CHAPTER IX

THE CONTENT OF THE CURRICULUM

It is not the nomenclature or the combination of subjects that matters in the curriculum but their actual contents.\(^1\) The framework of curricular offerings formulated and prescribed from time to time since the advent of the 20th Century, although important, does not give any idea of the nature, suitability, scope and arrangement of the contents in different subjects. In order to have a clear view of the development of the high school curriculum in the Punjab, it is but necessary to see the contents of subjects in their historical perspective, examining them at the same time from the functional point of view. "The concept of all-round education requires vigorous and discriminating examination of the contents of every project, and of the course as a whole, to see that the more important elements are included and the less important eliminated."\(^2\)

The nature of the changes in the subjects effected from time to time will be made clear by writing at greater length on these subjects. The order in which the subjects appear here is not due to any scheme of hierarchy of intellectual discipline.

Languages

Languages have all along formed an important part of the high school curriculum in the Punjab. Besides the three languages

English has been a subject of study ever since the establishment of the high school in the Punjab. The Calcutta University prescribed it as a compulsory subject for those who took its Matriculation Examination and this position has been maintained by the Punjab University to this day. But for two short periods, one of ten years of the Punjab University College, Lahore from 1872 to 1882, when English was an optional subject, and the other of four years from 1956 to 1960 when a modern Indian language was made alternative to English, the subject has enjoyed the most prominent place in the high school curriculum. To secure a pass in the Matriculation Examination it has been necessary to study English and pass in it.

Formal grammar (taught through books written in English), composition, translation and study of text-books in prose and poetry have all along been the main items of the syllabus in English. For long, text-books written by English authors were prescribed. They had foreign background and most of them were of difficult nature. Rupert of Hentzen, The Prisoner of Zenda, Stories from Nathaniel Hawthorne, John Halifax Gentleman, Heroes of Exploration, Master-man Ready, A Book of Golden Deeds, etc., were no easy books for the children of the Punjab. It was from thirteens that books written or edited by Indian authors began to find their way in the schools. However, the text-books written by English authors who had made a deep study of Indian life and Indian school children were always very much wanted for the beauty and simplicity of their language. Garret's 'An English Reader for
Indian Boys was a popular book. Books like 'Robinson Crusoe' adapted by Edith Robarts and 'A Fight for Education' (the story of Booker Washington's earlier days) retold by W.M.A. Jones had a special appeal for children.

The compulsory study of English and difficulty inherent in its learning, placed heavy burden on students in terms of time and mental and physical strain. It should not be difficult to imagine the countless number of students who could not get a pass in the Matriculation during the last 84 years since the establishment of the Punjab University in 1882 because of their inability to get through English and how many more might have dropped half way in their high classes. How many were intellectually crippled and economically and socially down-graded? And how many were rendered strangers in their own land? The answers must present a story of long suffering. Mr. H.G. Wyatt for long associated with education in the Punjab wrote, "English is generally found to be the most difficult subject of curriculum and non-promotion from class to class is often more than not due to failure to reach a satisfactory standard of efficiency in the subject. While, therefore, a knowledge of English is of great value to the Indian students more especially in the access it gives to vast stores of knowledge, he should not be made to pay too dearly for it by too high a value being set on the ability to express oneself in English with the freedom and accuracy of the native." For reasons quite obvious, the English gave their own language the foremost place in the high school curriculum and the people would learn the language for prestige and profit.

More than a century of domination of English in the system of our education has firmly entrenched it in Indian life. It has had many staunch supporters and circumstances too have favoured it, with

a few odds notwithstanding. Despite its retention and under-
current controversy about its place in our educational system, the
fact remains that it cannot be banished from India; and further
because of its international importance it will continue to have a
place rather an honoured place in the high school curriculum. What
is, however, of utmost importance is the determination of the
position and status that English should be given in the high
school.

The recommendations of the Secondary Education Commission
(1953) regarding the teaching of languages at the high school stage,
the three-language formula of the Central Advisory Board of
Education (1956) and the modified language formula offered by the
Education Commission (1964-1966) all bear the stress of changed
times. Besides accommodating the claims of the mother tongue and
Hindi, the sponsors of these recommendations and formulas have given
English a prominent place in the high/higher secondary school
curriculum. According to the recommendations of the Education
Commission the children of the lower secondary stage (present high
school) should be under an obligation to study English.

4. Every student will be required to study (i) mother tongue or
regional language or a composite course of the mother tongue and a
classical language and (ii) one other language out of Hindi,
elementary English, advanced English, a modern Indian language other
than Hindi, a modern foreign language other than English and a
classical language. (Report of Secondary Education Commission

5. The study of three languages is recommended: First scheme
(i) Mother tongue or regional language or a composite course;
(ii) Hindi or English (iii) any modern Indian or European language
other than under (i) and (ii). Alternative scheme i. Regional
language or mother tongue or a composite course; ii. English or a
modern European language; iii. Hindi for pupils whose mother tongue
is not Hindi and any other Indian language for pupils whose mother
tongue is Hindi. (Draft Syllabus, 1957 p.2).

6. A modified three language formula: (i) The mother tongue or the
regional language; (ii) the official language of the Union or the
associate official language; (iii) a modern Indian or a foreign
language not covered under (i) and (ii) and other than the medium of
It is not understandable as to why all the children should be compelled to study English when the vast majority of them are neither to go out of India nor even enter the universities for higher studies. Gandhiji's opinion about the place of English in schools expressed by him in 1942 holds so sound even today, our far closer relations with the English speaking peoples in this mobile world notwithstanding. He observed,

I am a lover of English language and the English. But my love is wise and intelligent... I recognize the great importance of the English language for international intercourse. I hold its knowledge as a second language to be indispensable for specified Indians who have to represent the country's interest in the international domain. I regard English language as an open window for peeping into western thought and sciences. For this too I should set apart a class. Through them I would spread through the Indian languages the knowledge they have gained from the west. But I would not burden India's children and sap their youthful energy by expecting the expansion of their brains through the medium of a foreign language. I do hold it to be a sin on the part of those who are responsible for producing the unnatural conditions under which we are being educated. Being too near the scene of the wreck we are unaware of the damage the nation has suffered by it. I can see the enormity of the damage because of my daily close contact with the dumb and suppressed millions. 7

It is unjust to suggest that "English should be a compulsory subject for all who wish to go in for university education because no Indian student will be really fit for university education in any subject, except Indian languages, unless he knows sufficient English to read books in English with ease." 8 In this regard the advice of Prof. Menon is appropriate. "The best solution", he suggests "will be to give all pupils an opportunity to begin the study of English and to permit them to continue as long as they

desire a clear educational benefit from it. No departmental rigidity should be enforced as it is done in some States. In the ultimate analysis, it is the teacher, the parent and the pupil who should decide whether he should continue English or not."  

Let there be a provision for the teaching of English at the high school stage for all those who need to learn it or are capable of learning it, but to make its study obligatory for all is to place unjustified burden upon students. To retain English as a medium of instruction in science and mathematics is nothing short of a tyranny. To presume that it is only through English that our youth can have the knowledge of European philosophy, science and technology and learn to solve the problems arising out of industrialisation and rapid scientific and technological development is rather like under-estimating the intellectual capacity of our young men and women. If the vast majority of our young boys and girls are to experience the joy of originality of thought, depth of intellect and richness of imagination, if they are to have the fullness of feeling, enrichment of emotion and refinement of tastes, they must have all education though their own language.  

Modern Indian Languages  

The Punjab University College, Lahore (1870) true to its objective of promoting vernacular and classical languages, made it compulsory for high school students to study either Urdu, or Hindi. The Punjabi language which had not been considered a sufficiently developed language for inclusion in school studies was still to wait for a decade more. In 1883 came its turn to enter the high school curriculum. The Punjab University established in 1882, included in the high school curriculum Punjabi and Pashto spoken.
by vast sections of population in the Punjab and North West Frontier Province. Bengali was added to the list in 1900. The study of these languages, however, was not required in the case of students of Science Course and it was optional for students of Arts Course. Only those who opted for Oriental Course were under an obligation to study a vernacular language.

In 1920 when the three courses were merged, the study of a vernacular language was made optional. Seven years later in 1927 it was made compulsory for all students to take up either a vernacular or a classical language and to pass in it. Vernaculars also figured under the list of elective subjects. This provided students an opportunity to study as many as three different vernaculars if one showed special interest in and ability for them. But this provision lasted only for a decade. In 1938 the study of a vernacular was again made optional. This position continued till 1956 when urged by the Department of Public Instruction, the University equated the study of a modern Indian language with that of English. This was done to meet the demand of the students who having been permitted by the Department of Public Instruction not to study English in their middle school course were asking for admission to high schools.

In 1960 it was laid down that it would be obligatory for all students preparing for the Matriculation Examination to study Hindi, Punjabi or Urdu as well as English. Thus after a period of some 80 years the modern Indian languages regained their lost status of being compulsory for study. English by force of circumstances had enjoyed supremacy over all other subjects. Mathematics and 'history and geography' came next and vernaculars (or the modern Indian

10. Director of Public Instruction, Punjab letter No.6392-B.C. dated 18-5-1966 to the Punjab University, Chandigarh.
languages as they later came to be called) were among the several elective subjects.

As for the language course, intensive study of the language text-book prescribed by the University, formal grammar and composition work have formed its main components. Text-books prescribed by the University have had selections of prose and poetry, mainly of literary type. Topics of general current interest have been very few. Selections from medieval poetry in the Hindi and Punjabi text-books have been difficult for average students. Grammar specified since 1931 has been taught in the same form and manner all these years. Functional aspect has been sadly lacking. Besides, the teaching of modern Indian languages has all along been in the hands of teachers of low academic qualifications. Persons holding certificates of having passed a language examination with or without previous general education and having undergone no training or a sort of narrowly-conceived training, in the past were employed to teach high school children. Complaints about the poor teaching of vernaculars were too frequent. The Inspector of Schools, Multan Division even went so far as to suggest that teachers of Urdu should be recruited from the United Provinces and from the neighbourhood of Delhi. Another Inspector wrote, "Our vernacular masters are deeply sunk in stagnation and this shows very clearly in the oriental language work in our Anglo-vernacular schools." Although after independence there is perceptible improvement in the training of language teachers in as much as that at present graduates are being trained to undertake language teaching actual class-room teaching leaves much to be desired.

The study of a classical language, Sanskrit, Arabic or Persian, was made compulsory under the regulations of the Punjab University College, Lahore. There was also made a provision for the study of a second classical language. The status quo was maintained by the Punjab University in the Oriental and Arts Courses up to 1919. While it was not necessary for the students of Arts Course to take up a vernacular language, the study of a classical language was an essential requirement. In the Science Course there was, however, no place for a classical language.

Classical language was made an optional subject in 1920 but from 1929 all students were required to study either a vernacular or a classical language. In 1939 again the subject was made optional. Since then it has been a non-essential subject.

As in the case of vernacular languages, besides formal grammar and composition there have been prescribed text-books in classical languages containing selections from great classical works for intensive study. Modern writings have not had any significant place in them. The compulsory study of three languages, English, Hindi and Punjabi, at one time has affected the study of the classical languages, for fewer students like to offer a fourth language. Despite no encouragement, Sanskrit at least is, as Table IV on the opposite page shows, competing favourably with other Optional subjects. But it has little chance of being taken up by a large number of students.

Foreign Languages other than English

In the interests of European children in the Punjab, there were included in the high school curriculum during the last quarter of the nineteenth century subjects of Hebrew, Greek and Latin as alternative to Sanskrit, Arabic and Persian, and French and German as
alternative to vernaculars. These languages have ever since continued to be a part of the curriculum without, of course, attracting any significant number of students.

**Social Sciences**

**History and Geography**

History (of India and of England) and Geography (General, World and India) has all along been a part of the high school curriculum. Except for a short period from 1920 to 1927, the study of the subject has been compulsory. Upto 1919 it was necessary to obtain a pass in it by securing varying percentage of marks, 25% marks upto 1908 and 33% afterwards upto 1919. Such vital subject should be given such low weightage in the education of the child is rather difficult to appreciate.

In 1910, the teaching of British history was dropped from the curriculum. An educational conference held under the auspices of the Punjab Education Department in April that year, considered the exclusion of the subject from the curriculum. Although the conference was of the view that the course of English history then in vogue was beyond the capacity of school boys, it considered the subject useful and held that it was not proper to expunge it altogether without consulting school representatives and officers of the Department. The conference, in a resolution, urged the university to introduce a new and a simplified course in English history for it was a subject of great educational value.13

Eight years later in 1918, English history was reintroduced. But when the new scheme of studies as a result of the merger of three Entrance Courses was introduced, the subject of history and

geography lost even its old status of being a compulsory subject. It was listed as an elective subject in which it was not necessary to secure a pass. Its importance, therefore, was exceedingly reduced. Among the many options that the new scheme provided, students could easily ignore 'history and geography' which was not a popular subject. Furthermore, the subject under the new arrangement consisted of four parts: (i) Indian history, (ii) English history, (iii) Geography and (iv) Commercial geography and a student offering 'history and geography' as one of the elective subjects was at liberty to take up any two parts. Obviously one could easily do without history or geography if one so desired.

In 1927 the study of history and geography was again made compulsory but without the condition of securing a compulsory pass in the subject. This position remained unchanged till 1958 when 'history and geography' was replaced by social studies.

English was the medium of instruction and examination in the subject except that in the case of students who took up oriental course, vernacular medium was allowed. But even in their case from 1912, questions in the examination were set in English. In 1922, Urdu, Hindi and Punjabi were also made the media of instruction and examination although, questions in the examination continued to be set in English only right upto 1960.

The medium of a foreign language came in for severe criticism. The status of the subject, the nature and amount of content matter and the foreign language as its medium made 'history and geography' an uninteresting and unpopular subject.

History. The first attempt to give contents of the course in Indian history was made in 1911. Topics without details were listed. The course covered the period from the Aryans to the third Afghan War.
Although in 1915 the syllabus in Indian History was curtailed, full details of the topics were not provided. The course also did not go beyond the period of Lord Dufferin. A critical period of over 30 years of Indian history from 1882 to 1917 which saw the birth of the Indian National Congress, the upsurge of the Swedeshi Movement, Morely-Minto reforms and the First Great World War did not form a part of the course.

The contents of the syllabus were improved in 1927 and then in 1934 in as much as the topics were broken down into sub-topics. The 1934 syllabus which remained operative upto 1958 covered the period upto 1919. That University should not have thought of providing a systematic knowledge of the events of the most crucial period of Indian history from 1919 to 1957 to students, is a sad reflection upon its capacity to keep the curriculum in tune with changed times. That no effort should have been made to make the History Course national in spirit even during the post-independence period shows that the framers of the curriculum lacked realism enough to adapt educational material to the new social order. The history which does not take account of the revolutionary changes that came about in India during the last half a century would not appeal to the minds of the boys and girls as the history of their own country.

The contents of the history of India that the high school students of the State studied for a century did not possess the potentiality of giving them sufficient awareness of India's culture and heritage and arousing in them national consciousness. "Indian history had not been correctly presented since history books were written by Britishers who never brought to light the true aspect of India's cultural heritage."\(^{14}\) Accounts of kings, wars and

battles and a sketchy treatment of the administrative system of government of the past constituted for the students the whole of their history course. The treatment of history in a way that has no relevance and significance to the present day only makes it a dull, dreary and useless subject of the curriculum.

The contents of the course in history of England were first specified in 1929 and rearranged in 1936, there being no change up to 1958 when the course was finally excluded from the curriculum. The course required the students to study the history of England right from the time of Norman Conquest to the end of the Great War; the account of the period before the Tudars was made non-examinable in 1936.

The course in English history was considered by many as difficult for the school children. The whole mass of information in it was foreign to students. A detailed study of English history was hardly needed. Had the history of India been kept as the basic subject and certain relevant portions of history of England been organically related to it, the correlated approach would have certainly appealed to the school students and made it interesting. Rightly did the Educational Conference, held in the Punjab in 1910, observe that "some elementary knowledge of English history could be given in the course of the lessons of Indian history." The account of the early English traders in India, the concern of the British Parliament about the behaviour of the servants of the East India Company in India, the impeachment of Warren Hastings, Industrial Revolution, the growth and evolution of English parliamentary system, constitutional reforms and rule of law

in England, British foreign policy and its impact on India, etc.,
could to a great extent be related to Indian history and made more
intelligible. Besides enriching Indian history such an approach
would have led to a better understanding of English life and
culture.

**Geography.** The course in geography outlined in 1908 consisted of
physical geography, World geography with special reference to
British Empire, and political and general geography of India and
Burma. Five years later in 1915 the study of geography of Burma
was dropped and the scope of physical geography was widened.

Economic geography was added to the course in 1927 but it
related only to the distribution of vegetation, animals and principal
human occupations, inter-change of principal commodities and trade
routes. The word 'economic' was a misnomer. The contents did not
bring into lime-light economic issues in relation to geography.
Moreover, they already figured under the natural regions. The
division of geography into sections is likely to disturb its unity.

It "suggests that geography can be divided into watertight
compartments and that each section is taught separately. This is
an old-fashioned idea, and we realize it today that the economic
geography of a country is the direct outcome of its physical
geography and so the separation into these distinct divisions and
especially the use of separate text-books for each part is very
much to be deplored. It is far better to frame the course and use
a book or books which regard the subject as a concrete whole."\(^ {18}\)

For the older pupils a comprehensive scheme of world-study, based
on well-grounded principles, can offer scope for the consideration
of a variety of vital problems bearing on social, economic and

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\(^ {18}\) L.D. Stamp, "The Teaching of Geography" in Instruction in
Indian Secondary School, by E.A. Macnee (ed) Madras: Geoffrey
Cumberlege Oxford University Press, 1931, p.169.
political life. Such a course is to be preferred to the isolation of one aspect of geography, for instance physical, political, or economic geography. 19

In thirty years between 1927 to 1957 no change was made in the course except that in 1935, the study of geography with special reference to Punjab was stressed and in 1941 economic geography was omitted. The course made little attempt to relate geographical data to practical situations and to use the latter as a means of developing the capacity to organise and apply the data. The list of topics was too long to cover. "The choice must lie between large tracts of barren outline and a few topical problems studied in depth. The latter is the promising solution." 20 The practical work all through the period did not receive the attention it should otherwise have received. Drawing of maps of India and continents which was an essential item in the examination was replaced by mere filling in of the outline map of Asia, India, or Punjab in 1929. Field trips, study of the local geographical conditions, collection of specimens of agricultural products, minerals and articles of local manufacture, exercises in observation and recording, etc., had no mention in the geography course. Good teachers certainly do of their own a great deal of practical work to enliven their teaching: but for average teachers inclusions of the details of practical work is necessary to indicate the extent of the work required to be done.

Civics. The subject of civics was included in the curriculum as late as in 1929, as a part of the elective subject of "civics and

hygiene". The contents of the course remained unchanged right up to 1958 when history, geography and civics were replaced by social studies. Not a word was added to or removed from the syllabus during the thirty long years when the political life of India underwent radical changes. Items like 'the British Commonwealth and its justification', 'Crown as unifying force', importance of obeying and upholding the British government, etc., remained long after the English were gone. (Appendix A)

The knowledge of the constitution of free India and political, economic and social developments of the post-independence period that have affected our life so much, and so necessary for our students, did not form a part of the civics course. Much useful practical work intended to promote civic sense could also be profitably made a part of the course.

Social Studies

The Secondary Education Commission (1953) recommended social studies as one of the compulsory subjects in the high/higher secondary school curriculum. Dwelling upon its usefulness the Commission observed,

If the teaching of these separate subjects History, Geography, Economics, Civics, etc., only imparts miscellaneous and unrelated information and does not throw any light on, or provide insight into social conditions and problems or create the desire to improve the existing state of things, their educative significance will be negligible. This whole group of studies has, therefore, to be viewed as a compact whole, whose object is to adjust the students to their social environment - which includes the family, community, State and Nation - so that they may be able to understand how society has come to its present form and interpret intelligently the matrix of social forces and movements in the midst of which they are living. 21

This objective obviously was intended to be achieved through a subject in which history, geography, economics, civics, etc., were

completely fused or at least integrated. The Punjab University adopted the course given in the Draft Syllabus of the All India Council for Secondary Education (1957) with certain alterations, and prescribed its compulsory study by students of 9th and 10th classes of high and higher secondary schools. The subject is divided into two papers. Paper A has five major divisions:

(i) Geography of India.
(ii) Life in prehistoric and ancient India.
(iii) Major natural regions of the globe and their chief characteristics.
(iv) The modern world takes shape (A brief survey of the middle ages and Feudalism, Renaissance, rise of democracy in Great Britain, the French Revolution, the Industrial Revolution, etc.,)
(v) Influence of the West in India (i.e., salient features of history of British rule in India).

Paper B has three main divisions:

(i) Living as free citizens of India (under it certain topics of civics are covered).
(ii) The task of the National Reconstruction (under this item development of the country after the Independence of India, is dealt with).
(iii) Living in the modern world (This part is devoted to the interdependence of the countries of the world, need for world co-operation and peace and attempts made towards it).

This course obviously enough is a compendium of portions culled from different social sciences lacking logical sequence rather than being an integrated or fused social studies programme. Even if some experts succeed in bringing out a truly unified or integrated course that breaks the conventional barriers or boundaries between existing subjects of history, geography and civics, which at the moment appears to be a remote possibility, it will be of doubtful utility to have it at high school level. Students of 9th and 10th classes are mature enough to appreciate and understand systematic knowledge of history, geography and civics and educationists suggest that these subjects should be studied "as separate disciplines and form the basis of specialized
studies in social sciences at the higher secondary stage." A good deal of care will, however, be required to select the most suitable contents so that the subjects do not become heavy.

**Mathematics and Science**

**Mathematics.**

Since the inception of English Education in the Punjab, Geometry, Algebra and Arithmetic have constituted the subject of Mathematics.

**Content of Geometry.** In the beginning, Euclid Books I-III with easy deductions and the mensuration of plane surfaces, including the theory of surveying formed the syllabus in geometry. In 1907, the content of the Geometry course was more specifically mentioned. However, after that except the addition of an item or two in 1913 and then in 1929, the syllabus has remained the same.

At present some 20 constructions, 80 theorems and a large number of exercises based on them form the content of the Geometry course.

**Arithmetic.** Most of the items in the existing syllabus in Arithmetic were first listed in 1918, the remaining few were added in 1937. The arrangement has all along suffered from several drawbacks. Description of items is vague, e.g. it does not define their scope, with the result that the determination of the standard of achievement to be expected of the students has been left to textbook writers and paper-setters. Topics stand in isolation from one another and are unrelated to life. The syllabus also lacks proper grouping. Simple and Compound Interest, Stocks and Shares and Insurance could well be grouped under "Modes of Investment of

Money”. Thus this could be made more socially meaningful for students. Similarly if Profit and Loss, Rates, Discount, Percentage and Partnership, were grouped under Business Arithmetic, the students would not only see the importance and significance of these topics but would also realise its usefulness in life and would view commercial Arithmetic in its true perspective.

Useful arithmetic relating to every day life like wholesale and retail prices, cost and credit purchase, cash and credit bills, national saving schemes like fixed deposits, saving bank accounts, time deposits, etc., budgeting, Government borrowings, co-operative societies and joint enterprises, local and State taxes, etc., have not yet found any place in the course. Another drawback is that undue weightage has been given to computational aspect of arithmetic. In order, therefore, to give practice in computation, text-books contain too many problems. Students waste a good deal of their time in dull manipulation and useless practice of solving unnecessary and complicated problems, utterly divorced from real life situations.

Content of Algebra. The content of algebra specified in 1904 has continued for over 60 years. Most of this course is abstract, difficult, and unsuitable for the present day high school population with great heterogeneity of ability, interest and future need. Functional topics like formulas, equations, graphs and verbal problems rather than abstract items like elimination, surds, etc., should receive more attention. Besides, modern algebra should find its due place in the syllabus.

Mathematics has more or less retained the position assigned to it some sixty years ago. As at present, its study has always been compulsory for all without being of much use to the great majority of students who either left their high school education
half way or did not go beyond the high school or in their later professional career they found no opportunity to use mathematics they had read in their school days. The compulsory study of the subject consumed a major part of the time of students, probably equal to the time given to English and has been the cause of the suffering of a large number of students who could not pass the Matriculation Examination because of their failure to secure a pass in mathematics.

It will amount to denial of benefits of high school education to children of masses with great diversity of individual characteristics and purposes, if the present difficult and abstract course of mathematics which is mostly a pure science meant previously for the selected few who received high school education continues. A vast majority of students need to learn significant applicability to problem situations and not the abstract and manipulative processes which are meant for students designed to go up for higher general or technical education. The Norwood Committee in England gave a sound advice when they stated that

pupils who show ability in Mathematics or who need or may need that it should be carried to an advanced stage for purposes of a career. We are not disposed to suggest a reduction in the content of the Mathematical course or in the time given to it. On the other hand we are not convinced by the evidence put before us that pupils whose abilities lean most markedly in other directions or whose disability in Mathematics is established beyond reasonable doubt, should devote the same attention to Mathematics or be expected to cover the same ground in the same way as those whose interests and needs justify Mathematics as an important part of their school course. 23

Elementary Mathematics for many and higher Mathematics for a small number may be a right arrangement and the two courses

should be adapted to the present needs of the society. The emphasis should be on assimilation of new concepts and their application to current problems. Topics which are no longer required should be purged away. The Education Commission in this connection remarks:

There is considerable room for eliminating out-dated material from the syllabus such as simplification, factorization, the finding of H.C.F., L.C.M., etc. Much of the work on identities, solution of triangles, heights and distances could be considerably cut down. The emphasis on memorizing of theorems and exercises in geometry should be given up. The approach to the teaching of geometry should be changed and an axiomatic and systematic treatment adopted.24

The present syllabus of Arithmetic in the high classes is by and large the repetition of the topics already covered in the middle classes. There is a view that the whole of the Arithmetic should be finished in the first eight classes.25 But ever-increasing use of arithmetic in ever-growing complex situations of life may not permit the discontinuance of the study of arithmetic at the high school. According to Kinney what is needed is clearly not a refresher drill, it is continued application of arithmetic to increasingly adult problem situations. Many of the situations formerly taught in middle classes can well be moved up to the high school and taught from year to year as projects during which the pupils will be provided opportunities to discover and diagnose inadequacies in his fundamental skills. Since most of the adult applications of mathematics are in the field of arithmetic, these should be dealt with as the increasing maturity of the pupils makes them appropriate.26

In the matter of text-books in mathematics, the position is by no means happy. Most of them contain problems which are artificial and unrealistic, drawn from situations that the pupils never meet. Hence there is need for completely overhauling the text-books. Equally important is the treatment of mathematics which should not be lifeless and abstract. "Ever increasing utilization of mathematics in other sciences and various fields of practical activity of people requires the school mathematics course too, to inculcate in pupils' minds the experiences to use mathematics while taking over sciences and solving practical problems. It is necessary to provide real life situations to mathematical problems."27 The methods of teaching mathematics should be such as "will cause the pupil to appreciate both the beauty of mathematical truths and their practical application."28

Physic and Chemistry

'Elements of physics' as an optional subject appeared in the high school curriculum with the establishment of the Punjab University College, Lahore in 1870. This was an improvement over the Calcutta University Matriculation curriculum which had no provision for science. The course consisted of the elements of heat, light, electricity and properties of matter.

In 1896, the Punjab University raised the status of science education by instituting Entrance Examination in Science. Besides providing for compulsory study of physics and chemistry by the students of the science course, the University regulations required of them to offer one of the three optional subjects of 'botany and


zoology', 'agriculture' and 'drawing'. Over and above this full-fledged Entrance Course in Science, there was arrangement for the teaching of science as an optional subject in the Arts and Oriental Courses. None of the four other universities of India in that year had such a broad-based programme of science education for the students of high class.

The Punjab had stabilized the teaching of science at high school when the Indian Universities Commission in 1902 expressed the opinion that the study of science for students intending to go in for the university education should be postponed until after Matriculation when it could be advantageously carried on in colleges and the students at that advanced stage could better understand and grasp physical facts. Since the results as borne out by increase in the number of students taking up science proved the demand and efficacy of the study of sciences at the pre-college level, the Punjab University did not discontinue the provision for science in the high school curriculum.

The number of students appearing in Entrance Science Examination steadily increased. From 5 in 1897 it rose to 57 in 1901. The next four years registered a slight fall but in 1906 the students who appeared in the Entrance Examination in Science numbered 76. From that year onward the number went on increasing. In 1920 when the three Entrances courses were merged, the number of students who sat for the Examination in Science was 3258 as against 9308 for the Arts Course Examination and nil for the Oriental Course Examination. It shows that more than 25% of the total number of candidates took up the Science Course at a time.

29. Indian Universities Commission, 1902. p. 31.
30. The figures are from the Punjab University Calendars for the relevant years.
when the importance and value of the study of science had not
been realised as much as now. It is all the more encouraging
when this number does not include the students who studied science
under the other two Entrance Courses.

Although the study of science was started in 1871, the
contents of the course were not outlined. The syllabus was mainly
based on a book. Such a method of defining a syllabus had not
much to commend it, except perhaps that it saved the university
some expense in printing. The weakness of the method was that
those two very important words "mainly based" would be left out,
and the syllabus understood to be the book of course, omitting
some sections, and nothing but the book on which the teacher and
the student both depended.31

The nature and treatment of the subject in the prescribed
books also came in for criticism. The treatment of the subject
was far from satisfactory and the exclusions made it infinitely
worse.32 The text book "Lessons in Science", by Gregory and
Simmons, for long in vogue in the high schools of the Punjab had
excluded under the influence of Laboratory Method on Heuristic
lines, the treatment of the atomic theory and symbols and formulae.
An experienced teacher of science complained that the book contained
no theory or symbols or atomic weights, etc., yet formulae such as
H₂O, CO₂, H₂, SO₄, Na OH, etc., had been taught and learnt up as
the teachers candidly admitted not for the examination but as a
matter of convenience. Since the formulae were not merely forms
of abbreviations but more than that, to bring them in without

32. B.H. Wildson. "Science and our Schools", The Punjab
explaining what they signified was vexing. To an average high school boy H₂O meant two parts of hydrogen and one of oxygen, but most of them did not know whether that referred to weight or to volume. Such of them as remembered the volumetric composition of water concluded that the number following H or O denoted parts by volume and thus for them CO₂ was composed of one volume of charcoal and two of oxygen. This sort of mental confusion became hopeless by the time one came to H₂, SO₄ and NaOH and thus what was intended to be a convenience had become a positive obstacle in the teaching of chemistry. 33

The details of the theoretical contents of physics and chemistry first outlined in 1924 and the elaboration of the practical work in 1927 (first specified in 1912) have undergone no change during the last 40 years, a period in which science has taken long strides and there has been going on a steady growth of industry and technology in the country. Neither the curriculum framers by themselves have incorporated new knowledge in the course, nor there appears to have been put forth any demands by the technical, engineering and medical colleges to make the base of science education in schools strong. If it was a matter of credit that it was first in the high schools of the Punjab that science education was given the status it enjoyed nowhere else in the country, it is also discredibly true that the course in the subject in the Punjab has remained static for all these years in this age of scientific development. Rightly it is remarked that "to teach a science which may be out of date and no longer valid

is almost as bad as not teaching science." Several items need to be removed either, their study is not very much wanted or they are included in the course of general science introduced in the middle classes of the school several years back.

With a view to keeping the teaching of physics up-to-date, children should be given elementary knowledge of nuclear and atomic physics and the physics of solids and radio electronics because these new aspects of physics do not only lay the basis of modern life and technology (atomic energy radio-engineering, tele-mechanics, automation of production) but also form the basis of modern scientific world revealing many forms of existence of matter, its motion and mutual transformation of processes. The course should be linked with chemistry, biology and mathematics so that existing dependence between these sciences should be revealed in the lessons. Practical application of physics in modern life and production should also be made sufficiently clear to the students.

The syllabus in chemistry provides for mere facts. The application side is weak. "The stress hitherto laid on memorization of facts, formulae, processes and compounds should give place to an emphasis on the unifying concepts in the subject. It is necessary to high-light the applications of chemistry in industry and daily life and its growing importance in our developing economy."

Experts aware of the rapid march of chemistry suggest that our high school students should be given the knowledge of

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fundamentals of atomic-molecular theory, chemical symbols, formulae and equations and Periodic Law. They should be acquainted with theory of atom-structure, theory of electrolytic dissociation, solutions and the nature of a chemical bond and the most important chemical industries and the utilization of their products in life. They should also be given knowledge of chemical equilibrium, the theory of velocity of chemical reactions and the basic provisions about catalysis. The study of the theory of the composition of organic matters, co-valency bond of atoms in organic matters etc.

However necessary this knowledge may be, it may not be possible for all our high schools to arrange necessary facilities for its teaching.

General Science.

In pursuance of the recommendation of the Secondary Education Commission (1953) general science was introduced as a core subject in the higher secondary schools in 1958. In the high school it first appeared in 1960 as a non-examination optional subject. Three years later its study was made compulsory for all. It was a step in the right direction although it was taken quite late.

The syllabus suggested by the All India Council for Secondary Education was adopted by the Punjab University. An attempt has been made to treat the subject as a coherent whole. There is no traditional division into separate science subjects such as physics, chemistry, biology and geology. Against each item in the content course are indicated relevant demonstrations,

experiments and out-door activities which provide necessary
guidance to the teacher.

The general science approach to the teaching of science,
however, has not been approved by the Education Commission (1966)
for the Commission believes that during the last ten years
general science has been taught in the elementary schools, it
has not proved successful as it tends to make science appear
somewhat formless and without structure and runs counter to its
methodology. A disciplinary approach, the Commission feels,
will be more effective in providing the necessary scientific
base to young people. At the high school level, it suggests,
science as a discipline of the mind and a preparation for higher
education should deserve special emphasis. Physics, chemistry,
biology and earth sciences should be compulsory subjects for
all the pupils. Building on the introductory courses at the
earliest stage, they should be made to cover wide areas and go
deeper into the contents than before. 38

The recommendations of the Education Commission if
implemented are likely to create two difficulties. First, not
all students are capable of benefiting from the study of separate
subjects like physics, chemistry, biology, astronomy and geology
in details, nor do all the students plan to go in for higher
education. Secondly, too many subjects will burden the high
school curriculum. Since the study of general science at present
is compulsory in the primary and middle schools in the Punjab, the
students are coming to the high school with better understanding
of principles of science. This necessitates that the present
high school course in general science, should be sufficiently

advanced. It should also be improved along with the simultaneous improvement of the course at lower levels. As at present, the course should be compulsory for all students. Better fitted among them should instead go in for physics, chemistry and biology for which there should continue to be a provision as before.

The Practical Subjects

Agriculture

Agriculture was listed as a subject for the Science Entrance Course instituted in 1894-95. For long its teaching suffered from several handicaps. Lack of qualified teachers, non-availability of land at reasonable cost, inadequate irrigational facilities, heavy expenses on bullocks, etc., stood in the way of introducing it in every high school. The All India Conference on Agricultural Education (1917) provided an impetus for the improvement of agriculture education in the province. Proposals for the purpose prepared jointly by the Departments of Education and Agriculture were discussed by two provincial conferences on agriculture education in 1918 and a scheme for better agriculture education at all levels of school emerged.

In the case of agriculture education in high schools it was said that the two years spent in a high school were not long enough for the efficient teaching of practical agriculture. The ambition of the high school students was ordinarily not a return to the land; they were not, therefore, likely to appreciate a course of practical agriculture; and little good

would result from providing one for them. Most of the students who went through a high school course of agriculture would probably do so with the intention of qualifying themselves for a degree in science or agriculture. Therefore, the agricultural teaching of a high school must not be purely vocational as in vernacular middle schools where many of the students intended on leaving to adopt farming as a calling. It must be optional and it should aim at turning out men who even if they did not adopt practical agriculture as their means of livelihood, would still have the ability and interest to diffuse sound agricultural knowledge. The main lines of agricultural teaching in high schools should be the inculcation of sound principles of agriculture. But theoretical teaching by itself was not sufficient for that. The Conference, therefore, recommended for high schools a course of theoretical teaching accompanied by some practical training.

The practical work was specified by the University in 1920 and on the recommendation of the Conference several common high schools centres were set up for teaching practical agriculture. The students of the two or three high schools having agricultural classes and situated in the same area would attend their own schools for tuition in all subjects other than agriculture, but in this subject they would receive tuition in a centre common to them all.

Reviewing the progress of agriculture education in the province the Assistant Inspector of Agriculture Education told the Punjab Educational Conference in 1926 that the centres did not prove to be economical and efficient as was hoped. They were also

of doubtful value in so far as the accomplishment of the ultimate aim was concerned. The syllabus of the course of instruction in agriculture for high classes, he said, was controlled by the university without whose approval no improvement in it could be effected. Again it had been noticed that the majority of the students who took up agriculture in the high school, did so not because they had any genuine interest in the subject but mainly because they regarded it as a soft subject.\footnote{Proceedings of the Punjab Education Conference, December, 1926. Lahore, 1926. p. 406.}

The regulations of the university did not prove to be helpful for the promotion of the study of agriculture. For over twenty years of its introduction the subject was confined to the Entrance Science Course. From 1919 any student who felt interested in the subject could offer it. But in 1927 the University made it obligatory for the students of agriculture to study physics and chemistry as well. This discouraged students for not many were capable of studying science. The number of scholars dwindled from 1800 in 1927 to 175 in 1937.\footnote{Punjab Education Report, 1937-38. p. 88.} It was after ten years of protests that the University withdrew its regulation in 1937. The course in agriculture was also revised. Such portions of physics and chemistry were included as were necessary for understanding the principles of agriculture. The course introduced in 1937 continues to this day. Except for the addition of an item of 'Compost' in 1954 on the recommendation of an All India Conference on Compost held in Delhi in 1947, there has been no change.

\footnote{File - Original Proceedings of School Board (Punjab University) 1952. (Unpublished).}
The course needed to be modernised long back. It provides no knowledge of growing cereal and cash crops, fodders, vegetables and fruit trees. Hybrid Crops, use of fertilizers, modern farming and mechanization of agriculture are yet other important development about which students of agriculture in high schools should know. The course also does not give any awareness of live-stock and other allied industries like bee-keeping, poultry, etc. Portions of science needed to be eliminated from 1963 when the study of general science was made compulsory for the students.

Although originally provided to help the students of rural areas to improve the methods and techniques of agriculture which was and still continues to be the major occupation of the vast majority of the people of this state, agriculture as a subject in schools seldom achieved its objective. Not all the village boys offered the subject and those who did would go out of their villages to seek more paying employment in urban areas. For admission to the Degree Course in Agriculture it was not essential have qualified in the subject of agriculture at the Matriculation level. The subject in the high school was thus one of the soft options offered to pass the Matriculation Examination.

The Education Commission (1964-66) after reviewing the position of the subject is of the view that it appears rather unlikely that in a field like agriculture vocational competency can be given in a period of two or three school years. Farming implies hard work and mature judgement, and the children in the high school are neither physically, nor mentally prepared for this. Moreover, over-specialisation at an early age is not at all desirable. The Commission also holds that it is unrealistic to expect that persons with education so much better than the majority will in the present socio-economic set-up remain on the land. In
view of the existing circumstances, the Commission suggests that agriculture should be a part of the course in work-experience rather than as a separate full course. If this recommendation of the Commission is accepted, it will reduce one subject without in any way depriving the willing students of the benefit of the study of agriculture.

Animal Husbandry.

Introduced as a subject alternative to agriculture in 1955, animal husbandry has attracted more students than agriculture. While 14851 candidates chose animal husbandry for the Matriculation examination in 1966, agriculture was offered by 3781. The reason for the popularity of animal husbandry is not that there is a great demand for people knowing about the cattle but because the course prescribed by the university is simple and easy, that ensures a good percentage of marks. Animal husbandry could well be made a part of agriculture by removing from the latter elements of general science.

Drawing

Like agriculture drawing was first introduced as a subject in the Science Entrance Course. In 1908 it was included in the list of elective subjects under Entrance (Arts Faculty) as well.

Upto 1916 free hand drawing from the flat, model drawing, geometrical drawing and drawing to scale formed the components of the syllabus. In 1917 the objects of drawing in light and shade and of scale drawing were specified. Memory drawing from a group of two simple common objects or from nature forms (to be executed in outline in any medium) was a new addition. Free hand drawing and geometrical drawing, however, did not form the

ingredient of the syllabus. Memory drawing did not survive for long; it was excluded from the course in 1927, while geometrical drawing was again included in the course that year. In 1941 the contents of the geometrical drawing (plane geometry and solid geometry) were specified. Most of the items in this portion overlapped with those in geometry under mathematics and were thus unnecessary for geometry was a compulsory study in mathematics. The only change made during the post-independence years was the inclusion of a very rudimentary knowledge of 'Design' in 1958.

Drawing has proved to be a useful practical subject particularly for those who enter engineering school, or take up draftsman's course, carpentry, or the like. The proficiency acquired in the subject also helps a large number of boys to get into several avenues that demand the knowledge of drawing. The entries for the subject in the Matriculation Examination reveal that drawing is more popular than agriculture, physiology and hygiene, Sanskrit or even animal husbandry. It is, however, a fact that the course has remained static. Knowledge of plan, side and front elevation of furniture, buildings, gardens, factories, etc., could well be included to strengthen the vocational usefulness of the subject. The fundamentals of art used by dress-makers, designers, engineers and lay people should have been made known to students.

As for the development of the artistic interests and tastes, the course has suffered from several inadequacies. There has not been much in it to develop aesthetic sensibility and judgement among students. Design in which the student learns colour combinations, harmonies and contrasts was included only very late in 1958 and that too in a rudimentary form. Memory drawing which provides exercise in reproducing mental perceptions and observation
has not carried weight with the framers of the syllabus. The course was a subject of criticism at the Punjab Educational Conference in 1926: "Our Course in Art Drawing is much too formal and shows very little expression. It does not develop sufficiently one's power of free graphical expression, which is one of the fundamental aims of teaching drawing. There should be more of drawing from memory and imagination to fulfil this aim; and such drawings should be rapidly produced." 45

The practice of providing a number of objects of circular, rectangular and irregular forms for drawing has also not been favoured by artists. It has been considered an uninteresting, old-fashioned and decadent method of teaching perspective and technique of pencil shading. "Shapes of various objects are understood better when seen as colour silhouettes. The modern method of art training does not emphasize the teaching of perspective. Students need to be trained to observe the placing and shapes of objects in relation to one another. As they gain more patience and understanding, they should be encouraged to experiment with perspective, shading in pencil, charcoal, water colour and pastels. Automatically the choice of subjects becomes varied and they should be given a free hand to compose drapery, vases, flowers, fruits, plates and pottery birds." 46

Nature offers a rich variety of scenes. Paintings of nature are always a source of great delight. But there has been little provision in the course for painting based upon natural objects like plant forms, still life objects, animal and bird life.

models, landscape, etc. Nor was free expression drawing which is one of the best means of initiating younger students into art and drawing, retained long in the programme.

For girls there has been little in the course to attract them. Painting and interior decoration which catch their fancy do not figure in the course. 'Design' lately introduced is very limited in scope and effect. No wonder, fewer girls take up drawing at the high school level - although at the college level, art is their favourite subject. Again no place has been given to the study of the importance of art in human life. Such an account should give students an infinite amount of inspiration and the idea of the worthiness of the subject.

The contents in drawing do not satisfy those who study the course for artistic and cultural value or want to make art as their life work, nor does it provide sufficient initiation to those who aspire to get into engineering schools and polytechnics. Since specialisation is now not the purposes of this course, it would be appropriate if it is taken up for its own value. This changed out-look will not only help eliminate much of the useless content but will also ask for rich variety of matter that helps high school students to learn to create, reproduce and appreciate form and design and structure and composition. The course also needs to be related to other subjects of the curriculum. Biology, geography, general science, history, etc., provide ample material for sketches and diagrams. In fact, the programme should provide experiences of various kinds--experiences that centre around the self, social values and problems, life enjoyments, community living, materials, tools, etc. "There should be greater interest in what experiences
Domestic Economy

In 1919 domestic economy, a subject specially intended for girls, was given a place in the high school curriculum. Introduced as an elective subject, it had simple rudiments of hygiene, physiology, home nursing, sewing and cutting. The nomenclature of the subject has been a misnomer. There has been nothing in it of home management and home economics or household accounts.

In 1935, the syllabus in domestic economy was revised. Cooking and housewifery formed one paper and 'laundry and needlework' or 'first aid and home nursing' the other. Except for certain very minor changes in needlework in 1939, the same syllabus has continued. The course has been burdened with the details of cooking, cleaning, washing up, laundry and needlework which although important are not the only cares of a home. 'Home nursing and first aid' so essential for every girl has been alternative to laundry and needlework. Home management, family, relations, dietetics, hygiene, 'child care and development', music, housing, interior decoration, etc., which are also so necessary for good home making, have had no place in the course. A few items judiciously selected and reasonably delimited in scope can provide a far better understanding of home and its science than an attempt to provide thorough skill in cooking and laundry and sewing. A simple interesting and at the same time useful course in home science should be a better substitute.

Crafts

In order to foster among students love for work with hands and help them attain a reasonably high standard of proficiency in

it, the Secondary Education Commission recommended that every high school student should take up one craft. It was not on economic grounds only that the recommendation was made but "by working with the hands, the adolescent learns the dignity of labour and experiences the joy of doing constructive work. There is no greater educative medium than making with efficiency and integrity, things of utility and beauty. It trains practical aptitudes, facilitates clarity of thinking, gives chances for cooperative work and thus enriches the entire personality."48

A large number of crafts like spinning and weaving, gardening, woodwork, metal work, tailoring, sewing, printing technology, workshop practice, hosiery, elementary electric technology, handmade paper industry, etc., have now provided a rich variety of hand work in schools. In actual practice, however, craft work for several reasons has not yet been a success.

Not being an examination subject, craft work does not receive from teachers and students the attention that it should otherwise be given. Examination so dominates the curriculum that anything beyond its perview is considered to be useless and superfluous. Secondly, not every school has found it within its means to provide teachers with requisite qualifications and necessary equipment and facilities for running various crafts. Unwieldy classes and crowded time-table are yet some other handicaps.

Crafts are a useful part of education. Not only should there be a more extension of craft skills to a widening range of projects but the high schools should also have better and more varied craft facilities.

For long merely as an extra-class activity in the high schools, music acquired the status of a practical subject for girls in 1949. But being an optional non-examination subject, it did not enjoy much significance. Fewer schools were prepared to spend their funds on the appointment of a teacher and the purchase of necessary musical instruments, both made necessary by the requirements of the course. Since 1964, provision has also been made for an elective course in music both for boys and girls.

The contents of the subject are appropriate keeping in view the fact that with the introduction of music as a subject in the middle classes, students acquire a good background by the time they enter the high school. However, the scope of songs other than classical is limited. These days when one comes across among the adolescents a craze for film songs, good and bad, it is necessary that music in the school should provide them a rich variety of beautiful songs, easily understood and appreciated; and develop in them a positive aesthetic response to great music and a negative reaction to poor music. A good selection of 'shabads', 'bhajans', national songs, poems, lyrics and folk-songs and group songs must satisfy the emotional needs of the students and provide them with much needed emotional balance.

Physical Training

Important as the physical training is, it has never been formally prescribed by the University as a part of the regular high school curriculum. The Department of Public Instruction, however, has always impressed upon the high schools the desirability and importance of the physical development of students and enlightened inspectors of schools, headmasters and teachers have all along encouraged it.
During the early years of the century, indigenous games, drill and gymnastics were popular. Wherever playgrounds and play material were available, cricket and football were played with much keenness; and District and Circle tournaments were organised with enthusiasm. Gymnastic masters and instructors were provided in some schools. But as most of the schools could not provide apparatus for gymnastic, proficiency in gymnastic was not so general as in drill. 'Desi Kesrat' (indigenous physical exercise) which required no apparatus was encouraged in schools and it was also included in the courses in the physical training programme of teacher training institutions. Also, physical exercises with dumb-bells and Indian clubs in which all could join on equal terms and which were good substitute for difficult feats on gymnastic apparatus were recommended. The protective side of physical education and advantage of medical inspection were emphasized.

The programme of physical training, nevertheless, remained confined to games, sports and drill. It was limited in scope and effect. Narrowly trained instructors were employed, who knew set exercises and a few games. Tournaments often led to occasional friction among schools. The situation upto 1917 was not encouraging and the Director of Public Instruction was of the view that the province had an unscientific system of physical training with but little health value.49

A new scheme of physical education was prepared by the Advisor in Physical Education of the Department of Public Instruction and introduced in 1920. It was designed to afford a progressive course of exercises and activities based upon the

mental as well as the physical development of the pupil. According to the Director of Public Instruction, the system had achieved a most gratifying measure of success, its utility and interest had appealed to teachers and pupils alike. The occurrence of unfortunate collisions between rival institutions, however, led the Director to observe that the organisation of games in secondary schools was still imperfect in at least two essential respects, the cultivation of the true spirit of sportsmanship and the utilisation of the available resources for games which existed in most high and upper middle schools in the form of a Sports Fund for the provision of means of healthy recreation amongst the largest number.

In early twenties Mr. Atama Ram, Inspector of Schools, Ambala Division started in the schools under him "Play-for-all" movement, by which all pupils, without exception, played games at least three or four times a week either in the usual after school play-hour or in half-hour periods set apart for the purpose in the time-table. The movement was encouraged in the other Divisions of the Punjab. It was a good substitution for old expensive tournaments, in which a few selected students could participate. The play-for-all movement, as the Director of Public Instruction remarked, was an attempt to provide healthy recreation for all after the close of and during the school session. To supplement this movement Atma Ram started food-for-all movement to provide children nourishment during the school hours. The scope of the movement was, however, very limited.

Another notable development of this period was the introduction, encouragement, and expansion of the Boy Scout

50. Ibid., p.76.
51. Ibid., p.77.
Movement that provided the boys a means of happy and healthy recreation and awakened in them desire for service. Describing its progress and impact on school life, the Director of Public Instruction observed, "The Scout Movement has spread far and wide throughout the Punjab and contrary to the expectations of many, has found a most hearty welcome in the schools of rural areas. Scouting has given to boys much happiness in life and has opened up to them avenues to new and cleaner interests. Masters and boys alike are healthier, brisker and more mentally alert as members of this great brotherhood."53 It was hoped that the Boy Scouts would do much to counter-act the communal rivalries and friction which then persisted in the province. A beginning in girl-guiding was made in 1932-33. Cubbing was started in later thirties.

The medical inspection of children that made a promising start in 1915 fell into abeyance during the War owing to the heavy demands for qualified practitioners for service with the troops and the consequent recall of doctors attached with the Education Department. It was revived in 1920. The inspection carried on in that year, revealed that the school children suffered from several diseases, ailments and physical defects. The system of inspection, on account of several limitations, was not capable of rendering any great help to the children. Doctors being few, the inspections were infrequent and somewhat cursory examinations of pupils. There was also no follow-up programme. Absence of co-ordination in purpose and effort between those directly concerned in the success of the system, the medical inspector, the school authority and the parent was yet another drawback.54

The system of medical inspection was abandoned six years after its revival as it was found difficult to cope with the ever growing number of students in need of medical attendance and treatment. Therefore, the students were referred to the local medical authority in each area for the medical inspection and care.

In the beginning, physical instruction was placed in the hands of the Physical Instructors who were often illiterate and whose mental capacity was usually unequal to a scientific treatment of the subject. Many of the ordinary teachers would take little part and show little interest in the physical care of the pupils under them. In 1924, arrangements were made whereby all anglo-vernacular teachers under training were to receive a general course in physical training and those who showed special aptitude for the work had the facility to specialise in physical training by taking it as an elective subject for the Junior-Anglo-Vernacular Examination. In 1927-28 a special course in physical training was instituted at the Central Training College, Lahore for graduates. These trained graduates later on were made Assistant Inspectors for Physical Training and did useful work in popularising play-for-all, mass drill, minor games, efficiency tests and inter-group physical competitions.

From later thirties physical training in high schools began to improve steadily. The number of young physical training supervisors increased. Refresher courses for the old hands became common. Schools got men and more facilities for games and sports. Mass drill, play-for-all and mass marching came to be regular features. The introduction of bands and gramaphone records made physical training interesting. In some of the urban high schools, gatka, boxing and rugger touch were attempted. Both Scouting and Cubbing continued to receive impetus. Scouts wherever employed rendered useful service and won public applause.
During the post-independence period while the status of physical education has remained the same in the high school curriculum, the programme of training of teachers of physical education has been intensified and various new programme have been sponsored to promote discipline among students, develop their physical health and prepare them for the defence of the country in time of emergency. The National Cadet Corps was started in 1948 to develop in boys and girls qualities of character, comradeship, the ideal of service and capacity for leadership as also to provide them service training so as to stimulate interest in the defence of the country. A large number of high schools have raised the National Cadet Corps. Teachers trained in regular army centres for short periods and regular personnel of the army conduct the training. Since the National Cadet Corps did not cover all the students, a supplementary scheme known as Auxiliary Cadet Corps was started in 1954. It differs from the National Cadet Corps in as much as it does not provide for the use of the rifle and arms drill. Lack of discipline among students prompted General Bhonsle, formerly of the Indian National Army, to suggest to the Government of India a programme for developing discipline among students. As a result the National Discipline Scheme was launched in 1958-59. The scheme emphasizes drill, marching, physical exercises and social service and a limited number of schools have introduced it. Sponsored by the Central Government the three organisations are directed and mainly financed by it.

Too many programmes now claim students' allegiance and make exacting demands on the school time-table. The result is that there is no systematic and thorough programme covering all the students. Regular physical exercise, games and sports have
suffered because of the importance given to the N.C.C. training, the utility of which is questionable for more than one reason. Huge sums of money are being spent on a limited number of students who after training are neither more disciplined than other students in schools nor most of them are fit for military life or in any way eager to take to it.

The National Fitness Programme designed to embrace N.C.C. A.C.C., N.D.S., Scouting/Guiding, physical exercises, games, sports, etc., has now been recommended by the Kunzru Committee appointed by the Government of India to examine the physical education programme at school level. 'Fitness' is too narrow a term. A comprehensive nomenclature like 'Physical Education' is more appropriate and suitable. An intensive and thorough programme of physical education embodying the good features of all the schemes and programmes that now press their individual claims to the detriment of proper physical education of all children be developed. Knowledge about human organism, its ailments and diseases, hygienic living, sex, food, safety education, etc., should form a part of the course in physical education. The programme should also deal with "all aspects of the personality in the broader sense through activities, intellectual as well as physical, in all the areas of health, physical education and recreation."55 It is encouraging that physical education figures prominently in the high school curriculum recommended by the Education Commission (1964-66) and it is hoped that the programme would enjoy the status that it deserves.

Moral Training

Like the physical training, 'moral training' was all along imparted informally during the British rule. Writing about it in 1900 the Director of Public Instruction observed that moral training received very particular attention in the province. 56

A perusal of the annual reports of the Director shows that the Inspectors of Schools emphasized upon the teachers under them the importance of moral training of children. The reading books included lessons here and there furnishing suitable ideals, in order to inculcate common as well as rare virtues. In the high classes of several schools in addition to this incidental teaching, definite moral instruction was given by means of the Moral Reader. The teaching was complete, positive and applicable to everyday school work. 57 The teacher's sense of duty and his own example were very much emphasized. The feeling in the early years was that with trained teachers, the moral lessons were generally both enforced and applied. The recital of poetic pieces was recommended for uplifting the moral standard of the pupils. Teachers' associations and students' clubs also exercised wholesome influence through the discussion of educational and moral subjects. Games were encouraged for inculcating qualities of co-operation, self-reliance, self-control and sympathy. Inspectors were asked to take care of school discipline to uplift the moral tone of schools. In order to exert wholesome effect upon the moral sensibilities of children, it was emphasized to improve physical surroundings of schools.

As the century advanced, more and more boys began to enter the school. The number of schools and teachers started increasing. This brought about some laxity in the discipline and conduct of teachers and students. Reports from some Inspectors of Schools about moral training were disquieting. In 1909 one Inspector wrote that he had to upbraid teachers for directly inculcating deceit, untruthfulness, disorder and the like by their example. Another suggested "Our present system of education leaves the moral side of child nature very much to take care of itself. What we want is a special place for constructive moral training in our curricula, and earnest teachers with high ideals and noble aspirations - teachers whose personal example and carefully thought-out precepts would mould the plastic nature of our young ones into thoroughly good and loyal British citizens."59

The Department of Education felt that there seemed to be a wide-spread opinion that school education in the province was doing less than it might have done to form character. But the problem of combining moral with secular instruction without trenching on religious teaching was not peculiar to India, and a solution under the then existing conditions was not easy to suggest. The ethical value of a moral text-book studied as a school task might have amounted to little or nothing; the delivery of moral discourses to order was a responsibility to which few teachers could do justice. But the absence of direct moral teaching, the Director asserted, did not necessarily mean that the influence of the school was non-moral. Good habits were insensibly formed in a well-regulated school under a strong and

conscientious headmaster. The Department was anxious to see that the teacher and taught realized that greatness of a nation was built upon character and principle not on examination results. Among the means adopted for enforcing discipline and improving "tone" in schools were the appointment of class and boarding-house monitors, organization of games, student clubs and the residence of school boys and students in supervised hostels. Good conduct registers were maintained in all recognised schools.60

Political unrest was mounting up during the pre-war period and students both in schools and colleges were feeling attracted by political agitations. The Government felt apprehensive of "the immature youth, undisciplined in thought and action, falling a ready prey to the agitator and anarchist."61 Loyalty to the sovereign, habit of obedience and moulding of the young ones into thoroughly good and loyal British citizens were emphasized with greater vigour.

Special enquiries were made into the position of moral instruction in 1909-10. After reviewing the nature of moral instruction in text-books, the mode of its teaching, Moral Readers, direct moral instruction other than that contained in school readers, opinions about moral instruction and arrangements for moral instruction in schools of old type, it was concluded that

1- the actual effect of the direct moral instruction conveyed through undenominational Moral Readers was not considerable;

2- the most effective direct moral teaching was that which was based upon religious doctrines;

3- the effect of direct moral teaching was in proportion to the earnestness and character of the teacher; and

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60. Ibid., p. 24
61. Ibid.
4- in the hands of many teachers such teaching would be ineffective, and in some cases might do harm where the general influence of the teacher was not also exerted on behalf of the precepts conveyed in the 'moral' lesson. 

This analysis of the situation, however, was of little avail. No effective measures appeared to be possible to impart moral instruction rooted in religion.

The situation in the denominational schools with regard to the development of high moral values and standards of social ethics was not very satisfactory. These institutions reflected the discord among various communities, social and political groups outside, and put up barriers which interfered with the free intercourse of children professing different creeds and thus sowed seeds of misunderstanding. They fed communal feeling, which was rampant in the province and which was not a happy augury for the future. 

Besides the inadequacies of homes which created difficulties in the moral development of children, there were the weaknesses of teachers setting bad example for the youngsters. Mr. Crosse, the Lahore Inspector of Schools, pointed out that so long as the supply of teachers was so limited that men of any sort had to be welcomed, there could hardly be any improvement in the moral tone of schools. Furthermore, with the numerical increase of schools and scholars there was noticed a growing restlessness and disregard for authority, manifested by strikes, and a tendency to change from school to school if promotion was refused or punishment inflicted. Whether moral lapses were attributable to the dearth

of strong headmasters or to weakness or disloyalty to school interests on the part of subordinate teachers, they certainly affected the moral tone and discipline of schools.

Year after year the Inspectors of Schools were asked to report on the sense of discipline and moral development of school children. Assessment of the situation varied. If one deplored the comparative futility of moral training, divorced from religious education, the other thought that the example of the teacher was more important than religious education, and the third pleaded for more co-operation between parents and teachers. In any case, the Department of Public Instruction viewed cases of breach of discipline with seriousness and were anxious to see discipline maintained among students.

The programme of moral training under the British rule was mainly intended to promote 'civil sense' among students. It laid stress upon discipline, obedience, loyalty to the British Government, co-operation among individuals for a peaceful social life, service to fellow-beings, etc. Such a training was in conformity with the thinking of the foreign rulers who looked for law-abiding peaceful people, willing to obey them and serve them. Morality, shorn of religion, not deeply rooted in higher human ideals of truth, goodness and beauty, degenerates into expediency. Moral training of the British period did not teach patriotism, sacrifice, selfless service to the nation, love of national freedom, unity and integration and thus proved barren and ineffective.

The picture after Independence has also not been bright. Horrors of communalism and religious separatism encouraged by British policies weighed so heavily with the framers of the Constitution of India, that they laid down that no religious
instruction would be provided in any educational institution wholly maintained out of state-funds. The State-owned schools in particular and privately managed schools aided by the Government in general, have no specific programme of moral and spiritual development of boys and girls. In the yearly reports on the progress of education in the Punjab by the Director of Public Instruction, relating to the post-independence period one looks in vain for any discussion of this very important aspect of education. The high schools are turning out students with hazy notions about spiritual values and moral ideals. A great majority of them are self-centred, intolerant, aggressive and indisciplined. They are aimless youth, uninspired by any vision.

The report of the Committee on Religious and Moral Instruction appointed by the Government of India in 1959 to examine the desirability and feasibility of making specific provision for the teaching of moral and spiritual values in educational institutions made useful suggestions indicating a broad frame-work of instruction in moral and spiritual values at different stages of education. For the secondary stage, it suggested observance of silence during morning assembly, community singing, reading from scriptures, inclusion of essential teachings of the great world religions in courses of social studies, history and languages, addresses on moral and spiritual values, discussions, joint celebrations of religious festivals, social service, physical education and sex hygiene. But during the last six or seven years little real effort has been made to orientate the secondary schools towards the moral and spiritual life. Success in examination is

the only goal of teachers and students and their energy are to
be spent for the achievement of this goal.

The absence of provision for education in social, moral
and spiritual values has been viewed by the Education Commission
(1964-66) as a serious defect in the school curriculum. The
Commissioners write:

In the life of the majority of Indians, religion is a
great motivating force and is intimately bound up with
the formation of character and the inculcation of ethical
values. A national system of education that is related
to the life, needs and aspirations of the people cannot
afford to ignore this purposeful force. We recommend,
therefore, that conscious and organised attempts be made
for imparting education in social, moral and spiritual
values with the help, wherever possible, of the ethical
feelings of great religions.... We would like to
emphasize that the consciousness of values must permeate
the whole curriculum and the programme of activities in
the school. 67

The Commission recommends that moral education may be correlated
with the teaching of great religions and both direct and
indirect methods of imparting moral education should be
employed.

For several reasons moral and social values of our society
have received a great set-back during the recent past. The
present situation in the private and public conduct of individuals
poses a challenge to education. A far more important place will
have to be given to moral education in the high school curriculum
than ever before contemplated.