country.

Executive Organization and Its Function. -- The Central Advisory Board has proposed that an inspectorial staff be maintained for the administration and operation of technical education in public schools. But there is a great need for an additional, separate unit for the administration and supervision of vocational education within the framework of the Department of Public Instruction. It is extremely difficult for any but the specialist to understand the implications of the specific character of vocational education. Effective execution needs technical knowledge and the training in the basic methods of executive activities in the organization of vocational education. The nature of the work involved in providing school plants, equipment, and supplies is too technical to be handled by general educators. The methods of training for practical work differs from those of regular academic work and need a different type of supervision altogether. Such administrative practices make it necessary to delegate direction of all vocational education to an independent administrative and supervisory staff which consists of well trained specialists.[1] In view of this the following suggestions are presented.

1. There should be an independent unit of administration for the execution and operation of vocational education in public schools within the framework of the Department of Public Instruction.

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[1] J.C. Wright and Charles R. Allen, Administration of Vocational Education, pp. 1-53. New York: John Wiley & Sons, Inc., 1926.

2. The executive head of the above unit should be made responsible for the development and operation of all vocational education in public schools. He should possess the technical knowledge and executive ability for such work.

3. The department should have at least one supervisory official on a state level for each of the following major divisions of vocational education: industrial, agricultural, business, homemaking and vocational guidance. These officials should be responsible for the efficient operation of the work in schools.

4. There should be an adequate staff for inspecting the work in schools.

The executive functions of vocational education (or any kind of education) can be classified into two main divisions: administrative functions and supervisory functions. The object of the administrative functions is to create and maintain adequately supervised working conditions to permit the operation of a program. The object of the supervisory functions is to provide the necessary technical guidance and inspection for the efficient operation and improvement of the program. Because of these differences of function it will be helpful to list the responsibilities of administration and supervision of vocational education according to the prevailing practices in the United States, as analysed by Messrs. J.C. Wright and Charles R. Allen:

Responsibilities of Administration

Organizing and maintaining an efficient staff for the vocational department.

Establishing and maintaining effective working relations with other school offices and departments, and with outside organizations.

Preparing plans showing how cooperative relationships will be carried out.

Preparing and administering the departmental budget.

Recommending to the Superintendent satisfactory locations and plans for vocational schools.

Recommending lay-outs and lists of equipments for vocational schools and classes.

Maintaining stocks of supplies suitable for training purposes.

Preparing standard qualifications and requirements for use in selecting the teaching staff.

Selection, placement, transfer, rating, and promotion of teachers.

Establiching and maintaining an effective morale on the part of the supervisory staff and teaching force.

Preparation and improvement in service of teachers and members of supervisory staff.

Establishing standards for programs, courses, and instructional material.

Providing for the preparation or purchase fo lesson outlines, of manuscripts for bulletins, and text materials in harmony with established standards.

Setting up and maintaining entrance requirements classification standards.

Providing ways and means for measuring the value of the instruction

Evaluating the work of vocational supervisors.

Providing for necessary research, including studies, investigations, and experimental work bearing upon the problems of vocational education.

Setting up standard practices and forms for office records and departmental reports.

Establishing contacts with mediums of publicity and stimulating vigorous constructive service.

Arranging and approving itineraries of supervisors and other staff representatives.

Providing opportunities for the professional improvement of the director and staff.

Keeping informed with respect to legal requirements imposed upon the work of the vocational department and affording leadership in initiating and following up legislative measures.

Providing for the employment, entry, and followup adjustment of students trained in vocational schools.

Preparing and recommending new policies and administering policies already in effect.[1]

Responsibilities of Supervision

Securing information concerning the work of the vocational department and its relations to other school departments and officers.

Preparing a plan for supervision.

Preparing supervisory working schedules and itineraries.

Establishing and maintaining official channels and supervisory contacts.

Preparing recommendations for the budget of the vocational department.

Preparing reports with recommendations to the director setting forth the needs of the department with reference to buildings and grounds.

Recommending and supervising installations of new equipment and providing for its maintenance and care.

Preparing specifications and requisitionssfor supplies, and providing for their receipt and storage.

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[1] J.C. Wright and Charles R. Allen, Supervision of Vocational Education, p. 18. New York: John Wiley & Sons, Inc., 1926.

Preparing standards and recommendations relating to the teaching staff.

Promoting an effective morale on the part of the teachers and staff.

Preparing and supervising a program for the improvement of teachers in service.

Assisting in the development of standards for programs, courses, and instructional material.

Making job analyses and cooperating with teachers in the preparation of lesson outlines, manuscript for departmental bulletins, and text materials.

Providing standards and cooperating with teachers in the measurement of the value of the instruction.

Providing the teacher with suitable forms and guides for reporting on the work of the class.

Maintaining standards relating to the selection and classification of students.

Conducting studies, investigations, and experimental work on problems related to the supervisory field.

Preparing and submitting reports on all supervisory problems.

Promoting the work of the service to further meet the needs of the community.

Cooperating with placement departments, labor organizations, and employers in placement of pupils, coordination of school work, and "follow-up supervision."

Maintaining professional standing and keeping informed on new developments in the supervisory field.[1]

This division of functions should be helpful for organizing the work of the executive staff in Mysore.

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[1] Ibid., p. 24.

II. Curriculum Organization

Guiding Principles of Curriculum Construction. -- The curriculum in Mysore schools has been determined on a state level by committees which have prescribed rigid subject studies, mostly to prepare youth for college education. These committees have generally overlooked modern trends in the development of the curriculum and the influence of scientific research on education. There is no evidence that the curriculum offered in schools has any definite purposes. Patterned as it is on the style of English schools, it has undergone only slight changes to meet the needs of the youth and the community in Mysore. The need for changes in the curriculum has become imperative in the light of developments throughout the country. In order to assist in the future development of curricula in Mysore the following guiding principles have been derived from the results of the experience of educators in the United States:

1. The high school curriculum should perform the two chief functions of secondary education, the preparation of future leaders and the provision of general education appropriate for the majority of the high-school population.

2. Every aspect of the curriculum in high school should have a direct bearing on the aims of secondary education.

(The aims described by Cardinal Principles of Secondary Education have been suggested earlier.)

3. Secondary education should provide experiences directly related to social, civic, economic, health, vocational, and leisure-time

activities instead of the conventional school subjects.

4. Each unit of work in the curriculum designed to provide general education should be a problem of common concern in actual life.

(The major activities in life as stated in Developing the Secondary School Curriculum are: (i) protecting life and health, (ii) getting a living, (iii) making a home, (iv) expressing religious impulses, (v) satisfying the desire for beauty, (vi) securing education, (vii) cooperating in social and civic action, (viii) engaging in recreation, and (ix) improving material conditions.[1])

5. Each unit of work should have specific objectives and be designed to fix specific attitudes. The basic objectives and attitudes of the general education must be emphasized by every teacher.

6. The curriculum should serve the basic psychological needs of youth.

(The basic needs of youth have been classified as: (i) security, (ii) fellowship and companionship, (iii) recognition and a feeling of personal worth, (iv) new experiences and variety, (v) self-expression, (vi) expression for special capacities, and (vii) the satisfaction of various physical demands.[2])

7. The curriculum designed for general education should be

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[1] J. Paul Leonard, Developing the Secondary School Curriculum, pp. 371-372. New York: Rinehart & Company, Inc., 1946.

[2] Raleigh Schorling, Student Teaching, p. 163. New York: McGraw-Hill Book Company, Inc., 1940.

the result of a cooperative effort by teachers, administrators, supervisors, and community leaders.

8. A curriculum unit should be organized in keeping with the abilities of pupils to accomplish it. An unit of work improved by teachers and pupils working on it together.

9. Community experiences and community problems should be a source for building units of work in schools.

10. The teaching content and the curriculum should be scrutinized frequently.

11. Occupational and Technical education should be expanded to meet the wide range of interests and aims of students.

12. Systematic experimentation should help to make significant changes in the curriculum and the methods employed in schools.[1]

Organizing an Instructional Program. -- A new approach is necessary for organizing an instructional program in Mysore schools, if the traditional methods of subject-matter learning are to be overcome. The pattern of organizing school work on a subject-matter basis has failed to achieve unity and coordination in school work. Knowledge has been split into compartments; the mastery knowledge has been given the major emphasis while the application of knowledge in practice, so vital in actual life, has been ignored. These conditions warrant a change from present methods. One of the most outstanding methods in

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[1] Raleigh Schorling, A Primer in Curriculum Revision, Unpublished. Ann Arbor: School of Education, University of Michigan, (mimeographed). Pp. 32.

modern developments of curriculum construction was described in the report, Education for All American Youth, prepared by the joint efforts of the Educational Policies Commission and the American Association of School Administrators in the United States. This approach to the organization of school work lays more emphasis on education based around the major functions of social life. Recently this approach has been generally preferred to traditional methods of grouping subjects. The commission and the association recommendations are adaptable to conditions in Mysore. The four major areas of curriculum organization are:

1. Individual interests.
2. Vocational preparation.
3. Common learnings for civic competence.
4. Health and physical education.[1]

Courses and units of work are developed and organized in each of these areas. Since the scope of this plan is primarily to deal with vocational education at the secondary school level, the problem of course construction in the area of vocational preparation will be discussed further.

Course Construction in Vocational Education. -- The methods of constructing courses in vocational education have gradually developed into more or less standardized procedures. The subject matter is based

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[1] Educational Policies Commission, Education for All American Youth, pp. 243-244. Washington: National Education Association of the United States, 1944.

on the activities involved in an occupation or a group of jobs which are very similar. Occupational analysis is the basic method which determines the content of courses. It identifies the essential elements by listing the number of manual operations which the worker does and describing the related knowledge which the worker has to possess in order to perform these operations successfully. Such a classification affords an opportunity to build a systematic course of study in a training program.

In setting up a course of study, the first step is to establish the aims of the program and the purpose of the course. The actual content of a course is obtained by analyzing the occupation in question for its manipulative skills and related knowledge. The skills which a beginner can learn in the school shop with the available facilities are chosen for training in schools while the more difficult ones, which cannot be taught in schools, may be deferred to a later period when the student can learn them in actual working conditions. The subject-matter selected should further the purpose of the course. The next step is to arrange manipulative skills in the order of their difficulty and according to the abilities of the pupils to accomplish them. In arranging the order, the relative importance of the skills should also be taken into consideration. These manual operations have to be mastered by the pupils through some vehicle, which may be either simple practice on a piece of material or a project involving the relevant operations. The related subject matter should be so arranged that while teaching the course there is proper

correlation between the manual skills and the information related to them. Units of work involving basic skills and their related knowledge should be disigned for practice in schools. Details of the courses must be written out and plans should be made beforehand regarding the methods of presenting them. The course should be tried for its effectiveness and improved from time to time on the basis of experience.[1]

Evaluating Pupil Progress. -- Measuring pupil progress in schools involving work of a manipulative character is more difficult than measuring progress in the acquisition of mere knowledge. Practical work is a comparatively new subject in schools and, as such, it has not yet developed standardized methods for judging the progress of pupils. The old method of a final examination to measure pupil achievement has limited value and is not applicable to this type of work. New methods have to be developed for measuring the progress in acquiring skills. Practical skills, unlike theoretical knowledge, cannot be acquired in a short period. Skill-learning is a slow and gradual process and accomplishment has to be carefully watched throughout the process of learning. Unless the work is closely checked, pupils may fail to learn the fundamental operations connected with their work.

There are some basic reasons for measuring the progress of pupils in shop work. Professor Emanual E. Erickson states the following reasons:

1. To ascertain the progress of students in shop work.

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[1] John F. Friese, Course Making in Industrial Education, pp. 18-26. Peoria; The Manual Arts Press, 1946.

2. To learn of the difficulties experienced by students.
3. To motivate the learning process.
4. To measure teaching efficiency.[1]

In view of this, each shop teacher should be familiar with the methods of evaluating his pupils' work. The teacher should be completely free to exercise his judgement, and he should be responsible for grading his pupils. The evaluation should be done at frequent intervals, all of which should count towards the final grading. Grades should be based on student performance. Pupils should have access to their grades so that they may know their position in the class. The following suggestions made by Dr. Erickson concerning the five areas in which pupil progress has to be judged will be found useful.

1. The quantity of work accomplished: this gives an indication of speed, which is an important factor for a worker in modern production.

2. The quality of work: the quality of work shows the workmanship and the accuracy of the worker.

3. The effort put forth by the pupil: effort is an important factor in making a successful worker. It shows the ability of the worker to apply himself to the job.

4. Knowledge acquired and applied: related information is a big factor since the worker is often called upon to use this knowledge of his job. Tests show the extent of knowledge acquired by the pupils.

5. Proper attitudes: proper attitudes are necessary for the

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[1] Emanual E. Erickson, Teaching the Industrial Arts, p. 202. Peoria: The Manual Arts Press, 1946.

successful adjustment of the worker to his environment. Therefore certain attitudes and personal traits are to be encouraged. They should also be considered in grading.[1]

These proposals for measuring pupil progress in shop work apply generally to the evaluation of progress in other areas of vocational education such as agriculture, business, and homemaking. Teachers concerned with developing manipulative skill should devise their own tests for measuring and grading the achievements of their pupils.

III. Preparation of Teachers

Importance of the Problem. -- The success of any program of vocational education depends to a large extent on the quality of the teachers. Hence the selection, preparation, and supervision of teachers are of vital importance. All vocational teachers must be proficient in their vocations in addition to being skillful in teaching. They should have the kind of personality which will command respect from their pupils and they should be able to develop in their pupils desirable vocational attitudes. The problem of providing adequately trained teachers presents many serious difficulties. Furthermore, the progress in the development of vocational education will depend on the rate at which trained teachers are made available. Therefore, the establishment of the proper training institutions with the necessary facilities deserves the highest priority. The education of teachers is

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[1] Ibid., pp. 191-193.

is primarily the concern of the university and deserves a more elaborate treatment. However, in this section a few phases of the problem of teacher education will be discussed.

Difficulties in the Way of Securing Vocational Teachers. -- The problem of securing proper teachers in Mysore for instructing in the occupational training programs in schools presents many difficulties. At present, there are no training institutions for the training of vocational teachers. The teacher-training schools in Mysore are chiefly concerned with the training of teachers for academic instruction. One of the chief difficulties in Mysore is that the educated people lack practical skills whereas the workers who possess practical skills lack school education. This presents obvious difficulties to a teacher training program. It is hard to induce persons of suitable abilities and personalities to prepare themselves for teaching. A change to the profession of teaching would require changes in their habits, attitudes, and environment which many would not accept. In addition to this, the heavy demand for workers in industries and other development works, which generally pay more, will normally take away trained workers from the profession of teaching. To secure and hold such men in vocational education the schools must pay salaries comparable to those industry is willing to pay. These difficulties have to be met by a bold policy. Training institutions for vocational teachers should be established as soon as possible, preferably under the control of university authorities. To meet the emergency demand for teachers, temporary certificates may be provided for those who have

some of the qualifications and are willing to take up short courses of training. The absence of any organized effort to train teachers demands a careful selection of candidates. Much waste can be avoided if some standards of qualifications are established and methods of testing these qualifications are devised.

Principles of Teacher Education. -- There are certain fundamental principles which govern the selection and preparation of teachers. The purpose of vocational teacher education is to provide teachers who are thoroughly competent to attain the objectives of a vocational education program. The functions of teacher education, then, are to select the proper person and to prepare him for the operation of the instructional program. The teacher has to be trained to meet the needs of the public schools. Mere subject matter specialization is not sufficient to prepare a young man or woman to teach in secondary school. In order to ensure the efficient operation of the instructional process, the State Board should have the authority to enforce the minimum qualifications necessary for teachers and should also be responsible for issuing teacher certification. However, the state authority may delegate the responsibility for teacher preparation to the universities. The following principles in teacher education and selection, generally accepted in the United States, seem to hold good also for Mysore:

1. Every teacher should comprehend the purpose of public education in a democratic society and should clearly see how his own work contributes to the achievement of these purposes.

2. Every teacher should have both a liberal education and thorough preparation in the field in which he expects to teach.

Specialization alone is not enough, for in the secondary school of today, the competent teacher must be able to see and teach the relationships of his particular subjects to the whole of education and the whole of life.

3. Because of the prime importance of citizenship education in all schools and for all pupils, every teacher should be well prepared to assume his own obligations as a citizen and should also understand how the school may serve as an agency for developing civic responsibility.

4. Every teacher should have sympathetic understanding of boys and girls and should be familiar with scientific information regarding child development and the psychology of learning.

5. In view of the growing recognition of the importance of guidance, particularly in secondary schools, every teacher should understand the nature and purposes of guidance and should have had practical experience in individual and group guidance as a part of his training.

6. Every teacher of vocational courses and every teacher in other fields related to the world of work should have had some experiance, as an adult, in work outside the teaching profession.

7. Every teacher should have had training and experience in studying community problems or in working with community agencies other than the school.

8. Programs for the education of teachers should include supervised experience in dealing with actual problems representative of those which students are likely to encounter later as teachers, and the college records of candidates for teaching should include full reports of candidates' performances in these situations.[1]

Training of Teachers. -- The preparation of teachers involves many important phases, such as the selection of suitable persons, the provision of adequate and desirable general education, technical knowledge and vocational skills, and the necessary vocational and teaching experience, and the development of proper vocational attitudes.

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[1] Educational Policies Commission, Education for All American Youth, op. cit., p. 369.

In Mysore there are likely to be two types of students, one drawn from the world of work, who possesses the skill but lacks general and professional education, and the other drawn from schools, who needs a complete orientation towards the profession of vocational teaching. Both types present special problems and need to be given education in those phases which they are lacking. It would seem that a training division with the necessary shop and plant in the teacher training institution in Mysore should be helpful in meeting the present demands. After the secondary schools, a four-year course leading to a Bachelor's degree should be instituted as early as possible. The first two years should be concentrated on the general education of the students and the last two years on education for teaching.

As regards courses of study for vocational teaching, practices in the United States present some suggestions. The courses of study recommended for the training of teachers by a National Committee at the Annual Convention of the American Vocational Association consist of the following fifteen: (1) Trade analysis, (2) Course building (3) Psychology, (4) Introduction to Vocational education, (5) Methods of teaching, (6) Development of Instructional materials, (7) Shop organization and control, (8) Shop-planning and equipment, (9) Guidance, (10) Labor problems, (11) English (oral), (12) English (written), (13) Black-Board sketching, (14) Practice teaching and observation, (15) Teaching aids.[1] The courses of study in Mysore

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[1] Unpublished Report on Industrial Teacher Training Presented at A.V.A. Convention, Buffalo, February 5, 1946. (Mimeographed). Pp. 7.

should be based on somewhat similar lines. Measures should be taken to provide adequate practice in the development of vocational skills.

SUMMARY OF SIGNIFICANT FACTORS

1. Education is a state responsibility. The state should provide a State Educational Authority to carry out the purposes of education in society. The state should provide equal educational opportunity to every one in accordance with his inborn abilities and interests.

2. A State Board of Education is a necessary authority to determine the policies regarding the development and operation of public education. The board should represent public opinion and possess the confidence of the people. It should be responsible for planning, executing, and appraising, the three chief functions. It should secure through the legislature the proper legal basis for the administration of education in the state.

3. All phases of vocational education should be placed under the control of the Department of Public Instruction. The control by a central authority of higher technical institutes, as proposed by the Central Advisory Board, is undesirable; they should be placed under the control of provincial or state agencies. However, financial aid and guidance from the central government should be provided to promote national interests and coordination of the efforts of provincial and state agencies on a national basis.

4. A Division of Administration for Vocational Education in the state should be established within the framework of the Department of Public Instruction with the necessary supervisory and inspectorial staff for the four main fields of vocational education and for vocational guidance.

5. The curriculum should be reorganized in keeping with the aims of secondary education. It should help to meet the needs of youth. Curriculum organization according to subject matter should be replaced in schools. The instructional program should be divided into four areas (i) individual interests, (ii) vocational preparation, (iii) common learning necessary to civic competance, (iv) health and physical education, which should provide units of work based on community problems.

6. Occupational analysis is of fundamental importance in the construction of courses for vocational training programs. An analysis of occupations must suggest the list of skills and related knowledge that need to be taught in schools.

7. Evaluation of pupil progress in practical instruction needs a different approach from that used in academic teaching. The teacher should be given freedom to grade his pupils. Grading should be done at frequent intervals and the progress should be measured throughout the year.

8. The rate of progress in executing the proposed plan depends to a large extent on the availability of teachers and the success of the program depends on the quality of teachers. Teacher education deserves a high priority in the development of vocational education. Vocational teacher training institutions must be established as soon as possible to meet the demand for teachers.

CHAPTER IX

CONCLUSION

In the foregoing chapters of this study there has been presented an analysis of social and economic conditions in Mysore and what they imply in the way of desirable and essential education for the workers in the state. An attempt has been made to survey the conditions in the schools of Mysore and the extent to which they serve the needs of the individuals and society. It has been pointed that, despite the progress in the last few decades, the existing facilities for training workers fall far short of the present industrial demands and the future requirements of the state. If economic and social vitality is to be improved, the level of productivity increased, and a better standard of living for all achieved, a solution for the existing difficulties must be found. In this challenging crisis, schools should assume a part of the responsibility for building the future. In view of this, the study offers an outline of the forms of vocational education desirable for the schools of Mysore as one means of meeting the condition that exists.

Any educational planning for the future should have definite targets that can be accomplished within a reasonable period of time. The proposals offered here for specific reforms and modifications to the existing educational system are neither unrealistic not impracticable. The recommendations have aimed at changes and improvements that

would be theoretically desirable. They have been based on modern educational theory and practice and are capable of achievement in the light of the social and economic conditions in Mysore.

The Plan. -- The major purpose of this dissertation is to present a plan for the development of vocational education in Mysore. The principles underlying the proposals have been derived from modern theory and practice of education as found in the United States. The acceptance of these principles is fundamental to the development of future programs of vocational education. The suggested plan for the reorganization and setting up of the program of vocational education lies within the scope of the preliminary plans that have been drawn up for the development of education in Mysore. The structure of the program proposed comprises the following elements: elementary schools, middle schools, high schools with specific vocational objectives, vocational schools, and higher technical institutes at the post-secondary level. It is not suggested that this is a complete program; it is intended merely as a beginning to the task. The plan has not, for the time being, considered part-time, cooperative, apprenticeship programs. The development of these programs must be deferred to a later stage; once the fundamental principles of operation are accepted, the inclusion of these programs will not present any further difficulties. The problem of vocational education for adults and university students, it is hoped, will be adequately dealt with by the agencies responsible for them.

Role of the State. -- The state has adopted a progressive

policy for the furtherance of education in Mysore. The state bears a major portion of the expenditure for education out of its revenues. A democratic approach, however, is essential for the conduct of education in the new social and political order. The tradition of a central authority strong enough to undermine local initiative and enthusiasm is harmful to the progress of education. Education should be based on public opinion and the authority for it should rest with those in whom the public has confidence. It would seem that a state board with its representatives elected by the people and having the necessary legal authority for the conduct of education in the state, will be a step in the right direction. The attempts to transfer the control of elementary education to local authorities have repeatedly failed, but this should not discourage further attempts. Conditions are rapidly changing. More qualified men are available to assume the responsibilities now than in the past. Moreover, the transfer of control to local people will encourage local initiative and leadership and reduce the heavy burden on the state. Very little effort for the furtherance of education has been forthcoming from the people in the past and an attitude of reliance on government initiative has developed and become an obstacle in the way of progress. Measures should be taken to secure the cooperation and participation of the people in the educational activities of the state.

Education should provide equality of opportunity. Where this does not exist, whether the causes be social or economic, the state must remove them. To ensure equality of opportunity, a varied and

elaborate program should be geared to the intricate social and economic needs of life. The prevailing negligence and indifference in the matter of vocational education, and the emphasis on the academic learning for the privileged, should be radically changed. It is the function of the state to initiate, direct, and provide necessary support for vocational education. If the state fails in this, it has failed to provide a democratic system of education.

The need for a national system of education with proper coordination and articulation should not be overlooked. The central government has to assume certain responsibilities in the education of the people as a whole to ensure the social and economic well-being of the country. But the central agency is too remote to exercise efficient control over education throughout the country. Therefore the responsibility for the education of the people should rest with the provinces or states. Among the duties of the central government, the most important are to ensure uniformity of practice, to stimulate educational leadership and research, to establish standards of achievements, to coordinate the education on local, state, and national levels, and to provide guidance and financial aid wherever there is need.

Occupational Information. — Occupational information is of fundamental importance in planning vocational education. The available data is of little help in planning. The proposal for a state agency to gather this information so vital to the economy of the state agency and to educational planning deserves immediate action. The problem even deserves attention on a national scale. An early step must be

taken for the classification of occupations. Of the possible bases of classification, those which seem to be most significant are (1) a classification according to the nature of the work, such as industrial, business, or agricultural, (2) a classification according to the degree of skill required such as unskilled, semi-skilled, skilled, semi-professional, and professional. A combination of these two should provide a way to determine the types of education desirable in schools at various levels. The classification of occupations by degree of skill should, of course, be made on the basis of functional activities rather than economic or social influences. The position of occupations within this classification may be determined by the period of training required for learning them. Extensive research needs to be done in this field before authentic information can be made available for school use.

Vocational Guidance. -- A program for aiding students to choose and enter an occupation they can follow successfully has been presented. The need for such assistance increases with the growing complexity of the economic and industrial conditions of society. The program in Mysore should strive for greater efficiency and better adjustment of workers in occupational life. The success of any program depends on the wise selection of occupations by students. There is a close relation between vocational guidance and vocational education. The providing of occupational information, the offering of advice by trained counselors, and the establishment of placement and personal adjustment services for those who need them must be provided in a

comprehensive program. Vocational guidance is fundamentally an effort to conserve human resources and should be regarded as a public responsibility. Schools are in a favorable position to assume this responsibility. The educational and psychological research needed to analyse the abilities, interests and aptitudes of individuals in Mysore should be undertaken as soon as possible.

Nature of Training. -- The various types of schools proposed provide training mostly in occupations which are highly skilled. Even education for the professional occupations should start early and high schools should make provisions for it. It is not sufficient to provide opportunity at each level; the program must provide for advancement from one level to the other. Students who successfully complete the proposed vocational schools or the vocational curriculum in high schools should be eligible to enter higher technical institutions if they desire. Likewise students who successfully complete the post-secondary schools should be eligible to enter professional colleges. The entire structure of education should provide reasonable articulation so that it may not deny the opportunity for progress.

One of the most complex problems is the question of determining the breadth of training in occupational skills. A narrow training for a single job to fulfil the fluctuating demands of the labor market is undesirable. It will limit the individual's opportunities in a changing pattern of economic life. There are various factors such as the interests of students, the facilities in schools, and the demands of economy, which determine the extent of training. The student should

be given an opportunity to become familiar with a variety of materials, work processes, production methods, and machinery. Such training should be regarded as an asset to the individual, giving him a sound basis for making a final choice of vocation. Moreover, the flexibility of program makes him less dependent on one industry for his livelihood.

Control. -- Throughout this plan, it has been repeatedly emphasized that the control of vocational education should be transferred to the Department of Public Instruction and a separate division for the administration of vocational education should be established. Both the state and the individual will be better served if vocational education and general education are offered in the same schools. There are in some cases valid reasons for separating the two. In general, however, all phases of vocational education should be treated as integral parts of the common scheme of public education. Unless vocational education is offered side by side with general education, it will not be conceived as equal in status with general education. To separate the two aspects of education, assigning the control of general education to the department of public instruction and the control of various divisions of vocational education to other departments is to promote the belief that vocational education is different from general education. It perpetuates the practice of offering education that is not related to any practical aspects of life. This can be checked if only vocational education and general education are offered in the same schools. People will realize then that both are functions of education. Only a complete coordination of the vocational education and

general education programs under a unified control will create a democratic system of public education.

However, for its execution and operation the program needs its own trained specialists. A high degree of special technical knowledge as well as administrative ability is required to organize the program. The nature of the work involved in the instructional methods and supervisory tasks, the supply of materials, tools, and machines, is entirely different from that involved in the administration of general education. In view of this a separate administrative division within the Department of Public Instruction is justifiable.

Relation to General Education. -- One of the potential dangers in the practice of vocational education is the widely held idea that vocational education is appropriate to students whose academic education is not satisfactory. This attitude ignores the fact that industries in recent times are requiring their workers to have a high degree of mental ability and general education. An understanding of technical knowledge as well as mastery of manual skills has become imperative. One positive approach to this danger is to make vocational preparation compulsory for every school student. Thus, the practice of dumping the academic failures in vocational courses would be eliminated.

Another threat to the smooth operation of education is a mutual suspicion between those responsible for general education and those responsible for vocational education. There is also a possibility of emphasis on one aspect of education at the cost of the other. Both vocational extremism and academic specialization are undesirable

practices. A sound vocational education program should not prevent a student from getting an all-round general education. The fusion of the two elements is an essential requirement in democratic education.

Future. -- Since the scope of this plan has been primarily vocational, the other phases of education have not been elaborately treated. However, the plan has clearly stated the place of vocational education in future programs of education. It may not be regarded as the final word in the matter, but if through it some of the fundamental principles of education and its functioning are better understood, the purpose of the study will have been served.

In spite of many difficulties, the future holds promise. The work ahead is colossal, yet it is not discouraging. If the economic and social conditions in Mysore are to be improved, narrow communal and political interests must be suppressed. Genuine efforts must be mobilized and a sincere attack launched. The people of Mysore have just won the freedom to think and act, and now they have to use it wisely for their progress. In education they will find the key to their problems.

APPENDIX

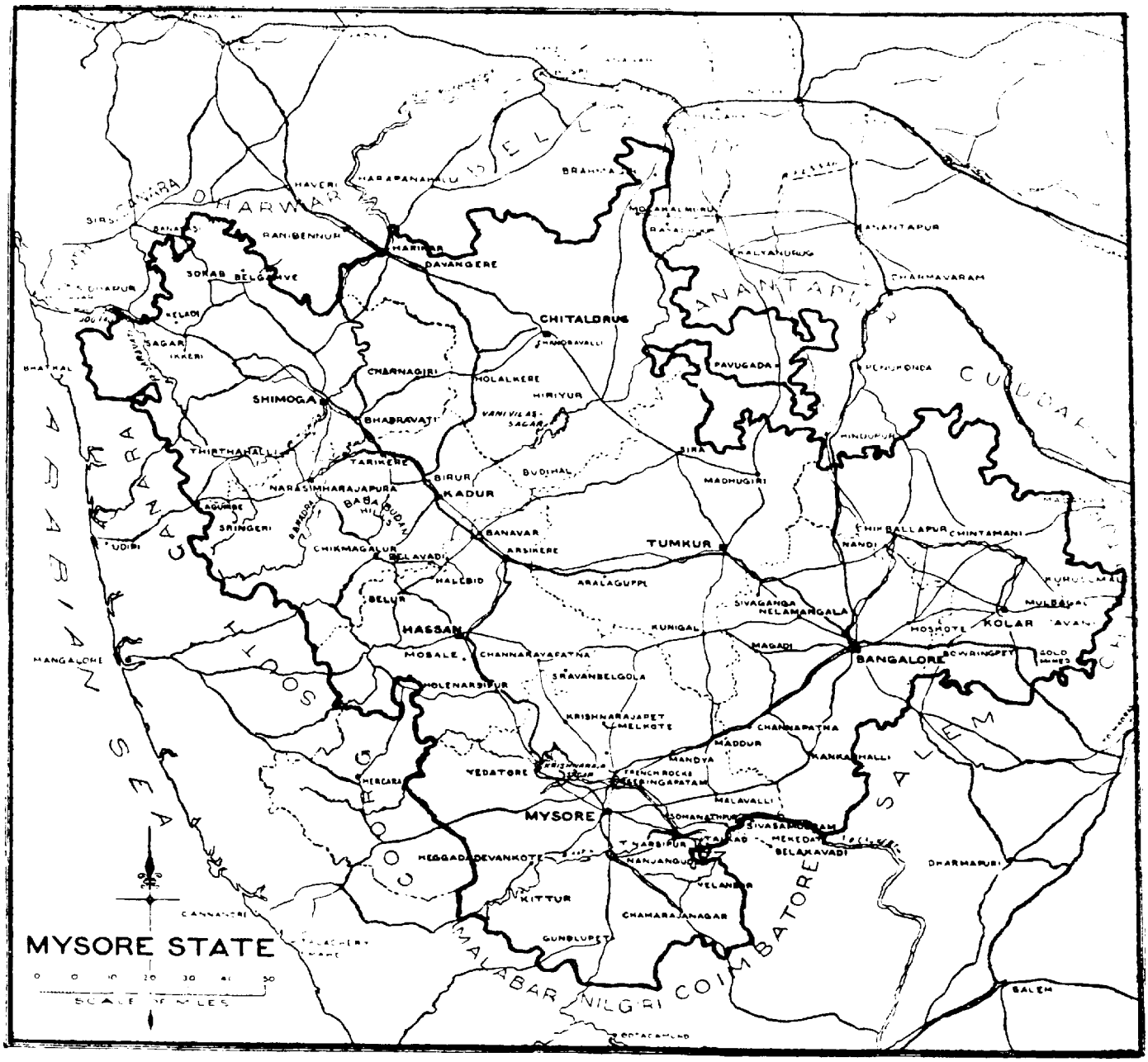
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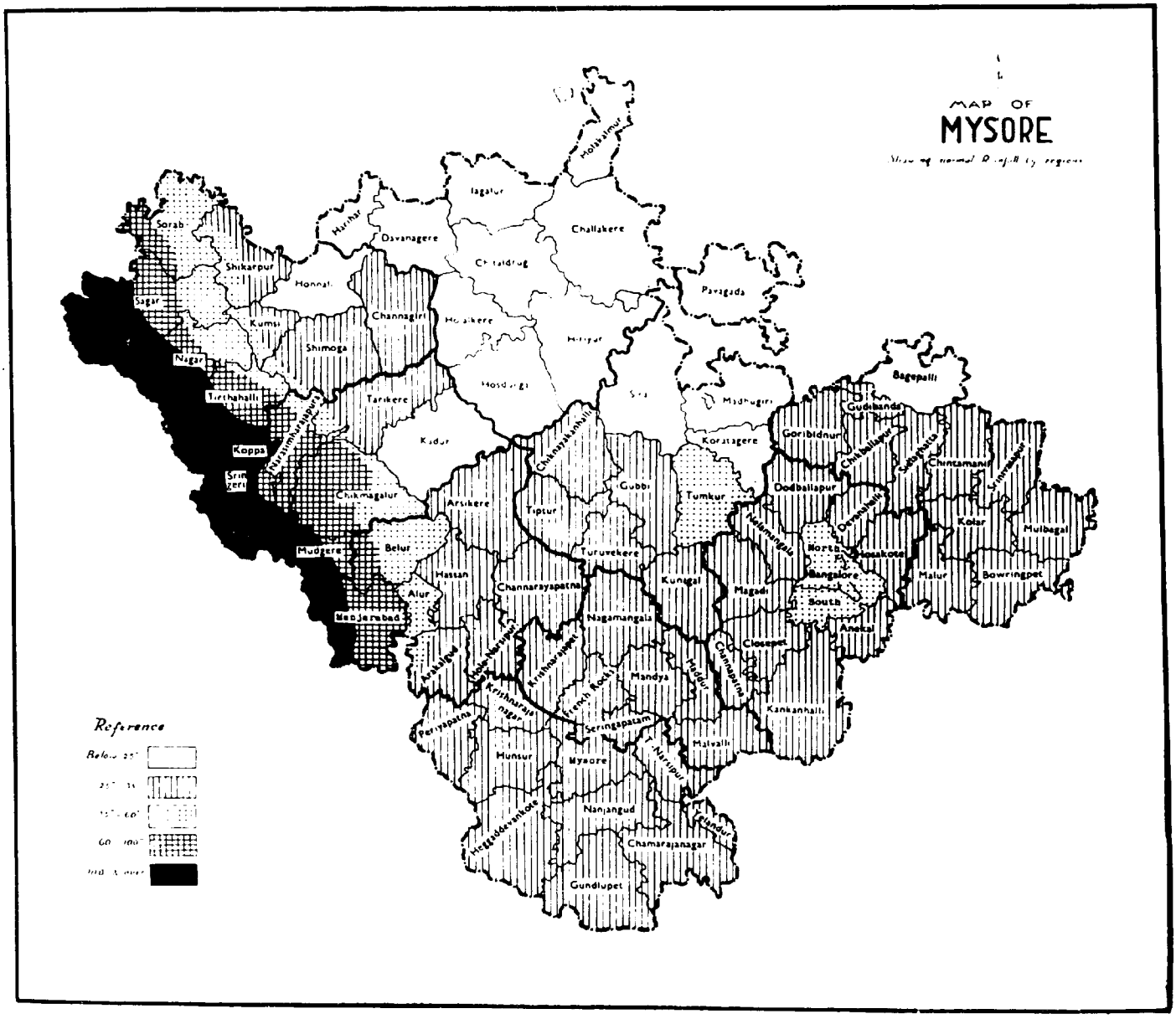
2. School Shop Plans:
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3. Development Schemes of Education in Mysore, Abstract of Estimates:
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Map 1

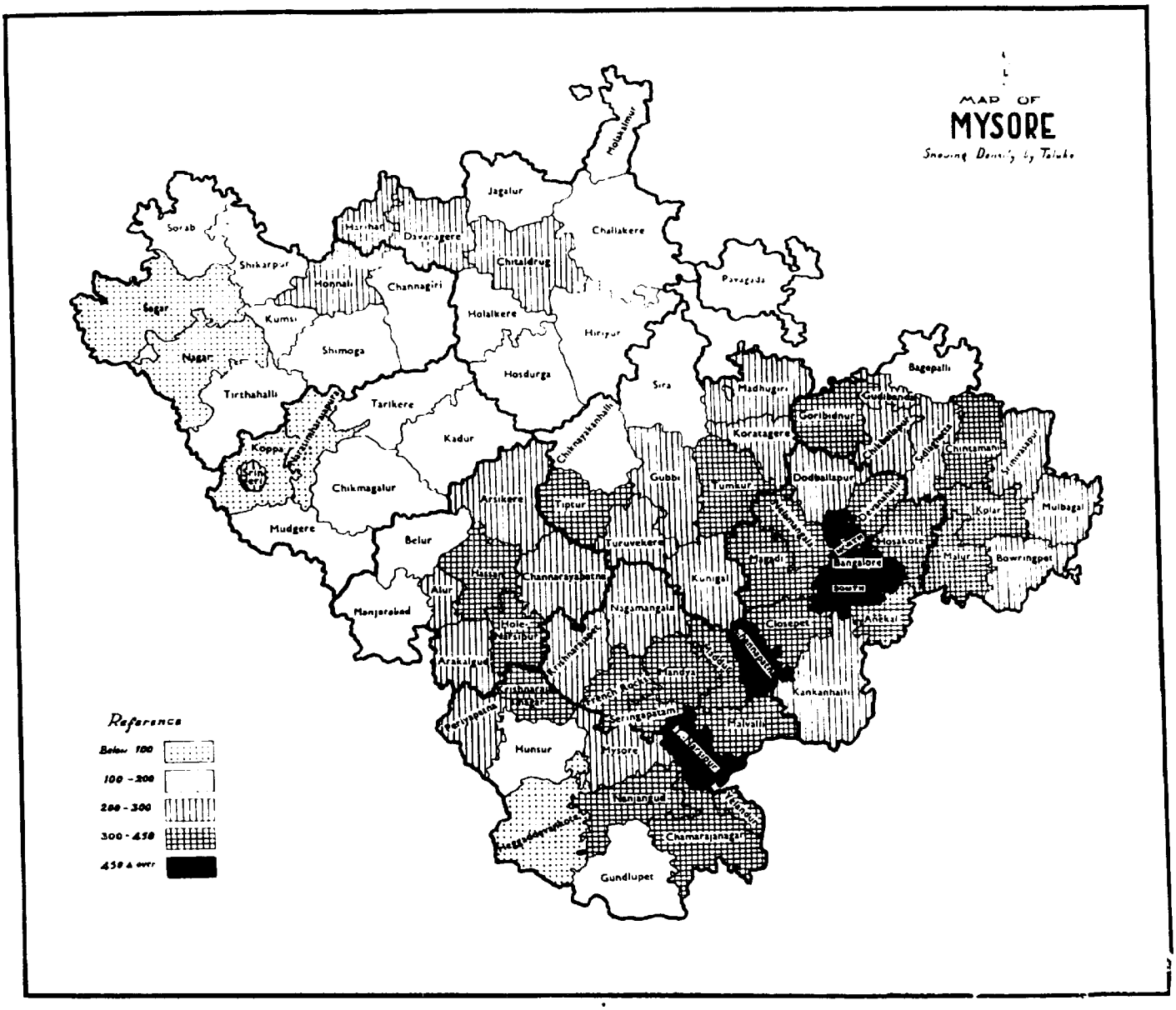

DHARWAR
BELLARY
ANANTAPUR
CUDDAPAH
NORTH ARCOT
SOUTH ARCOT
SALEM
COIMBATORE
NILGIRI
MALABAR
ARABIAN SEA
MYSORE STATE
SCALE OF MILES
CHITALDRUG
SHIMOGA
KADUR
TUMKUR
HASSAN
BANGALORE
KOLAR
MYSORE
MANGALORE
CHAMARAJANAGAR
SALEM

Map 2



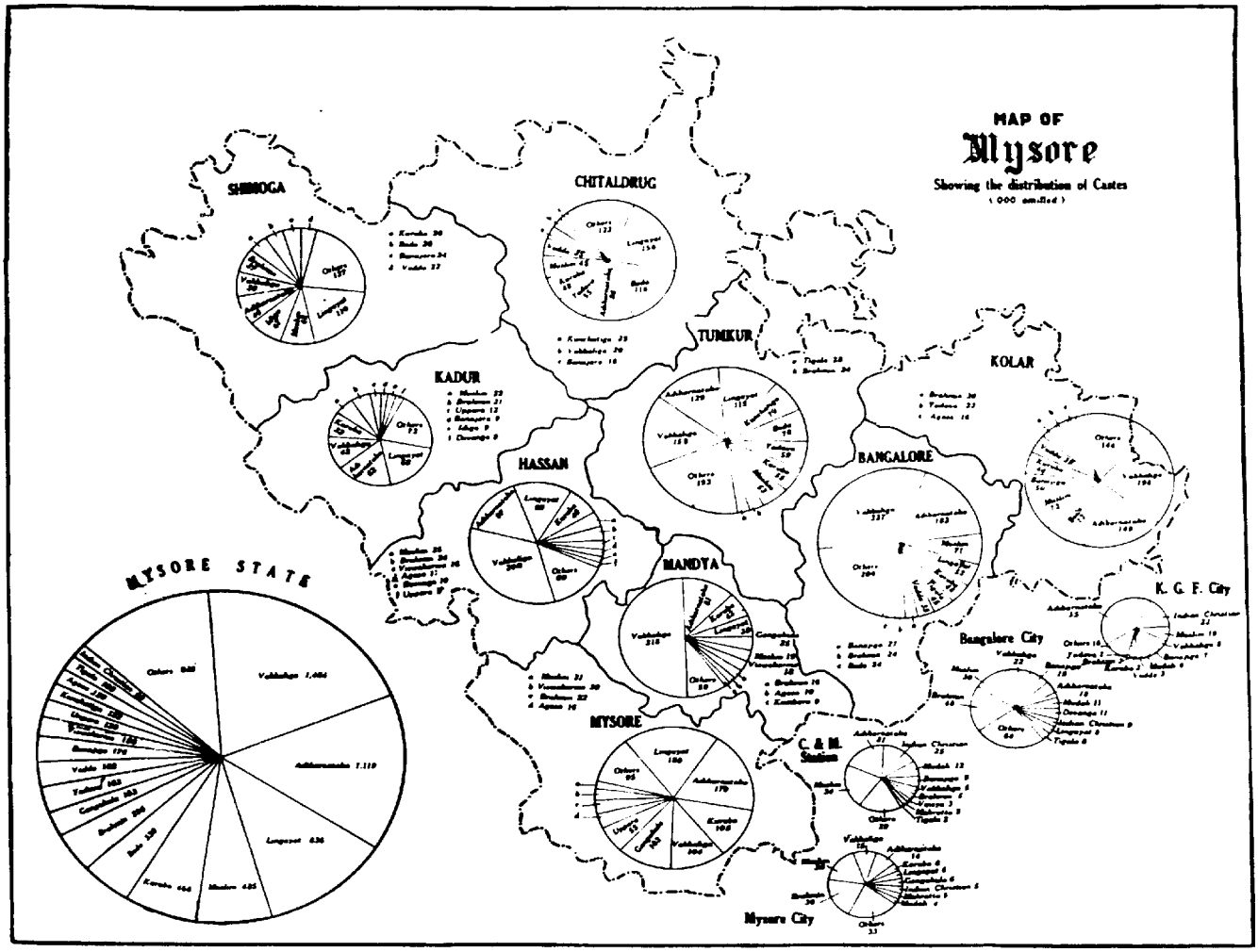
Rainfall by Regions

Map 3



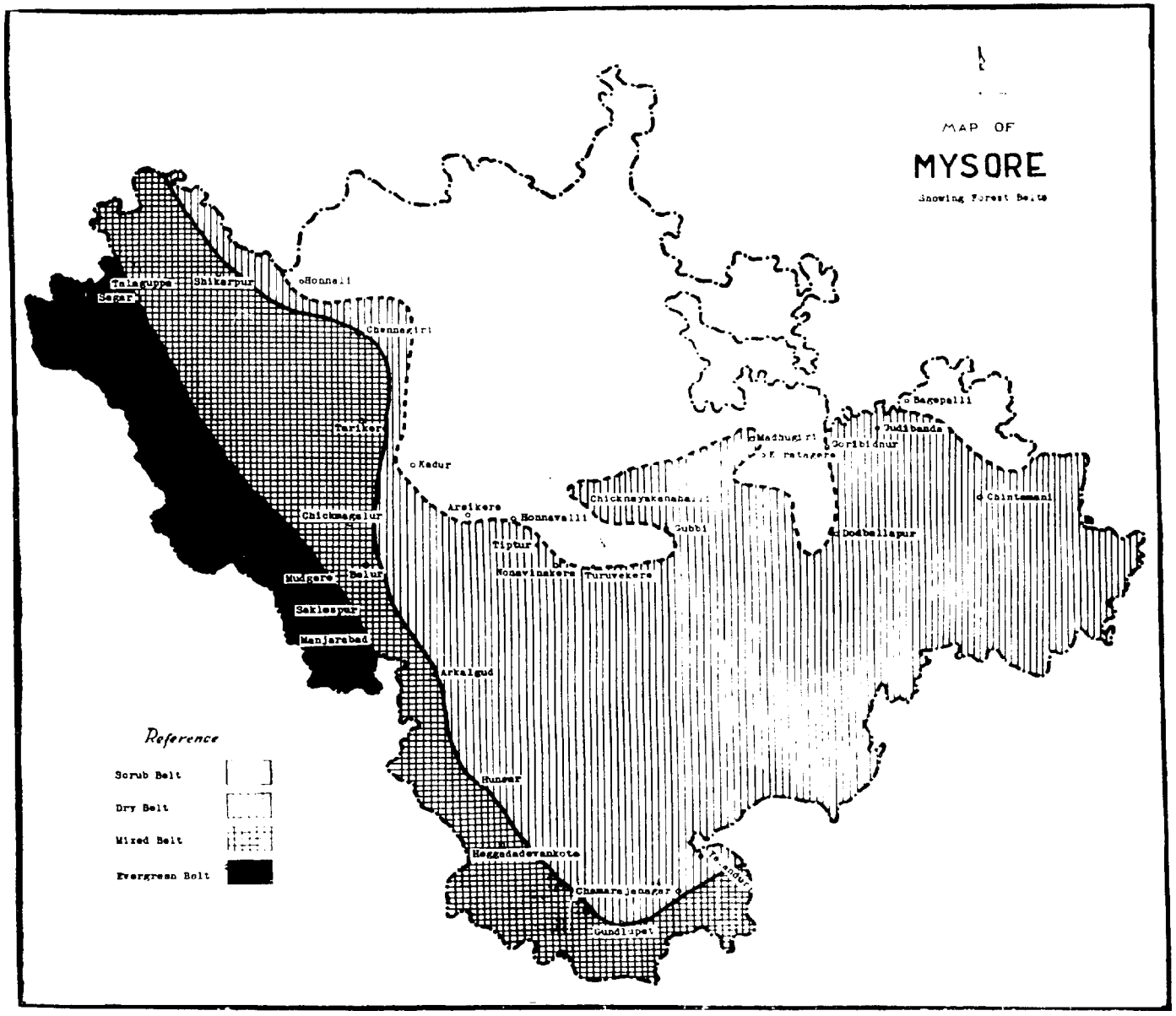
Density by Taluks

Map 4



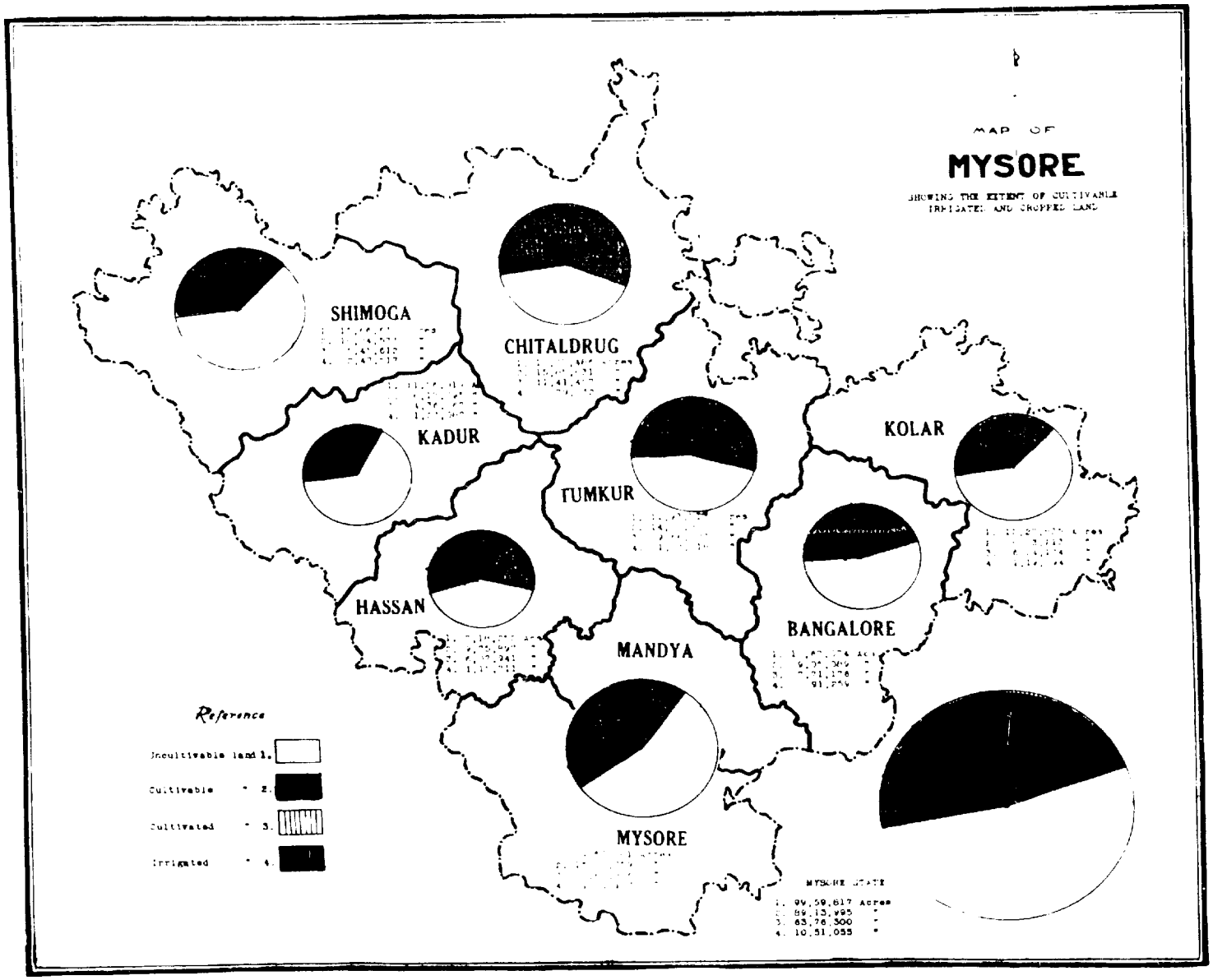
Distribution of Castes

Map 5



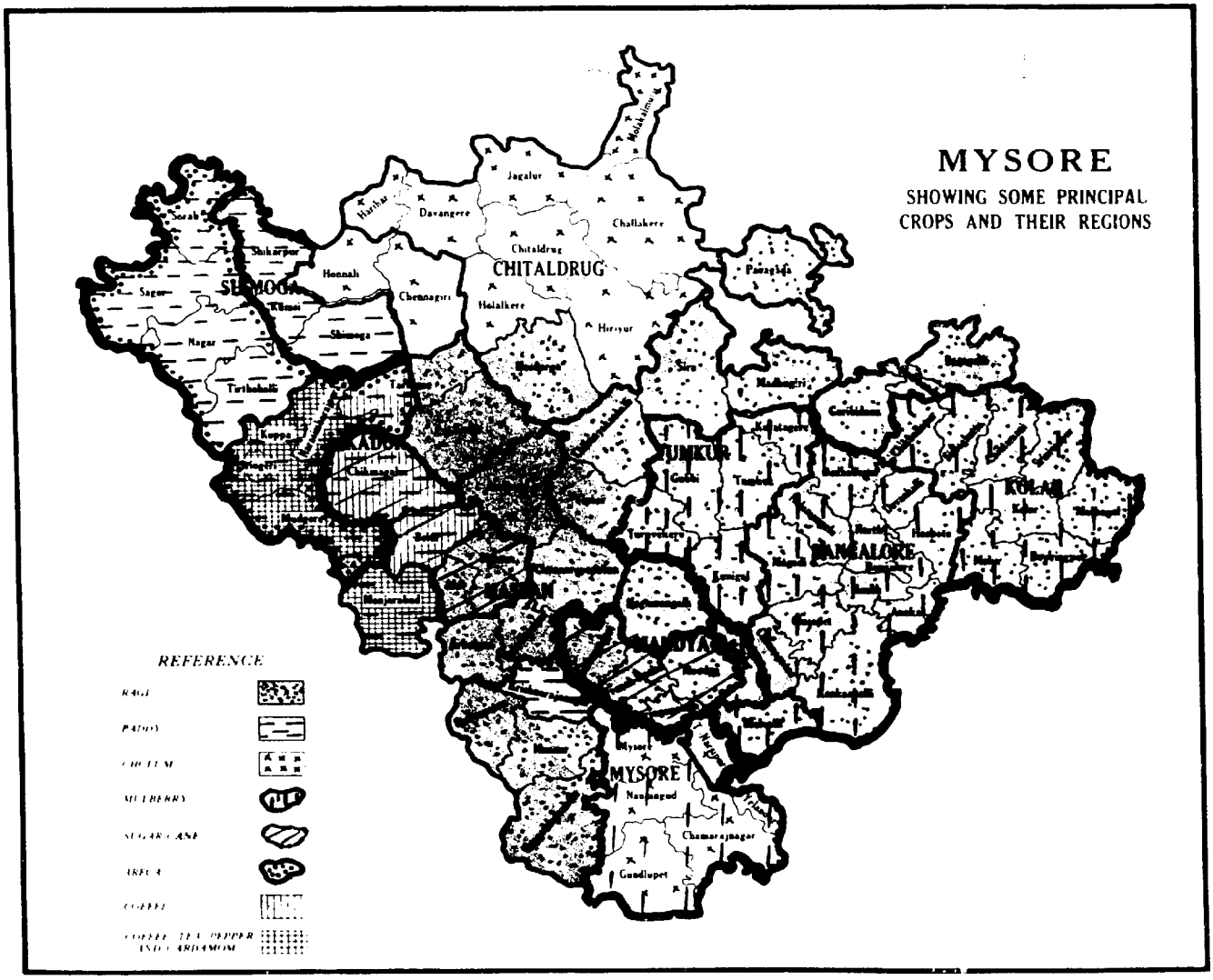
Forest Belts

Map 6



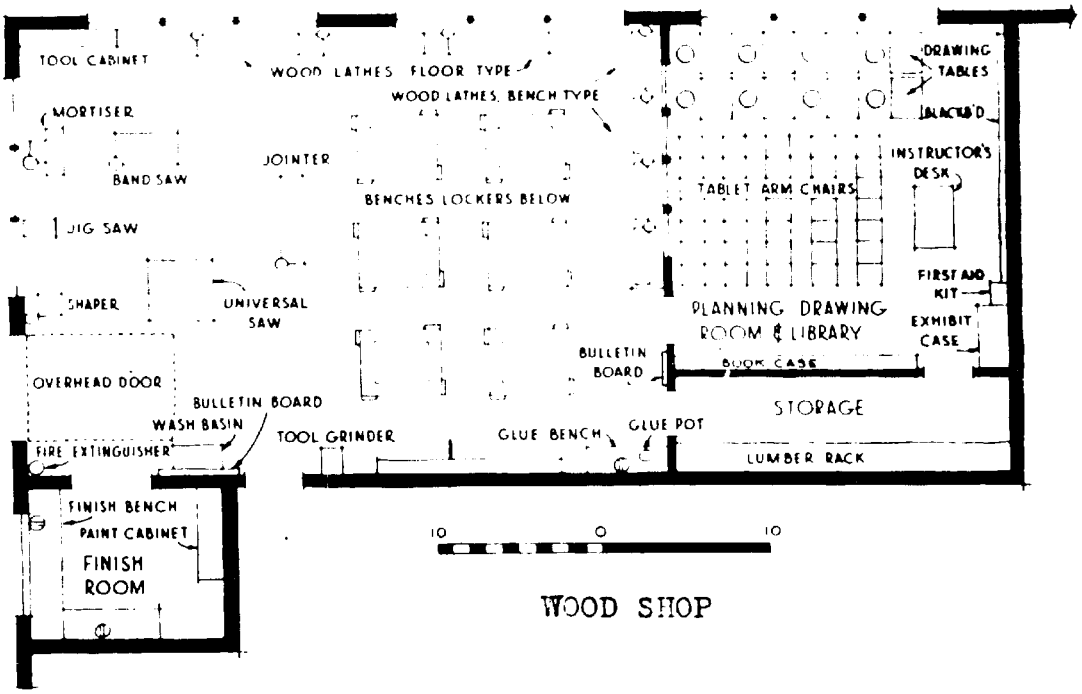
Map Showing the Extent of Cultivable, Irrigated and Cropped Land

Map 7

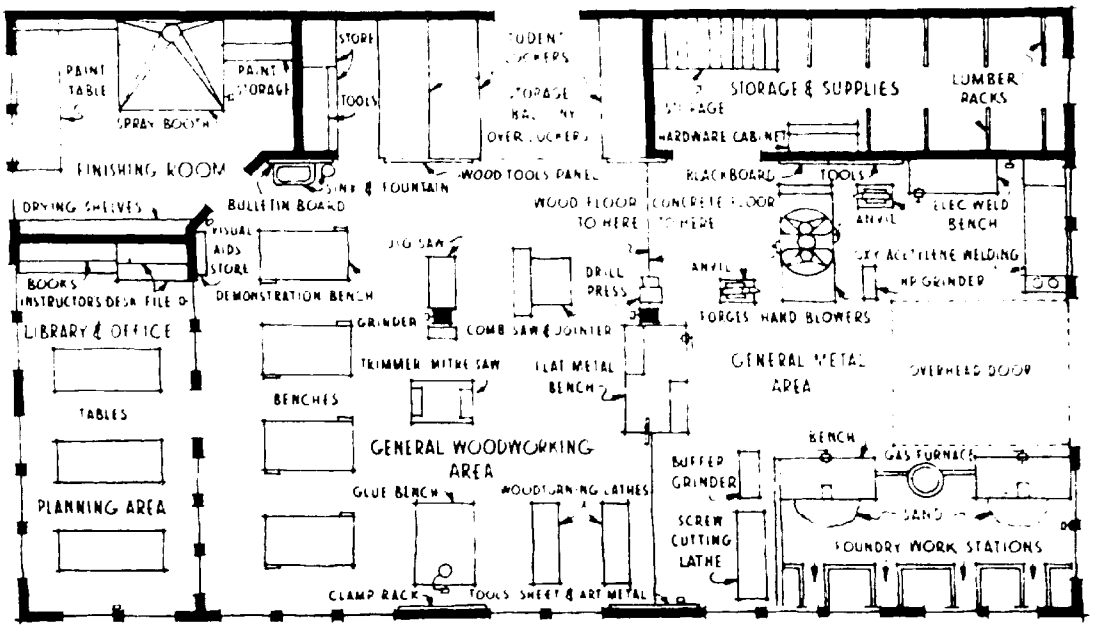

MYSORE
SHOWING SOME PRINCIPAL
CROPS AND THEIR REGIONS
CHITALDRUG
MYSORE
REFERENCE

School Shop Plans*

Below—General wood shop plan for a medium-sized high school. This plan also appears in the "Missouri Industrial Arts Handbook."



WOOD SHOP



GENERAL SHOP

Above—Plan for a medium-sized general shop from "A Guide to a Shop-Planning Program for Oregon Schools," by George B. Cox.

*These plans are recommended for schools in the United States.

Development Schemes of Education in Mysore

Abstract of Estimates

Scheme Number	Serial Number of Scheme in Group Volume	Scheme	Non-Recurring (In lakhs of rupees)						Recurring (In lakhs of rupees)					
			I Year	II Year	III Year	IV Year	V Year	Total	I Year	II Year	III Year	IV Year	V Year	Total
		GROUP XV—EDUCATION												
		(a) EDUCATION—												
151	1	Primary Education ...	18·85	18·85	18·85	18·85	18·85	94·25	72·34	84·68	98·78	114·73	126·80	497·33
152	2	Post-Primary Education ...	9·60	9·60	9·60	9·60	9·60	48·00	20·86	24·36	27·84	31·31	34·66	139·05
153	3	High School Education ...	3·80	3·80	3·80	3·80	3·80	19·00	11·00	12·00	13·00	14·00	15·00	65·00
154	4	(a) Training of Primary School teachers ...	2·50	2·40	2·28	2·14	2·00	11·32	7·71	12·57	14·88	16·28	16·45	67·84
		(b) Training of Teachers for High and Middle Schools.	1·00	1·00	1·00	...	...	3·00	1·00	1·50	2·00	2·50	3·00	10·00
155	5	Pre-Primary or Nursery Education ...	0·17	0·09	0·23	0·34	0·34	1·17	0·28	0·89	0·66	1·07	1·47	3·87
156	6	Adult Education ...	0·80	1·60	2·10	2·40	2·60	9·50	3·70	4·70	5·80	7·00	7·00	28·20
157	7	Physical Education ...	0·20	0·20	0·20	0·20	0·20	1·00	0·70	1·39	1·85	2·32	2·81	9·07
158	8	Medical Inspection ...	0·40	0·40	0·40	0·40	0·40	2·00	1·50	1·75	2·00	2·25	2·50	10·00
159	9	Midday meals ...	0·20	0·20	0·20	0·20	0·20	1·00	16·00	19·00	22·00	25·00	28·00	110·00
160	10	Inspection and Supervision ...	0·44	0·44	0·44	0·44	0·44	2·20	4·78	5·49	6·67	7·17	7·84	31·95
161	11	Education of the Defectives ...	0·75	0·75	...	...	...	1·50	0·30	0·30	0·30	0·30	0·30	1·50
162	12	Deputation of Officers for training ...	...	...	...	...	...	...	0·30	0·30	0·30	0·30	0·30	1·50
163	13	Basic Education ...	...	...	...	...	...	...	0·34	0·58	0·82	1·06	1·30	4·10
		Total (a) ...	*38·71*	*39·33*	*39·10*	*38·37*	*38·43*	*193·94*	*140·83*	*169·01*	*196·90*	*225·24*	*247·43*	*979·41*
		GROUP XV.—(b) UNIVERSITY												
164	1	Establishment of a First Grade Women's College in Mysore City.	2·00	0·50	0·50	...	...	3·00	0·50	0·60	0.70	0·80	0·90	3·50
165	2	Raising of Intermediate College at Mysore to the Degree standard.	0·25	0·25	...	...	...	0·50	0·10	0·20	0·30	0·40	0·50	1·50
166	3	Starting of Intermediate Colleges in mofussil places.	1·00	0·20	1·30	0·20	0·30	3.00	0·30	0·35	0·70	0·80	0·95	3·10
167	4	Development of the Engineering College...	1.00	0·30	0·30	0·30	0·33	2·20	0·50	0·75	0·85	0·95	1·06	4·11
168	5	Establishment of a Teachers' College ...	0·50	0·12	0·12	0·13	0·13	1·00	0·20	0·25	0·30	0·35	0·40	1·50
169	6	Establishment of an Agricultural College	9·08	...	...	...	...	9·08	0·98	0·99	1·05	1·06	1·13	5·21
170	7	Establishment of a College of Commerce...	0·50	0·65	0·15	...	...	1·30	0·20	0·25	0·30	0·35	0·37	1·47
		Total (b) ...	*14·33*	*2·02*	*2·37*	*0·63*	*0·73*	*20·08*	*2·78*	*3·39*	*4·20*	*4·71*	*5·31*	*20·39*
		Total Group XV ...	*53·04*	*41·35*	*41·47*	*39·00*	*39·16*	*214·02*	*143·61*	*172·40*	*201·10*	*229·95*	*252·74*	*999·80*

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