

R E P O R T

O F

THE COMMITTEE ON UNIFORM PATTERN

O F

HIGHER SECONDARY, VOCATIONAL AND

COLLEGIATE EDUCATION

I N

MAHARASHTRA STATE



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MAH-R

OFFICE OF THE MINISTER FOR EDUCATION :
Sachivalaya, Bombay-32
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FOREWORD

I am happy to know that the State Level Committee on the 10 *plus 2 plus 3* pattern of Education has concluded its labours and submitted its report to Government.

Since Maharashtra's Policy Statement on Education was issued and implemented, various steps to strengthen and restructure education have already been taken during last four years. Standards V, VI and VII have been treated as Secondary Standards. English has been reintroduced from Standard V. New Mathematics and up-to-date Science syllabi have been introduced, alongwith Social Service, Scouting and Work Experience in Secondary Classes. Teachers have been imparted orientation education and Training Colleges have been humming with activity to man all schools with trained teachers. Institutes of Education and Secondary Board of Education have been endeavouring to introduce innovations, evolve new technology and upgrade quality of teachers as well as of text-books and educational aids. Subject-matter teachers associations, colleges and school complexes and higher resource personnel have rendered yeomen service in achieving qualitative and quantitative improvements we are aiming at.

Thus, the ground has been fairly well prepared for embarking on the uniform 10 *plus 2 plus 3* pattern of education on which the Central Advisory Board of Education and the Chief Ministers' Conference have set their seals of approval. Maharashtra was perhaps the first and the only State which set up a State Level Committee and Sub-committees of educational experts to consider and weigh all aspects and details of the problem and I am glad their deliberations have already proved extremely useful to Government in framing the Fifth Five Year Plan of education. In fact, the Junior I. T. Is. pattern of education and full-fledged schemes for Careers and Education Guidance etc. received whole hearted support from the Ministry of Education and Planning Commission in Delhi. Full support has been received also for the unique scheme for Institutes of Higher Education, proposed to be set up to improve the techniques and teaching of Higher Secondary and College teachers. The plan for strengthening Industrial Training Institutes in the State, along with the whole Department of Technical Education as well as Engineering College, Poona and Institutes of Science in the State has also been approved.

Our Vice-Chancellors and Principals of Colleges have also co-operated in giving an excellent lead in restructuring and improving education at all levels, and in increasing productivity in the college system as proposed in their valuable reports which is being reproduced here.

The Committees on Vocational and Professional courses had a difficult task but the experienced experts who served unstintingly on these Committees have tackled it well. We must be grateful to them all.

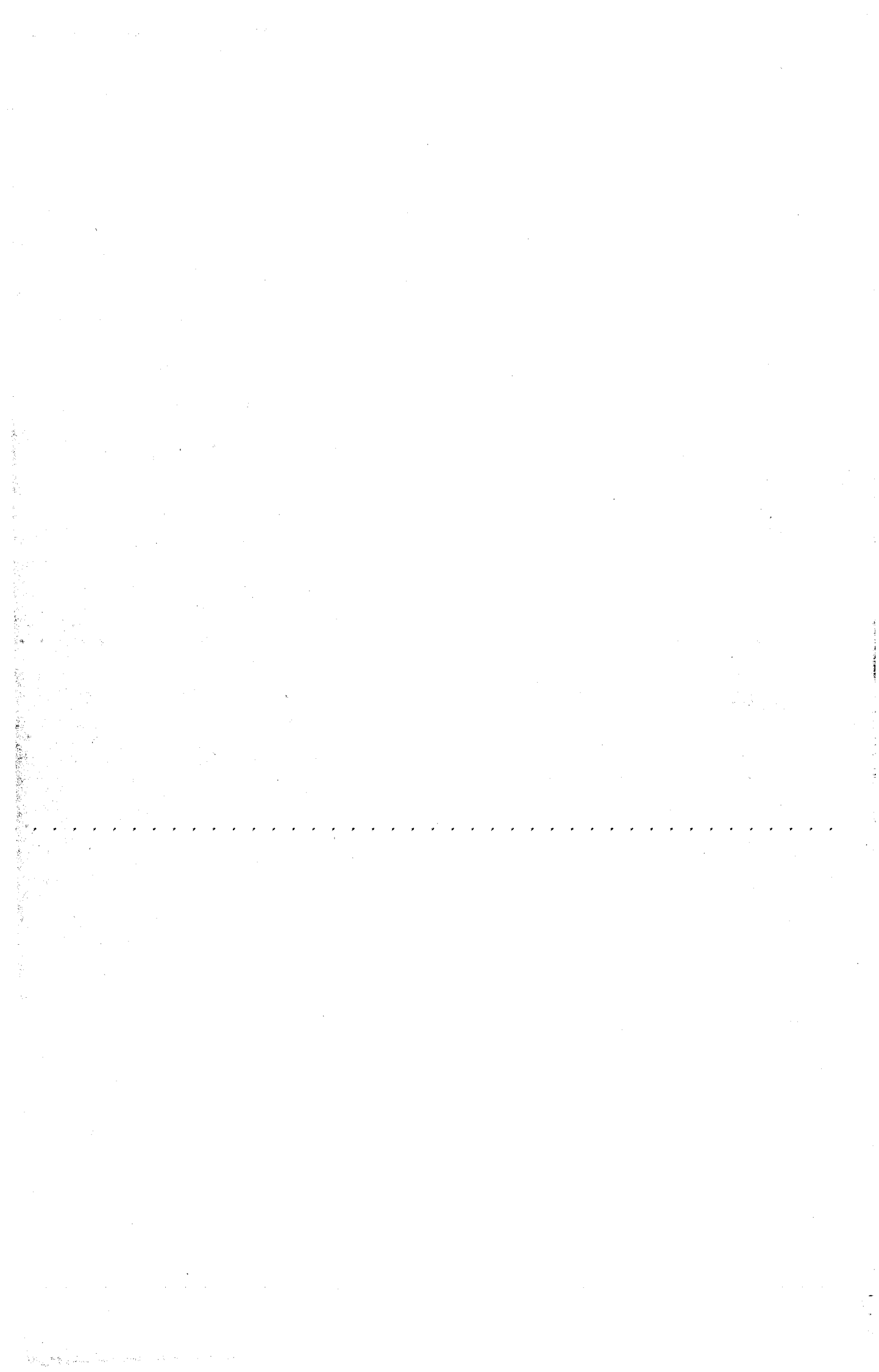
That Government could readily secure the co-operation of representatives of various educational institutions in the State and even outside along with some ex-members of the Education Commission and ex-Directors of Education besides the Registrars and Vice-Chancellors of our Universities to give us the benefit of their expertise and experience shows how anxious we all are to turn a new leaf and build a Brave New World of and for our children. Luckily, for us, the legal frame-works of the new Universities Bills and the Education Bill etc., are also on the anvil and they have taken advance notice of the revised educational pattern and institutional set-up in the State.

May I therefore, congratulate the Chairman, Dr. A. U. Shaikh, and the members of the State Level Committee and all its Sub-Committees on their assiduous and excellent work? May I at the same time hope that all our educational/institutional and departmental leadership and personnel will fully imbibe, understand and co-operate in implementing all the constructive suggestions in this Report, which Government will carefully sift and pass on to them without loss of time?

ANANT NAMJOSHI,
Minister for Education.

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REPORT OF THE STATE LEVEL COMMITTEE ON HIGHER SECONDARY, VOCATIONAL AND COLLEGIATE EDUCATION.

In accordance with the present pattern of education obtaining in the State of Maharashtra, Preamble. S.S.C. Examination is held at the end of Std. XI. Barring the University of Bombay, the students desiring to continue University Education in other Universities in the State, have to undergo pre-Degree Course of one year after S. S. C. Examination before they take up Degree Course of three years. So far as the Bombay University is concerned, the Degree Course is of duration of four years from first year to degree. This, of course, relates to (1) Humanities, (2) Science, and (3) Commerce. So far as professional courses such as Law, Engineering, Medicine are concerned, the pattern is different and these courses branch off after taking education in Art, Science or Commerce Colleges for certain number of years.

2. In a conference of Chief Ministers of States and in a meeting of the Central Advisory Board of Education held at New Delhi in 1972, it was unanimously decided that there should be a common pattern of education for the entire country and it should conform to the formula now commonly known as 10+2+3. The Maharashtra Government has accepted this recommendation and has taken steps particularly in revising syllabus so as to bring this new pattern into practice, from June 1975. As a first step, the revised syllabus has been introduced in Std. VIII from June 1972 and those who are following this revised syllabus will appear for their S. S. C. Examination at the end of the Std. X in March 1975.

3. Prior to introduction of the revised syllabus, there was no uniformity at the secondary stage of education in different regions of the State. The introduction of revised syllabus has brought about uniformity at the secondary stage of education in different regions of the State, and by June 1975, the duration and courses will be common for all students in the secondary stage. As a result, it has become necessary to integrate the programme at the higher secondary stage, i. e. Standards XI and XII and Degree curricula with diversified courses including vocationalisation in Stds. XI and XII. Consequently, a number of issues, such as dovetailing of syllabi, the conduct of examinations, staffing pattern of higher secondary and Degree classes and financial repercussions on high schools, colleges, and the Universities and administration were required to be tackled with prudence and care. Looking to the complexity of the problems, it was considered necessary to appoint a State Level Committee to discuss and decide these issues so that Government could then take its own decisions. Accordingly, a State Level Committee was appointed by Government under the Chairmanship of Secretary, Education Department in its Government Resolution, Education Department, No. ECR-1072 R (I), dated 31st August 1972. The official and non-official members of the Committee were as per Appendix 'A'.

The Committee was asked to make its recommendations to Government within a period of six months ending 28th February 1973. As the issues involved had far-reaching effects and as the work was of complicated nature, the Committee could not conclude its report during this period and its term was consequently extended by six months ending 31st August 1973, and further extended from time to time by 6 months upto 28th February 1974, and the terms of reference of the Committee were as under :—

(1) To consider and examine the question of reorganisation of the present set-up and practices for introducing 2+3 years pattern of Higher Secondary and Collegiate Education now that the 10 years uniform S. S. C. Course has been introduced throughout the State.

(2) To suggest ways to bring about uniformity of action regarding syllabus, administrative arrangements, examination systems etc. and to integrate S. S. C., Higher Secondary and Collegiate Education Programmes and arrangements.

(3) To prepare programme for advance action which is required to be taken by Schools, Colleges and Universities to readjust themselves in all respects including curricula, accommodation, equipments, teaching staff, examination patterns etc.

(4) To suggest modifications, if necessary, to the grant-in-aid formula, for Schools, Colleges and Universities in the light of academic, administrative, and financial repercussions as well.

(5) To study the legal provisions in respect of the education system and to suggest recasting of the same.

(6) To examine and lay down the criteria for upgrading of some well equipped and well staffed secondary schools in suitable areas as centres of higher secondary education.

(7) To consider the question as to whether it would be necessary to lay down condition, subject to fulfilment of which the colleges can be permitted to undertake teaching for the 11th and 12th standards for various diversified courses and if so, to suggest the same.

(8) To consider if and how the conduct of examination should be entrusted to a State Board of Higher Secondary Education, to be constituted and/or the Universities.

(9) To consider and recommend how vocationalisation should be attempted in an appropriate manner so as to provide for terminal certificate and other vocational courses and diploma education.

(10) To see how S. S. C. students would be diverted into agricultural, commercial and other special faculties and institutions.

(11) To make special preparations to absorb the students passing the S. S. C. under the old and new courses in June 1975.

(12) To go into such other matters as may be considered relevant by the Committee for the smooth introduction of new pattern of higher secondary, vocational and collegiate education throughout the State.

4. The first meeting of the Committee was held on 22nd September 1972. During the course of the discussions in this meeting, it was held that it would be appropriate for the Committee with reference to term of reference No. 12 to consider how best the question of providing gainful employment by giving suitable vocational training to such of the students who may not reach the S. S. C. standard for one reason or the other can be tackled. It was also emphasised that the ultimate object should be to see that no student either a boy or a girl should be denied education either academic or vocational at any stage and every one should have equal opportunity to take education.

5. The wastage at the primary and the secondary stage is phenomenal in this country and unfortunately this question has not been satisfactorily tackled by us so far. In the State of Maharashtra, the wastage is of the order of 83 per cent i.e. out of 100 boys entering standard I, only 17 enter the S. S. C. standard and even of these 17, only about 50 per cent pass the examination. As a matter of fact over 60 per cent children did not go beyond the Vth or VIth standard. The drop-out rate was highest in mofussil areas. Looking to the magnitude of the question the Committee thought it desirable to tackle this issue simultaneously with the steps to be taken for increasing retentivity and re-entry into schools for general education and make its recommendation so that such of the students as are not able to continue in general education and complete their education upto S. S. C. for one reason or the other should be provided vocational training by opening junior I. T. Is or giving them training in other courses like Agriculture, Fisheries, Animal Husbandry, etc. and equip them with vocational or professional skills at elementary level at least so that they may be able to achieve employment or find gainful employment and upgrade their own and national productivity.

6. With this end in view, the Committee divided itself into two Groups, viz : (1) Study Group for Higher Secondary Education and (2) Study Group for Vocationalisation of Secondary and Higher Secondary Education. It was considered necessary to have expert advice on the vocationalisation of education. For this purpose, experts in various fields of Industry, Commerce, Agriculture, etc. were co-opted on the Committee. The names of members who were co-opted on the Committee are given in Appendix ' B '. The task before this Study Group on Vocationalisation of Education and to make it job-oriented was gigantic and as the field was expansive, the Study Group decided that there should be separate Sub-Groups for different categories of courses. Accordingly, six Sub-Groups were constituted under the Chairmanship of Secretary of Education and on these Sub-Groups also some experts were again co-opted. Their names are also indicated in Appendix ' C '. These Sub-Groups were asked to prepare their own reports and present them to the Main Committee for its final discussion. Accordingly, the Sub-Groups have prepared their reports indicating therein the existing position, the new courses that may be introduced for different types of students, the type of training they may be given and whether the present available facilities should be expanded and the additional equipment added to the existing institutions. They have also given in their reports financial implications involved in their recommendations.

Starting of
Higher
Secondary
Classes.

7. The main issue before the committee was which type of institutions be entrusted with the work of imparting teaching of Higher Secondary classes i. e. Standards XI and XII from June 1975. The members expressed three different views, viz. :—

(i) the said Classes should be run exclusively at the secondary schools after upgrading them;

(ii) these should be run at colleges for some years to come or (iii) new institutions should be established as ' Junior Colleges ' to cater for two-year courses.

8. The idea of establishing Junior Colleges was given up by the Committee as it was felt that the nomenclature would create numerous difficulties in implementing the scheme. Moreover, voluntary agencies may not be interested in running such institutions as they will be catering for only two-year courses and prove administratively and financially non-viable. The justifications for starting the classes in secondary schools after upgrading them were as under :—

(a) Kerala Government has introduced Higher Secondary education through colleges and therefore, the system failed to yield desired results, the main reason being that the students going to colleges are mostly within the age group of 15—16 and are not mature enough to understand and grasp the lectures given by teachers in colleges ; the very purpose of starting higher secondary classes thus stands defeated ;

(b) Higher Secondary education is a school stage and it should be a part of the school. Its separation from schools will create innumerable difficulties of an emotional and integrational type. The approach to Higher Secondary education should be such that it should meet the objectives in view, viz. : personal attention to each student, instructions should be imparted in a manner that the students of that age group could grasp them well;

(c) The course by its very nomenclature is a school stage and should therefore, be imparted through schools ;

(d) Large number of qualified teachers were available and teaching standard XI already in schools and schools had besides facilities such as class rooms etc. for one out of two years XI and XII ;

(e) By recognising and selecting superior schools as Higher Secondary schools we could achieve the object of taking Higher Education upto XII standard in interior parts of the State and enable poorer families to impart Higher Secondary education to their children instead of spending for sending them to colleges which are mostly located in cities and big towns which are costly.

The arguments in favour of running Standards XI and XII in colleges were :—

(a) The facilities for Higher Secondary education may not be adequate in schools immediately, even if they are upgraded ; it would therefore, be more appropriate to introduce them in colleges which may have the necessary accommodation and other facilities readily available ;

(b) The courses, if introduced in colleges, may help to reduce the financial burden by substantial amount that would be required to be given to schools to upgrade them to accommodate all students. The colleges are already equipped with laboratories and libraries but provision for these will have to be made in schools by giving them grants.

After considering all the pros and cons of the issue, the Committee was generally of the view that the Higher Secondary classes should be introduced from June 1975 in only such selected secondary schools as are strategically situated from point of view of bringing higher secondary education nearer home to mofussil people and have the necessary potentialities and in colleges which will volunteer to undertake the programme by becoming Higher Secondary schools for standards XI and XII.

9. The following facts generally influenced the members in arriving at the decision :—

(1) If the classes are started in colleges only, Higher Secondary education would be restricted to Urban and Semi Urban areas whereas the students in rural areas will be faced with difficulties and their present facility of 11 years of education would be reduced to 10 years of education ;

(2) By allowing secondary schools also to run the said classes, students from rural areas would not be required to travel long distance to acquire higher secondary education which otherwise may not be possible on account of economical conditions of rural population ;

(3) Cost on account of introducing these classes in colleges may be much less as in these institutes, laboratories, libraries and other equipment are available for the purpose and therefore, colleges may also be harnessed to the task for at least ten years to start with ;

(4) Good secondary schools having the required potentialities should also be included in the scheme even though expenditure for upgrading them for providing new laboratories, libraries etc. or for expanding the facilities available at present, may be required to be incurred ;

(5) In case the colleges are not allowed to run these classes, some of them particularly in Semi-Urban areas will get a set back leading to their closure on account of discontinuance of F. Y./P. U. Classes ;

(6) The staffing pattern had to be upgraded, hence association with colleges was useful whereas the school complex had to be strengthened by allowing Higher Secondary staff and standards to be located in secondary schools ;

(7) Dovetailing of vocationalisation and technical courses with school and college patterns would be attained better by having a midway house called Higher Secondary school pattern under a separate Higher Secondary Board of Education which would also ensure uniformity up to Standard XII in all university areas of the State.

10. A separate steering Committee of Vice-Chancellors was therefore formed and its report is attached at Appendix 'U'. Secretary, Education Department and the Director of Higher Education were in that Committee which took some very important and useful decisions viz. :—

(1) That Higher Secondary standard should be treated as a uniform school stage and colleges may register themselves as Higher Secondary schools under the Board of Higher Secondary education which should conduct examinations for XI and XII standards, prescribe courses, prepare text books and carry out research in Higher Secondary education. It should co-ordinate with Universities on the one hand and State Secondary School Board and State Board of Technical Education on the other ;

(2) That in future no colleges should be affiliated except for three year degree courses and those colleges which will now run Higher Secondary classes may shed these classes when they have sufficient number of students to degree classes and when they become centres of advanced studies of autonomous colleges ;

(3) That work load of teachers in Higher Secondary classes as well as colleges should be suitably increased from 15 lectures plus four tutorials or practicals upto 18 lectures and ten tutorials or practicals ;

(4) That vacations in colleges should be reduced from four months to three months by adjusting examinations time-tables ;

(5) That financial viability and administrative efficiency and links between colleges and Higher Secondary schools run in colleges should be ensured and both universities which will lose, to some extent, examination fees, profit margins and colleges which will lose over 40% of their student strength and fees should be helped to meet their overhead costs as well as costs of equipping Higher Secondary school classes etc. The human problem of Junior College Lecturers should be sympathetically tackled.

11. The first batch of students following the revised pattern will appear for the S. S. C. examination at the end of Std. X in March 1975. The number of such students is estimated at about 2,00,000. About 50% of these students, looking to the present trend are expected to join Higher Secondary courses. As the colleges have generally big classrooms the Committee was of the view that they may be allowed to be permitted to admit 75 students in a higher secondary class when such classes are run by them. The schools should not however, be permitted to admit more than 60 students in a class, the size of the class rooms being comparatively small. On the basis of this intake capacity, it was estimated that about 500—600 schools and 400 colleges will have to be selected for running Higher Secondary classes. Accordingly, the criteria was prescribed by the Committee for selection of good secondary schools and colleges for purpose. The criteria is indicated in Appendix "D".

12. A questionnaire was accordingly prepared on the basis of the said criteria separately for schools and colleges and circulated among them seeking information on the points mentioned in the questionnaire. Some of the schools and colleges sought clarifications particularly with reference to grants that may be available from Government for this scheme, but as this issue was undecided, no specific reply could be given to them. As however, the date for returning the questionnaire with complete information had expired, the Committee decided that the Deputy Directors of Education in the respective regions should constitute Regional/Districtwise teams each consisting of two Head Masters/Principals/Educationists to visit the schools personally and recommend the names of schools in their regions which generally fulfilled the criteria laid down by the Committee. The Deputy Directors of Technical Education and Inspector of Commercial Schools were also requested to do likewise so far as the technical schools and schools having 'Commerce' bias were concerned. It was also suggested that while selecting the Institutes, they should be categorised separately as—A—denoting institutions having all the required facilities and —B—denoting institutions which were required to supplement their amenities and facilities so as to come up to the required standards.

13. The recommendations of the Regional/District Committees were received through the Deputy Directors of Education and Deputy Directors of Technical Education with regard to selection of High Schools to be upgraded as Higher Secondary Schools on the basis of criteria laid down for the purpose by the Committee (*vide* para 11 above). These recommendations were tabulated and forwarded to Government. While doing so, care has been taken to see that all areas, particularly the backward and unserved areas have been equitably served by the Higher Secondary Schools. The recommendations with regard to the selection of colleges to start higher secondary classes have not been received from the Director of Higher Education so far.

The selection of secondary schools and colleges for running higher secondary classes should be finalised by Government as early as possible and in any case before the end of April 1974 and the institutions so selected be informed about the same, so as to enable them to make necessary arrangements for the purpose. The number of students to be admitted in Std. XI in a Higher Secondary School should not exceed 60 and in Std. XI to be located in a College should not exceed 80.

14. The Committee was, however, of the view that higher secondary classes may be attached to the colleges initially for a period of ten years, when the position may be reviewed by Government. If the selected and additional secondary schools are able to take full load of higher secondary classes by then, the higher secondary classes may be withdrawn from most of the colleges. The colleges will then be left to concentrate on degree and post-graduate courses and research activities which is in fact their main function. It was also decided that new colleges that may be opened after 1974 should not be allowed to run higher secondary classes.

The number of students who will be passing S. S. C. examination under the revised pattern (after Std. X) is expected to increase year after year and the students who desire to continue their education will have to be accommodated in Higher Secondary Schools. The number of Higher Secondary Schools required to absorb the increased number of students will be much more as the present Secondary Schools after upgradation as Higher Secondary Schools will not be able to meet the situation. Thus Additional Secondary Schools will have to be selected for

being upgraded as Higher Secondary Schools to provide for the increased number of students that will be passing S. S. C. examination in future. The Committee, therefore, recommends that at the end of the fourth academic year after the new pattern of education commences i.e., from 1979-80, by which time the Colleges will have fulfilled three year degree classes, the programme for selecting secondary schools to be converted into Higher Secondary Schools should be phased out. For this purpose there should be a panel of the Board of School Education which should be entrusted with the work of selection of suitable Secondary Schools for being converted into Higher Secondary Schools.

15. The number of students seeking admission to Higher Secondary classes is bound to increase gradually in subsequent years, unless of course alternate technical and professional courses leading to employment opportunities are opened and students in good numbers are diverted to take them. New divisions for these students will have to be provided for and they may be started in new secondary schools which will meet the requirement of these classes.

16. The higher secondary schools will be recognised as separate entities both academically and administratively from the other schools running I-X standards and from colleges running degree courses. In the interest of co-ordination and good standards link will have to be maintained between these classes. This can be best achieved by having a Head Master or a Principal as a common link between the two institutions and a supervisor or an Assistant Head Master in charge upto Standard X. The colleges when allowed to run Standards XI and XII, the Principal of a college will also be the Principal of the entire institution including XI and XII classes and he will be assisted by a Vice-Principal for supervising administration of Standards XI and XII. Even qualified teachers from secondary school classes and professors from degree classes may be allowed to take certain amount of workload in Higher Secondary classes attached to their institutions and given certain credit for work so rendered for the purposes of their workload and salaries. This will make for rationalisation, upgraded teaching standards as well as saving in costs over teachers/lecturers being under-utilised both in schools and colleges.

17. A distinct Higher Board should be set up to facilitate co-ordination between both universities and schools with regard to courses of studies, qualifications of staff and uniformity of facilities and standards of teaching in all areas and Higher Secondary institutions of the State, including Technical, Professional and Vocational institutions and courses of studies.

18. The Committee emphasised the need for upgrading courses and standards of teaching. It also pleaded for improved facilities such as better equipped libraries, laboratories, classrooms and tutorial classes. It definitely wanted educational technology and methods to be imparted both to Higher Secondary and College teachers as the latter were untrained at present. It desired that proper linkup should be provided between school, higher secondary school, technical, vocational, professional courses, terminal or otherwise, and the college courses by giving suitable credits to those who had covered parts of practical or theory portions and gained life experience after completing a certain stage of studies for technical efficiency. They wished to encourage learners and earners by providing for open university degrees and correspondence courses so that an egalitarian society may emerge. The overall objective to be steadily kept in view was that the working efficiency, as well as intellectual attainments of our younger generations should go up at all levels and teachers of quality and devotion should be pressed into action. Above all educationists, education and all its institutions should truly subserve a self-sufficient, culturally and materially advanced, egalitarian society and a democratic welfare state.

19. The Committee discussed the question of providing different courses for higher secondary classes i.e. Standard XI and Standard XII for general education stream and Technical stream. It was of the view that the students may be provided with a wide range of subjects and they should be given a choice of selecting subjects according to their aptitude keeping in view the career they intend to follow in their after life.

20. So far as general education is concerned the committee was of the view that a student should be required to study in all six subjects—Two languages (compulsory) and any Four optional subjects. The student following the technical stream should be required to study seven subjects instead of six—Two languages (compulsory) (1) Physics, (2) Chemistry, (3) Mathematics and two technical subjects (1) Machine Drawing and (2) Workshop Engineering. It was suggested that since the students taking Technical stream will be required to study seven subjects, the course content of the subjects being the same, technical subjects viz. Machine Drawing and Workshop Engineering should not be exhaustive. Unless the courses are planned in this manner the students following Technical stream will be overburdened and may not be able to devote sufficient time to other five subjects placing them in a disadvantageous position so far as the competition with the students who would be offering only six subjects is concerned. Since 'specialisation' is ultimate aim, the Committee felt that passing in all the subjects was not necessary for passing in whole of the examination. It was, therefore, decided that each student must necessarily pass in five subjects out of six/seven subjects that may be offered by him/her at the examination. The standard of passing in individual subjects should be 40 per cent. However, a student may be allowed, if he/she so desires, to offer not more than seven subjects at a time. He/she may also appear if he/she so desires in other subjects in compartments or singly. The examination at the end of each standard i.e. XI and XII should be conducted by the Board of School Education in order to maintain uniformity.

The list of subjects suggested by the Committee for these two standards under the general stream is as under :—

(A) COMPULSORY SUBJECTS

Two languages, mainly English and medium of instruction of the school.

1. English—Higher Level
2. English—Lower Level
3. Indian Language—Higher Level
4. Indian Language—Lower Level.

(B) OPTIONAL SUBJECTS

Four optional subjects from the following subjects :—
Language other than the two offered as compulsory ;

I. *Language and Literature*—

1. English.
2. Hindi.
3. Sanskrit.
4. Arabic/Persian/Urdu.
5. Any modern Indian Language.
6. Modern Foreign Language
7. Oriental language like Pali, Prakrit, Ardhamagdhi, etc.]

} Any one language out of this group.

II. *Other Subjects*—

8. Economics.
9. Sociology..
10. Psychology.
11. Geography.
12. History.
13. Civics.
14. Political Science.
15. Physics.
16. Chemistry,
17. Biology including Human Biology.
18. Geology.
19. Mathematics .. 70 per cent.
- Statistics .. 30 per cent.
20. Technology (in rural and Industrial Sector.)
21. Logic.
22. Clothings textiles.
23. Home Management.
24. Physiology and mother craft.
25. Food and Nutrition.
26. Commerce.
27. Business Management.
28. Book Keeping and Accountancy.
29. Painting.
30. Music.
31. Dramatics.
32. History of Art.
33. Dancing.
34. Sculpture.

In respect of technical stream, the following subjects should be offered :—

- I. Two Languages out of those mentioned at (A) under the general education subjects.
- II. Physics.
- III. Chemistry.
- IV. Mathematics.
- V. Machine Drawing.
- VI. Workshop Engineering.

Any other subject approved by Board of School Education or the Universities in the State or permutation of different subjects.

Subjects to be selected from the above will be subject to specific grouping as required for University courses.

21. The question of fixing the standard of examination at the end of Std. XII of the Higher Secondary Classes was considered by the Committee at length. Since the students after completion of Std. XII, two years after S. S. C. examination will be entering degree courses, the Committee was of the view that the standard of education achieved at the end of Std. XII should be at least that of Intermediate/Predegree class conducted by the University, if possible slightly higher. With this end in view, the committee decided that the standard of teaching, accommodation, libraries, laboratories etc. required for the Higher Secondary classes should also be adequately raised, otherwise the purpose for which these classes are being introduced would be defeated. The Committee, therefore, suggested the following criteria for institutions conducting Higher Secondary classes :—

Requirements of the Higher Secondary Institutions in respect of staff, their pay scales, accommodation etc.

STAFF

- (a) Lecturers, Tutors and Demonstrators : Academic and Profession Qualifications—
Master's Degree (M.Sc., M.A. or M.Com.) II Class in the subject taught ;
plus B.Ed. or Diploma or certificate from Higher Institutes of Education to be set up by two Universities or/and Orientation Training;
plus 5 years of teaching experience in a secondary school or 3 years' teaching experience in a college.

Proviso.—(1) Lecturers with M.A./M.Sc./M.Com. with teaching experience of 10 years in a particular subject with minimum II Class at the Master's degree may be absorbed in the scheme after Orientation training.

(2) Trained graduate teachers with 10 years of teaching experience at the existing Higher Secondary Schools in the State may be absorbed if they take a special orientation course in their subjects.

(3) Specialist teachers must necessarily possess special qualifications and training in their subjects.

(4) Lecturers who are M.A., M.Sc. or M.Com. with 5 to 10 years teaching experience should be required to undergo orientation teachers training course for a year.

(5) Tutors and Demonstrators should possess post-graduate degree in II class but their teaching experience may not be insisted upon.

(b) A trained Counsellor plus a teacher Counsellor.

(c) A trained Librarian.

(d) A trained Physical education teacher.

All the lecturers should receive training in evaluation techniques and guidance.

Scale of Pay.—There should be three scales of pay for the teaching staff in Higher Secondary class as under or a running scale of Rs. 220—550—25—650 :—

- (i) Rs. 220—450
(ii) Rs. 300—600
(iii) Rs. 400—650 (Selection Grade).

Since the Higher Secondary classes are considered to be a School stage it was thought advisable that all the teaching staff should be designated as ' Teachers ' whether the classes are attached to a school or a college. As such the teachers in the lowest grade of Rs. 220—450, which will constitute 80 per cent of the full compliment of the teaching staff should be designated as Jr. Teachers. The teaching staff in the grade of Rs. 300—600 should be designated as Assistant Teachers and should constitute 12 per cent of the total strength. The remaining 8 per cent in the grade of Rs. 400—650 should be designated as Senior Teachers. Other alternative to the 3 grades referred to above suggested by the Committee was a running scale of pay of Rs. 220—650 with two efficiency bars in between. The Committee recommends that the final decision may be left to Government.

A pay scale of Rs. 450—950 is recommended by the committee for Head Masters of Higher Secondary schools. The existing Head Masters of the Higher Secondary schools who may not be qualified in the terms of the above recommendations to hold such posts may be consistent with their experience and good work and zeal to maintain the integrity of their schools. They should be considered for extra allowance, which may be called Head Master allowance.

Holidays.—Holidays and vacations for higher Secondary Schools may be the same as in the case of secondary schools.

Strength—Class Size.—(i) 60 students in a class for a lecture in a Higher Secondary school and 75 in a college.

(ii) 20 students for a tutorial. At some places like Bombay and also in Vidarbha, class rooms in a secondary school are small and may not accommodate 60 students consistent with the actual size of the classroom. Relaxation in such cases will therefore, have to be made.

Lectures and tutorials per class may be in the proportion of 2:3, both in schools and colleges. In a lecture there should be students' participation to the extent of 25 per cent at least while in tutorial, students' participation should be 75 per cent.

Work Load for Teachers.—30 periods of 45 minutes each of which there will not be more than 18 lectures (one period of lecture of 45 minutes equivalent to two tutorial periods or two hours of practicals).

- Accommodation.**—(a) Each class room of atleast 600 sq. ft. i.e. 10 sq. ft. per student ;
 (b) for 240 students four classrooms and 9 tutorial rooms, a tutorial room being of the size of 200 sq. ft. for a class of 20 ;
 (c) Well equipped library and reading room managed by a qualified librarian ;
 (d) Common room for teachers ;
 (e) (i) Common room for students ;
 (ii) Recreation room for indoor games for students ;
 (f) Laboratories for (1) Physics, (2) Chemistry, (3) Biology ;

each providing facilities and equipment for demonstration, experiments by teachers, experiment and practical work by students individually in a batch of 20 students. 3 laboratories for Home Science ; suction fans are essential in all the Laboratories or arrangement for movement of fresh air ;

- (g) Room for storing equipment ;
 (h) Subject rooms for Geography, History, etc ;
 (i) Principal's room ;
 (j) Office ;
 (k) Open space-playground for physical education and games.

Fees. 22. Fees for F.Y./P.U.C. taught at present in colleges are higher than those charged in high schools conducting Std. XI as a part of Higher Secondary course. These higher rates of fees, if charged in Higher Secondary classes may give rise to discontentment and resentment from the public in general and parents in particular. The Committee therefore, considered this question with great consideration it deserved. It was decided that the fees that are being charged in Std. XI in Higher Secondary schools in some of the regions of the State and F.Y./P.U.C. in colleges at present should be added and divided into 3/5th for Std. XI and 4/5th for Std. XII and the resultant should be the fee rate for these classes. The present concession of freeships under the scheme of free studentship to the Economically Backward Classes should be extended to students in Higher Secondary Classes i.e. XI and XII Stds.

The Committee has recommended introduction of various pre-S. C. C. and post S. S. C. courses upto XII Std. including Diploma to divert students from the General Education stream to make them fit for employment including self-employment in industries/commerce/workshop etc. Vocational and Professional courses being costly, the Committee felt that the Students taking up these courses should not be charged any fees. In short, these courses should be made free for all students irrespective of their guardians'/parents' income. This appears to be, in the opinion of the Committee the only course open to divert a large bulk of students to these courses.

Age. 23. At present a pupil is admitted to Std. I after he/she attains the age of 5/(+) years. It was suggested in the meeting of the State Level Committee that if this age is allowed to be continued for admission to the 1st Std. under the revised pattern a pupil will pass his/her S. S. C. examination at the age of 15 plus. 2 years after that, at the age of 17 he/she will be eligible for admission to a degree course in a college after passing Std. XII of Higher Secondary. Some members felt that this was not mature age for admission to a degree course. It was also stated that if a pupil enters the school at a higher age, he/she would develop his/her faculties and can then have better understanding and could grasp topics better. It was, therefore, suggested that the minimum age for admission of a pupil to Std. I should be raised from 5 years to 6 years.

24. The Chairman of the Committee explained that the intention of admitting children at an earlier age is to enable them to complete the education earlier so as to compete with students from other States in competitive examinations held for All India Services. If the age limit is increased by a year, a student will have to remain idle for one year more and may be a problem to parents as they are very anxious these days particularly in towns and cities to send their children to school as early as possible. As a result, Balwadies and K. G. Schools have been coming up in good number at these places. It is, therefore, essential that they should be allowed to join schools at an early age. The members agreed with the view of the Chairman and it was accepted that age limit for admission to Std. I should continue to be 5 plus.

Admission to Polytechnics (Diploma in Engineering). 25. Polytechnics in the State cater for diploma courses in Engineering, such as Civil, Mechanical and Electrical Engineering. For admission to these courses, S. S. C. examination (XI Std.) is the minimum qualification. The students passing this S. S. C. examination from a Technical High School get a preference for admission to the Diploma Course. According to the revised pattern of education, S. S. C. examination will be held after Std. X. Syllabi of standards VIII to X in general education stream as well as technical education stream have been revised and the course content has been so adjusted that the students passing Std. X (revised) will be required to cover the whole course which is being covered at present for S. S. C. at the end of Std. XI. The Committee was, therefore, of the view that students passing Std. X both from general education and technical education stream should be held eligible for admission to a Diploma course in Engineering conducted in Engineering Polytechnics. Students passing S. S. C. examination from Technical High Schools may however, be given weightage of 10 per cent of the total marks allotted for the subjects in which they have appeared at the S. S. C. examination for admissions to Diploma Courses.

26. In Std. XI of the higher secondary education with technical subjects, students will be required to study two technical subjects i.e. Machine Drawing and Workshop Engineering in addition to two languages, Physics, Chemistry, Mathematics. The course content of technical subjects in Std. XI should be such as to cover up bulk of the portion of first year Diploma Course in Engineering, so as to enable students to join Diploma Course in Engineering, if they so desire. In that case, students should be held eligible for exemption from first and second semesters of Diploma Course and should be admitted direct to the third semester. Students after passing Std. XI with technical subjects may join Std. XII of general education stream or may continue technical course in Std. XII. Students pursuing technical course in Std. XII and after passing that Std. may be given weightage of 10 per cent of the total marks allotted for the subjects in which they have appeared in the examination at the end of Std. XII for admission to degree course in engineering.

27. As has been mentioned earlier the Committee was of the view that the Higher Secondary classes should be introduced in suitable high schools so also in colleges. At the initial stage there were different opinions with regard to the conduct of examinations at the end of Stds. XI and XII of higher secondary education. As the higher secondary classes are also to be attached to colleges, one view was that the examinations at the end of these Stds. should be entrusted to the University. Similarly, as the secondary schools also are to be allowed to run these classes and as they form a part of school stage the other opinion was that the conduct of the examinations should be entrusted to the Secondary Board of Examinations.

Maharashtra
State Board
of School
Education.

28. The Committee has recommended that these classes may also be attached to colleges for a period of 10 years at the initial stage as a matter of convenience but it was accepted that Higher Secondary classes is primarily a school stage. The Committee after elaborate discussion on this point came to the conclusion that the Board of School Education should be set up in the State for conduct of examinations at the end of Stds. XI and XII.

29. The structure of this Board as recommended by the Committee is indicated below :

The Chairman of the Board of School Education would be the Head of entire machinery of examinations of Higher Secondary classes in the schools and colleges and would be responsible directly for higher secondary courses, research, text books and the syllabus for these classes. There would be three separate wings under this body ; (i) S. S. C. Board, (ii) Board of Technical Education and Examinations and (iii) Board of Primary Education. These three Boards may be headed by officers to be designated as Vice-Chairman of the main Board. The S. S. C. Board and the Board of Technical Education and Examinations will conduct examinations in (i) General Education subjects and (ii) Technical Education subjects, including Commerce, para medicine etc. respectively. The Board of Technical Education and Examinations would consult the Board of School Education in respect of subjects which will be common in technical and general education courses. For the sake of overall control and co-ordination, powers will vest in the Board of School Education. This Board will be a separate financial and administrative entity. With regard to the preparation of the syllabus of the courses for higher secondary education, representatives of the Universities will also have to be taken on the Boards of Studies of the Board of School Education. The Board of Primary Education, the third wing should be a part and parcel of the Board of School Education and look after Primary and Pre-primary Education. The present Maharashtra Secondary Education Boards Act will be suitably amended.

30. With the introduction of the revised pattern, degree courses will be of 3 years duration instead of 4 years. The Universities at present conduct P. U. C. and Pre-degree Examinations in which a large number of students appears. Since the proposed Board of School Education will conduct examinations in Stds. XI and XII, income of the Universities from this source is bound to be affected. The question whether the Board of School Education should reimburse a part of its receipts to the Universities to compensate them will have therefore, to be examined by Government in the light of the actual position when this scheme is brought into force.

31. Under the revised pattern of education the secondary schools to be selected to run Higher Secondary classes after they are up-graded may not have sufficient class rooms for the purpose. As such, they would be required to construct some class rooms, tutorial classes, expand laboratories to suit the requirement of higher secondary classes. It is likely that the managements may not have sufficient funds to carry out the programme of construction or extension of buildings for the said classes. In that case it would be necessary for them to seek financial assistance for the purpose. The Committee, therefore, recommends that such managements should be allowed by Government to obtain loans from Scheduled Banks under Government guarantee, provided the institutions are registered bodies under the Societies Registration Act of 1860 or the Bombay Public Trust Act, 1950.

Loans for
construction
of Class
Room.

32. The term of reference (12) of the Committee required it to consider the question of vocationalisation of education throughout the State. The wastage at all the levels of education particularly at primary and secondary stage has become phenomenal in this country and unfortunately this problem has not been tackled satisfactorily so far. It was a matter of great concern for the Committee and it gave a serious thought to it. As stated earlier, the Committee divided itself into two Study Groups (1) Study Group for Higher Secondary Education and (ii) Study Group for vocationalisation of Secondary and Higher Secondary Education. As

Vocationalisation.

the expert advice on vocationalisation of education was necessary, experts in various fields of Industry, Commerce, Agriculture etc., were invited to work on various sub-groups which were constituted, to go into this problem and to suggest the ways to make School and Higher Secondary Education vocationalised and job-oriented so that students who drop-out at the school stage or post S. S. C. stage for various social or economic reasons can stand on their legs either by securing some employment in factories or Industrial concerns or by self employment. Various sub-groups went into the problems assigned to them such as Agriculture, Animal Husbandry, Fishery, Co-operation, Industrial, Vocational, Technical, Commerce, Paramedical, Home Science, education etc. and prepared their group reports with suitable recommendations. The reports of these sub-groups are appended to this report (Appendices E,F,G,H,I). The reports and the recommendations of these sub-groups were considered by the Committee and they were generally accepted by it. The Committee was of the view that if the recommendations are accepted and implemented by Government, quite a large number of young boys/girls who were frustrated for lack of their progress in education will be gainfully employed which will improve the financial and economical conditions of an individual and ultimately of the community as a whole, thereby reducing a drain on the nation. The Committee therefore, recommends that the programmes prepared by the sub-groups may be accepted and implemented by Government.

33. Group-I was constituted by the Committee and was assigned the task of suggesting ways and means for giving vocational training in Agriculture, Animal Husbandry, Fisheries, Co-operation etc. to school drop-outs and those who pass S. S. C. examination but do not propose to take higher education. The group has suggested various diploma and certificate courses as mentioned in paras 3.2 and 3.3 of its report for those who pass S. C. C. examination and school drop-outs respectively. Since all the certificate courses for school drop-outs have been covered and are to be started in Jr. I. T. Is. as recommended in the report of Group II on Industrial, Vocational and Technical Education, it is not necessary to consider them further. However, the diploma courses suggested by the Group for S. S. C. passed students may be taken up for implementation.

34. Diploma in Co-operation is at present being awarded by the Co-operative training centres in the State to inservice personnel deputed for training from co-operative institutions and Co-operative Department. There will be no difficulty for the persons securing this Diploma to find an employment in Co-operative Sector which is expanding very fast. As the facilities are already available at these centres, it is recommended that the Diploma courses of two years duration may be introduced at these centres for private candidates having passed S. S. C. examination. Broadly, the capacity of a class should be thirty.

35. It will be seen from para. 3.7 of the report of Group I that there is a scope for conducting different vocational courses in fisheries for students who have studied upto S. S. C. or who have passed S. S. C. examination. It is, therefore, recommended that some suitable courses for these students should be evolved by the Department concerned for benefit of the drop-outs.

36. Foresters' Training course is at present being conducted by the Forest Department at Chandrapur and the Forest Guards Training courses at Pal in Jalgaon District and Shahapur in Thane District. In addition to the three forestry schools at the said places, a fourth school for training of forest guards will be started soon by the Forest Department at Chikhaldia in Amravati District. These schools can serve school and post S. S. C. drop-outs particularly those residing in forest areas by starting Vocational Forestry course. If the forestry training is imparted to such students, it would certainly improve the socio-economic conditions of the inhabitants of the said areas.

37. The drop-out rate at the secondary stage is on increase and no effective steps have been taken to check it. Out of 100 children entering standard I, 83 drop-out at various stages in the school and only 17 per cent of these children reach S. S. C. standard. Again out of 17 students appearing at the S. S. C. examination, about 9 pass the examination. Vocational courses are therefore, necessary to be designed for them so that they can be gainfully employed at the completion of the course. They can also be fit for self-employment.

38. A group for Industrial, Vocational and Technical Education constituted by the Committee has suggested various courses which can be started in Jr. I. T. Is. for the benefit of drop-outs. The Committee is of the view that after completion of these courses the students will attain the skill or semi-skilled workers, which will help to improve their social and economic conditions and it would be possible for them to secure employment in appropriate workshops and industries.

39. The students completing their training in Jr. I. T. Is. should be given preference for employment in their skill under Government, Municipal Corporations, Zilla Parishads and other Local bodies in the State. If necessary, a directive in this regard may be issued to these bodies by Government.

40. There are a number of private agencies doing excellent work in the field of Vocationalisation and the results of their efforts are very encouraging. If these agencies are encouraged to take up the programme of training students for the Jr. I. T. Is. it would be possible to have wider spreadouts.

41. In that case, however, it would be necessary to give them financial help by way of grants. It is recommended that these institutions should be paid 85 per cent of the non-recurring expenditure and also 85 per cent of the recurring admissible expenditure or the deficit, whichever is less by way of grant-in-aid subject to the usual conditions attached to payment of such grants. These institutions may be allowed to charge fees on the same pattern as in the schools for Std. VIII in General Education which fee would be Rs. 3 p.m. in rural areas and Rs. 5 p.m. in cities and towns, besides the term fees etc. The students may be held eligible for E. B. C. concessions. By doing so, it would be possible to increase the number of Jr. I. T. Is. without substantial cost to Government.

42. Commerce education is useful for persons seeking employment in Industrial concerns, Business Houses, Government Offices, Semi-Government Offices, etc. It is, therefore, necessary that students intending to follow this Course should have sufficiently good standard of general education before their taking up specialisation in Commerce education.

43. The Group on Commerce Education was constituted by the Committee with experts in the field of Commerce. The minimum qualification for admission to various courses has been fixed by the Group as S. S. C. and accordingly, it has suggested various post S. S. C. Commerce courses for those students who do not desire to prosecute degree education for various reasons and desire to eke out income by doing some certificate or diploma courses which will fetch them employment earlier.

44. A group was constituted by the Committee for suggesting para-medical, Home Science, Teacher Training and allied courses. This Group has observed that although women are not debarred from entering into any occupational field, some of the fields are more congenial to the natural trend of women, their aptitude and emotional make up. While taking this fact into consideration, various pre-S. S. C. and post-S. S. C. courses have been suggested by the Group in its report which has been appended to this report. While accepting generally the courses and suggestions made by the Group, the Committee was of the opinion that the following points are important for deciding locations of courses, minimum qualification for admission for the pre-S. S. C. courses, functional and practical literacy, duration of courses, stipend to trainees, etc. and therefore recommends that these should be taken into consideration while deciding the courses to be introduced and the locations of the institutions:—

(i) Intensive short-term courses should be started for housewives, so that they can be self-employed or they can become good cooks by getting employment in canteens and hospitals. For this purpose, courses like catering, house-keeping, cookery, bakery, housing etc. should be useful;

(ii) Courses with necessary syllabi should be specifically framed for candidates below S. S. C. level; minimum qualification for admission to such courses should be standard VIII passed and the minimum age should be 13 years;

(iii) The syllabus should consist of (a) 20 per cent functional literacy, (b) 20 per cent theory and (c) 60 per cent practical;

(iv) Each course will have functional literacy to the extent of twenty per cent and every lesson in functional literacy will be connected with the particular trade in which a candidate will be undergoing training so that he can learn the economy of that trade in respect of business transactions; such as selling of the products and purchasing of raw material etc.;

(v) Different courses should be started at various places where facilities are existing or can be created to suit needs of those localities or areas;

(vi) Duration of courses should depend on the nature of courses. However, five months or 22 weeks full-fledged courses should be framed in which 20 weeks will be actual teaching period and each working day should consist of about 6 hours. Two-three courses should be combined together to impart full-fledged 20 weeks training and at the initial stage of two months, a candidate should undergo a foundation course consisting of two-three subjects and after completing foundation course, in the remaining period of course a candidate will undergo training in specialised course. This will enable the students to have comprehensive education of two-three types of courses;

(vii) Trainees should be paid stipend @ Rs. 15 per month for out-of-pocket expenses. No fees should be charged, so also material required for the courses should be free and would not be charged;

(viii) Medium of instructions should be according to the course and its utility in the employment market;

(ix) Location of institutions should be decided taking into consideration the requirements of the area. The Committee is of the view that courses should be started as far as possible at the places where the facilities are already existing. In the case of courses such as catering, house-keeping, etc. they should be located at Nagpur Catering Institute where facilities are already in existence.

45. Career Guidance plays an important role in deciding which particular vocation or career a student should take up. It is, therefore, necessary to make adequate provision so that the students are guided properly at every stage for making a suitable choice and also the teachers to know how to guide new students. It was with this intention the Committee constituted a group on "Career Guidance" to suggest how best various teachers can be trained in Guidance so that they can help students to make proper selection of the course or vocation. This group has suggested schemes which if accepted and implemented by Government, would certainly benefit both the teachers and the students. The present Institute of Vocational Guidance and Selection, Bombay, which is a Government body will not be in a position to have effective control or can implement the schemes suggested by the group and it will be absolutely essential that the present machinery of administration should be upgraded. The Committee therefore, recommends that the schemes suggested by the group should be accepted and implemented by Government.

46. These days Education Guidance plays an important role in the life of a student. It must, therefore, be given its due place in the secondary and higher secondary curricula. This will enable the students to choose their subjects which would help them in their career. The Committee, therefore, recommends that suitable number of periods should be provided in the Secondary and Higher Secondary classes for this purpose.

47. It has been suggested earlier that the qualification for recruitment of teachers for higher secondary classes should be Master's degree (M.A., M.Sc., or M.Com.) II class in the subject taught plus B.Ed. or Diploma or Certificate in teaching and/or orientation training plus 5 years' teaching experience in a Secondary School or 3 years' teaching experience in a College. The syllabus of the present B.Ed. courses does not place much stress on the methodology of teaching and such other basic requirements which are necessary for making a good teacher. The Committee, therefore, recommends that the Universities may be advised to revise the syllabus of B.Ed. course suitably taking into account the requirements for teaching Stds. XI and XII higher secondary courses.

48. Agriculture Courses and the Agriculture Schools are under the control of Agriculture Department. It is understood that the Agriculture Schools are under the control of the Agriculture Universities. The Courses in the Agriculture Schools will have to be suitably revised so as to bring them on par with the courses in Higher Secondary Stds. viz. XI and XII in general and technical education. The Agriculture Department may be advised to have the courses revised in these schools suitably through Agriculture Universities.

49. The new pattern of education is to be put into practice from June, 1975. It is, therefore, very necessary that the decisions on various recommendations of the Committee are taken by Government as early as possible. The Committee feels that it would be desirable and in the interest of all concerned that the decisions of Government are communicated to them at least a year in advance. The Committee, therefore, recommends that the decisions on various recommendations that may be taken by Government are communicated by the end of May 1974, i.e. before the commencement of the next academic year.

FINANCIAL PROVISIONS

Pattern of Education

50. *The Impact of Old Course.*—The new pattern of 10 year Primary and Secondary Education was introduced in the State from 1972. The new three-year syllabus for Secondary Schools was introduced in all the Secondary Schools in the State. This will have an impact on the number of students studying in Western Maharashtra only. In this area in 1975 March, students who were enrolled in June 1971 in VIII Standard according to old course and those enrolled in June 1972 in VIII Standard, according to the new course will both appear at the S.S.C. examination thus:

Year	Old Course Standard	New Course Standard
1971-72	VIII	....
1972-73	IX	VIII
1973-74	X	IX
1974-75	XI	X

March 1975 S.S.C. examination.

This will not happen in Vidarbha, where the ten year pattern is already in vogue. In Marathwada, the bulge appears at the end of April 1974.

51. *The effect of this on Colleges.*—The estimated number of students appearing at the S.S.C. examination under the old course is 3.00 lakhs. Assuming that 50 per cent of these will pass the S.S.C. examination and also taking into consideration the present trend of students going to Colleges it is estimated that in all 0.95 lakhs students will enroll themselves in Colleges in June 1975. The details of student enrolment faculty-wise in the three regions of Western Maharashtra, Vidarbha and Marathwada are shown separately in *Appendix I(a)*. The estimated number of students appearing at the Lower S.S.C. examination at the end of 10-year schooling in Vidarbha is 0.40 lakhs. Of these, if we assume 50 per cent will pass the examination, and also take the existing trend into account, 0.10 lakhs will seek entrance in the Colleges and Higher Secondary Schools in Vidarbha. In Marathwada 0.42 lakhs will appear at the S.S.C. examination in 1975. Of these 0.21 lakhs are estimated to come out successfully. Of these 0.10 lakhs will enter the Colleges and Higher Secondary Schools in Marathwada.

Since this is the usual number seeking admissions in colleges every year, during the year 1975-76 the colleges in Maharashtra will not be affected in any way. Even though the old course is discontinued in Schools from June 1975, students who have appeared and failed at previous examinations and external eligible students will have to be given two more chances to appear at the S.S.C. examination according to the old course. These students will appear at the examinations in October 1975 and in March 1976. Their number is estimated to be 1.90 lakhs. Of the 0.95 lakhs who will pass about 0.48 lakhs will seek admissions to colleges as usual. The details of such admissions according to the normal trend is given in *Appendix I(b)*. Since this number is about 50 per cent of the usual number admitted, the colleges in Maharashtra will have additional intake capacity available for students passing out of the New Course during 1976-77.

52. *The Impact of New Course.*—The students who were admitted to VIII Standard in June 1972 will appear at the S.S.C. examination in March 1975 according to the new ten-year course, for the first time. Their number is estimated at 3,41,548. Assuming the S.S.C. examination results are 50 per cent as at present it is estimated that 1,70,774 students will pass the examination. Normally, about 50 per cent of those who pass seek admissions to colleges. This would mean that 85,388 students will be seeking admissions for Higher Secondary course in June 1975.

53. *Channelising students into Institutions providing Higher Secondary Education Course.*—While planning the placement of students in Institutions providing Higher Secondary Education Course some basic assumptions have to be made. These are as follows:—

- (1) The number of students admitted in the XI Std. in a Higher Secondary School will not exceed 60 and that in the XI Std. located in a College will not exceed 80.
- (2) The existing facilities in colleges such as libraries, laboratories, staff, class-rooms, etc. are adequate and may need strengthening to some extent.
- (3) It is likely that the existing teaching load of staff will be increased from 18 periods a week to 28 periods a week, inclusive of tutorials (in Higher Secondary Classes).

Many colleges have accepted to take a few additional students during 1975-76 who will have passed S.S.C. examination according to new course in addition to their full normal load of students who will have passed S.S.C. examination according to old course. They have agreed to run classes in shift if need be. With the increase in teaching load of the staff and use of other facilities by shift, the absorption of about 20 per cent of the students (New Course) in colleges will involve perhaps very little cost by way of providing contingencies.

The remaining 80% of the total number seeking admission for Higher Secondary course will be admitted to Higher Secondary Schools. *Appendix II (A-D)* gives the estimated number of students appearing at the S.S.C. examination in March 1975 (New course), number of students passing the examination, number seeking admissions to Higher Secondary Course and their channelisation into Higher Secondary Schools or Higher Secondary classes located in colleges. This statement gives these figures regionwise and yearwise for all the five years of the Fifth Five Year Plan.

As mentioned in the previous para, it has been agreed by the Vice-Chancellors to increase the present load of college teachers from 15 lectures plus 4 tutorials or practicals per week to 18 lectures plus 10 tutorials or practicals per week. The work may be adjustable in that proportion to other work or responsibility given to the Heads of Departments, Lecturers or Professors. As regards Higher Secondary Schools, the load of work would be 30 periods per week. It is also a happy news that Vice-Chancellors have agreed to reduce the college vacation by one month. This would definitely help the upgraded load to be properly completed.

It is also assumed that there will have to be interchangeability of staff between the college classes and the Higher Secondary classes located in colleges on one side and the Higher Secondary class and the secondary classes in a Higher Secondary School on the other. This will have to be done on rationalised basis so that unutilised teaching capacity can be fully utilised, and it may be given to teachers to teach on both sides according to some proportion fixed for this.

The extra load of work, on account of increase in teaching hours would help this interchangeability as well as it will release some teaching capacity. This will enable institutions to provide for study reserves or leave reserves. This in turn will improve teaching capacity. The study courses are meant for teachers who are not adequately qualified and need inservice training in teaching techniques.

54. *Probable admissions of students facultywise.*—The present trend of admissions to various faculties shows that about 45% of the total number of students seeking admissions in colleges go in for Arts, about 30% for Commerce and 25% for Science. Assuming that same trend will exist during 1975-76 and thereafter during Fifth Five Year Plan period the number of divisions facultywise at 60 students in Higher Secondary Schools and at 80 students in Higher Secondary classes located in colleges have been calculated.

While calculating the number of units it is presumed that for Higher Secondary Classes located in colleges, each unit will consist of 2 divisions only; whereas for Higher Secondary Schools each unit will consist of three divisions. The object of ascertaining units is to facilitate the calculation of non-teaching staff which is based on each unit; while the object of ascertaining divisions is to facilitate the calculation of cost on laboratories, libraries etc. The teaching staff has been calculated on the total number of students facultywise based on the teacher pupil ratio of 1 : 30, for all faculties, *Appendix III (A-C)* gives the number of students in the three regions who would probably be admitted facultywise during the Plan period, number of divisions and number of units in Higher Secondary Schools and in Colleges in which Higher Secondary classes will be located. This is only an estimate and a probability.

55. *Cost Calculations :*

A. *Teaching staff—(a) Higher Secondary Classes located in Colleges.*—As has already been explained earlier, there is no need to increase the existing staff in the colleges. In the year 1975-76 there will be a small addition to the number of students in Western Maharashtra because in addition to the normal student population coming out of the old course, only 20 per cent of the total number of students coming out of the new course and going in for higher education are expected to join the colleges. This number is about 12,000 in Western Maharashtra and can easily be accommodated within the existing resources. Since the workload of teachers is expected to be increased to $1\frac{1}{2}$ times the present load, even with smaller divisions of 90 students, the existing staff, it is hoped, will suffice.

In Vidarbha, since there is already a 10-year Lower Secondary and 11-year Higher Secondary Course in existence, there will be no bulge in 1975 as in Western Maharashtra. The students coming out of the New Course can be very easily absorbed in the existing Higher Secondary classes in the Higher Secondary Schools and the first year class in colleges which of course will be renamed as XI Standard (Higher Secondary Class). No additional staff will be required, therefore, both in colleges as well as in Higher Secondary Schools during 1975-76, in Vidarbha.

From 1976 onwards, the students coming out of the old course will dwindle to a considerable extent during the second year. And then ultimately, in the third year the number will be negligible and therefore, the regular flow of students from the new course will absorb the existing staff, for some years to come.

A. *Teaching staff—(b) Higher Secondary Schools.*—Since the old course will cease to exist from 1975, the XI standard of the old pattern will also cease to exist in Western Maharashtra. The teachers teaching these classes will be in excess in schools which will be selected for being converted into Higher Secondary Schools. It is assumed that these selected schools will not be allowed to expand at the lower end by opening additional divisions either of V standard or of VIII standard, as soon as these schools are converted into Higher Secondary Schools. If this is done, the staff which would be rendered surplus on account of the abolition of old XI standard could be utilised for Higher Secondary XI standard if adequately qualified. Taking

this into consideration the cost of teachers required for XI standard of Higher Secondary course during 1975-76 has been worked out. The total number of teachers required during 1975-76 in Marathwada and Western Maharashtra is 1,803. The number of teachers who will be rendered surplus on account of closure of old XI standards would be 2,256. Hence the cost during the first year i.e. 1975-76 on account of the teachers has not been calculated. The scale of pay for teachers with a ~~second~~ ^{Second} class in M.A./M.Sc./M.Com. and a second class in B.Ed. B.T. is proposed as follows :—

220—10—260—EB—15—350—EB—15—410—EB—20—550—25—650.

It may be necessary to adjust the present salary of adequately qualified staff in this scale as per rules prescribed. For the additional teachers required, every year thereafter cost has been worked out separately.

In Vidarbha the existing Higher Secondary Course is an integrated course of three years and is spread over the three standards IX, X and XI. With the introduction of the new secondary course from 1972, the Higher Secondary standards will cease to exist progressively as follows :

Year	Old Lower Secondary Course	Old Higher Secondary Course	New Secondary Course
1971-72	.. VIII	IX	....
1972-73	.. IX	IX X	VIII
1973-74	.. X	— X XI	IX
1974-75	.. —	— — XI	X
1975-76	.. —	— — —	

Of the three classes viz. IX, X and XI of Higher Secondary old Course, the IX standard will be closed during 1973-74, X during 1974-75 and XI during 1975-76. All the teachers teaching these classes will be rendered surplus from 1973-74. The problem how to absorb them during 1973-74 (IX Standard teachers) and 1974-75 (X Std. Teachers) will have to be tackled. These teachers will also be found surplus during 1975-76 for XI standard even if it is taken for granted that there would be some expansion. Hence no teacher costs have been worked out for two years i.e. for XI Std. in 1975-76 and XII Std. in 1976-77. The following table explains the requirements of teachers in the three regions in Maharashtra and the existing teachers who could be utilised for manning the Higher Secondary course when rendered surplus on account of the closure of XI Std. old course in Western Maharashtra or IX, X and XI Standards of old Higher Secondary course in Vidarbha:—

TABLE 1
Teacher Requirements

Region	Teachers required	Teachers existing	Net teachers required	Increase over the previous year
Western Maharashtra	.. 1975-76 .. 1,577	1,846	Excess	....
	.. 1976-77 .. 3,537	1,846	1,691	1,691
	.. 1977-78 .. 4,170	1,846	2,324	633
	.. 1978-79 .. 4,280	1,846	2,434	110
Marathwada	.. 1975-76 .. 226	410	Excess	....
	.. 1976-77 .. 535	410	125	125
	.. 1977-78 .. 684	410	274	149
	.. 1978-79 .. 771	410	361	87
Vidarbha	.. 1975-76 .. 477	1,032	Excess	....
	.. 1976-77 .. 983	1,032	....	....
	.. 1977-78 .. 1,158	1,032	126	126
	.. 1978-79 .. 1,274	1,032	242	116
State	.. 1975-76 .. 2,280	3,288	Excess	....
	.. 1976-77 .. 5,055	3,288	1,167	1,767
	.. 1977-78 .. 6,012	3,288	2,724	957
	.. 1978-79 .. 6,325	3,288	3,037	313

An allowance of Rs. 50 p.m. is proposed to be given to the Senior most teacher of the Higher Secondary Classes in the Higher Secondary School for looking after administrative work and for supervising and guiding teachers of that section. Appendix IV gives the teachers' cost worked out on the basis explained above for all the 4 years of the Fifth-Five Year Plan. The total cost for the Plan period works out to Rs. 376.58 lakhs. No extra allowance is proposed to the Head of a Higher Secondary School in order to avoid duplication.

B. *Non-Teacher costs*—(a) *Higher Secondary Classes located in Colleges*.—The existing non-teaching staff is quite sufficient and needs no augmentation, because there would be some added pressure only for one year i.e. during 1975-76. After this the pressure of work would be normal.

B. *Non-Teacher costs*—(b) *Higher Secondary Schools*:

(1) *In Vidarbha*.—Some non-teaching staff exists for the 3-year old Higher Secondary course starting from IX Standard at present. This course will be replaced by a 2-year Higher Secondary course beginning from XI Standard from the year 1975 June. The existing non-teaching staff has, therefore, been proposed to be strengthened by giving an additional—

(1) Office Peon,

(2) Office-cum-Library Clerk.

This is because in the place of 3 classes of IX, X and XI there would probably be 4 or 6 division, two or three each of classes XI or XII, for the three faculties of Arts, Commerce and Science. Whenever it is found that the non-teaching staff is less than that proposed to be given to Higher Secondary Schools in Western Maharashtra and Marathwada, such ancillary staff, as may be considered necessary, may also be sanctioned to Higher Secondary Schools in Vidarbha.

(2) *In Western Maharashtra and Marathwada*.—Since Higher Secondary Schools will be newly started in these regions, the following non-teaching staff has, therefore, been proposed to be provided for Higher Secondary Schools. This is the maximum staff available for each Higher Secondary School but while granting permission to appoint this staff, the posts rendered surplus on account of the closure of Class XI (Old course) should be taken into account and the sanction to be given would be reduced to that extent to effect Economy:—

1. Office-cum-Library Clerk	..	..	1
2. Library attendant	..	..	1
3. Laboratory assistants	..	..	3
4. Laboratory attendants	..	..	3

The cost on account of the non-teaching staff as explained above works out to Rs. 546.46 lakhs. The detailed allocations year-wise are given in Appendix V.

C. *Non-Recurring cost on Laboratory and Library equipment*—(a) *Colleges*.—Since the colleges are already having well-equipped laboratories and good libraries it has been presumed that only a small amount of Rs. 5,000 per unit (one unit consists of 2 divisions) would be sufficient for additional student population and additions to the library every year. Since this has to be provided in advance before the class is in position, cost on this account has been planned a year in advance. The following table gives the yearly cost during the Fifth Five-Year Plan period:—

TABLE 2

Cost on account of non-recurring contingencies for Higher Secondary classes located in Colleges.

Norm : Rs. 5,000 per unit for XI and XII standards separately.

(Amount in lakhs of Rupees.)

Year	Units	XI Standard	XII Standard	Total
1974-75	....	5.60	....	5.60
1975-76	112	6.45	5.60	12.05
1976-77	129	2.25	6.45	8.70
1977-78	45	0.75	2.25	3.00
1978-79	15	0.75	0.75	1.50
	301	15.80	15.05	30.85

(b) *Higher Secondary Schools*.—(i) *In Vidarbha*.—Higher Secondary Schools in Vidarbha have well-equipped laboratories and as such will not require much expansion. Non-recurring cost for this purpose has not, therefore, been worked out. However, when a need for expansion of these laboratories arises, Government may consider each case on merits. For the two laboratories viz. Psychological laboratory for Arts faculty and Geographical laboratory for Commerce faculty an amount of Rs. 5,000 per laboratory during the first year i.e. the year of establishing of these laboratories has been taken into account while calculating the cost as indicated in the following table.

TABLE 3

Cost on account of non-recurring contingencies for laboratories in Higher Secondary Schools in Vidarbha.

Norm : Science Laboratory—Nil.

(Amount in lakhs of Rupees.)

Year	No of Laboratories each year	XI Std.
1974-75	....	6.00
1975-76	120	6.40
1976-77	128	2.10
1977-78	42	1.50
1978-79	30	1.50
Total	320	17.50

The furniture for the Higher Secondary classes need not be provided for as there would be enough left when the Higher Secondary classes IX, X and XI under old course would progressively get closed.

(ii) *In Western Maharashtra and Marathwada.*—Till now in Secondary Schools in the above two regions, only one laboratory per school has been provided. These laboratories are being used for all the three disciplines and are not adequately equipped. Taking into account the existence of one laboratory, it would be necessary to establish at least 2 more laboratories in each Higher Secondary School having Science faculty so that ultimately there will be one independent laboratory for each of the three disciplines viz. Physics, Chemistry and Biology. The number of such additional laboratories has been worked out and given in the following table. The cost is calculated at Rs. 45,000 for each laboratory, Rs. 37,500 during the first year of establishment to be augmented by Rs. 7,500 during the second year. This cost is shown in the table below :

TABLE 4

Cost on account of non-recurring contingencies to additional Science laboratories to be established in Higher Secondary Schools in Western Maharashtra and Marathwada.

Norm : Non-recurring contingencies to

(a) Existing Laboratories	..	..	..	Nil.
(b) New Laboratories	..	..	..	Rs. 45,000

(Amount in lakhs of Rupees.)

Year	No of Science Labs.	I-year Rs. 37,500	II-year Rs.7,500	Total
1974-75	....	57.00	....	57.00
1975-76	152	71.25	11.40	82.65
1976-77	190	24.38	14.25	38.63
1977-78	65	6.38	4.88	11.26
1978-79	17	6.38	1.28	7.66
Total	424	165.39	31.81	197.20

It would be necessary to establish two laboratories for Arts and Commerce faculties—Psychology Laboratory and Geography Laboratory. The non-recurring cost is calculated at Rs. 5,000 per Laboratory during the year of its establishment as shown in the following table. It has been presumed that a Higher Secondary School may have 2 Arts or 2 Commerce divisions. Therefore, the laboratories calculated are 2/3 of the total number of divisions.

TABLE 5

Cost on account of non-recurring contingencies to Psychological and Geographical Laboratories to be established in Higher Secondary Schools in Western Maharashtra and Marathwada.

Norm : Rs. 5,000 per Lab.

Year	No. of Laboratories	1 year Rs. in lakhs.
1974-75	.....	22.60
1975-76	452	28.35
1976-77	567	9.85
1977-78	197	2.45
1978-79	49	2.45
Total	1265	65.70

It would also be necessary to provide furniture to students and teachers of an additional standard *i.e.* XII standard which would be opened in Higher Secondary Schools during 1976-77. For the XI Std. Higher Secondary Class, the furniture rendered surplus on account of the closure of XI Std. (old course) can profitably be used. The non-recurring cost on this account has been worked out at Rs. 8,000, per division of Arts, Science and Commerce faculty. This cost is shown year-wise in the following table.

TABLE NO. 6

Cost on account of non-recurring contingencies for furniture for XII standard in Higher Secondary Schools in all Regions.

Year	No of divisions	Cost Rs. in lakhs
1974-75	.....	.....
1975-76	1143	91.44
1976-77	1389	111.12
1977-78	479	38.32
1978-79	158	12.64
Total	3169	253.52

The total cost on account of non-recurring contingencies for the whole State for colleges and Higher Secondary Schools during the plan period would, therefore, be Rs. 564.77 lakhs.

D. Recurring Contingencies (a)—Colleges.—In the case of Higher Secondary Classes located in colleges recurring contingencies have been worked out at Rs. 3,000 per unit. The cost for the fifth Five Year Plan period works out to Rs. 28.20 lakhs. Table No. 7 below gives the cost on this account year-wise for the Plan period.

(b) Higher Secondary Schools.—In the case of Higher Secondary Schools located in the three regions of the State recurring contingencies have been calculated at Rs. 2,000 per division for all the three faculties. The total cost for 3,169 divisions which are estimated to be opened during the plan period, works out to Rs. 197.10 lakhs.

The total cost on account of recurring contingencies therefore comes to Rs. 225.30. Table No. 7 below gives the details year-wise.

TABLE NO. 7

Cost on account of recurring contingencies to Higher Secondary Classes located in colleges and to Higher Secondary Schools.

Year	Colleges		Higher Secondary Schools		Total cost
	Cumulative units	Cost	Divisions cumulative	Cost	
1974-75
1975-76	..	112	1143	22.86	26.22
1976-77	..	241	2532	50.64	57.87
1977-78	..	286	3011	60.22	68.80
1978-79	..	301	3169	63.38	72.41
Total	..	28.20	197.10	225.30	225.30

56. *Total Revenue Cost.*—The total Revenue cost on account of introduction of the Higher Secondary Course (both in Schools and Colleges) from 1975 for the Plan period thus comes to Rs. 1,713·11 lakhs as indicated below :—

TABLE NO. 8

Total additional revenue cost on account of introduction of the Higher Secondary Course (in secondary schools and colleges) for the Plan period, to be included in the Plan.
(Rs. in lakhs)

Items	1974-75	1975-76	1976-77	1977-78	1978-79	Total
A-Teaching Staff Emoluments	.. ..	1·23	67·99	137·78	169·58	376·58
B-Non-Teachers Emoluments	.. ..	46·51	127·75	177·40	194·80	546·46
C-Non-recurring contingencies	.. 91·20	220·89	170·40	56·53	25·75	564·77
D-Recurring contingencies	.. ..	26·22	57·87	68·80	72·41	225·30
Total	.. 91·20	294·85	424·01	440·51	462·54	1713·11

Loss to be made good to University.—The pre-degree and Intermediate or First Year Graduate Examinations which are at present conducted by the Universities would be taken over by the State Board of School Education. The number of students appearing at these examinations is very large. Consequently the examination fees collected by Universities and other fees such as migration fees etc. is also very large. On the closure of these classes and introduction of Higher Secondary Classes in their stead, the Universities will be losing a bulk of their income which in fact helps them to meet the loss in other graduate and post graduate departments. This loss will have to be made good to the Universities. Even though the cost of conducting these 2 examinations will be saved to some extent, it is proposed to provide a total amount of Rs. 36·00 lakhs for payment to all the Universities together during Fifth Plan. The actual assistance to the Universities on this account will have to be determined on the basis of actual loss of each University if any, for a particular year.

57. *Establishment of the School Education Board for the State.*—With the introduction of a 10 plus 2 plus 3 pattern, it would be quite necessary to establish a separate body for planning the syllabus, preparing and producing text-books, organising examinations and for laying down, the norms and registering Higher Secondary Schools etc. The present State Board which is going to be reconstituted into the Maharashtra State Board of School Education will have a special Department for looking after this aspect of Education. The total cost on account of the strengthening of staff and providing additional accommodation and furniture etc. works out to Rs. 29·66 lakhs. This has been worked out in detail for each Year of the Fifth Five Year Plan and given in Appendix V (A). Since the first H.S.S. Examination will take place in March 1976 and since classes will start during 1975-76, arrangements to establish this section of the Board will have to be made one year in advance. Hence expenditure for finalising all previous arrangements has been booked for the year 1974-75.

58. *Income from fees.*—The rates of fees for the first 2 years in colleges under the various Universities in the State vary from Rs. 160 per annum (Nagpur University) to Rs. 330 (Bombay University). Details of fees charged for the 3 faculties, viz. Arts, Commerce and Science by the various Universities in the State are given in Appendix VI. The Committee has recommended that there should be uniform rates of fees for higher secondary standards in the entire State. On the basis of the recommendation of the Committee, the rates of fees charged for Arts and Commerce in Std. XI would be Rs. 140 per annum and Rs. 185 for Std. XII per annum. As regards Science, the fees charged would be Rs. 170 per annum in Std. XI and Rs. 225 per annum in Std. XII.

Assuming that 66 per cent of the pupils studying in the Higher Secondary class would be fee paying and remaining number will be E.B.C. holders, it is estimated that an amount of Rs. 878·33 lacs will be received during the Plan period by way of fees. The details of the fee incomes are given in Appendix VII.

59. *Cost to Government.*—It will be seen that the total revenue cost on account of introduction of higher secondary classes is Rs. 2,409·31 lakhs. After deducting the fee income of Rs. 878·33 lakhs the cost to Government would be approximately Rs. 1,530·98 lakhs. The income from fees for technical courses recommended to be introduced is estimated at 10 per cent of the total income from fees for General Education. The estimated income would be Rs. 79·85 lakhs. Deducting this from the total revenue cost of Rs. 2,409·31 lakhs the approximate cost to Government on account of introduction of higher secondary classes and technical courses would be of the order of Rs. 1530·98 lakhs. This cost to Government is calculated on the basis of previous assumptions made or accepted by Government and that for the construction to be undertaken by various institutions, loans would be made available by financing agencies such as Life Insurance Corporation of India or Nationalised Banks or Scheduled Banks or co-operative Banks on Government guarantee. The abstract at the end shows the gross item-wise cost, fee income and net cost on account of the introduction of higher secondary courses. Appendix XIII gives the details. It is expected that the building loans to the educational institutions will be written-off by them by paying them in 10 equal instalments of principal and interest within the next 10 years from the grants provided by Government for repayment. No grant will be available on account of rent to these institutions for the first 10 years or thereafter because of the proposed arrangement.

60. *Cost on account of expansion of Technical High School.*—In addition to this, the cost on account of expansion and re-construction of Technical Higher Secondary Schools, works out to Rs. 430.54 lakhs as shown in Appendix XII.

In technical Schools 42 divisions are recommended for being upgraded into XI Standard of Higher Secondary Technical Class during the first year and an equal number of Std. XII class during the next year. The maximum strength of students in each class would be 60. This means that there would be an intake capacity of 2520 students in the XI standard and an equal number in the XII Standard. It may be mentioned here that Technical Higher Secondary Schools will have all the science staff, libraries and equipment and could teach Higher Secondary classes in science courses for Std. XI and Std. XII without much additional cost except contingencies.

The cost on account of emoluments to staff works out to Rs. 154.20 lakhs. The emoluments are worked out on the basis as indicated in Appendices XIV to XVII

The cost on account of non-recurring contingencies during the Five Years works out to Rs. 185.25 on the bases as shown in Appendices XX—XXI.

Provision has been made to enable the institutions which would borrow loan for construction of buildings, to pay interest on the loan at 10 per cent, along-with recurring contingencies the amount works out to Rs. 91.09 lakhs, of which Rs. 23.78 lakhs are for recurring contingencies and Rs. 67.31 for interest on loans.

61. *Building Cost—(a) Colleges.*—As far as possible, existing facilities in respect of buildings will have to be used to the maximum. The introduction of the new pattern and of Higher Secondary Course need not assume a massive project of construction of buildings. Even then, the minimum most essential building requirements will have to be estimated.

In respect of colleges in Vidarbha and Marathwada since there is no additional load which these institutions will undertake, the following additional building construction would be necessary to provide for—

(a) *Tutorial Rooms.*—Each College has sufficient accommodation for lecturing purposes. But since each class will have to be split into 2 tutorial groups, at least one tutorial room of $24' \times 15' = 360$ sq. ft. dimension at Rs. 35 per sq. ft. of cost of construction will have to be provided for during 1975-76 and one additional room during 1976-77. The total cost on account of construction will be Rs. 77.73 lakhs during the Plan.

(b) *Laboratories.*—Since the Colleges have already well-equipped Laboratories, no cost for construction of Science Laboratories, it is assumed, should be necessary.

(b) *Higher Secondary Schools in Vidarbha.*—In Vidarbha, the Higher Secondary Education is being imparted from IX Std. upto XI standard. And the Higher Secondary Schools are equipped with separate laboratories for the three disciplines viz. Physics, Chemistry and Biology.

Provision for the construction of 2 laboratories one for Psychology and the other for Geography has to be made at Rs. 26,250 per Laboratory. Assuming that there may be either 2 Arts or 2 Commerce divisions in some Higher Secondary Schools, the total number of laboratories calculated are 2/3 of the total number of Arts and Commerce divisions. The total cost is calculated on the following basis :

(a) Number of laboratories would be 2/3 of total number of divisions of Arts and Commerce.

(b) Area of each laboratory would be 750 sq. ft. ($25' \times 30'$).

(c) Cost of construction at Rs. 35 per sq. ft. The total cost works out to Rs. 92.15 lakhs for the Fifth Five-Year Plan period.

As regards class-rooms, a class-room for XI Std. is already available in Higher Secondary Schools in Vidarbha. Provision will have to be made for one more class-room to accommodate 55 students of XII Std. during 1976-77. In addition to this 2 tutorial rooms, one during the I year i. e. during 1975-76 and the other during the II year will have to be constructed. The class-room would be of 440 sq. ft. area and the tutorial room of 280 sq. ft. area. The total cost of construction of additional class-rooms and tutorial rooms would be Rs. 76.86 lakhs during the Fifth Five-Year Plan. Since these facilities have to be in existence at the beginning of the year, provision for their construction will have to be made one year in advance. The details of the cost year wise for construction of Laboratories, class-rooms and tutorial rooms in Vidarbha area are given in Appendix VIII (A and B).

(c) *Higher Secondary Schools in Western Maharashtra and Marathwada.*—The same assumption that in some institutions, there will be two divisions of Science or Arts or Commerce is made. Hence the number of laboratories required would be 2/3 of the total number of divisions for the three disciplines. In Western Maharashtra and Marathwada nucleus science laboratories exist in Secondary Schools. However, these laboratories will be required for classes VIII, IX and X. Those which used to accommodate (old) XI Std. would not be used for additional divisions at the lower level on account of natural growth. No expansion of VIII Std. or V to VII Std. divisions in Higher Secondary Schools is expected. The cost works out to Rs. 669.91 lakhs during the Fifth Five-Year Plan period. The details year-wise are given in Appendix X.

Thus the total building cost for the whole State works out to Rs. 1496.25 lakhs. Of this, during 1974-75 the first year of the Fifth Plan an amount of Rs. 311.82 lakhs would be required. It is presumed that all this amount would be made available by Institutions by way of loans from Life Insurance Corporation or State Schools/Colleges Development Financial Corporation or Co-operative or Nationalised Banks or by Government at reasonable rate of interest. Hence there would be no expenditure to Government on account of grant-in-aid on this activity. Government would give necessary guarantee. However, for upgrading Government Institutions, capital cost will be provided in the Plan.

The cost on account of construction of building class-rooms, work-shops for technical Higher Secondary Schools would come to Rs. 284.50 lakhs as shown in Appendix XII. This will also have to be met on 100 per cent basis in case of Government Institutions and by making loans, at reasonable rate of interest, available to non-Government Technical Higher Secondary Schools from sources mentioned in the preceding para.

APPENDIX I (a)

Estimates of students appearing at the S. S. C. Examination in *March 1975* according to the *old course* and their placement faculty-wise.

	Western Maharashtra	Marathwada	Vidarbha
No. appearing	2.98	0.42	0.40
No. passing 50 per cent	1.49	0.21	0.20
No. seeking 50 per cent admission to Colleges	0.75	0.10	0.10
No. going in for—			
Arts 45 per cent	0.34	0.04	0.04
Science 25 per cent	0.19	0.03	0.03
Commerce 30 per cent	0.22	0.03	0.03

APPENDIX I (b)

Estimates of students who will pass S. S. C. Examination in *October 1975 and in March 1976* together according to the *old course* and their placement faculty-wise.

	Western Maharashtra	Maharashtra	Vidarbha
No. appearing	1.38	0.20	0.32
No. passing	0.69	0.10	0.16
No. seeking admission to Colleges	0.35	0.05	0.08
No. going in for—			
Arts	0.16	0.02	0.04
Science	0.09	0.01	0.02
Commerce	0.10	0.02	0.02

APPENDIX II-A

Estimates of students appearing at the S. S. C. Examination (*New Course*) students passing the Examination and seeking admission to Higher Secondary Course.

	1974-75	1975-76	1976-77	1977-78	1978-79
<i>Western Maharashtra</i>					
1. Students appearing at the S. S. C. examination (<i>New Course</i>)	2,36,328	3,53,251	3,60,523	3,71,739	3,82,891
2. Students passing the examination ..	1,18,164	1,76,626	1,80,262	1,85,869	1,91,446
3. Students going in for Higher Secondary Education Course.					
XI 50 per cent of the above ..		59,082	88,313	90,131	92,935
XII 75 per cent of the XI ..			44,312	66,235	67,598
4. Students going in for Higher Secondary Education Course—					
(a) In Higher Secondary Classes in Colleges 20 per cent.					
XI		11,816	17,663	18,026	18,587
XII			8,862	13,247	13,520
(b) In Higher Secondary Schools—					
XI		47,266	70,650	72,105	74,348
XII			35,450	52,988	54,078

APPENDIX II-B

	1974-75	1975-76	1976-77	1977-78	1978-79
<i>Marathwada</i>					
1. Students appearing at the S. S. C. Examination (New Course.)	33,778	54,920	61,526	69,582	77,932
2. Students passing the examination 50 per cent of the above.	16,889	27,460	30,763	34,791	38,966
3. Students going in for Higher Secondary Education Course—					
XI at 50 per cent of the above ..	....	8,445	18,730	15,382	17,396
XII at 75 per cent of the XI ..	....	....	6,384	10,208	11,537
4. Students going in for Higher Secondary Education Course—					
(a) In Higher Secondary Classes in Colleges 20 per cent.					
XI .. .. .	....	1,689	2,746	3,076	3,479
XII .. .. .	....	....	1,267	2,060	2,307
(b) In Higher Secondary Schools 80 per cent.					
XI .. .. .	....	6,884	10,984	12,306	13,917
XII .. .. .	....	....	5,067	8,238	9,230

APPENDIX II-C

	1974-75	1975-76	1976-77	1977-78	1978-79
<i>Vidarbha</i>					
1. Students appearing at the S. S. C. Examination (New Course).	71,442	93,898	1,08,288	1,13,617	1,24,979
2. Students passing the Examination 50 per cent of the above.	35,721	46,949	51,644	56,809	62,490
3. Students going in for Higher Secondary Education Course—					
XI at 50 per cent of the above ..	....	17,861	23,475	25,822	28,405
XII at 75 per cent of the XI ..	....	....	13,396	17,606	19,367
4. Students going in for Higher Secondary Education Course—					
(a) In higher Secondary Classes in Colleges 20 per cent.					
XI .. .. .	....	3,572	4,695	5,164	5,681
XII .. .. .	....	....	2,679	3,521	3,873
(b) In Higher Secondary Schools 80 per cent.					
XI .. .. .	....	14,289	18,780	20,658	22,724
XII .. .. .	....	....	10,717	14,085	15,494

APPENDIX II-D

	1974-75	1975-76	1976-77	1977-78	1978-79
<i>Maharashtra State</i>					
1. Students appearing at the S. S. C. Examination (New Course).	3,41,458	5,02,069	5,25,337	5,54,938	5,85,772
2. Students passing the Examination 50 per cent of the above.	1,70,729	2,51,035	2,62,669	2,77,469	2,92,886
3. Students going in for Higher Secondary Education Course—					
XI at 50 per cent of the above ..	....	85,365	1,25,518	1,31,335	1,38,735
XII at 75 per cent of the XI ..	....	....	64,024	94,139	98,502
4. Students going in for Higher Secondary Education Course—					
(a) In Higher Secondary Classes in Colleges 20 per cent.					
XI .. .. .	....	17,073	25,104	26,267	27,747
XII .. .. .	....	....	12,805	18,828	19,700
(b) In Higher Secondary Schools 80 per cent.					
XI .. .. .	....	68,292	1,00,414	1,05,068	1,10,988
XII .. .. .	....	....	51,219	75,311	78,802

APPENDIX III-(A)

Statement showing probable number of students facultywise, number of divisions and units in the three regions, during each year of the V-Plan.

Western Maharashtra

	1975-76		1976-77		1977-78		1978-79	
	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools
1	2	3	4	5	6	7	8	9
<i>Arts—</i>								
45 per cent Students	5,317	21,270	11,936	47,745	14,073	56,292	14,448	57,792
Divisions	67	355	150	796	176	939	181	964
Units	34	119	75	266	88	313	91	322
Teachers required	177	709	398	1,591	469	1,876	482	1,926
<i>Note.—College division of 80, School division of 60, College unit of 2 for Arts, Science and Commerce Divisions. School unit of 3; Teacher-Students Ratio 1 : 30 for Arts, Science and Commerce.</i>								
<i>Commerce—</i>								
30 per cent Students	3,545	14,180	7,958	31,830	9,382	37,528	9,632	38,528
Divisions	45	237	100	531	118	626	121	643
Units	23	79	50	177	59	209	61	215
Teachers required	118	473	265	1,061	318	1,251	321	1,284
<i>Science—</i>								
25 per cent Students	2,954	11,817	6,631	35,525	7,818	31,273	8,027	32,107
Divisions	37	197	83	443	98	522	101	536
Units	19	66	42	148	49	174	51	179
Teachers required	99	395	221	885	261	1,043	266	1,070
<i>Total—</i>								
Students	11,816	47,266	26,525	1,06,100	81,273	1,25,093	32,107	1,28,426
Divisions	149	789	333	1,770	392	2,087	403	2,173
Units	76	263	167	591	196	696	203	716
Teachers required	394	1,577	884	3,537	1,043	4,170	1,069	4,280

APPENDIX III-B

Marathwada

	1975-76		1976-77		1977-78		1978-79	
	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools
1	2	3	4	5	6	7	8	9
<i>Arts—</i>								
45 Per cent Students	760	3,040	1,806	7,223	2,811	9,245	2,604	10,416
Divisions	10	57	23	121	29	155	33	174
Units	5	17	12	41	15	52	17	58
Teachers required	25	101	60	241	77	308	87	347
<i>Commerce—</i>								
30 per cent Students	507	2,027	1,204	4,815	1,541	6,163	1,735	6,944
Divisions	7	34	16	81	20	103	22	116
Units	4	12	8	27	10	35	11	39
Teachers required	17	68	40	160	51	205	58	231
<i>Science—</i>								
25 per cent Students	422	1,689	1,003	4,013	1,284	5,136	1,447	5,787
Divisions	6	29	13	67	17	86	19	97
Units	3	10	7	23	9	29	10	33
Teachers required	15	57	34	134	48	171	49	193
<i>Total—</i>								
Students	1,689	6,756	4,013	16,051	5,136	20,544	5,786	28,147
Divisions	23	114	52	269	66	344	74	387
Units	12	39	27	91	37	116	38	130
Teachers required	57	226	134	535	171	684	194	771

APPENDIX III-C

VIDARBHA

	1975-76		1976-77		1977-78		1978-79	
	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools	In Colleges	In Higher Secondary Schools
1	2	3	4	5	6	7	8	9
Arts—								
45 per cent Students	1,607	6,430	3,318	13,274	3,908	15,634	4,299	17,198
Divisions	21	108	42	222	49	261	54	287
Units	11	36	21	74	25	87	27	96
Teachers required	54	214	111	442	130	521	143	573
Commerce—								
30 per cent Students	1,072	4,287	2,212	8,849	2,606	10,423	2,866	11,465
Divisions	14	72	28	148	33	174	36	192
Units	7	24	14	50	17	58	18	64
Teachers required	36	143	74	295	87	347	96	382
Science—								
25 per cent Students	893	3,572	1,844	7,374	2,171	8,686	2,389	9,555
Divisions	12	60	24	123	28	145	30	160
Units	6	20	12	41	14	49	15	54
Teachers required	30	120	62	246	73	290	80	319
Total—								
Students	3,572	14,289	7,374	29,497	8,685	34,743	9,554	38,218
Divisions	47	240	94	493	110	580	120	639
Units	24	80	47	165	56	194	60	214
Teachers required	122	477	247	983	290	1,158	819	1,274

APPENDIX IV

Teacher cost for the State

(Rs. in lakhs.)

Year of the Plan		II	III	IV	V	
Year	No. of Teachers	1975-76	1976-77	1977-78	1978-79	Total
1975-76
1976-77	..	1,767	65.03	98.60	100.37	264.00
1977-78	..	957	..	35.22	53.40	88.62
1978-79	..	313	..	..	11.52	11.52
Total	..	3,037	..	65.03	133.82	165.29
Additional allowance at Rs. 50 per month to the Head of the Section.	1.23	2.96	3.96	4.29
Grand Total	1.23	67.99	137.78	169.58

APPENDIX V

Statement showing cost on account of non-teaching staff to be appointed in Higher Secondary Schools.

(Rs. in lakhs.)

Year	Additional units	1975-76	1976-77	1977-78	1978-79	Total
(A) Western Maharashtra and Marathwada—						
1975-76	..	303	43.63	65.75	66.36	67.27
1976-77	..	379	..	54.58	82.24	83.00
1977-78	..	130	..	..	18.72	28.21
1978-79	..	34	..	..	..	4.90
Total (A)	..	846	43.63	120.33	167.32	183.38
(B) Vidarbha—						
1975-76	..	80	2.88	4.36	4.40	4.44
1976-77	..	85	..	3.06	4.63	4.68
1977-78	..	29	..	..	1.05	1.58
1978-79	..	20	..	..	..	0.72
Total (B)	..	214	2.88	7.42	10.08	11.42
Grand Total—State	46.51	127.75	177.40	194.80

APPENDIX V (A)

Cost on account of the establishment of the Department of Higher Secondary Education in the Maharashtra State Board of School Education

	1974-75	1975-76	1976-77	1977-78	1978-79	Total
Staff	1.60	2.43	2.49	2.54	2.60	11.66
Non-recurring Contingency and furniture.	1.50	0.50	0.50	0.25	0.25	3.00
Building cost	1.00	5.00	5.00	4.00	....	15.00
Total ..	4.10	7.93	7.99	6.79	2.85	29.66

APPENDIX VI

Fees charged for the H.S.C. Class in Vidarbha Region and for the P.D./P.U.C./F.Y. Classes for the three faculties by various Universities

(Rates per annum)

University	Arts		Commerce		Science	
	Rs.		Rs.		Rs.	
Bombay	330	..	350	..	390	..
Poona	240	..	240	..	310	..
Shivaji	260	..	260	..	320	..
Marathwada	250	..	250	..	290	..
Nagpur	160	..	160	..	235	..

H. S. C. Class in Vidarbha Region—Rs. 132 per annum.

Fees to be charged for Higher Secondary Classes uniformly throughout the State—

	Arts and Commerce		Science	
	Rs.		Rs.	
XI	140	..	170	..
XII	185	..	225	..

APPENDIX VII

Income from fees from pupils taking General Education in Higher Secondary Schools

(Rs. in lakhs)

Year	I-year				II-year				Total amount	Income from fees for Technical Courses	Grand Total
	Rs. 140 for Arts and Commerce		Rs. 170 for Science		Rs. 185 for Arts and Commerce		Rs. 225 for Science				
	No.	Amount	No.	Amount	No.	Amount	No.	Amount			
1	2	3	4	5	6	7	8	9	10	11	12
1975-76	42,217	89.10	14,089	23.95	..	..	..	..	83.05	8.31	91.36
1976-77	62,121	86.97	20,710	35.21	31,701	58.65	10,567	23.78	204.61	20.46	225.07
1977-78	65,011	91.02	21,670	36.84	46,599	86.21	15,523	34.93	249.00	24.90	273.90
1978-79	68,674	96.14	22,891	38.91	48,758	90.20	16,253	36.57	261.82	26.18	288.00
									798.48	79.85	878.33

Note.—(1) Assumption made is that only 66 per cent of the pupils will be fee-paying.

(2) Income from fees for Technical courses has been estimated @ 10 per cent of income from fees for General Education.

APPENDIX-VIII (A)

Construction cost of Laboratories in Vidarbha

Norms : No. of Laboratories would be 2/3 the total No. of divisions

Area of each Laboratory: 750 sq. ft. Cost of construction : Rs. 35 per sq. ft.

Year	No. of divisions, Arts and Commerce	No. of Laboratories (Rs. 26,250).	Cost of construction (In lakhs)
1974-75	31.50
1975-76	180	33.34
1976-77	190	11.55
1977-78	65	7.88
1978-79	44	7.88
			92.15

APPENDIX VIII (B)

Construction cost of Class-rooms and tutorial rooms in Vidarbha

Norms.—Class room 440 sq. ft, Tutorial room 280 sq. ft. cost of construction Rs. 35 per sq. ft.
1 Class-room and 2 tutorial rooms per unit (of 3 divisions).

(Rs. in lakhs)

Year	Unit	I Year (XI Std.) Tutorial Room Rs. 9,800	II Year (XII Std.) Tutorial Class-room Rs. 25,200	Total
1974-75	....	7.84	....	7.84
1975-76	80	8.33	20.16	28.49
1976-77	85	2.84	21.42	24.26
1977-78	29	1.96	7.31	9.27
1978-79	20	1.96	5.04	7.00
	214	22.93	53.93	76.86

APPENDIX IX

Construction cost of Laboratories in Western Maharashtra and Marathwada

Norms.—No. of Laboratories will be 2/3 the No. of divisions for each discipline.
The area of Arts and Commerce Laboratory is 750 sq. ft.
The area of Science Laboratory is 1500 sq. ft.
The cost of construction Rs. 35 per sq. ft.

(Rs. in lakhs)

Year	Total No. of Divisions	No. of Laboratories	Cost
1974-75	A plus C Sc.	.... ....	198.98
1975-76	A plus C Sc.	677 226	250.16
1976-77	A plus C Sc.	852 284	86.36
1977-78	A plus C Sc.	294 98	22.05
1978-79	A plus C Sc.	74 25	22.05
			579.60

APPENDIX X

Construction cost of Class-rooms and tutorial rooms in Western Maharashtra and Marathwada

Norms.—Two additional class rooms per unit during 1976-77 for Std. XII area 560 sq. ft. each. Two tutorial rooms per Unit during 1975-76 and two during 1976-77, area 280 sq. ft. each, cost of construction Rs. 35 per sq. ft.

(Rs. in lakhs)

Year	Units	I Year Rs. 19,600 each Tutorial room	II Year Rs. 58,800 each Class-room and Tutorial room	Total
1974-75	....	59.39	....	59.39
1975-76	303	74.28	178.16	252.44
1976-77	379	25.48	222.85	248.33
1977-78	130	6.66	76.44	83.10
1978-79	34	6.66	19.99	26.65
	846	172.47	497.44	669.91

APPENDIX XI

Cost on Higher Secondary Education

ABSTRACT
(A Cost in School)

(Rs. in lakhs)

Item	1974-75	1975-76	1976-77	1977-78	1978-79	Total (1974-79)
1. Emoluments of Teachers	....	1.23	67.99	137.78	169.58	376.58
2. Emoluments of non-teaching staff.	....	46.51	127.75	177.40	194.80	546.46
3. Recurring contingencies.	....	22.86	50.64	60.22	63.38	197.10
4. Non-recurring contingency.	85.60	208.84	161.70	53.53	24.25	533.92
Total Revenue Expenditure.	85.60	279.44	408.08	428.93	452.01	1,654.06
5. Cost on construction of building. (Capital Expenditure)	297.71	564.43	370.50	122.30	63.58	1,418.52
Total—Rev. and Cap. (A) ..	383.31	843.87	778.58	551.23	515.59	3,072.58

Note.—The interest to be paid on the loan amount borrowed for the construction of buildings, Laboratories etc. would be at 10 per cent and has not been included in the above amount.

APPENDIX XI—contd.

(B) Cost in Colleges

Item	1974-75	1975-76	1976-77	1977-78	1978-79	Total (1974-79)
1. Recurring contingency ..	....	3.36	7.23	8.58	9.03	28.20
2. Non-recurring contingency.	5.60	12.05	8.70	3.00	1.50	30.85
Total Rev. Expenditure ..	5.60	15.41	15.93	11.58	10.53	59.05
3. Cost on construction of building (Capital).	14.11	30.36	21.92	7.56	3.78	77.73
Total Rev. and Cap. (B) ..	19.71	45.77	37.85	19.14	14.31	136.78

APPENDIX XII

Cost of Higher Secondary Technical Education

(Rs. in lakhs)

Item	1974-75	1975-76	1976-77	1977-78	1978-79	Total (1974-79)
1. Emoluments of teachers	....	8.09	14.24	15.69	17.23	55.25
2. Emoluments of non-teaching staff.	....	21.45	23.45	25.74	28.31	98.95
3. Recurring contingencies plus interest on building loan at 10%.	....	3.75 } 11.47 }	6.40 } 15.48 }	6.67 } 18.05 }	6.96 } 22.31 }	23.78 } 67.31 }
4. Non-recurring contingencies.	75.00	25.75	16.75	27.75	40.00	185.25
Total—Revenue expenditure ..	75.00	70.51	76.32	93.90	114.81	430.54
5. Cost of construction of building (Capital expenditure).	114.71	40.10	25.69	42.59	61.41	284.50
	114.71	40.10	25.69	42.59	61.41	284.50
Total Revenue and Capital expenditure.	189.71	110.61	102.01	136.49	176.22	715.04

APPENDIX XIII

(Rs. in lakhs)

	1974-75	1975-76	1976-77	1977-78	1978-79	Total
I. Revenue cost in Schools and Colleges including Technical Institutes.	166.20	365.36	500.33	534.41	577.35	2,143.65
II. Establishment of Board of School Education.	4.10	7.93	7.99	6.79	2.85	29.66
III. Expenditure on reimbursement of the losses to Universities.	....	....	8.00	14.00	14.00	36.00
IV. Expenditure on account of Vocational Courses.	40.00	40.00	40.00	40.00	40.00	200.00
Grand Total of I, II, III & IV.	210.30	413.29	556.32	595.20	634.20	2,409.31
Income from Fee Receipts —	....	91.36	225.07	273.90	288.00	878.33
Net cost	210.30	321.93	331.25	321.30	346.20	1,530.98

APPENDIX XIV

No. of students at S. S. C. in 1974-75 passing @ 50 per cent.	6000 estimated 3000 going to XI Tech. 100 per cent.
40 students per division—75 divisions.	
3000 in 1974-75 + 10 per cent each year	2000 in 1975-76 in Std. XII @ 2/3 passing + 10 per cent each year.
Staff	
Norm 1 : 30	
<i>Office Staff</i>	75 Schools for 300 intake
	1 Clerk
	1 Peon
	1 Library Attendant
	3 Laboratory Assistants
	3 Laboratory Attendants per School.
	<i>Contingency</i>
Norm	@ Rs. 3000
	2000
	Std. XI
	Std. XII
	+ Workshop Contingency @ Rs. 50 per student.

APPENDIX XV

No. of students in Higher Secondary Technical Schools

	1974-75	1975-76	1976-77	1977-78	1978-79	Total
Standard XI	3000	3300	3630	3993	13,923
Standard XII	2000	2200	2420	6,620
No. of Schools	75	82	90	99	346
<i>Staff</i>						
	1974-75	1975-76	1976-77	1977-78	1978-79	Total
No. of Teachers—						
Standard XI	100	110	121	133	464
Standard XII	66	73	80	219

APPENDIX XVI

Staff Contingency

Teachers

	1974-75	1975-76	1976-77	1977-78	1978-79
....		100	176	194	213
....		× 8088	× 8088	× 8088	× 8088
....		808800	1423488	1569072	1722744

@ Rs 220—700 Scale
i.e. Rs. 460 mean
+D.P. 214

674 p.m.
× 12 months

= 8088 p. a. per teacher

APPENDIX XVII

Non-teaching Staff

	Pay Scale	Pay	Dearness Allowance		
(1) Office-cum-Library Clerk ..	115—4—135—5—160—EB—5—185— —6—215.	165	163		
(1) Office Peon ..	75—1—80—2—90—EB—2—100 ..	88	112		
(1) Library Attendant ..	95—2—105—3—120—EB—3—135	114	139		
(3) Laboratory Assistant ..	115—4—135—5—160—EB—5—185 —6—215.	165 × 3 = 495	163 × 3 = 489		
(3) Laboratory Attendant ..	80—2—100—EB—2—110	94 × 3 = 282	112 × 3 = 336		
		1,144 +	1239 p.m.		
		= 2383	Total		
		2383 × 12	months		
		28596	p.a.		
		× 75	School		
		2144200			
	1974-75	1975-76	1976-77	1977-78	1978-79
Schools	75	82	90	99
	× 28,600	× 28,600	× 28,600	× 28,600
	21,45,000	23,45,200	25,74,000	28,31,400

APPENDIX XVIII

Recurring Contingency

	1974-75	1975-76	1976-77	1977-78	1978-79
			Rs.	Rs.	Rs.
Standard XI .. ..	....	75 (Schools) × Rs. 3,000 + (50 × 3000 pupils).	+ 75 × 3,000 (50 × 3300)	+ 75 × 3,000 (50 × 3630)	+ 75 × 3,000 (50 × 3993)
Standard XII .. ..	....	....	(75 × 2,000) + (50 × 2000 pupils)	(75 × 2,000) + (50 × 2200)	(75 × 200) + (50 × 2420)
	Ordinary	3000 XI 2000 XII	+ Workshop at Rs. 50 per student		
	1974-75	1975-76	1976-77	1977-78	1978-79
XI Ordinary	....	2,25,000	2,25,000	2,25,000	2,25,000
Workshop	....	1,50,000	1,65,000	1,81,500	1,99,650
XII .. ..	....	....	1,50,000	1,50,000	1,50,000
	....	....	1,00,000	1,10,000	1,21,000
	....	3,75,000	6,40,000	6,66,500	6,95,650

APPENDIX XIX

Recurring Contingency

Interest on Building loan @ 10 per cent

1974-75	1975-76	1976-77	1977-78	1978-79
....	11.47	11.47	11.47	11.47
....	....	4.01	4.01	4.01
....	....	....	2.57	2.57
....	....	....	....	4.26
....
....	11.47	15.48	18.05	22.31

APPENDIX XX

Non-recurring Equipment

				Rs.
I st Year	Rs. 37,500 × 2 laboratories and furniture	..	..	75,000
	Rs. 10,000 libraries and furniture	..	..	10,000
	Rs. 15,000 Welding equipment and furniture	..	..	15,000
				1,00,000
II nd year	Rs. 7,500 × 2 laboratories	..	..	15,000
	10,000 libraries	..	..	10,000
				25,000
				per school.

APPENDIX XXI

Equipment

	1974-75	1975-76	1976-77	1977-78	1978-79
School	.. 75 1st year	75 II year + 7 I year	7 II Year 15 I year	15 II year 24 I Year	24 II year 34 I year
	75,00,000	75 × 25,000	7 × 25,000	15 × 25,000	24 × 25,000
		18,75,000	1,75,000	3,75,000	6,00,000
		+ 7,00,000	15,00,000	24,00,000	34,00,000
	75,00,000	25,75,000	16,75,000	27,75,000	40,00,000

APPENDIX XXII

II year

I year

	1974-75	1975-76	1976-77	1977-78	1978-79
I Year	1 Class room .. 1120 × 35 = 39,200 2 Centres .. 2 Laboratories × 750 sq. ft. @ Rs. 35 per sq. ft. 1 Classroom 560 sq. ft. 2 Tutorial Rooms 280 sq. ft. } Rs. 35 per sq. ft.		Laboratories 1500 sq. ft. × 35 = 52,500 1 Class room .. } 1120 sq. ft. × 35 = 39,200 2 Tutorial room } Welding .. 800 sq. ft. × 35 = 28,000 Office & Library 950 × 35 = 33,250 = 6,52,950		
+II year	Welding 800 sq. ft.		Library 750 sq. ft. } @Rs. 35. Office 200 sq. ft. }		
Schools	.. 75 I year	75 II year + 7 I year	7 II year 15 I year	15 II year 24 I year	24 II year 34 I year
	Rs. 1,52,950 × 75	75 × 39,200	7 × 39,200	15 × 39,200	24 × 39,200
	= 1,14,71,250	+ 7 × 1,52,950	15 × 1,52,950	24 × 1,52,950	34 × 1,52,950
		29,40,000	2,74,400	5,88,000	9,40,800
		10,70,650	22,94,250	36,70,800	52,00,300
	1,14,71,250	40,10,650	25,68,650	42,58,800	61,41,100

RECOMMENDATIONS

Serial No.	Recommendation	Para.	Page
1	2	3	4
1	Higher Secondary Classes i.e. Stds. XI and XII should be introduced from June 1975 in Colleges as well as Secondary Schools having necessary potentialities for the purpose.	7 and 8	2-3
2	Final selection of Secondary Schools, technical high schools and commerce high schools as recommended by the Deputy Directors of Education, Deputy Directors of Technical Education and Inspector of Commercial Schools respectively may be made by Government. So far as colleges are concerned, all such colleges which are willing may be allowed to run Higher Secondary Classes. The selection of Secondary Schools and Colleges, that may be allowed to start Higher Secondary Classes should be finalised by Government as early as possible and the institutions so selected may be informed about the same by the end of April 1974 at the latest, so as to enable them to make necessary preliminary arrangements for the purpose.	13	4
3	Colleges may be allowed to run Higher Secondary Classes initially for a period of ten years and the position should be reviewed by Government. In case the Secondary Schools by then are able to take full load of Higher Secondary Classes, such classes may be withdrawn from the colleges.	14	4
	To meet the increase in the number of students passing S. S. C. examination under the new pattern of education, additional Secondary Schools should be selected by Government for being upgraded as Higher Secondary Schools in a phased programme by 1979-80. For this purpose, there should be a panel of the Board of School Education, which should be entrusted with the selection of suitable Secondary Schools for being converted into Higher Secondary Schools.		
4	No new colleges may be saddled with Higher Secondary Classes but in future, these classes may be started in the high schools fulfilling the requirements laid down for the purpose.	14 and 15	4-5
5	In order to maintain a link between Higher Secondary Classes and Secondary Classes, Head Master or Principal of the school should be the Head of the Institution. He should be assisted by a Supervisor or Assistant Head Master to look after the administration of classes upto Std. X. For the colleges running higher secondary classes XI and XII, Principal of the College should be the Head for all purposes and should be assisted by a Vice-Principal to look after the administration of Higher Secondary Classes.	16	5

Serial No.	Recommendation	Para	Page
1	2	3	4
6	In General Education there should be six subjects, two compulsory and 4 optional as mentioned in the list of subjects of General Education in para 20 of the report. For Technical Education there should be in all seven subjects as mentioned in the list of subjects for Technical Education mentioned in para 20 of the report.	20	5-6
7	Passing in five subjects out of six/seven subjects, as the case may be, should be essential for passing in whole examination conducted at the end of each of the Stds. XI and XII.	20	5-6
8	A student may be permitted to offer not more than seven subjects at a time. He/She may also be permitted to appear, if he/she desires, in other subjects in compartments or singly.	20	5-6
9	The standard of passing in each subject should be 40 per cent.	20	5-6
10	Examination at the end of each standard i.e. Std. XI and Std. XII, should be conducted by the State Board of School Education.	20	5-6
11	In order to improve and achieve the required standard of teaching in standards XI and XII it is necessary that a Higher Secondary Institution running these two classes should be fully equipped with the qualified staff, have suitable accommodation for class rooms, laboratories, libraries, etc. have proper equipment for laboratories for Science subjects. The qualifications and scales of pay of teachers, size of class rooms and other staff etc. should be as recommended by the committee and mentioned in para 21 of the report.	21	7
12	The rates of fees that are being charged in Std. XI in Higher Secondary Schools in some of the regions of the State and F.Y./P.U. class in colleges at present should be added and divided into 3/5th for Std. XI and 4/5th for Std. XII. The resultant should be fee rates for these Stds. The present freeships under the scheme of free student-ships to the Economically Backward classes should be extended to students in Higher Secondary Classes in Stds. XI and XII. Students taking up Vocational and Professional courses (Pre-S.S.C. and post-S.S.C. courses upto Std. XII and Diploma) should not be charged any fees irrespective of their Guardian's/Parent's income.	22	8
13	The age limit for admission to Std. I should continue to be 5 plus as at present.	23-24	8-9

Serial No. 1	Recommendation 2	Para 3	Page 4
14	Qualification for admission to Diploma in Engineering Courses should be S. S. C. after Std. X (revised) in General Education as well as Technical Education. Students passing S.S.C. examination from Technical High schools should be given weightage of 10 per cent of the total marks allotted to the subjects in which they have appeared at the S. S. C. examination, for admission to Diploma courses in Engineering. Students passing in the examination at the end of Std. XI with technical subjects should be allowed to join Diploma Course in Engineering and should be held eligible for exemption from first and second semesters of Diploma Course and admitted to third semester directly. Students passing in the examination at the end of Std. XII in technical subjects may be given weightage of 10 per cent of the total marks allotted for the subjects in which they have appeared at the said examination for admission to degree course in Engineering.	25-26	8-9
15	Maharashtra State Board of School Education should be set up which should be in overall control of examinations upto the Higher Secondary Stds. XI and XII.	28	9
16	There should be three separate wings under the Maharashtra State Board of Higher Secondary Education: (i) S. S. C. Board, (ii) Board of Technical Education and Examinations and (iii) Board of Primary Education for conducting examinations in the subjects of General Education, Technical Education subjects and looking after the Primary Education including Pre-primary Education respectively.	29	9
17	The present Maharashtra Secondary Education Boards Act, 1965 should be suitably amended.	29	9
18	The Committee recommends that the Secondary schools to be upgraded to run Higher Secondary classes viz. : Standards XI and XII, requiring to construct new class rooms and/or expand the present facilities for the purpose should be allowed to obtain loans from Scheduled Banks under Government guarantee provided these institutions are registered under the Societies Registration Act of 1860 or the Bombay Public Trust Act, 1850.	31	9
19	Diploma Courses for two years duration should be introduced in the subjects enumerated in para 3.2 of the report of Group I on Agriculture, Animal Husbandry etc. for those who pass S. S. C. examination but do not go for degree education.	3.2 of the report of Group I	54
20	Diploma Course for Co-operation for two years duration should be conducted for private candidates also in addition to in service personnel at the twelve Co-operative Training Centres existing in the State.	3.5 of the report of Group I	54

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21	Suitable courses in Fisheries for students who have studied upto S. S. C. or who have passed S. S. C. examination should be evolved by the Fisheries Department at the places where the facilities for the purposes are available.	3.7 of the report of Group I	54-55
22	Vocational forestry training courses should be introduced for school drop-outs as well as for those who have passed S. S. C. examination at (1) Shahapur in Thana District, (2) Pal in Jalgaon District, (3) Chandrapur in Chandrapur District and (4) Chikhaldia in Amravati District (to be started) with the minimum qualification for admission being Std. IX examination passed and the minimum age being 15 years.	4.4 of the report of Group I	56-57
23	The intake capacity at each centre either for a Certificate Course or a Diploma Course should not exceed thirty.	5.4 of the report of Group I	58
24	The proposed Courses should be started at the existing institutes as stated in paras 3.11 and 4.1 of the report of Group I.	3.11 and 4.1 of the report of Group I.	55-56
25	In order to ensure employment for persons who would successfully complete either Certificate or Diploma Courses, Government may modify the existing Recruitment Rules so as to make them eligible for appointment to posts under Government and Government sponsored bodies. Similar recommendations may be made to private and co-operative institutes.	5.6 of the report of Group I.	58
26	Establishment of an Institute for the purpose of guiding, directing and co-ordinating agro-Service Programme by different agencies in Maharashtra may be considered.	5.7 of the report of Group I	58
27	As the drop-out rate amongst students at the school stage has become increasingly serious particularly in the mofussil and rural areas, institutions of the type of Jr. I. T. Is. should be set up with suitable courses to be taught to them so as to enable them to come upto standard of atleast semi-skilled craftsman so that they can acquire employment in the market or be fit for self-employment.	1.4 of the report of Group II	65
28	Various courses which are useful and should be started at the Jr. I. T. Is. have been enlisted in Appendix 'A' of the report of the Group II on Industrial, Vocational and Technical Education, constituted by the committee.	Appendix 'A' of the report of Group II.	69-71
29	No Course to be conducted at the Jr. I. T. Is. should be of the duration of less than six months and more than two years.	1.6 and 6.3 of the report of Group II.	66 and 67
30	About six trades should be offered at each institution and a student may be allowed to choose any one of them suited to his liking and aptitude.	5.4 of the report of Group II	67

Serial No.	Recommendation	Para	Page
1	2	3	4
31	The syllabus for any trade or vocation should include the requisite trade theory and other related matters, such as, calculations, costing and economics of the trade and the aesthetic point of view pertaining to the trade or location. Other academic subjects should be considered for inclusion provided they are co-related with the trade. Greater emphasis should, however, be laid on practice. Teaching time allotted to the Technical subjects proper and functional literacy subjects should be in the ratio of 75 : 25.	6.3 of the report of Group II	67
32	The qualification for admission to a trade or vocation to be started at the Jr. I. T. I. should be as follows : (a) a student should have attained the age of 13 plus and be below 21 years, and (b) he should have passed V Std. so that there will be something to look forward to after Std. V. This will increase retentivity of general schools.	6.3 of the report of Group II	67
33	Since 70 per cent of the small families have to continue to labour on their farms or allied trades and vocations in the villages, attention should be paid to their specific requirements by having Jr. Agricultural institutes set up in all the 106 Agricultural high schools or in some of the Ashram schools in the State. The Courses and system of training at these institutions should be systematically planned for imparting education to suitably selected farmers or farm labourers' children if possible, some of these courses should be run in the off season and of sandwich nature so that trainees can go back and practise on their farms whatever is taught to them and even teachers from the junior Technical Institutes should visit the farms to check whether they are really putting what they learnt in practice. They should be taught farm budget properly and allied pursuits such as dairy, animal husbandry and poultry etc. to supplement their incomes and should be initiated into co-operative methodology, finance, marketing and processing.	3.1 of the report of Group II	66
34	In respect of dropouts in non-farm families and semi-urban areas technical and vocational education at the foundational level should be imparted at 53 Government and non-Government I. T. Is. about 109 Government and non-Government Technical High Schools, 9 Government Industrial Workshops, 41 Industrial Centres, 4 Forest Training Centres and in the second category 140 Ashram Schools, 106 Agricultural High Schools and Gram Sevak Training Centres.	3.2 of the report of Group II	66

Serial No. 1	Recommendation 2	Para 3	Page 4
35	In order to cover up the areas where the facilities of the Institutes mentioned in the fore-going recommendations are not available, 55 additional institutions should be set up in such areas which have been indicated in the map accompanying the report of Group II on Industrial Vocational and Technical Education constituted by the Committee.	3.2 of the report of Group II	66
36	Courses from the list of courses appended to the report of the Group II constituted by the Committee should be offered at the Jr. I. T. Is. in accordance with the demand and need of the area which may be settled after manpower and job oriented surveys of each location, as trade courses that may be selected for institutions or area will be varied. They should be made flexible according to the practical needs and emerging demand for skilled workers from time to time.	5.1, 5.2 and 5.3 of the report of Group II.	67
37	Although administratively the Jr. I. T. Is. may be controlled by different Departments such as Education, Social Welfare, Agriculture etc., their academic management, including syllabi, conduct of examinations, inspection and reviewing etc., should be entrusted to the proposed Board of Vocational and Technical Education under the Maharashtra State Board of School Education.	6.1 of the report of Group II.	67
38	Technical workshops or Sales Depots, may be attached to the institutions as on Rajasthan pattern and co-operatives of Craftsman after training may be organised.	6.2 of the report of Group II.	67
39	As the parents will find it difficult to spare their children for the required training and pay the full cost of living outside the farm or home, stipend of Rs. 15 p.m. or 50 paise per day should be paid per student. In addition, Rs. 5 p.m. or Rs. 30 per term should be paid per student for providing two uniforms and free books.	7.2 of the report of Group II as modified in the note attached to the report.	68
40	The number and types of courses suggested to be introduced are quite varied and as such the cost involved would depend upon the particular courses sought to be introduced and their specific combinations. In order to minimize overhead supervision, equipment and building costs, the courses should be introduced in different types of existing institutions like Technical High Schools, Government I. T. Centres, Ashram Schools, Agricultural High Schools, Agricultural Schools, Forest Training Schools, Gram Sevak Centres and perhaps I. T. Is. The potential of each institution by way of physical facilities of accommodation, equipment, furnitures, staff, etc., being different, they may need supplementing which should be sanctioned.	7.1 of the report of Group II	67

Serial No. 1	Recommendation 2	Para 3	Page 4
41	Care should be taken to see that all the areas particularly the Backward and Adivasi and Urban Slum areas should be well served.	7.3 of the report of Group II	68
42	The details of the intake of various institutions, the number of institutions, non-recurring and recurring cost on the full programme so also the locations of various institutions during the Fifth Five-Year Plan have been indicated in the report of Group II constituted by the committee.	Statements appended to Group II.	73
43	The organisations like CIDCO, Industrial Estates, Regional Development Corporations and Municipal Industrial Estates should also be urged to start these type of courses under their rehabilitation and training schemes.	5.1 of the report of Group II	67
44	In order to achieve the aim of improving social and economical conditions of the poor strata, it is desirable that the students who complete the training in Jr. I. T. Is. should be given preference for employment in jobs under Government, Municipal Corporations, Local bodies, and other such bodies in the State. If necessary, a directive in this regard may be issued to these bodies.	39	10
45	There is a good number of private agencies which are doing excellent work in the field of vocationalisation and the result of their efforts are very encouraging. If such agencies are encouraged to take up this programme it would be possible to have a wider spread outs. In that case it would be necessary to pay them grant-in-aid at the rate of 85 per cent towards non-recurring expenditure and recurring grant which may be equal to the whole deficit or 85 per cent of the total admissible expenditure, whichever is less, subject to usual conditions of the payment of grant-in-aid. By doing so, the number of institutions can be increased without additional expenditure to Government.	40 and 41. Note appended to the report of Group II.	10 and 11 and 79
46	The courses of the duration of one to two years as indicated in the chapter "Identification of possible Areas of Training" in the report of Group III should be started at the post S. S. C. (Std. X) level.	Chapter on "Identification of Possible Areas of Training" in the report of Group III.	83
47	While devising courses in commerce at Higher Secondary level, steps should be taken to ensure proper alignment with courses in Commerce available upto X class. The courses should be aligned closely to requirements of houses of Commerce and Business and whenever possible, sandwiched with practical training.	Chapter on "Higher Secondary Vocational with Commerce Subjects at Secondary and at other levels" in the report of Group III.	84

Serial No. 1	Recommendation 2	Para 3	Page 4
48	<p>Steps should be taken to rationalise the content and the operative field of courses in Commerce and allied subjects. Operation of Courses by different agencies entails lack of standardisation because of duality of agencies and also leads to duplicity of examination bodies and qualifications awarded by them. In order to make the Diploma / Certificate qualifications more effective for their acceptance and to ensure enrolment to such courses from different catchment areas of the society, both in public and private sectors, the following measures should be taken:—</p> <p>(a) Syllabi for various courses should be approved jointly by the Education Department and Professional Organisations concerned;</p> <p>(b) To devise methods of instruction based on work experience, either through workshops, laboratories, simulation exercises, industrial visits etc. so as to ensure practical orientation of concepts and improve the attainments of students;</p> <p>(c) To obtain recognition to relevant course content and qualifications from Finance Ministries both in the State and at the Centre so as to enable the holders of such qualifications to practise as Sales-Tax and/or Income-tax consultants; as this would help enhance the status of these qualifications for self-employment;</p> <p>(d) to prescribe the relevant qualifications as recruitment qualifications for various posts in Departments, semi-Government Departments, Local Bodies and Public Corporations; this may require reviewing and redevising of recruitment rules for certain categories of posts in Government, Semi-Government sectors.</p>	<p>Chapter on "Measures for Rationalisation of Courses and their Operations" in the report of Group III.</p>	84
49	<p>Two years courses and one year courses shown in the chapter "Identification of Possible Areas of Training" in the report should lead to Diploma and Certificate Status of qualification respectively.</p> <p>Students may be allowed to take one unit of two years course or two units of one year course so as to make two years vocational study feasible, even for the poor who earn and learn.</p>	<p>"Chapter on Duration of Courses and Classifications" in the report of Group III.</p>	85
50	<p>Arrangements for part-time attendance may be devised for those who may not be able to take up these courses on full-time basis due to various reasons, through methods such as enlargement of duration of operation of the course etc. without watering down the course contents, standards of operations and also evaluation;</p> <p>Primarily these courses should cater for the fresh school leavers; but if however, experience indicates that there is growing demand for vocational courses from the non-school adult students also, who have sufficient General Education and experience in life, arrangements for their training at such courses may be made on part-time basis so that the facilities for the training of fresh school leavers are not affected.</p>	Do.	85

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51	Universities may be persuaded to hold appropriate extension, orientation or further education courses so as to provide opportunities to young people with necessary back-ground, experience and maturity to acquire qualifications in Commerce at University level.	Chapter on "Linking of Higher Secondary Vocational Education (Commerce) with University Examination" in the report of Group III.	85-86
52	Possibilities of utilising the resources of the existing recognised institutes, with necessary remodelling for which norms may be laid down on the lines of the administration at present made in that behalf, may be explored so as to avoid waste of such resources as a result of the structural changes which may be implemented. Teacher training is necessary for the knowledge of students and the efficiency of their performance. An Institute of Commercial Training and Research may be set up at Sydenham College of Commerce and Economics, Bombay.	Chapter on "Selection of Institute for Conducting Higher Secondary Vocational Courses in Commerce" in the report of Group III.	86
53	A short Review of employment potential in Commerce in Maharashtra should be undertaken particularly as it is felt that in both industry and commerce more outsiders than Maharashtrians are getting absorbed in the State. Lack of Career Guidance arrangements needs to be made good too. It was felt that the material available for this purpose was not sufficient and the time limit for submission of the report was also short and as such it was not possible to have the review. However, such a specialised work could be done well with the assistance of institutions like Bombay Labour Institute or the Department of Economics and Political Science of the University of Bombay.	Chapter on "Need for a Survey of Employment in Commerce in Maharashtra" in the report of Group III.	86-87
54	A separate wing for examinations in Commerce may be created under the Board of Vocational and Technical Education which is proposed to be a part and parcel of Maharashtra State Board of School Education with the following functions:— (i) Arrangement for paper setting; (ii) Assessment of Examiners; (iii) Conduct of the examinations; (iv) Evaluation: Evaluation reforms; (v) Curriculum reforms.	Chapter on "Strengthening of Administrative machinery for operation of vocationalised Commerce Education" in the report of Group III.	87
	In order to undertake the range of activities in the initial stages and also to manage the super-structure which will be raised with the growth in future, the present Inspectorate of Commercial Schools in any case needs to be considerably upgraded, strengthened and developed region-wise.		

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55	A scheme for training course for punch operators in the Bureau of Economics and Statistics as suggested by the Director of the Bureau of Economics and Statistics is said to be self-supporting and may be implemented.	Chapter on " the Scheme for training courses for Punch Operators in the Bureau of Economics and Statistics " in the report of Group III.	96
56	Various courses as mentioned in the report of Group IV Services should be started in the existing training institutions as far as possible by timing in new courses in the mornings and evenings; wherever such institutions are not available, it would be necessary to set-up Polytechnic type institutions to provide the courses.	44	11
57	Intensive short-term courses should be started for housewives, so that they can be self-employed or they can become good cooks by getting employment in canteens and hospitals. For this purpose, courses like catering, house-keeping, cookery, bakery, housing etc. could be useful.	44 (i)	11
58	Courses with necessary syllabi should be specifically framed for candidates below S. S. C. Level ; minimum qualification for admission to such courses should be Std. VIII passed and the minimum age should be 13 years.	44 (ii)	11
59	The Syllabus should consist of (a) 20 per cent functional literacy, (b) 20 per cent theory and (c) 60 per cent practical.	44 (iii)	11
60	Each course will have functional literacy to the extent of twenty per cent and every lesson in functional literacy will be connected with the particular trade in which a candidate will be undergoing training, so that he can learn the economy of that trade in respect of business transactions; such as selling of the products and purchasing of raw material etc.	44 (iv)	11
61	Different courses should be started at various places where facilities are existing or can be created to suit needs of these localities or areas.	44 (v)	11
62	Duration of courses should depend on the nature of courses. However, five months or 22 weeks fulfilled courses should be framed in which 20 weeks will be actual teaching period and each working day should consist of about 6 hours. Two-three courses should be combined together to impart fulfilled 20 weeks training and at the initial stage of two months, a candidate should undergo a foundation course consisting of two-three subjects and after completing foundation course, in the remaining period of course a candidate should undergo training in specialised course. This will enable the students to have comprehensive education of two-three types of courses.	44 (vi)	11

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63	Trainees should be paid stipend at Rs. 15 per month for out-of-pocket expenses. No fees should be charged, so also material required for the courses should be free and should not be charged.	44 (vii)	11
64	Medium of instructions should be according to the course and its utility in the employment market.	44 (viii)	11
65	Location of institutions should be decided taking into consideration the requirements of the area. The committee is of the view that courses should be started as far as possible at the places where the facilities are already existing. In the case of courses such as catering, house-keeping etc., they should be located at Nagpur Catering Institute where facilities are already in existence.	44 (ix)	11
66	Career Guidance should be interwoven in teachers training programmes at all levels. 300 Block Guidance Centres should be started—one for a group of 10 schools—which can extend its service even to the college population.	Chapter on "Opening of Block Guidance Centres" in the report of Group V.	121
67	As the Training of Career Masters has to be undertaken on a large scale, it should be done even through B. Ed. Colleges in the State in addition to the Institute of Vocational Guidance, its Sub-Bureau at Poona and the St. Xavier's Institute of Education, Bombay.	Chapter on "Training of Career Masters for Secondary schools by B. Ed. Colleges" in the report of Group V.	122
68	Guidance services to the Primary School students can be given by training the Head Master/Senior Teachers of the Primary Schools in Career Masters' Course. For this purpose, one member of each of the Government D. Ed. Colleges in the State should initially be trained in Career Masters and Diploma Courses.	Chapter on "Training of Career Masters for Primary Schools by D. Ed. Colleges" in the report of Group V.	123
69	There are about 6,000 Secondary Schools in the State. About 10 per cent of these Schools are likely to be converted into Higher Secondary Schools. It is considered necessary to provide Guidance to students such as Information and Record, Testing and Counselling and Placement. At least 3 Career Masters on an average should be provided per school and career guidance periods should count towards prescribed duty hours and specialist allowances may also be attached.	Chapter on "Provision of Career Masters in Secondary Schools" in the report of Group V.	124
70	Guidance work in the Schools needs inspection if it is to go on effectively. One Assistant Vocational Guidance Officer with Diploma in Vocational Guidance should be attached to the office of every Education Officer in the District. In addition, if possible, an Assistant Deputy Educational Inspector may also be trained in Career Masters Course.	Chapter on "Inspection of Career Masters in the Schools" in the report of Group V.	125

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71	The Director of Technical Education runs Training Courses in Technical Training Colleges for the teachers of Technical Institutes. In order to give Guidance Training to these teachers, a guidance department would be established in the Technical Training Colleges and if necessary, all trainees detained for three weeks extra to receive career guidance training.	Chapter on "Guidance cell in the Technical Training Colleges conducted by the Director of Technical Education in the report of Group V.	125
72	With 300 Block Guidance Centres all over the State, it is desirable that large educational institutes are allowed to appoint their own Counsellors. Schools having a strength of above 500 and upto 1,000 students (High School Classes) may be allowed to appoint a part-time schools Counsellor, and those having more than 1,000 students be allowed to appoint a full time Counsellor. In case Block Guidance Centres do not come into existence, schools having students upto 500 may be allowed to have a part-time Counsellor, those having above 500 and upto 1,000 students may be allowed to appoint full time Counsellor. Societies running more than one school may be allowed to have in common full time career master at Government cost.	Chapter on "Provision of Counsellors in Secondary Schools" in the report of Group V.	125-26
73	In order to expand the guidance service, more trained persons are needed for continuous preparation, revision of guidance material, and continuous research. Any shortcoming in any of these will affect the guidance work in the schools and for the general public. With a view to making the above schemes successful, the Institute of Vocational Guidance needs to be strengthened and expanded considerably by providing staff as enlisted in the recommendation No. 8 in the report of Group V on Career Guidance.	Chapter on "Expansion of the Institute of vocational Guidance and Selection" in the report of Group V.	126-27
74	To supervise the training and guidance services in the State after the strengthening and expanding the Institute, the status of the Institute should be raised and brought to the level of independent Directorate which should be known as Directorate of Guidance.	Chapter on "Directorate of Guidance" in the report of Group V.	128
75	The Institute of Vocational Guidance and Selection although being a State Office is at present located in 2 small verandahs. It has no classroom of its own. Space for running the Diploma Courses and for conducting testing programmes during vacations is provided by the S. T. College. The proposed expansion would be impossible unless a separate building is provided to locate the Institute and the Directorate. In addition, a hostel for students who would be coming for the Diploma and the Career Masters Courses is also needed. A separate building for the proposed Directorate and hostel for the Institute be provided.	Chapter on "Building for the Institute Hostel and Directorate" in the report of Group V.	128

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76	At the regional headquarters, there should be regional Vocational Guidance Bureaus in order to help Block Guidance Centres and Guidance Department in D.Ed. and B.Ed. Colleges in their regions who would constantly require help and material of regional importance and co-ordination.	Chapter on "Regional Vocational Guidance Bureau" in the report of Group V.	128-129
77	Suitable number of periods should be provided in Secondary as well as Higher Secondary Classes for Education Guidance.	46	12
78	The Universities in the State should be advised to revise the syllabus of B.Ed. course suitably taking into account the requirements for teaching Stds. XI and XII in higher secondary courses.	47	12
79	The Agriculture Department may be advised to have the courses in Agriculture schools revised suitably through Agriculture Universities.	48	12
80	Decisions on various recommendations of the Committee that may be taken by Government should be communicated to all concerned by the end of May 1974 i.e. before the commencement of the next academic year.	49	12

APPENDIX ' A '

Dr. A. U. Shaikh, Secretary, Education Department	..	<i>Chairman</i>
Shri H. S. Shahani, Deputy Educational Adviser (Technical), Government of India, Ministry of Education, Bombay.		Member
Shri R. S. Kenkre, Director of Apprenticeship Training, Board of Apprenticeship, Chhatrapati Shivaji Market Building, Phalton Road, Bombay.		Member
The Director of Education, Maharashtra State, Poona	..	Member
The Director of Higher Education, Maharashtra State, Poona	..	Member
The Director of Technical Education, Maharashtra State, Bombay.		Member
The Director of Art, Maharashtra State, Bombay	..	Member
The Chairman, Maharashtra State Board of Secondary Education, Poona.		Member
Shri A. R. Dawood, Ex-Member of the Education Commission of India.		Member
Kum. S. Panandikar, Ex-Member of the Education Commission of India.		Member
Shri V. B. Parulkar, Retd. Deputy Secretary, Government of Maharashtra.		Member-Secretary
Registrars of all Universities (including Agricultural Universities in the State).		Members
Education Officer, Bombay Municipal Corporation, Bombay	..	Member
Representatives of Head Masters Associations from four regions :		
1. President, Non-Government Secondary Schools Head Masters' Association, Saraswati Bhuvan High School, Aurangabad.		Member
2. President, Vidarbha Federation and Head Masters' Association, Buniyadi Gujarati Higher Secondary School, Amravati.		Member
3. President, Maharashtra State Federation and Head Masters' Association, C/o Head Master, Residential High School, Ahmednagar.		Member
4. President, Bombay Head Masters' Association, C/o New Era High School, Huges Road, Bombay-7.		Member
Representatives of the Managements of :		
1. Moulidina Technical High School, Shankarshet Road, Poona-9.		Member
2. Somalwar Higher Secondary School, Nagpur	..	Member
3. Deogiri High School, Aurangabad	..	Member
4. Modern High School, Poona	..	Member
Dr. D. J. Nandedkar, Additional Man-power Officer, Planning Department, Bombay.		Member

APPENDIX ' B '*List of the Co-opted members of the State Level Committee to consider the uniform pattern of Higher Secondary and Collegiate Education in the State*

1. The Joint Director of Training (Directorate of Technical Education), Bombay.
2. The Inspector of Commercial Schools, Bombay.
3. Dr. B. L. Purohit, Panjabrao Krishi Vidyapeeth, Akola.
4. Principal, Institute of Vocational Guidance and Selection, Bombay.
5. Shri S. S. Desnavi, Principal, M. H. Saboo Siddik Polytechnic, Byculla, Bombay-8.
6. Shri B. R. Desai, Gokhalibai Technical High School, Vile-Parle, Bombay-56.
7. Principal, Father Agnel Technical High School, Band Stand, Bandra, Bombay-50.
8. Dr. (Miss) Mehroo Bengalee, Counsellor, St. Xavier's Institute of Education, 40-A, New Marine Lines, Bombay-20.
9. Chairman, Board of Technical Examination, Government of Maharashtra, Directorate of Technical Education, Bombay.
10. Mrs. F. J. Tarapore, Principal, S. N. D. T. College of Home Science, Karve Road, Poona-4.
11. Dr. V. V. Kale, Joint Director of Industries, Sachivalaya, Bombay.
12. Dr. H. E. Zala, Director of Medical Education and Research, Bombay.
13. Dr. K. S. Basu, Director, Jamnalal Bajaj Institute of Management, Bombay.
14. Dr. M. S. Gore, Director, Tata Institute of Social Science, Sion-Trombay Road, Chembur, Bombay-71.
15. Shri D. V. Deshpandey, M.L.C., " Dattashram " Ground Floor, Shivaji Park, Road No 4, Dadar, Bombay-28.
16. Dr. B. C. Haldar, Director, Institute of Science, Bombay.
17. Dr. M. S. Raghunathan, Professor in Mathematics, Tata Institute of Fundamental Research, Bombay.
18. Shri Kuruvila Jacob, Principal, Cathedral and John Cannon School, Bombay.
19. Shri S. S. Bhandarkar.
20. Shri B. M. Deshmukh.
21. Shri K. N. Sunderam, Industrial Adviser, Somaiya Vidyavihar, Fazalbhoy Building, Mahatma Gandhi Road, Fort, Bombay-1.
22. Shri P. A. Bana, Superintendent, Gurukul High School, Ghatkopar, Bombay.

APPENDIX ' C '

List of the persons appointed on the various sub-Groups constituted by the Study Group on Vocationalisation of Higher Secondary Education

Group I.—Agriculture, Animal Husbandry, Fishery, Dairy, Co-operation etc.:

1. Dr. A. U. Shaikh, Chairman.
2. Shri R. S. Pal, Director of MAFCO, Bombay.
3. Principal, Dairy Science Institute, New Zealand Hostel, Aarey Colony, Goregaon, Bombay-65.
4. Principal, Maharashtra State Co-operative Training College, Poona.
5. Director, Vaikunt Mehta National Institute of Co-operative Management, R. B. I. Building, Ganesh Khind Road, Poona-16.
6. Chief Executive Officer, Maharashtra Rajya Sahakari Sangh, 11, Bank Street, 2nd Floor, Bombay-1.
7. Shri B. L. Purohit, Panjabrao Krishi Vidyapeeth, Akola.
8. Agriculture Engineer to Government, Poona-5.
9. Shri B. K. S. Jain, Agro Industrial Products Division, Voltas Ltd., Bombay.
10. The Additional Manpower Officer, Planning Department, Sachivalaya, Bombay.
11. Shri M. R. Ranade, Senior Scientific Officer, Taraporewalla Acquarium, Bombay. At present Sr. Scientific Officer, Marine Biological Research Station, Ratnagiri.
12. Shri V. B. Parulkar, Convenor.
13. Dr. N. K. Upasani, Chairman, State Board of Secondary Education, Poona.

Group II.—Industrial, Vocational and Technical Education :

1. Dr. A. U. Shaikh, Chairman.
2. Dr. Eugene Staley, Ford Foundation, New Delhi.
3. Director of Technical Education, Convenor.
4. Shri Anant Ramaiya, Chief Engineer, Wyman and Gardon, India Ltd., Pokaran Road, Majiwada, Thana.
5. Dr. V. V. Kale, Joint Director of Industries.
6. Shri S. S. Desnavi, Principal, M. H. Saboo Siddik Polytechnic, Bombay.
7. Shri Anwar Divecha, Hon. Secretary, All India Manufacturers' Organisation, Bombay or his Substitute, Co-operative Insurance Building, Sir. P. M. Road, Bombay-1.
8. Dr. G. H. Nafde, Principal, Institute of Vocational Guidance and Selection, Bombay.
9. Principal, St. Agnel Technical High School, Bandra, Bombay.
10. Dr. L. V. Agashe, Chairman, Board of Technical Examinations, Bombay.
11. Shri R. S. Kenkre, Director of Apprenticeship Training, Board of Apprenticeship, Bombay.
12. Dr. N. K. Upasani, Chairman, State Board of Secondary Education, Poona.
13. Shri Y. D. Mahajan, Assistant Director, Employment Exchange, Bombay.
14. Shri D. T. Adatrao, Superintendent, Moledina Technical High School, Shankar Shet Road, Poona.

Group III.—Commercial Courses such as Book-Keeping, Accountancy, Shorthand, Typewriting, Secretarial Practice, Business Management, Commercial Art, Fine Art, Telephone Operator, Receptionist, Comptist and similar other courses :

1. Dr. A. U. Shaikh, Chairman.
2. Dr. K. S. Basu, Director, Jamnadas Bajaj Institute of Business Management, Convenor.
3. Shri W. C. Shreeshrimal, Managing Director, Maharashtra State Co-operative Bank Limited, Sir Vithaldas Thakersee Memorial Building, 9, Bakehouse Lane, Bombay-1.
4. Professor, C. L. Gheewala, Secretary, Indian Merchant Chamber, Bombay.
5. Director of Art, Maharashtra State, Bombay.
6. Principal, Institute of Vocational Guidance, and Selection, Bombay.
7. Additional Man-power Officer, Planning Department, Sachivalaya, Bombay-32.
8. Dr. (Miss) Mehroo Bengalee, Counsellor, St. Xavier's Institute of Education, 40-A, New Marine Lines, Bombay-20.

9. Principal, S. D. Bal, Sydenham College of Commerce and Economics, Bombay.
10. Inspector of Commercial Schools, Dhobitalao, Bombay.

Group IV.—Service—Paramedical Services. Home Science, Training of Teachers and Such other Allied Courses. :

1. Dr. A. U. Shaikh, Chairman.
2. Dr. H. E. Zhala, Director of Medical Education and Research, Bombay.
3. Miss Thangam Philip, Principal, Institute of Nutrition and Catering, Bombay.
4. Smt. Bhanumati Desai, Tata Institute of Social Science, Bombay.
5. Mrs. F. J. Tarapore, Principal, S. N. D. T. College of Home Science, Karve Road, Poona-4.
6. Dr. (Miss) Mehroo Bengalee, Counsellor, St. Xavier's Institute of Education, 40-A, New Marine Lines, Bombay 20.
7. Director, State Institute of Education, Convenor.

Group V.—Career Guidance :

1. Dr. A. U. Shaikh, Chairman.
2. Miss S. Panandikar.
3. Dr. D. J. Nandedkar, Additional Man-power Officer, Planning Department, Bombay.
4. Dr. G. H. Nafde, Principal, Institute of Vocational Guidance and Selection, Bombay, Convenor.
5. Dr. (Miss) Mehroo Bengalee, Counsellor, St. Xavier's Institute of Education, Bombay-20.
6. Shri B. R. Desai, Technical High School, Vile Parle, Bombay-57.
7. Shri Y. D. Mahajan, Assistant Director, Employment Exchange, Bombay.

Group VI.—This Group will examine the Acts pertaining to the Education Department (Excluding University Acts) and suggest amendments wherever necessary taking into consideration the programme of education, proposed to be undertaken during the Fifth Five Year Plan :

1. Dr. A. U. Shaikh, Chairman.
2. Dr. (Smt.) Chitra Naik.
3. Shri R. S. Kenkre, Director of Apprenticeship Training, Board of Apprenticeship, Bombay.
4. Dr. N. K. Upasani, Chairman, State Board of Secondary Education, Poona.
5. Shri V. B. Parulkar.
6. Shri P. S. Mulgaokar, Deputy Director of Education, Poona, Convenor.

APPENDIX ' D '

Selection of Schools.—Conditions expected to be fulfilled.—It should be ensured that the Institution should be economically viable as well as academically and administratively efficient.

Generally the following *criteria* were accepted :—

Size.—Minimum 2 divisions of each class from VIII-X. Optimum size should be 6 divisions.

The requirement regarding size of the school should be modified according to the area in which the school is located.

2. **Staff.**—Of the teachers teaching in classes VIII to X, at least 80 per cent should be trained graduates teaching the subjects which they studied for their B.A., B.Sc., or B.Com. and B.Ed. At least 5 per cent of the teachers should be M.A., M.Sc. or M.Com. with B.Ed.

3. **Accommodation.**—(a) Adequate number of class rooms, allowing 10 square feet per student. School working in double shift may undertake Higher Secondary work if located in areas where double shifts are inevitable ;

(b) Well-equipped laboratories in Physics, Chemistry and Biology if courses in these subjects are to be offered at the Higher Secondary Stage ;

(c) Well-equipped subject rooms in Geography and History ;

(d) Well organised library and reading room, with a sufficient number of books and reference reading material managed by a trained librarian ;

(e) Good and adequate audio visual aids ;

(f) A play ground and facilities for physical education and Games.

4. **General.**—(a) An effective programme of co-curricular activities such as Science Clubs, Social Studies Clubs, Literary and Debating societies ;

(b) Systematic maintenance of cumulative record of individual students.

5. **Management** —(a) Efficiency of Management-Financial position, general administration ;

(b) Support from parents and the public.

APPENDIX 'E'

**REPORT OF THE GROUP I ON AGRICULTURE
ANIMAL HUSBANDRY, FISHERY, DAIRY
CO-OPERATION ETC.**

**APPOINTED BY THE STUDY GROUP ON
VOCATIONALISATION**

OF

SECONDARY EDUCATION

CONSTITUTED BY THE

STATE COMMITTEE ON UNIFORM PATTERN OF EDUCATION

IN

MAHARASHTRA STATE

Chairman

Dr. A. U. SHAIKH

Convener

Shri V. B. PARULKAR

Report of the Group I—Agriculture, Animal Husbandry, Fishery, Dairy, Co-operation etc.—of the Study Group on Vocationalisation of Secondary Education

1. Dr. A. U. Shaikh, Secretary to Government of Maharashtra, Education Department, Bombay. Chairman
2. Shri V. B. Parulkar Convener
3. Shri R. S. Pal, Director of MAFCO, Bombay Member
4. Principal, Dairy Science Institute, Newzealand Hostel, Aarey Colony, Goregaon, Bombay 65. Member
5. Principal, Maharashtra State Co-operative Training College, Poona .. Member
6. Director, Vaikunt Mehta National Institute of Co-operative Management, Poona. Member
7. Chief Executive Officer, Maharashtra Rajya Sahakari Sangh, Bombay .. Member
8. Shri B. L. Purohit, Punjabrao Krishi Vidyapeeth, Akola .. Member
9. Shri R. P. Sandge, Professor of Agriculture Engineering, College of Agriculture, Poona. Member
10. Shri B. K. S. Jain, Agro-Industrial Products Division, Voltas Ltd., Bombay. Member
11. Dr. N. K. Upasani, Chairman, State Board of Secondary Education, Poona. Member
12. Additional Man-power Officer, Planning Department, Sachivalaya, Bombay. Member
13. Shri M. R. Ranade, Senior Scientific Officer, Marine Biological Research Station, Ratnagiri. Member

Meetings of the Group were held on the 17th November, 1972, 9th December, 1972, 18th to 20th December, 1972 and the 29th January, 1973.

INTRODUCTION

1.1. The State of Maharashtra has an area of 3,06,345 sq. kilometers and a population of 503.35 lakhs. Out of these 346.32 lakhs stay in rural areas. The total workers are 18,732,169 out of which 6,572,447 i. e. 35.09 per cent of total workers are cultivators and 5,429,631 i.e. 28.98 per cent are agricultural workers. Thus 64.07 per cent of the total workers are engaged in agricultural activities and they produce 32 per cent of the State domestic product equivalent to Rs. 1,160 crores (1971-72), as against the national average of 55 per cent. As compared to other countries and even some other States in India, contribution of agriculture to the State domestic product is low.

1.2. The low agricultural production is attributable to number of factors. Inadequacy of assured irrigation, small size of holdings, ignorance of improved methods of crop husbandry may be cited amongst others. The great majority of the cultivators have small holdings, less than 5 acres each and they lack credit worthiness with Co-operative and Commercial Banks. It is predominantly the small holder who takes the cereal cultivation an art he has learnt from his forefathers and practises it without adoption of improved methods. This has resulted in a declining trend in production of coarse grains, which is the staple food for rural masses, as compared to the production of cash crop like sugarcane which has shown a very substantial increase as is evident from the appended table.

The average size of a family should be 2 to 3 but at present it comes to 4—6. It is necessary to increase the production of cereals to meet the needs of this increasing population. This can be achieved by training the small land holders in improved methods of cultivation involving use of improved seeds and application of fertilisers alongwith appropriate crop protection measures. This calls for short-term courses specially designed for the farmers covering the vital aspects of crop production. They also have not got credit worthiness which is demanded by co-operative and commercial banks. Further their total economy is shattered on and off by vagaries of rainfall. The agricultural education has to play a vital role in educating individuals in modern agricultural practices as their adoption would lead to higher incomes from agriculture, particularly if allied agricultural pursuits are made to supplement their income. In addition, the educationists must identify the local problems affecting agriculture, find solutions thereof and spread the new findings amongst the cultivators. Agricultural education thus differs from other types of education since to be meaningful it must integrate education, research and extension to serve the farmers. Realisation of this aspect led to the divorce of agricultural education from the traditional Universities and establishment of Agricultural Universities, which are now repositories of advanced research as well as extension education in all branches of agriculture.

1.3. The Educational Survey has revealed that there is a considerable wastage at the primary and secondary level of education. Statistics show that in the case of boys the retention rate is 16.5 while in the case of girls it is only 8.2 [In 1960-61, 8,64,180 boys and 6,24,953 girls were enrolled in Standard I in Maharashtra. In 1970-71 only 1,42,541 (16.5 per cent) and 51,021 (8.2 per cent) reached Class XI]. Thus a small percentage of the number of students who enrol in the Standard I are only able to complete the education upto S. S. C. level; about 15 to 20 per cent of rural children never go to school. The eighty-three per cent drop-outs are thus left out without any prospects of gainful employment and consequently suffer from frustration. Although Universalisation of education and other unorthodox methods proposed to be employed may result in over-all improvement of reaching children to S. S. C. level to the extent of 50 per cent, the problem of skills to the remaining 50 per cent of our budding manpower still presents a problem. It is necessary, therefore, to provide diversified vocational programmes for such students which will prepare them for either self-employment or employment in public and private sectors.

1.4. The agriculturists as also the agriculture labour in the rural areas are occupied with agricultural operations for about three to four months in a year during the crop season. They have thus a large spell of leisure during which they remain idle. It is necessary to provide them with supplementary occupations, such as dairy farming, poultry farming or such other allied activities so that not only they will have occupation throughout the year but it would also supplement their meagre income from the agriculture and would improve their general standard of living. This will also to some extent accelerate the programme of production.

1.5. Co-operative sector is fast expanding and is being extended to various fields. At present, there are no training facilities exclusively for persons before their recruitment as Secretaries, Accountants, Salesmen etc. for Village Service Co-operatives. Facilities for training, however, exist for those who are already employed in co-operative sector in such posts. Recruitment of trained personnel would be advantageous both from point of efficiency and also for providing employment to those who would not pursue their education beyond S.S.C. Facilities will have, therefore, to be created for providing training before recruitment to persons to be appointed at lower levels. If training facilities are created for such persons, besides providing in-service training to those already in service, it will not only provide employment to persons who

are drop-outs upto S. S. C. and also those who have passed their S. S. C. but it will also be more economical inasmuch as the co-operative sector will get trained personnel and will not be required to send them for training at their cost.

2.1. *Existing Facilities.*—To provide agricultural education in rural areas agricultural school has been established in each of the twenty-five districts of the State. The candidates completing education in these schools are employed as agricultural Assistants. The admission capacity at each school is generally between fifty to sixty which means that the annual intake capacity of these schools is about 1,200. About ninety per cent of the students pass out from these schools and nearly seventy per cent of them find employment either in the State sector or private agencies. These facilities should continue and courses syllabi may be reviewed with a view to encouraging self-employment.

2.2. The minimum qualification for admission to these agricultural schools is Standard VII. The duration of the course is two years and as stated earlier, after the completion of the course candidates become eligible for employment as Agricultural Assistants. The Maharashtra State Board of Secondary Education has provided for S. S. C. several optional subjects which also include 'Agriculture' and 'Animal Husbandry'. There are a few students who take these optional subjects and pass their S. S. C. with them. These students are given weightage for admission to degree programmes of the Agriculture Universities.

2.3. The Department of Animal Husbandry runs short-term courses of fifteen days to six months duration for different types of persons who desire to take training in poultry, poultry management and poultry farms. There are Central Hatcheries at Poona and Kolhapur where such training courses are run for farmers or potential poultry keepers who wish to start keeping poultry. At the Central Hatchery, Poona, a course of six months duration is run for candidates who have already completed two months training course and who have the minimum qualifications of S. S. C. The Department also runs a course of fifteen days duration called 'Poultry Training Course' for farmers who intend to take poultry keeping as a subsidiary activity. Livestock Supervisors' courses have been discontinued as about 600 trained candidates were found unemployed.

2.4. There are three Rural Institutes conducting different courses for those who intend to work in the rural areas in the State. They are :

- (1) The Rural Institute, Wardha
- (2) The Rural Institute, Amravati,
- (3) The Rural Institute, Mouni Vidyapeeth, Gargoti, Kolhapur.

The Rural Institute, Wardha runs a two years Certificate Course in 'Agriculture Science' which includes dairy and animal husbandry subjects. The course is sponsored by the National Council for Rural Higher Education, Government of India, New Delhi. The course is on college level and admissions are open to students who have passed S. S. C. or an equivalent examination with mathematics, science or agriculture. The annual intake capacity is sixty but the number of candidates seeking admission in recent past is dwindling. As the recent report from one institution shows only seventeen candidates as against intake capacity of sixty were admitted during 1972, the reason probably being that the employment potentialities are meagre. It is reported that persons taking this course are employed as Agricultural Assistants in the State Department of Agriculture. So far as the Rural Institutes at Amravati and Wardha are concerned, they run courses (i) B. A. (Rural Service) Degree Course, (ii) Diploma in Civil and Rural Engineering and (iii) Certificate in Agricultural Science etc. The Rural Institute, Gargoti conducts the courses of (i) Rural Services and (ii) Diploma in Rural and Civil Engineering. Information regarding the employment potentialities of the students undertaking these courses is not readily available.

2.5. There are workshop wings at the Gram Sevak Training Centres at Sindewahi and at Manjri. These Centres have been established with a view to providing training to village artisans, such as carpenters and black-smiths in the art of designing, fabricating and repairing labour-saving agricultural implements. Each centre admits twenty trainees each year. The course is of one year duration. The selection of trainees is made preferably from those who are actually in the trade but if such candidates are not available in full number then persons who are not in the trade are also considered for admission. The persons who have taken training go back to the trade if they come from the trade ; others find their own employment.

2.6. The Dairy Development Department, Maharashtra State through the Dairy Science Institute, Aarey conducts a course, viz.—

three weeks course in Improved Dairy Husbandry Practices for the milk producers supplying milk to the Dairy co-operatives.

The minimum qualification for admission is Vernacular Final or Standard VIII passed. This training is intended for the benefit of those who intend to supplement their income by maintaining dairy cattle.

2.7. The Dairy Development Department, Government of Maharashtra is conducting a two years Indian Dairy Diploma (Dairy Technology) Course at the Dairy Science Institute, Aarey. The Indian Dairy Diploma in Dairy Technology is awarded by the I. C. A. R. Sub-

Committee on Dairy Education. The minimum qualification required for admission is that the candidate must have passed First Year Science, Pre-Degree Science or Higher Secondary of a recognised University/Board with Physics, Chemistry, Mathematics and English. Normally thirty students are admitted annually. The medium of instruction is English. The students who pass out from the Institute are employed in Government Milk Supply Schemes, Dairy Projects, Co-operative Dairy Plans and Private Dairy factories. So far, all except very few of the students have been employed. Of late, the number of students securing admission to the course shows a declining trend.

2.8. The Co-operative Department conducts courses for in-service training of personnel in co-operative sector through the Maharashtra Rajya Sahakari Sangh. The Maharashtra Rajya Sahakari Sangh at present conducts short-term Certificate Courses with one month and two months duration. These courses are primarily meant for in-service training of personnel and membership in Co-operative Societies. However, there are twenty seats at each course available for private candidates who have passed either the Vernacular Final examination or Standard VIII. There is a provision for 2,000 private candidates for admission to these courses annually but generally about 1,000 candidates seek admission. A majority of them get employment in some capacity or the other in the village co-operative societies. These courses may have to be strengthened to make the candidates fit to hold society's Secretaries' jobs, recruitment for which is through District cadre wherein these should be given preference.

2.9. The Maharashtra Rajya Sahakari Sangh also conducts a Diploma Course in Co-operation. The duration of the course is thirty weeks at present. The course is mainly meant for in-service training of personnel but ten seats at each centre are reserved for private candidates. The minimum qualification for admission to the course is S. S. C. About 120 private candidates can be trained at each course. There are fairly good opportunities for private candidates who pass this Diploma Course for securing employment in co-operative Institutions including State Co-operative Department.

2.10. Co-operative instrumentation of Agricultural, Agro-industrial community servicing patterns being a sine-qua-non of distributive justice and socialistic development of the nation, training both of specialists and generalists in co-operative form of organisation holds great scope for developing our man-power. With either as specialists or with management orientation, these can be of service to the rural economy in larger proportion. University education in the fields of Agriculture, Animal Husbandry, Veterinary Science and Agricultural Engineering, has now been entrusted to the four Agricultural Universities established in the State of Maharashtra. There are nine Agricultural Colleges, three Veterinary Colleges and two colleges of Agricultural Engineering at present providing education upto the first Degree. Arrangements also exist for Post-graduate education in Agriculture and Veterinary Science. The following table shows the intake capacity for various degrees in the four Agricultural Universities :—

Table showing intake capacity for various degrees in the four Agricultural Universities

Serial No.	Name of Degree	Punjabrao Krishi Vidyapeeth	Mahatma Phule Krishi Vidyapeeth	Konkan Krishi Vidyapeeth	Marathwada Krishi Vidyapeeth
1	B.Sc. (Agr.)	700	540	110	200
2	M.Sc. (Agr.)	130	72	....	56
3	B.V.Sc. & A.H.	64	....	75	50
4	M.V.Sc.	22	....	20	....
5	B.Sc. (Agr. Engg.)	24 (Post B.Sc. Agr.)	20 (Post F.Y.Sc. Agr.)	....	....

3.1. *Programmes proposed for school drop-outs and those who do not go to University.*—A large number of school drop-outs from the rural areas are generally the sons and daughters of farmers, agricultural labourers and other village artisans. They possess a background of cultivation, animal rearing as also village trades. Such children could be gainfully trained by providing educational programmes in diversified vocations related to agriculture and animal husbandry and such other correlated occupations. As this Group is assigned the task of suggesting ways and means of giving vocational training in Agriculture, Animal Husbandry, Fisheries and Co-operation to school drop-outs and those who pass S.S.C. but do not propose to take higher education, the Group has confined its consideration to these fields only. These programmes could be of various durations and may lead to award of a Diploma or a Certificate according to the level of training students who do not enter University after passing S. S. C. may also be admitted to these vocational courses so that they could be prepared either for self-employment or may find employment in the public sector and with private agencies. It is expected that with the

expansion in Agro-Industry, many more jobs would be available to persons trained in these specialisations. Agro-service Training Programme also needs to be undertaken to provide meaningful education to school drop-outs who would be able to serve the community by rendering Agro-service in different areas of activities as mechanisation and sophistication of Agriculture and allied pursuits are bound to emerge supreme in course of time.

3.2. The following courses with suitable inter-disciplinary links are proposed for award of Diplomas:—

1. Multiple Cropping,
2. Dry Land Farming,
3. Fruits and Vegetable Crops, including preservation and processing,
4. Crop husbandry,
5. Seed Production and Processing Technology,
6. Dairy Cattle Management,
7. Poultry Farming,
8. Plant Protection,
9. Soil and Water Management,
10. Farm Machinery Maintenance and Minor repairs,
11. Farm Management and Farm Economics,
12. Agricultural Marketing (in-puts and out-puts) and Extension,
13. Artificial Insemination,
14. Processing of farm produce,
15. Farms structure including warehousing,

Students who have passed S.S.C. may be admitted to these courses which will be ordinarily of two years duration and Diploma will be awarded to the successful candidates.

The medium of instruction for these courses should be as far as possible the regional language.

3.3. Short-term courses leading to an award of certificate in the above subjects except Artificial Insemination (at Serial No. 13), would also be offered particularly for school drop-outs. In addition to the first 12 courses mentioned above, Certificate courses in (i) Milk Processing and (ii) Fodder Crop Production will also be useful. However, admission will not be given to such students who have not passed Standard VIII. The Certificate course will be of six months to twelve months duration depending upon the nature and content of the course.

3.4. A training programme in modern farming can be undertaken on an extensive scale for out-of-school youth in the age group 20-24, who have passed atleast the 7th Standard but not S.S.C. as well as those who have passed their S. S. C. examination. Such a programme was taken up successfully in Osmanabad district on a pilot basis, where each of 25 school drop-outs was provided half an acre of land by his parent for undertaking practical work in the course of his training in modern farming. Not only was the yield in the trainee's land cultivated on modern lines more than the out-put of the land cultivated by traditional methods, the entire farming community of the village should see the fruits of training and cultivating land by improved agricultural practices. This experiment has demonstrated how education and training can help in the development of agriculture by linking it with the extension programme of the Agriculture Department. It therefore seems that education and training is not the sole responsibility of educationists alone, but those engaged in economic development agriculture scientists, engineers, doctors etc. have also to be associated with the task. Education and training have, therefore, to be inter-disciplinary in nature.

3.5. There are already twelve co-operative training centres existing in the State at the rate of generally one for two districts. They award Diploma in Co-operation to in-service personnel deputed for training from co-operative Institutes and Co-operative Department. Persons securing this Diploma will find no difficulty in getting employment in Co-operative sector which is expanding very fast. This being the position, it is suggested that these centres should introduce Diploma courses of two years' duration for private candidates having passed their S. S. C. examination. Broadly, the capacity of a class should be thirty. These centres would then require two additional lecturers and other incidental facilities and amenities.

3.6. So far as the school drop-outs are concerned, separate arrangement for Certificate course is deemed necessary. Alternatively, training courses of a peripatetic nature are already organised at the local level with the help of the co-operative training instructions under the existing arrangements. These facilities need not be expanded for the present.

3.7. Fisheries is now considered as a branch of science which deals with the marine as well as freshwater living resources. There are at present only eight primary fisheries schools in the Districts of Thana, Kolaba and Ratnagiri and one High School at Satpati (District Thana). The intake capacity of each primary school is 30-35 while that of the High School is 60. Besides, there are four training centres at Versova, Bassein, Alibag and Ratnagiri. Two training courses of six months duration each are conducted during a year at these centres. 22 candidates are admitted at each centre per course and they are paid stipend of Rs. 50 per month during the course. With the advancement in the science of fisheries the utilisation of the marine as well as freshwater resources has been more or less on the methodical lines and certain methods of fish culture and also exploitation of fisheries have been standardized to a certain extent which

can be followed without much of technical know how. So far as fresh water fisheries are concerned, the methods of fish culture, which consist of selection of water resources, selection of fish seed for growing in those resources, and the exploitation of fisheries have been more or less standardized. Though the technique of fish breeding cannot be said to be perfected, certain common methods are evolved to attain satisfactory amount of success. So far as marine fisheries are concerned, certain new methods such as trawling have been more or less standardized. There is, therefore, scope to train the boys who have passed the S.S.C. or those who have studied upto S.S.C. in both the freshwater fisheries and marine fisheries occupations. The Department of Fisheries has been conducting training courses of one to six months both in freshwater fisheries and marine fisheries. There are also some advanced courses for the boys who have studied upto S. S. C. conducted by the Government of India at the Central Institute of Fisheries Operatives at Ernakulam. Bosuns, skippers, gear technicians, boat-building carpenters, electric equipment operators, engine drivers are trained at this Institute. The newly established Konkan Krishi Vidyapeeth is also considering introducing one year certificate course for students passing the S. S. C. with Fisheries as a special subject. There is, therefore, scope for conducting vocational courses in Fisheries for the students who have studied upto S. S. C. or who have passed S.S.C. examination.

3.8. The courses which have been enumerated both for award of a Diploma and a Certificate are proposed because of their potential from point of self-employment as also of employment in Government, private and co-operative agencies. Persons who have successfully completed these Diploma courses can also start in their community and neighbouring areas Agro-service in respect of agricultural machinery, their maintenance and repairs, plans protection measures, seed production and soil and water management.

3.9. The preparation of syllabi for these courses will have, however, to be entrusted to subject matter specialists for which if necessary, separate committee will have to be constituted. This committee may also be entrusted with the work of spelling out the physical facilities and the staff required for these courses at an institute.

3.10. In the initial stage, these courses should be instituted at some of the existing institutes where facilities already exist for imparting training, if necessary, by providing additional facilities to bring them to the required level. After gaining experience if there is demand for expansion of these facilities, new centres may be opened.

3.11. To begin with, the courses may be started at the existing agricultural schools in the districts, Gram Sevak Training Centres, Rural Institutes, Agricultural and Veterinary Colleges, Agricultural Engineering Colleges and Co-operative Training Centres at district level.

3.12. All the courses enumerated above need not be started at every institution. The need for starting a particular course at an institute may be determined on the basis of (i) physical facilities, (ii) availability of trained staff, and (iii) prospects of candidates being available for a course. The selection of an institute for starting particular courses should be left to be determined by a team of experts who will examine the need in the light of the points mentioned above.

3.13. The admission capacity for each of the Diploma Courses should not exceed thirty. This figure is arrived at with due regard to the full utilisation of the facilities that may be created for that purpose. No institute should be permitted to undertake these courses unless it is properly equipped with all the physical facilities and staff, as may be prescribed by Government, from time to time. Government should finance these institutes on the lines of secondary schools grant-in-aid.

3.14. The courses referred to above are contemplated primarily to provide vocational training to the school drop-outs and also to those who cannot for one reason or the other enter University after S. S. C. In the present context of the green revolution, these courses are considered as employment oriented. The employment would be available for Diploma holders in certain subjects with the public sector and also some private and co-operative agencies dealing in agricultural inputs and marketing agricultural products. Some of the Diploma holders would also find employment as salesmen, godown-keepers or with banks providing agricultural credit. Some enterprising Diploma holders would also be able to establish thriving Agro-service centres. The greatest benefit to the community will, however, come from such of the Diploma holders who would go back to their farms and would utilise the specialised knowledge to augment the production of their own farms; they would in course of time serve as leaders and guides of their community. In the ultimate analysis, it is expected that the majority of the trained persons would not remain idle. In the same trend, it can be said that those who would undergo Certificate courses would be useful at lower level. The courses suggested here will entail employment of large number of agricultural and veterinary graduates.

4.1. *Financial and Administrative Implications.*—It is suggested that these courses both for Diploma and Certificate should be started at the existing institutions, viz. Agricultural Schools, Gram Sevak Training Centres, Rural Institutes, Agricultural Colleges, Veterinary Colleges, Agricultural Engineering Colleges and Co-operative Training Centres. After selecting an institute for starting a particular course or courses, financial implications will have to be worked out taking into consideration: (i) the additional staff, (ii) additional accommodation, (iii) additional land and (iv) other additional physical facilities which will be required to be provided for running these courses. The expenditure in this regard can only be estimated when

the details of various courses have been worked out by the subject matter specialists. The Group having considered the problem of indicating financial implications involved in starting these courses felt that it would be hazardous for it to suggest any estimates at this stage unless it has a clear picture of the existing facilities available at these institutions and the subject contents that may be prescribed for these courses by the experts. This will have, therefore, to be worked out at a later stage when proposals regarding starting of these courses at the institutions are finally determined by Government. So far as the Certificate course in Milk Processing is concerned, the facilities available at the Students Dairy of the Dairy Science Institute, Aarey should be fully utilised so as to keep the additional cost to the minimum.

4.2. The Group deems it necessary to draw the attention to the fact that the administration' inspection and supervision of various courses conducted by different agencies will have to be suitably co-ordinated. It is necessary to lay down clearly as to what would be the Agency for giving grant or providing funds for these various courses, they being for the present under the administrative control of various Departments. This Group also suggests that there should be an Agency which should ensure uniformity of syllabi, maintenance of uniformity in standards and conduct of examinations. This should be planned simultaneously to ensure placement of persons who would complete satisfactorily the different courses.

4.3. So far as the courses prescribed for the students who pass their S.S.C. examination are concerned, it is necessary to link them up suitably with the general course 10+2+3 so that such of the students who may later on intend to proceed to the University for Higher Education, their mobility is facilitated.

4.4. After the report of the Group was finalised, the Chairman thought that the Forest Department may be approached to suggest some courses of training and employable opportunities to the drop-outs at various levels upto S. S. C. stage in the Forest areas. With this end in view it was decided to discuss the relevant issues with the representatives of the Forest Department. A meeting was held on the 12th February 1973 when the Chairman discussed the relevant issues with the Deputy Secretary, Revenue and Forests Department, Conservator of Forests, Thana and the Silviculturist, Maharashtra State, Poona. It was decided that the Forest Department should frame a scheme for introduction of the Vocational Forestry Training Course. Accordingly, the Conservator of Forests, Thana Circle, has formed the necessary scheme for gainful employment of the drop-outs upto S. S. C. stage.

The Forest Department of Maharashtra is conducting two courses at present viz. the Foresters' Training Course at Chandrapur and the Forest Guards' Training Courses at Pal and Shahapur; thus there are three forestry schools conducting these courses. These schools are very well established in the forest areas. In addition to these, a fourth forestry school for training of forest guards at Chikhaldara will also start soon. Advantage of these schools can be fully taken for starting vocational forestry course for the drop-outs upto the S.S.C. stage (examination). It is, therefore, suggested that schools of vocational forestry training course may be established at the following places :—

1. Shahapur in Thana District.
2. Pal in Jalgaon District.
3. Chandrapur in Chanda District.
4. Chikhaldara in Amraoti District.

These schools will impart basic, theoretical and practical forestry training to the students who are drop-outs upto the S. S. C. stage (examination) as well as to those who have passed the S. S. C. examination but unable to continue further studies and desire to take some vocational training.

In each course about 50 candidates can be admitted; thus in the four proposed schools about 200 candidates can be admitted and trained. The duration of the courses can be for one academic year starting from 15th June and ending on 31st March with vacation of about 15 days during Diwali festival. These courses can be started during the year 1975-76. It will be necessary to provide suitable school building for accommodating 50 candidates in each school. These buildings can be constructed in the campus of the forestry schools already established. It will also be necessary to provide hostel accommodation for the students and residential accommodation for the school staff. Teaching staff of the existing forestry schools can be usefully utilized for the purpose with an addition of one Assistant Instructor specially for this course. In addition to this, separate staff for hostels, mess and office work of these schools will be necessary. Syllabus for the one year course can be the same as for the forest guards' training school; the details of which are indicated in Appendix II. In this course more emphasis will be on the practical training of the students in forestry works. They will be given this practical training in the nearby forest area. The course will have entrance examination as well as intermittent examinations during the course and the final examination at the end of the course; so that the candidates are made to work regularly and tested properly in this course. Those who will complete the course successfully will be given a certificate so that they can find suitable employment with the Maharashtra Forest Department or elsewhere in the other spheres.

As this course is proposed to provide opportunities for the drop-outs at the S. S. C. level residing in the forest area, it will be preferential to select candidates residing in the mofussil in the vicinity of the forests. This minimum educational qualification for the candidates will,

therefore, be that he should have passed the 9th standard examination of the 10 year S. S. C. course. The minimum age limit should be 15 years. Physical standard should indicate that the student has sound health and is capable of undergoing hard practical training. Each candidate will have to be provided with monthly stipend for undergoing the course for his boarding and lodging as well as some clothing and equipment allowance and travelling expenses.

Since the employment available in the Forest Department is limited, employment to all the candidates passed out from such schools cannot be guaranteed. However these candidates can be given preference while employing the forest guards of the foresters in the Forest Department. Besides the employment in the Forest Department, there is a scope for these trained candidates in other fields such as forest based industries, temporary employment in the Forest Department and employment in the Forest Labourers' Co-operative Societies and other social services.

The details of financial implications for establishing vocational forestry training schools in Maharashtra and training of about 200 suitable candidates can be worked out when this proposal is finally accepted. However, the financial requirement of establishing one school with a training capacity of 50 candidates is indicated below :—

	<i>Amount Rs.</i>
I. Providing necessary buildings :	
1. A school hostel for 50 candidates	60,000
2. Mess with kitchen and store, latrines, bathing places etc.	30,000
3. Quarters for :—	
(i) Assistant Instructor 1	16,000
(ii) Peon 1	8,000
(iii) Sweeper 1	8,000
(iv) Mess Cook 1	8,000
(v) Watchman 1	8,000
(vi) Clerk 1	10,000
	58,000
Total I ..	1,48,000
II. Pay and allowances of staff :	
(i) One Asstt. Instructor (R. F. O.) in the scale of Rs. 200—10—280—EB—15—400 @ Rs. 345 per month	4,140
(ii) One peon in the scale of Rs. 75—1—80—2—90—EB—2—100 @ Rs. 163 per month.	1,956
(iii) One Sweeper in the scale of Rs. 75—1—80—2—90—EB—2—100 @ Rs. 163 per month.	1,956
(iv) One Mess Cook in the scale of Rs. 70—1—80 @ Rs. 163 per month	1,956
(v) One Watchman in the scale of Rs. 75—1—80—2—90—EB—2—100 @ Rs. 163 per month.	1,956
(vi) One Clerk in the grade of Rs. 115—215 @ Rs. 236 per month	2,832
	14,796
III. Stipend and other allowances for the students :	
1. Stipend @ Rs. 50 per month for 10 months	500
2. Equipment and clothing allowances	100
3. Travelling allowances	200
	800
for 50 students ..	40,000
Total III ..	40,000
IV. Miscellaneous :	10,000
Grand total ..	2,12,796

Recommendations :

5.1. It is recommended that for school drop-outs, Certificate courses of six to twelve months duration should be introduced in the subjects as shown in para 3.3.

5.2. Diploma Courses of two years duration should be introduced in the subjects enumerated in paras 3.2 and 3.5 for those who will pass at S.S.C. but not go to the University.

5.3. The work of preparation of syllabi and of working out the detailed requirements of physical facilities and staff to conduct these courses should be entrusted to a committee/committees comprising of subject matter specialists.

5.4. The admission capacity at each centre either for a Certificate course or a Diploma course should not exceed thirty.

5.5. To begin with, the proposed courses should be started at the existing institutions as stated in paras 3.11 and 4.1.

5.6. In order to ensure employment for persons who would successfully complete either Certificate or Diploma Courses referred to in this report, the Government may modify the existing Recruitment Rules so as to make them eligible for appointment to posts under Government and Government sponsored bodies. Similar recommendations may be made to private and Co-operative institutes.

5.7. It is recommended that establishment of an Institute for the purpose of guiding, directing and co-ordinating Agro-Service Programmes by different agencies in Maharashtra State may be considered.

5.8. It is recommended that four schools of Vocational Forestry Course may be established at four different places indicated in the report, particularly for those students residing in forest areas of Maharashtra State.

APPENDIX I

Table showing Yields of Various Crops in Maharashtra

(Production in thousand tonnes)

Serial No.	Year	Rice	Wheat	Jawar	Bajri	All cereals	Tur	Gram	All Pulses	Cotton (lint)	Groundnut	Sugarcane	Tobacco
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1961-62	15.09	4.23	29.67	4.32	56.03	3.44	1.36	8.55	1.70	7.82	11.52	13.00
2	1962-63	12.67	4.52	33.47	5.54	58.74	3.08	1.44	8.28	2.29	8.07	10.20	11.90
3	1963-64	15.13	3.42	32.02	4.71	57.89	3.60	1.15	8.51	2.58	7.81	11.01	8.6
4	1964-65	14.55	4.08	32.59	4.78	58.87	3.52	1.21	8.58	2.28	8.41	12.07	7.6
5	1965-66	8.84	2.80	22.95	3.70	40.37	2.48	.79	6.00	1.79	4.73	11.20	6.4
6	1966-67	10.52	3.64	30.61	4.66	51.85	3.08	1.05	7.57	1.92	4.53	10.81	6.9
7	1967-68	14.13	3.52	32.27	5.54	58.29	3.04	.95	8.06	2.32	6.43	11.38	5.1
8	1968-69	13.18	4.13	32.54	6.39	59.13	3.02	1.18	8.44	2.46	6.58	15.08	3.6
9	1969-70	13.67	3.88	29.45	7.14	56.52	2.92	.95	8.36	2.17	5.84	16.17	5.7
10	1970-71	16.63	4.51	15.91	7.88	48.14	3.05	.99	7.76	.87	6.17	16.79	6.1

APPENDIX II

Vocational Forestry Training Course

SYLLABUS

1. Silviculture

1. Definition of elementary terms.
2. Requirements of tree as regards light, moisture, minerals, etc.
3. Effects of forests on locality factors.
4. Locality factors in details.
5. Direct and indirect benefits of forests.
6. Natural and artificial regeneration in details (especially the plantation of teak, semal, bubul, Kaju, and other main species). Nursery—selection of site, preparing beds, sowing seeds, etc. Types of nurseries, their maintenance and protection. Seed collection treatment given to different seeds before sowing, weathering and storing of seed, methods of vegetative reproduction. Conditions essential for natural regeneration, different methods of natural regeneration. Methods of artificial regeneration, sowing and planting, etc.
7. Tending operations—weeding, cleaning, thinning, climber—cutting, grinding, pellarding, etc.
8. Different types of forests in Maharashtra—broad outline.
9. Suitability of different soil for different species.
10. Study of important species.

2. Management

1. Knowledge and broad outlines of various silvicultural systems in Maharashtra State, their merits and demerits—Clear felling selection. Selection-*cum*-improvement, Coppice with reserves.
2. Elementary terms—rotation and its need, yield, felling series, compartment, block, coupe, working plan, working circle, etc.
3. Rules regarding laying out of coupes and carrying out various types of marking. Field practicals in marking under various systems and under different types of thinning.
4. Rules regarding management of Bamboo forests.
5. Improvement of pastures, rotational grazing.
6. Maintenance of boundary lines and boundary marks of forests.

3. Protection

1. Erosion, its causes, effects, and types. Measure for soil conservation and prevention of erosion. Planting technique for afforestation areas.
2. Practical knowledge in the protection of forests from pests, cattle and illicit cutting.
3. Fire—Causes of fire, damages caused by fire, how to prevent occurrence of fires, how to stop fire from spreading.
4. I. F. A. Sec. 79—duties of forest villages, forest contractors and their servants.

4. Utilisation

A. GENERAL—

- (i) Elementary knowledge of the structure and properties of wood.
- (ii) Common defects in timber,
- (iii) Common uses of wood and species suitable for them (species found in Maharashtra State).

B. FELLING AND EXTRACTION

1. Implements used in felling, precautions and general rules in felling of trees.
2. Upresting of trees or stumps, methods used.
3. Logging operation works involved in logging works and how to maintain logging registers.
4. Billeting for firewood and charcoal.
5. Extraction including dragging.
6. Carting chalan.

C. CONVERSION

1. Sawing types of saws used, different parts of saw, hand sawing and machine sawing, measurements of sawing work.
2. Charcoal-preparation of charcoal, common types of kilna, properties of good charcoal, field practical in manufacture of charcoal.

D. CLASSIFICATION OF TIMBER

1. Measurements of trees timber, firewood, and charcoal.
2. Round timber classification as prescribed by Utilization Officer.

E. STORING OF TIMBER

Selection of site, storing round and sawn timber, depots, arrangement of round and sawn timber in lots in depots, precautions to be taken in respect of storing round and sawn timber.

F. SEASONING

Different methods of seasoning of timber.

G. PRESERVATION

Different methods of preservation of wood.

H. MINOR FOREST PRODUCT

Minor forest products of commercial importance, elementary information of industries based on such produce (1) Rosha oil, (2) Tanning material, (3) Fodder trees, (4) Fibres and flosses, (5) Gum collection, (6) Oil yielding seeds, (7) Medical uses of Plants, (8) Kath manufacture, (9) Lac cultivation, (10) Paper pulp manufacture, (11) Match manufacture and (12) Ply-wood manufacture.

5. Botany

1. Parts of a tree and their functions—root, stem, leaf, flower, fruit and seed.
2. Various types and modifications of these parts and their purpose.
3. Pollination.
4. Seed dispersal.
5. Identification of the common species of trees, shrubs and timber.

6. Survey

A—Definitions of elementary terms in plain geometry such as point line, angle, triangle, quadrangle and circle. Measurement of areas of triangles and rectangles only.

B—Scales, Plain scales and its use in map reading.

C—Chain, measuring distances with chains, various types of chains, knowledge of using chains, precautions to be taken to avoid errors in chaining.

D—Tapes measuring distances with tapes, various kinds of tapes, precautions to be taken while using tapes.

E—Names and uses of different survey instruments.

Map Reading.—Simple map reading, knowledge of the signs and details given in toposheets such as contours, lines etc. How to orient a map. How to recognise the ridges, vallies, steep and gentle slopes etc. with the help of contour lines. Calculating distances on maps.

7. Engineering**A. BUILDING MATERIAL**

Stones, Brick-kinds of bricks, how bricks are prepared, qualities of good bricks, Sand, Tiles, Timber, Bamboos, etc.

B. BINDING MATERIAL

1. Mud—how mud mortar is prepared, requirements in a good quality mud mortar.
2. Lime—how it is prepared, kinds of lime and their uses, how lime mortar is prepared, qualities of good cement, how cement is stored, how cement mortar for various purposes is prepared.

C. CONSTRUCTION OF BUILDINGS

1. General Principles in selection of site.
2. Foundation—laying out for foundation, precautions to be taken in excavation of foundation, precautions to be taken in filling of foundation.
3. Precaution to be taken while supervising masonry and brick work, plinth, superstructure and roof.
4. Pointing.
5. Plaster.
6. Flooring.
7. Roofs—elementary knowledges of different types of roofs.

D. MAINTENANCE

Maintenance and repairs of buildings, premonsoon and postmonsoon work.

E. WELLS

Maintenance and cleaning of wells.

F. ROADS

Elementary knowledge regarding construction of roads, gradient, alignment, types of roads. Elementary knowledge regarding side drains and cross drains, maintenance and repairs of roads, premonsoon and postmonsoon repairs.

G. FENCES

Various types of fencing, live hedge fencing and species used for it.

H. MEASUREMENTS

Taking measurements of white washing, calculation of earthwork in foundation, burrow pits.

8. Other Subjects**A. FOREST LAW**

Indian Forest Act and Rules thereunder with special emphasis on sections 26, 30, 32, 33, 41 and rules thereunder, sections 52, 62, 63, 64, 79 with which forest guards are mainly concerned. Procedure to be followed in detection of offences, issue of F. O. R. and seizure of property, cattle, etc.

B. WILD LIFE ACT

Wild Life Act and rules made thereunder with special emphasis on sections 2, 3, 9, 15, 16, 17, 28, 30, 44, 45, 48 with which forest guards are necessarily concerned. (Shooting rules to be explained to students).

C. PROCEDURE

1. Duties of Forest Guards.
2. Writing of diaries.
3. Muster roll.
4. Remittances.
5. Elementary rules regarding casual leave, leave and joining time.
6. Conduct and discipline rules.
7. Proper care and use of uniform and weapons.
8. Grazing Rules, Rated Passes. (For Vidarbha region only).
9. Permits, Free grant permits.

APPENDIX 'F'

**REPORT OF THE GROUP II ON INDUSTRIAL,
VOCATIONAL, TECHNICAL EDUCATION**

**APPOINTED BY THE STUDY GROUP ON
VOCATIONALISATION**

OF

SECONDARY EDUCATION

CONSTITUTED BY THE

STATE COMMITTEE ON UNIFORM PATTERN OF EDUCATION

IN

MAHARASHTRA STATE

Chairman

Dr. A. U. SHAIKH

Convenor

Shri M. V. DESHPANDE

**Report of the Group II—Industrial, Vocational and Technical Education—of
the Study Group on Vocationalisation of Education.**

1. Dr. A. U. Shaikh, Chairman
2. Dr. Eugene Staley, Ford Foundation, New Delhi.
3. Director of Technical Education—Convenor
4. Shri Anant Ramaiya, Chief Engineer, Wyman and Gardon, India Ltd., Pokaran Road, Majiwada, Thana.
5. Dr. V. V. Kale, Joint Director of Industries.
6. Shri S. S. Desnavi, Principal, Saboo Siddique Technical High School, Bombay.
7. Shri Anwar Divecha, Hon. Secretary, All India Manufacturers' Organisation, Bombay or his Substitute, Co-operative Insurance Building, Sir, P. M. Road, Bombay-1.
8. Dr. G. H. Nafde, Principal, Institute of Vocational Guidance and Selection, Bombay.
9. Principal, St. Agnel Technical High School, Bandra, Bombay.
10. Dr. L. V. Agashe, Chairman, Board of Technical Examinations, Bombay.
11. Shri R. S. Kenkre, Director of Apprenticeship Training, Board of Apprenticeship, Bombay.
12. Dr. N. K. Upasani, Chairman, State Board of Secondary Education, Poona.
13. Shri Y. D. Mahajan, Assistant Director, Employment Exchange, Bombay.
14. Shri D. T. Adatrao, Superintendent, Moledina Technical High School, Shankar Shet Road, Poona.

VOCATIONALISATION

(Junior Industrial Training Institutes)

1. *Preamble.*—1.1. Since years, the number of drop-outs at the primary and secondary school stages has been very large and of late with mass education drive, the number of drop-outs has reached an alarming figure. Very little if anything has been attempted to increase the retentivity in the schools. In fact, the examination system and the traditional social structure have continued to take their toll of particularly the weaker and neglected sections of society.

1.2. Being very much under higher class, white collared domination, the education system has been naturally allergic to the problems of the egalitarian society and their solutions. By and large Educationists and Education Commissions have also mainly diverted their attention and the available resources of the community, such as, money, talent and equipment to the minority of nine per cent of all students who are expected to pass the S. S. C. examination. They have also done their best for the improvement of facilities and status of General education and of Technical and Scientific education at higher levels which cater to the three to four per cent of the student population. In the bargain they have also improved conditions of service and perquisites of educationists at all levels and particularly of these at the college and University levels of education while reducing their work-load to as little as fifteen periods per week. The University Grants Commission has been a God-send to them.

1.3. It is true that they have also given occasional lip-service to occupational education, work experience, new sciences, career guidance and technology being made available to the children at school stage but they have discarded the idea of Nai Talim which Mahatma Gandhi had initiated, as impractical, particularly because children, they have argued, are immature for vocational and professional work being taught to them at a tender age. This is strange because educational psychologists have also argued that a child develops its I. Q. by the age of 7 and it is thoroughly complete by 14 or 15 and that play-activity education at the nursery level is the best form of education. We know that children get married and become parents in many cases even at the age of 15 and bear the burden of the family much earlier. That is why nearly 35 per cent girls in Maharashtra are unable to go to schools at all and the drop-out rate is extremely high as they are needed for house-hold chores. On farms and other establishments like hotels etc. also children work under conditions of exploitation of child labour. The question, therefore, of enabling the child to get a definite skill of a vocational or professional type at the level after he is 13 or 14 by putting him to training for a year or two and imparting such practical education at the elementary or foundational levels has to be decided in the light of these realities of the situation.

1.4. It is estimated that in Maharashtra, out of about 19.55 lakhs of boys and girls that join Ist Std., 12.58 lakhs drop out by the end of the IVth Std. and only 6.97 lakhs continue in the Vth Std., that is, drop-outs constitute 65 per cent of the 95 per cent children who join the schools at age 6. Further, from amongst the 6.97 lakhs in Std. V students keep on dropping out at the rate of about 10 per cent every year and only 1.93 or 2 lakhs of children reach the S. S. C. class, which means that the drop-out rate at the secondary stage is about 70 per cent of Std. V entry and the drop-out rate with reference to admissions at the I Std. works out almost to 91 per cent as against the 9 per cent who pass the S. S. C. The Government of Maharashtra is spending about Rs. 150 crores per annum on all types of education, over and above whatever is the contribution of the parents and institutions by way of fees, recurring and non-recurring costs shared by them with Government on education at all levels. This gives us an idea of the higher rate of stagnation and wastage in the school system and the colossal waste of national resources and man power, not to speak of the frustration in the individuals, the families and the community at large. The situation that 91 per cent of our budding population should go through life as failures, drop-outs and as misfits, should not be tolerated any longer. If their individual productivity and efficiency is not upgraded, their earning capacities will be low and they will continue to be a drag on the nation. National rates of growth are also directly connected with this vast mass of working population and any social economist will have to reckon with this fundamental problem before he promises anything like "Garibi Hatao". The situation and education system as well as administration in Maharashtra being much better than most other States of India, we can only imagine what havoc is perpetrated all over India.

The only solution seems to be that vocational education and training has to be imparted to these drop-outs after they have attained the age of 13 plus upto 20 or 22, so as to enable them to stand on their legs by self-employment or by justifying giving them gainful employment in factories, and households or farms. Many of these children would also pursue a more efficient and gainful way of life if suitable skills are imparted to them according to their aptitudes, liking or requirements.

1.5. Imparting of some skill, however, elementary or at the foundational level would stand them in good stead in life and their productivity as individuals or as units in a farm or factory will go up and many dissatisfactions in both employees and the employers will be reduced. It may also be desirable to provide facilities such as, uniforms and mid-day meals to poor

children, particularly girls, to increase the schools' retentivity, and giving compact courses to the drop-outs to reinduct them in the general education system at standards V, VIII and X. This may also have some good effect, but to expect that the drop-out rate may suddenly be counteracted thereby is hoping against hopes. We shall continue to face the problems of a large number of unskilled drop-outs. These drop-outs upto the end of Std. V belong to the age-group of 6 to 11 and attempts may be made to retain them longer and reinduct them in general education system upto the VIII Std. or so.

1.6. However, once the drop-outs have attained the age of 13 to 14, it is too much to expect them to go back to general education and we must, therefore, immediately work out the system of imparting them some definite skill of a vocational or professional type. The number of such pupils who need this kind of training in Maharashtra is calculated at about 6 lakhs. From amongst them about 25 per cent or 1.5 lakhs may be brought under the spell of a new system of education in which functional literacy plus a suitable skill out of about 160 plausible electives (which are mentioned in the Appendix) may be imparted to them in informal or formal type of Technical or Vocational institutions over a period ranging from 6 months to two years.

1.7. It is to be remembered that this problem of drop-outs is more serious in the mofussil and rural areas. Their training will have to be arranged in their areas or round about, otherwise it would be difficult for the parents to send their children for training. Moreover, the boys and girls after getting trained in district places, get accustomed to city life and are likely to be reluctant to go back to the rural areas to work there. Education may thus further disintegrate the rural community rather than reintegrate and make it more affluent and attractive. Therefore, the courses and locations of institutions for rural people and areas will have to be chosen according to their needs and genius. The courses for rural, semi-urban, urban and industrial localities will have to be settled after man-power, and Job-opportunity surveys of each location.

2. *Objectives.*—The objectives of vocationalisation envisaged here are limited to elementary and foundation type. Nonetheless, without claiming to turn out a fully skilled craftsman the courses will provide sufficient basic knowledge and skill which could be improved by further practice and actual work. If necessary, further orientation courses of the short or long duration can be organised for these trainees in their spare time by utilising these institutions, their staff, equipment and machinery from early morning to late at night. These children who would be earning and learning may also be later on given courses in their particular skills at higher levels in regular I. T. Is. Since general educationists insist that they must also have sufficient literacy and numeracy in them besides technocracy, for further improvement and better standard of living, we would see that the trades and courses imparted to them are also accompanied with functional literacy, through which they will improve their knowledge of the theory of their own profession as well as its economics at elementary levels. Besides, the trainees would be imparted a certain amount of civic knowledge, etc.

3. *Line of Action.*—3.1. Since 70 per cent of the rural families will have to continue to labour on their farms or on allied trades and vocations in the villages, attention would be paid to their specific requirements by having junior agricultural institutes set up in all the 106 agricultural high schools or in some of the Ashram schools in the State. There is also a scheme sanctioned under G. R. and Corrigendum, S.W.C.A., Sports and Tourism Department, No. BCP-1072/3893-G, dated 14th August 1972 and dated 21st September 1973 for having area development programme of an agricultural extension type of about 240 or 300 Ashram schools in the State under the Social Welfare Department (*Vide Appendix 'C'* showing 40 Ashram Schools sanctioned during 1972-73). The courses and system of training at these institutions would be systematically planned for imparting education to suitably selected farmers or farm labourers' children. If possible, some of these courses should be run in the off-season and made of sandwich type so that trainees can go back and practise on their farms, whatever is taught to them and even the agricultural teachers from the Junior Technical institutes should visit the farms to check whether they are really putting what they learnt into practice. They will also suitably influence their parents and improve their farm techniques and practices. They would be taught farm budgets properly and allied pursuits, such as, Dairy, Animal Husbandry and Poultry, etc. to supplement their incomes. They would also be initiated into co-operative methodology, finance, marketing and processing.

3.2. As regards the drop-outs in non-farm families and semi-urban area, it would be necessary to set up junior I. T. Is. where technical and vocational education at foundational level will be imparted. We have already got about 53 Government and non-Government Industrial Training centres, about 109 Government and non-Government Technical High Schools, 9 Government Industrial Workshops, 41 Industrial centres, 4 Forest Training centres, and in the second category, 140 Ashram schools, 106 Agricultural high schools, and Gram Sevak training centres.

3.3. Out of 500 institutions which have facilities as stated here, we propose to select about 400 and strengthen, extend and re-equip them for the purpose in view, in addition to the Ashram schools, 25 Agricultural schools, the latter will be converted into middle level agricultural diploma courses which have been planned in consultation with Vice-Chancellors of Agricultural Universities.

4. *Existing Facilities.*—At present there are the following categories of institutions which impart instruction in the field of technical and vocational or general education to boys and girls at the S. S. C. level or below:

(a) Government Industrial Training Institutes	33	} These are mainly post-S. S. C. vocational schools which Government of India are proposing to modernize.
(b) Non-Government I. T. Is.	.. 20	
(c) Government Technical High Schools/Centres.	43	} These are only imparting technical and general education for S.S.C. on the basis of 50 : 50 but no final trade skill.
(d) Non-Government Technical High Schools	66	
(e) Government Industrial Workshops	.. 9	} These are imparting elementary skill.
(f) Industries centres	.. 41	
(g) Ashram Schools .. .. .	.. 140	} Only 40 out of these are having agricultural farms attached but give primary education.
(h) Agricultural Schools .. .. .	.. 25	
(i) Gramsevak centres	.. 9	} These can be upgraded for higher agricultural courses by Agricultural Universities.
(j) Agricultural High Schools	.. 106	
(k) Forest Training.Schools mostly for forest staff.	4	} These are for departmental hands

5. *Courses.*—5.1. The courses that are planned for these institutions and the cost thereof are as stated in Appendix A and Appendix B. Junior Industrial Training Institutes with fulfilled trades, craftsmanship or agricultural courses would be started at the above listed institutions. The CIDCO, Industrial Estates, Regional Development Corporations and Municipal Industrial Estates could also start such courses under their rehabilitation and training schemes.

5.2. To cater to the varied needs of the different sections of the society scattered all over the State from the tribal areas to the urban cities, a variety of courses will have to be started. The aptitudes, resources and needs of the tribal areas will be quite different from those of the agriculturists in the fertile plains in the rural districts and these in turn will differ from the needs of the industrial zones, semi-urban and urban towns.

5.3. Some courses from this list may be offered at the Junior I. T. Is. in accordance with the demand and need of the area as revealed by a survey which should precede location. Trade courses selected for institutions or area will be varied and made flexible according to practical needs and emerging demand for skilled workers from time to time.

5.4. It is proposed that at each institution about six trades should be offered. A student may choose any one of them suited to his liking and aptitude.

6. *Academic Control.*—6.1 Although administratively the junior I. T. Is. may be controlled by different departments such as Education, Social Welfare and Agriculture, their academic management, including syllabi, conduct of examinations, inspection, reviewing etc. should be entrusted to the proposed State Board of Vocational, Professional and Technical Education. Functional literacy will also be an important and essential concomitant of these trade courses.

6.2 The State Board of Technical Education may have under it three wings with specialists in charge for supervision, control and direction with appropriate advisory bodies. The Board may have a common wing for statistical and man-power studies, a guidance cell, as also accounts and administrative branches and a set-up for teacher training and research. Curricular evaluation and other research programmes may have to be attended to and subject-wise institute of teacher-training and research set up. Technical workshops or sales depots may also be attached to the institutions as on the Rajasthan pattern and Co-operatives of Craftsman after training may be organised.

6.3. It is felt that no courses should be of a duration less than six months and more than two years. It is also felt that the syllabus for any trade or vocation should include the requisite trade theory and other related matters, such as, simple calculations, costing and economics of the trade, and the aesthetic point of view pertaining to the trade or vocation. Other academic subjects could be considered for inclusion provided they are correlated with trade. In this course greater emphasis should, however, be laid on practice. Teaching time allotted to Technical subjects proper and Functional Literacy Subjects would be in the ratio of 75:25. The admission qualification for the Junior Industrial Training Institutes should be as follows:—

(a) A student should have attained the age of 13 plus and be below 21; and

(b) He should have passed V Std. so that there will be something to look forward to after Std. V education. This will increase retentivity of general schools.

7. *Financial Implications.*—7.1. It is to be noted that the number and types of courses proposed to be introduced are quite varied. They are as many as 160 besides Ashram Shala and Agricultural courses. The costs involved would, therefore, depend upon the particular

courses sought to be introduced and their specific combinations. In order to minimize overhead supervision, equipment and building costs the courses will be introduced in different types of existing institutions like Technical High Schools, Government I. T. Workshops, Industries centres, Ashram Schools, Agricultural High Schools, Agricultural Schools, Forest Training Schools, Gramsevak Centres and perhaps Industrial Training Institutes. The Potential of each parent institution by way of physical facilities of accommodation, equipment, furniture, staff, etc. being different, they may need supplementing and the courses will vary according to survey of needs.

7.2. It is proposed to subsidise one meal per trainee at a cost of Re. 1 per day as it is assumed that their parents will find it difficult to spare them for the required number of days and pay the full cost of living outside the farm or the home. If the student is earning and learning, then, he can only earn a part-time wage as an unskilled hand and, therefore, he should be compensated by payment of one rupee by way of a subsidized meal at the centre. It is also proposed to provide hostel accommodation for 50 per cent of the children as the scheme is intended to cover a far-off area round about the location of the Institute.

7.3. The details of the intake of various institutions, the number of institutions, non-recurring and recurring cost on the full programme, so also the locations of various institutions during the Fifth Five-Year Plan have been indicated in the accompanying Statements (Appendices 'B' and 'D') and the map. Care shall be taken to see that all areas particularly the Backward and Adivasi and Urban Slum areas are well-served.

A. U. SHAIKH,
Secretary, Education Department and Chairman.

APPENDIX 'A'

*List of Certificate Courses**Civil Engineering*

- 1 Architectural Draftsmanship.
- 2 Construction Supervisor.
- 3 Interior Designing and Decoration.
- 4 Trained Mistry.
- 5 Masonry.
- 6 Tracers.
- 7 Wood Turning and Laccuer Work.
- 8 Brick Laying.
- 9 Mason.
- 10 Cement Casting.

Mechanical Engineering.

- 1 Foremanship.
- 2 Supervisorship.
- 3 Engineering Apprentice.
- 4 Marine Motor Room.
- 5 General Maintenance Mechanic.
- 6 Engine and Pump Repairs.
- 7 Store Keeping.

Electrical, Radio Engineering and Allied.

- 1 Television Servicing.
- 2 Radio Servicing.
- 3 Cinema Projection.
- 4 Lineman, Wireman.

Applied Chemistry.

- 1 Photography.
- 2 Dyeing and Calico Printing.
- 3 Artisans Industrial Leather Goods, Manufacture.
- 4 Leather Technology (Tanning).
- 5 Artisan Footwear Manufacture.
- 6 Artisan Miscellaneous Leather Goods Manufacture.
- 7 Plastic Technology Course.
- 8 Soap Manufacture.
- 9 Cosmetics.
- 10 Ink, Glue, Gillatine Manufacture.
- 11 Matches and Fire Works.
- 12 Tyre retreading and rubber Products.
- 13 Preservations and Canning.

Catering and Institutional Management.

- 1 Teachers Training in Hotel Management and Food Technology.
- 2 Food Science Management in Hotel and Catering Industry.
- 3 Certificate Courses in Hotel Management.
- 4 Craftmanship Course in Hotel Reception and Book-keeping.
- 5 Craftmanship Course in Bakery and Confectionery.
- 6 Craftmanship Course in Cookery.
- 7 Craftmanship Course in Restaurant and Counter Service.
- 8 Craftmanship Course in Canning and Food Preservation.
- 9 Craftmanship Course in House Keeping.

Sugar Technology and Operative Course.

- 1 Juice Treatment Manufacturing Assistant.
- 2 Pan Boiling.
- 3 Sugar Operative in Milling House Practice.
- 4 Operative in Boiling House Machinery.

Printing Technology.

- 1 Composing (Advance).
- 2 Printing (Advance).
- 3 Composing.
- 4 Craftsman's Course in Hand Composing.
- 5 Book Binding Course.
- 6 Crafsman's Course in Letterpress Machine work.
- 7 Mono Operators.
- 8 Lino Operators.

Textile.

- 1 Textile Apprentice Spinning.
- 2 Textile Apprentice Weaving.
- 3 Weaving of Man-Made Fibre Fabrics.
- 4 Wet Processing of Man-Made Textile.
- 5 Handloom Weaving.
- 6 Cotton Weaving (Powerloom) (Full-Time).
- 7 Cotton Weaving (Powerloom) (Part-Time).

- 8 Cotton Spinning (Part-Time).
- 9 Wool Knitting and Weaving.
- 10 Practical Weaving (Powerloom).
- 11 Hosiery.

Tailoring and Embroidery.

- 1 Master Tailor.
- 2 Teachers Training Course in Needle Craft (Group A).
- 3 Teachers Training Course in Needle Craft (Group B).
- 4 Tailoring and Cutting.
- 5 Tailoring Course in Women's and Children's Garments.
- 6 Practical-Tailoring Course in Women's and Children's Garments.
- 7 Embroidery and Fancy Work.

Craft Teachers Courses.

- 1 Tailoring.
- 2 Needle Work and Embroidery.
- 3 Cardboard work and Book Binding.
- 4 Cane Work.

Miscellaneous.

- 1 Travel Agency.
- 2 Home Science.
- 3 Sarang Boatswain.
- 4 Sukanu (Quarter Master).
- 5 Khalasi (Sailor).
- 6 Mechanical toys.
- 7 Modelling.
- 8 Painting.
- 9 Bicycle, Stove, Petromax repairs.
- 10 Calico Printing.
- 11 Rope Making and Coir Work.
- 12 Pottery.
- 13 Brick Making.
- 14 Laundry Bleaching and Dyeing.
- 15 Soldering Brazing Tinning.
- 16 Plumbing.
- 17 Fistwork.
- 18 Chalk Sticks and Crayon Making.
- 19 Glass Blowing.
- 20 Interior Decorator.
- 21 Engraving and Rubber stamps.
- 22 Commercial Painting.
- 23 Automobile servicing.
- 24 Tin Smith.
- 25 Lock Smith.
- 26 Optics and Glass Grinding.
- 27 Telephone Operator.
- 28 Footwear Manufacture.
- 29 Fancy Leather Goods Manufacture.

Agricultural.

- 1 Multiple Cropping.
- 2 Dry land farming.
- 3 Fruits and vegetable crops, Preservation and Processing.
- 4 Crop husbandry.
- 5 Seed production and processing technology.
- 6 Dairy cattle management.
- 7 Poultry Farming.
- 8 Plant Protection.
- 9 Soil and Water Management.
- 10 Farm Machinery, Maintenance and Minor Repairs.
- 11 Farm Management and Economics.
- 12 Agricultural Marketing (Inputs and Outputs) and Extension.
- 13 Processing Farm Produce.
- 14 Farm Structures including warehousing.
- 15 Milk Processing.
- 16 Fodder Crop Production.
- 17 Certificate Course in Co-operation.
- 18 Elementary Agriculture Pertaining to above Subjects.

Industrial Training Institute Courses.

- 1 Blacksmith.
- 2 Carpenter.
- 3 Diesel Mechanic.
- 4 Refrigeration and Air Conditioning Mechanic.
- 5 Motor Mechanic.
- 6 Tractor Mechanic.
- 7 Moulder.
- 8 Painter.
- 9 Plumber.
- 10 Sheet Metal Worker.
- 11 Welder.
- 12 Wireless Operator.
- 13 Draftsman Civil.
- 14 Draftsman Mechanical.
- 15 Electrician.
- 16 Electroplater.

- 17 Fitter.
- 18 Wireman.
- 19 Machinist
- 20 Grinder Mechanic.
- 21 Miller Mechanic.
- 22 Mech. S. S. P.
- 23 Instrument Mechanic.
- 24 Radio and T. V. Mechanic.
- 25 Pattern Maker.
- 26 Surveyor.
- 27 Tool and Die Maker.
- 28 Turner.
- 29 Watch Repair.
- 30 Building Constructor.
- 31 Electronics.
- 32 Printing Machine Operator.
- 33 Cutting and Tailoring.
- 34 Hand Composing and Proof Reading.
- 35 Stenography (English).
- 36 Stenography (Marathi).
- 37 Book-Binding.

Abstract of Functional Vocational Literacy-cum-Jr. Trade Skills including Agricultural, Technical Paramedical and Commercial

	1	2	3	4	5
	No. of Institutions	No. of Students	Non-Recurring Expenditure (in lakhs)	Recurring Expenditure (in lakhs)	Total Expenditure (in lakhs)
<i>(A) Institutions to be run by the Education Department</i>					
1. Elementary Agriculture in other than Ashram Shala Areas.	100+25*	24000+6000*	218.44	134.25	352.69
2. Engineering and Technological in other than Ashram Shala Areas.	125+25*	84375+16875*	675.00	630.00	1305.00
3. Para Medical ..	25+ 5*	4500+900*	150.00	90.00	240.00
4. Commercial ..	50*	+7500	15.00	37.50	52.50
5. Additional Staff to control the Organisation	....	....	1.00	60.00	61.00
	355	144150	1059.44	951.75	2011.19
<i>(B) Institutions to be run by the Social Welfare Department</i>					
1. Elementary Agriculture in Ashram Shala Areas.	25	6000	43.69	26.85	70.54
2. Engineering and Technological in Ashram Shala Areas.	50	33750	225.00	210.00	435.00
	75	39750	268.69	236.85	505.54
<i>(C) Institutions to be run by the Agricultural Universities</i>					
1. Higher Agriculture ..	25	7500	225.00	141.00	366.00
Grand Total ..	455	191350	1553.13	1329.60	2882.73

*These Institutions will be located in tribal and other backward areas and urban slums.

APPENDIX ' C '

List showing 40 Ashram School Complexes sanctioned during the year 1972-73 under the scheme
"Area Development Approach Scheme"

	District	Taluka	Place
Bombay Division	Thana	Mokhada	1. Palsunde
		Talasari	2. Koregaon
	Nasik	Surgana	3. Uplat
			4. Savane
		Dindori	5. Ambupada
		Peint	6. Palsan
	Dhulia	Kalwan	7. Titavi
		Akranimahar	8. Boripada
			9. Mohandari
	Jalgaon		10. Chulwad
		Akkalkuva	11. Mandvikhurd
		Navapur	12. Pimpalkhuta
		Raver	13. Bandhare
		Yawal	14. Lalmati
Kolaba	Chopda	15. Wagzire	
	Ratnagiri	16. Vaijapur	
Poona Division	Poona	17. Kolghar	
		18. Kadawan	
Ahmednagar		19. Goghebudruk	
		20. Khireswar	
Aurangabad Division	Kolhapur	21. Maveshi	
	Satara	22. Kelirumanwadi	
Nanded	Junnar	23. Borbet	
		24. Bannoli	
Bhir		25. Sarkhani	
		26. Patoda	
Nagpur Division	Chanda	27. Shedala	
		28. Wadner	
	Sironcha	29. Korchi	
		30. Kotgul	
	Amravati	31. Jinganoor	
		Melghat	32. Kasansur
	Nagpur		33. Chikhali
		Bhandara	34. Ranigaon
	Wardha		35. Belda
		Yeotmal	36. Kadikasa
		37. Navargaon	
		38. Hivari	
		39. Chinchoni-Bo-toni	
		40. Kinhi (Jawade)	
Total			40

APPENDIX 'D'

Number of Institutions to be started and the Students to be trained during the Fifth Five Year Plan Period

	No. of Institutions	No. of Students	
1. Elementary Agriculture (other than Ashram Shala Areas).	100+25*	24,000+6,000†	*These Institutions will be located in tribal and other backward areas and in urban slums.
2. Engineering and Technological (other than Ashram Shala areas).	125+25*	84,375+16,875†	
3. Para Medical	25+5*	4,500+900†	†Additional Students.
4. Commercial	50	7,500	Institutions to be located in above areas.
	355	1,44,150	

A SYLLABUS IN 'FUNCTIONAL LITERACY' FOR STUDENTS OF JUNIOR INDUSTRIAL TRAINING INSTITUTES

For the last so many years the number of drop-outs at the school stage has been very large and recently it has reached an alarming figure. It has, therefore, become necessary to provide useful openings for these drop-outs by way of vocational education and training to enable these students to stand on their own legs by self-employment or by seeking job to earn living.

A number of vocational and technical courses have been suggested. The duration of these courses will be five months. The trainees for these courses will have an educational background of the level of Standard VII but less than the S.S.C. With a view to giving them a short course of 15 days duration it has been prepared covering the areas—Marathi, Mathematics, General Science, Social Studies, Developmental Studies and Recreational games and simple exercises etc. The total number of periods allotted for the various subject areas is 120, excluding the time required for recreational games and simple physical exercises, which will be organised for half an hour every day during the entire course.

2. *Distribution of the time allotment.*—120 periods have been distributed for different areas as indicated below :—

Serial No.	Area	Periods
1	Mother Tongue—Marathi	20
2	Mathematics	30
3	General Science	30
4	Social Studies	20
5	Development Studies	20
	Total ..	120

Recreational games and exercises—30 minutes duration per day during the entire course.

3. The general objective of the course is to provide the basic academic background to the trainees, under-going the course. The objectives and syllabus of each of the areas referred to above are indicated below :—

(a) *Mother Tongue—Instructional Objectives—*

To help the trainees—

- (i) to develop the language ability ;
- (ii) to correspond with different agencies in their field of work ;
- (iii) to express views in simple language.

Syllabus

Serial No.	Unit	Periods
1	Prose (about 60 pages) from the text-book for Standard VIII and/or Special Vocational text-books as in the case of neo-literates including lessons on Civics, Local Geography and History and Cultural themes.	12
2	<i>Grammar</i> —	8
	(i) Rules of orthography . .	
	(ii) Punctuation and/or . .	
3	<i>Composition</i> —	
	(i) Letter writing . .	8
	(ii) Correspondence letter	
Total ..		20

(b) Mathematics—Instructional objectives—

To help the Trainees—

- (i) to develop basic computational skills,
- (ii) to understand the importance of personal and vocational budgeting,
- (iii) to apply Mathematical knowledge in day to day life-situations.

Syllabus

Serial No.	Unit	Periods
1	Revision : Fundamental Operations	2
2	<i>Measurements</i> —	
	(i) Units of length, weight and time in metric system	3
	(ii) Simple examples on length, weight and time	4
3	Averages and Percentages.	3
4	General knowledge about the working of Posts, Telegraphs, Banks	4
5	Use of Time Tables : S.T., Railways	2
6	Budgeting : Personal and vocational	2
7	Areas of triangles and quadrilaterals, Volume of regular solids	5
8	Graphs—Drawing and reading	5
Total ..		30

(c) General Science—Instructional Objectives—

To help the trainees—

- (i) to understand the scientific principles behind the natural phenomenon,
- (ii) to use simple methods of detection and prevention of common diseases,
- (iii) to develop skills in using scientific knowledge in their day-to-day work.

Syllabus

Serial No.	Unit	Periods
1	Heat, Temp. and Climate—its effect on life	3
2	Simple Thermometer and Clinical thermometer, reading and comparison	3
3	Balanced diet—its composition and importance in maintenance of health	4
4	<i>Common diseases</i> —	
	Cholera, Typhoid, Small pox, Malaria, Skin Diseases and Preventive measures.	5
5	Electricity Dry Cells and their uses. Reading a voltmeter, ammeter and of calculation of electric bills	5
6	Modern methods of preservation of seeds and use of fertilisers	5
7	Accidents and First Aid with practicals	5
Total ..		30

(d) Social Studies—Instructional Objectives—

To help trainees—

- (i) to know the working of different local organisations and their impact on the individual and society,
- (ii) to develop a sense of responsibility towards citizenship in the democratic set-up.

Syllabus

Serial No.	Unit	Periods
(i)	Working of village Panchayat, Zilla Parishad and/or Municipality ..	5
(ii)	Exposure to the World of Work and organised and unorganised workshops and factories.	5
(iii)	Citizenship training rights and duties of a citizen	5
(iv)	Different social, cultural and political organisations, their functions in democracy.	5
Total ..		20

(e) Developmental Study—Instructional Objectives

To help the trainees—

1. Initiation in Co-operative Organisation and its Financial Assistance.
2. Lessons on different raw-materials, their costing and uses.
3. Lessons and Drawings of different Tools, their uses including repairs, maintenance and importance.

Syllabus

Serial No.	Unit	Periods
1	Working of Co-operative Societies	4
2	Population, Education, Family Planning and Savings	2
3	Importance of manual labour and of simple instruments and machines ..	5
4	Emotional integration restricted to family life and the community around ..	2
5	Small scale industries, their working, needs and financing, their tools, machines, raw materials and procedures.	7
Total ..		20

In addition to the above subject areas the trainees will have recreational games and simple physical exercises for half an hour daily.

EDUCATION DEPARTMENT

Chief Minister's Secretariat has been pressing for submission of the five Study Group Reports which functioned under my Chairmanship over the last ten months. Reports of all the five Groups are now finalised and submitted herewith for the kind perusal and support of the Chief Minister.

I may be permitted to submit that though Maharashtra has got only about 9 per cent of the total population of the country, it has a much higher percentage of G. N. P. and it covers nearly twenty-five per cent of the Industrial product of the Nation. Added value of the product that it produces is also extremely impressive. Commercial turnover of Maharashtra is also of the order of about 23 per cent. Its Agriculture, though deficit in food production, is fairly sophisticated and paying in terms of cash crops, such as, Sugarcane, Cotton, Groundnuts, Fruits and Vegetables etc. There is great scope for Agro Industrial processing and allied Industries. Maharashtra has got the highest urbanisation rate in India and, therefore, Urban, Industrial and Occupational pattern for better living is steadily emerging all over, necessitating the servicing of the Urban and Semi-urban communities by way of improved housing and added utilities and services by way of transport etc, which, in turn, be a great deal of employment and manufacturing potential for providing these services and facilities with their personnel and instrumentations.

It is, therefore, most important to find out how the man-power requirements of this extraordinary developmental and servicing process are being met. It is clear that a large number of trained people from other States are walking into jobs of various Technical, Semi-Technical and even of Semi-skilled labour type, into the State from other States, and the people of the soil are being left high and dry, or, in any case, they do not get adequate share in this employment potential.

The fault does not lie with others, but with ourselves in that our educational system has been somewhat impracticable and evasive towards semi-technical, technical, professional and vocational education in a changing and diversified economy. We must, therefore, recast our educational structure from the grass root to make it thoroughly practicable and efficient and technique oriented, so as to match it to our resources and their exploitation as well as to take in its strides the added responsibilities of Industrial and Urban growth, as well as agricultural processing and production.

With a view to making good these deficiencies and recommending new approaches and practical steps for training our out-of-school and in-school youth as well as vocationalisation of post S. S. C. courses, various Expert Committees and Groups have laboured under my Chairmanship and I am, therefore, submitting herewith the matured consensus of their recommendations to Government for immediate action. Already steps are being taken to include many of the schemes in the Fifth Five-Year Plan of the Department, but some of these proposals are meant to be tackled by the Departments and Universities of Agriculture, as also the Departments of Social Welfare, Industries etc. A copy of this proposal is, therefore, immediately submitted to the Development Commissioner/Chief Secretary/Secretary (Agriculture)/Secretary, (Industries)/Vice-Chancellors of Universities and other concerned Departments for their advance perusal and such action as may fall within their sphere.

I am submitting this proposal to Chief Minister and the Cabinet Sub-Committee for Planning for favour of their considered decisions and directions, before the Fifth Five-Year Plan is crystalised.

A. U. SHAIKH,
Secretary (E. D.)

2nd August, 1973.

EDUCATION DEPARTMENT

Part I

The cost of vocationalisation of education is naturally high and, therefore, the total cost that was expected to be met under the Fifth Five Year Plan for the proposals of the Department for vocationalisation at pre-S. S. C. as well as post-S. S. C. levels was coming to a high figure. As the Education Department's Fifth Five Year Plan has suffered substantial cut particularly under the Minimum Needs Programme for general education and pre-S. S. C. Vocational Education, the cost of vocationalisation at pre-S. S. C. level is proposed to be cut down by making two or three adjustments as follows :—

(1) That the stipends proposed to be given to the poor children of the weaker Sections of Society going to general Vocational courses of the Agriculture or any other technical or professional lines would be reduced from Rs. 30 per month, i. e. Re. 1 per day, to Rs. 15 per month, or 50 paise per day.

(2) In addition, Rs. 5 per month or Rs. 30 per term would be paid specifically for providing two uniforms for children at work and free books.

(3) The fees chargeable would be on the same patterns as in schools for the respective class but in this case it will be taken as 8th Std. in General Education which fees would be Rs. 3 in rural areas and Rs. 5 in the cities, besides the term fee, etc. The same Std. of fees as for 8th Std. will be maintained, but those entitled to E. B. C. concessions will enjoy those concessions. This would reduce recurring cost to some extent, and in any case that will not be burden on the Plan.

(4) The non-Government Agricultural or Technical High Schools or I. T. Is. wanting to take up these activities of Junior I. T. Is. will be expected to contribute at least fifteen per cent to the non-recurring cost of land, buildings, equipment, furniture, etc. as may be incurred, while they will be paid grant-in-aid which may be equal to whole deficit or eighty five per cent of the total admissible expenditure including staff, contingency, etc. costs of the institution whichever is less, plus rent, if any as per S. S. C. Grant-in-aid Code. This will mean that the total Plan cost for the Government Institutions would be 100 per cent but for other institutions it will be reduced and thus, we shall be able to extend the programme to some more areas. Perhaps for Ashram Schools, etc. we may have to bear the entire cost as Government Institutions or on ninety per cent basis, as before.

(5) The question of training of teachers for the Junior I. T. Is. as well as Technical Department is being tackled separately and these teachers and technical personnel teaching in these institutions like Jr. I. T. Is. or Technical High Schools, etc. would also have to be tackled on the same lines as we impart teaching technology to teachers under General Education.

(6) Necessary co-ordination will have to be maintained with the Departments of Agriculture, Industries and others which is pre-supposed in the scheme.

Part II

The post S. S. C. vocationalisation that is for terminal courses like I. T. I. courses needs also to be expanded into some Technical High Schools and other Technical institutions in order to provide some terminal vocational, professional courses in many places, particularly, in the interior and, therefore, similar facilities of grants etc. for taking up terminal vocational courses in higher secondary institutions or secondary technical institutions will be proposed as at present they are starved for assistance.

Dr. A. U. SHAIKH.

1st October, 1973.

APPENDIX 'G'

**REPORT OF THE GROUP III ON COMMERCIAL COURSES
APPOINTED BY THE STUDY GROUP ON
VOCATIONALISATION
OF
SECONDARY EDUCATION
CONSTITUTED BY THE
STATE COMMITTEE ON UNIFORM PATTERN OF EDUCATION
IN
MAHARASHTRA STATE**

Chairman

Dr. A. U. SHAIKH

Convenor

Dr. K. S. BASU

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MEETING OF GROUP III—COMMERCE COURSES

Meeting of Group III—Commerce Courses was held on 11th November, 1972 at Sydenham College of Commerce and Economics, Bombay-20 and continued on 12th November, 1972, when the following persons were present.

Dr. A. U. Shaikh, Secretary to Government in Education Department had informed Dr. K. S. Basu earlier to convene the meeting as he (Dr. Shaikh) had another appointment elsewhere on that day. Dr. Shaikh was kind enough to be in the Chair at the meeting on 12th November, 1972.

Dr. A. U. Shaikh	..	..	..	..	in Chair
Dr. K. S. Basu	..	..	..	..	Convenor
Shri R. P. Karnik	..	..	..	..	Co-Convenor
Principal S. D. Bal	..	..	..	..	Member
Shri C. L. Gheewala	..	..	..	..	Member
Dr. D. J. Nandedkar	..	..	..	..	Member
Dr. (Miss) Mehroo Bengalee	..	..	..	..	Member
Dr. G. H. Nafde	..	..	..	..	Member
Shri H. C. Hanumante	..	..	..	..	Member
Shri R. K. Deshpande	..	..	..	..	Co-opted Member

The agenda of the meeting which was decided in advance by the Convenor and Co-Convenor was circulated earlier to the members and the same was agreed readily at the meeting.

The Convenor read out the terms of reference assigned to the Committee so as to bring forth their significance and scope and initiated the discussion.

The decisions of the Committee which were arrived at after careful and exhaustive discussion are recorded as under :—

The question regarding possible areas of training was discussed informally between Dr. K. S. Basu, Principal Bal and Shri Karnik and the possible areas were identified. After giving necessary consideration to the issues involved at the discussion at the meeting, the areas of training that were arrived at are recommended for the following categories at the post-S. S. C. (X) level :—

Identifica-
tion of
possible
areas of
training.

- (1) Book-Keeper, Auditor, Cashier, Accountant, Elementary Costing.
Duration : Two years—full time.
- (2) Store-keeping and Purchase-Clerk
Duration : One year—full time
- (3) Intensive Salesmanship and Shop Assistant.
Duration : One year—full time.

(Salesmanship would include retail Salesmanship across the counter and also Salesmanship in the field)

(Shop Assistant would include functions of the display of goods and the general supervision of the shop).

(Note.—Details will have to be worked out in each case.)

- | | | |
|--|---|----------------------------------|
| <ol style="list-style-type: none"> (4) A. Photography
B. Display-Decoration
Duration : One year in each case. | } | Also please refer to Appendix-D. |
|--|---|----------------------------------|

- (5) Telephone-Operator-Receptionist-Typist.
Duration : One year—full time.

- (6) Typing either English or Marathi or Hindi or Gujarati.

A comprehensive training is intended under this course so that the trainees are able not only to type with speed and accuracy but they are able to type intelligently from the manuscripts, type tabular statements etc. Acquaintance with routine office letter. They should be able to handle stenciling and duplicating work fairly satisfactorily. Acquaintance with elementary mechanism of a typewriter and a duplicator.

- (7) Stenography (English or Marathi or Hindi)
Duration : Two years—full time.

This Course would include study of (a) English as would be relevant for the purpose of ensuring efficiency of a Stenographer's work, (b) Use of dictating machines, (c) Training in Secretarial functions.

- (8) Library Assistant.
Duration : Two years—full time

(Note.—This course could be developed on the lines of Certificate Course in Librarianship).

(9). Business Machines.

Duration : One year—full time.

This Course would include training on various Business machines excluding an Electronic Computer.

(10). Training in the work of regulated markets.

Duration : One year—full time.

This Course would include aspects such as weighment, packing, inspection, Office-work.

(11) Office Routine Course for Office-Assistants.

Duration : Two years—full time.

This course would include aspects such as Office procedures and methods, filing, typing, cyclostyling, telephone-handling, cash-book, ledgering, vouchering, banking and banking procedures including those of co-operative banks, Post and Telegraph procedures, Record keeping, time office work and handling Establishment matters.

(Note.—It was agreed that this was only a suggestive and not an exhaustive list of areas of training. Some more areas of training would always be added with experience and exigencies. An instance of Diploma in Co-operation and Accountancy conducted by Registrar of Co-operative Societies, Poona was quoted.)

Bearing of Higher Secondary Vocational with Commerce subjects at Secondary and at other levels. It was recommended that while devising courses in Commerce at Higher Secondary levels, steps should be taken to ensure proper alignment with courses in Commerce available upto X Class.

If schemes of modernisation and updating of similar existing Diploma or Certificate courses are on the anvil, steps should be taken to bring them within the line of these courses.

Measures for rationalisation of courses and their operations. Steps should be taken to rationalise the content and the operative field of courses in Commerce and allied subjects. For instance, it was observed that different agencies were operating courses at Government level in the State, Specified instances were listed out as under :—

(1) Government Commercial Diploma and Certificate courses are operated by Inspector of Commercial Schools. (Education Department)

(2) (A) Senior Course in Accountancy.

(B) Senior Course in Secretarial Practice operated by Sydenham College of Commerce and Economics, Bombay. (Education Department).

(3) (A) Diploma in Stenography operated by Department of Technical Education. (Education Department)

(B) Diploma in Private Secretarial Practice operated by Department of Technical Education. (Education Department)

(4) Examination in Marathi Shorthand and Typewriting for Government servants held by Ad-hoc Board operated by General Administration Department, Sachivalaya.

(Note.—This duplication of operation not only entails lack of standardisation because of duality of agencies, but, it also leads to duplicity of examination bodies and qualifications awarded by them).

(5) To make the diploma/certificate qualifications under the scheme more effective for their acceptance and to ensure enrolment to such courses from different catchment areas of the Society, both in Public and Private Sectors, definite measures will have to be taken. Some such measures are given below :—

(A) Syllabi for the various courses should be approved jointly by the Ministry of Education and the professional organisations concerned.

Joint control of such diplomas and certificates would ensure appropriate educational and professional standards and the same would be accepted in this way as part qualifications for either a corporate membership or some stage in that structure of course or may even render possible exemption of a stage of study at some other allied course such as Insurance, Banking, Secretarial Practice, Costing or even the examinations held by the Institute of Chartered Accountants of India which are by and large professional bodies.

(B) To devise methods of instruction based on work experience, either through work-shops, laboratories, simulation exercises, industrial visits so as to ensure practical orientation of concepts and improve the attainments of students.

(C) To obtain recognition to relevant course content and qualifications from Finance Ministries both in the State and at the Centre so as to enable the holders of such qualifications to practice as Sales-Tax and/or Income-Tax Consultants.

(Note.—This would also help to enhance the status of these qualifications for self-employment.)

(D) To prescribe the relevant qualifications as recruitment qualifications for various posts in Government, Semi-Government Departments, Local Bodies and Public Corporations.

(Note.—This may require reviewing and redevising of recruitment rules for certain categories of posts in Government/Semi-Government sectors).

Duration of courses at Higher Secondary Vocational level has to correspond with two years broadly according to the time marked for vocational content of training in the structure of 10+2+3. Duration of Courses and the classification of qualifications.

Thus, in the list of courses suggested in this Paper under areas of training, the duration in respect of some courses is shown for two years while for others it is shown for one year. A two-year course should lead to a diploma-status of qualification while one-year course to a certificate status of qualification.

For the convenience of students and also other adult population wanting to acquire qualifications, it was recommended as under :—

Young school leavers may take one unit of a two-years course or two units of one-year course so as to make two years vocational study feasible. The choice of combination of subjects may be left to students. However, opting one subject or the other may depend upon the provision of different courses that the institutes may be able to make at different places.

Other school leavers who because of circumstances could not take up vocationalised course on two years basis may be afforded opportunities to take it up on one year basis.

For a number of others who may not be able to take up these courses on full time basis due to various reasons, arrangements for part-time attendance may be devised through method such as enlargement of duration of operation of the course etc. without watering down the course contents, standards of operations and also evaluation.

Since Commerce education at the University and extra-University level is now popularly supported on the basis of part-time attendance, careful consideration may be needed in respect of the proposed scheme of vocational courses from the point of view of its coverage to college drop-outs and a large section of adult population and work force.

Commerce courses are mainly availed of by those who have the necessary minimum educational qualification for employment. Therefore, it is obvious that Commerce qualifications would be normally sought by people in relation to requirements of recruitments to jobs in various occupations and offices. Scope for College drop-outs rather than School drop-outs.

Considered from this point of view, it was found that it was not possible nor was it necessary also to devise training programmes for school drop-out from VIII onwards.

It was also considered whether these courses could be opened to College drop-outs and others. It was felt that since there was a possibility of an on-rush from these categories, it was necessary to safeguard the interests of young school leavers who have otherwise no maturity and equipment to enter the careers in employment and occupations. These courses may, therefore, primarily cater for the interests of such freshers from schools.

If however, experience indicates that there is a growing demand for Vocational courses from the non-school adult students also, who have had sufficient general education and experience in life, arrangements for their training at such courses may be made on part-time basis without much administrative delay so that facilities for the training of fresh school leavers are not affected.

The aspects of provision of link arrangements of the system of Higher Secondary Vocational course in Commerce with possible course/s at the University, was studied in relation to Item No. 56, Page No. 33, of the Paper on Education in the Fifth Five Year Plan 1974-79 prepared for the consideration of the Central Advisory Board of Education. Linkage of Higher Secondary Vocational Education (Commerce) with University Education.

Since this working paper provides the guide-lines for developing schemes, the possibilities of devising further education/orientation courses and University extension courses in the field of Commerce and Management Studies were considered.

The Committee observes that in order to offer opportunities to people to improve their qualifications at the Universities, it was necessary to provide for some link-courses which may enable such aspirants to become eligible for further education in appropriate subjects, at the Universities at different stages in their life.

The Committee therefore, recommends that Universities may be persuaded to hold appropriate extension, orientation or further education courses so as to provide opportunities to young people with necessary background, experience and maturity to acquire qualifications in Commerce at the University level.

Diagrammatic representation of the structure of education that would obtain under this system is enclosed in Appendix-B.

Selection of
Institute for
conducting
Higher
Secondary
Vocational
Courses in
Commerce.

The Committee examined this aspect and felt that in order to keep the cost of launching the scheme to lowest possible extent, the possibilities of utilising the resources of the existing recognised institutions with necessary remodelling for which norms may be suggested on the lines of the administration at present made in that behalf, may be explored so as to avoid waste of such resources as a result of the structural changes which may be proposed. However, it was further felt that decision in this regard may be taken after the group appointed to work on the problem of structure of institutions makes its report so that pattern for institutes of Vocational Higher education becomes uniform.

During his address to the Committee on 12th November 1972, Dr. Shaikh made very useful and significant suggestions. Considerations arising out of these suggestions are noted as under :—

(1) The projection of facilities that may be needed for various courses on the basis of enrolments anticipated during 1974-79. Dr. D. J. Nandedkar, Additional Man-Power Planning Officer has undertaken a study of this aspect and also in respect of diffusion of institutions in different parts of the State.

The material that was circulated to the members of the Committee such as the enrolment patterns for the Government Commercial Diploma course conducted at the recognised institutions on part-time basis, the spread-over of such institutions in the State, the total number of students going in for training in shortterm courses such as Typing/Shorthand has been made available to Dr. Nandedkar by Shri Karnik. The Statements are shown at Appendix C.

Report on the item would follow.

(2) *Teacher Training Aspects :*

It was observed that the state of knowledge of students and the efficiency of their performance depended many times on the conditions of teacher's equipment and training. In this programme, therefore, teacher training must get the necessary place. In this connection, there were two main suggestions :—

(A) Possibilities of developing an Institute of Commercial Training and Research at Sydenham College of Commerce and Economics, Bombay, may be explored.

(B) Possibilities of utilising the resources of the existing Teacher-Training Institutes such as Secondary Teachers Training Colleges etc. may be explored.

A Paper developed by Shri R. P. Karnik, and Principal S. D. Bal on the subject is enclosed at Appendix A.

(3) *A Short Survey of Employment in Commerce in Maharashtra :*

Need to
discard
traditional
outlook on
employment
stressed.

It was observed that people in Maharashtra look to employment opportunities in the most traditional manner. Thus, it was not uncommon to find that certain categories of employment or occupations were restricted to particular sections of societies. For instance, a son of a Kshatriya was likely to go in for post in Police Department or Army.

Industrial
Economy of
Maharashtra.

In this connection, it needs to be appreciated now that Maharashtra is one of the most highly industrialised States in the Indian Union. A number of industries have developed in Maharashtra, to mention a few Textiles, Chemicals, Automobile, Printing and Publishing, Rubber Products, Non-Electrical Machinery. It is significant to note that industrial activity has taken a root in Maharashtra and it is making its impact on the tertiary activities.

Tertiary
Sector.

This sector includes trade, transport, financial institutions, Government Administration, private services and liberal independent professions. All these activities are absorbing a noticeable percentage of working population. These developments certainly promise scope for leadership and employment opportunities in different occupations. It is also possible to visualise scope for opportunities of self-employment. However, the young people should come forward to take up the requisite training courses so as to make their entry in different occupations possible,

This change of outlook would require an effort on the part of social workers and educationists so that the young school leaver is persuaded to go up for the training in the right direction.

Need for a
Survey of
employment
in
Commerce in
Maharashtra.

In this context of the traditional approach towards employment obtaining in Maharashtra, it was recommended that a short review of employment in commerce in Maharashtra should be undertaken. Accordingly, Shri Karnik has produced the following literature :—

- (1) Occupational-Educational Pattern in Maharashtra in Public Sector-1966.

(2) Occupational Pattern of employees in the Private Sector in Maharashtra State, 1965.

(3) State Employment Review, 1970-71.

Note.—Publications of Directorate of Employment, Industries and Labour Department, Maharashtra State.

Foot-Note.—On a later discussion between the Convenor and the Co-Convenor, it was found that this was a specialised work and would require proper analysis, examination and investigation on statistical basis of the data embodied in these publications and also from others that may become necessary for drawing the relevant inferences.

It was not therefore, possible to undertake the review in view of the time limit for the submission of the report.

It is, however, felt that such a specialised work could be done well with the assistance of institutions like, Bombay Labour Institute or the Department of Economics and Political Science of the University of Bombay.

Administrative structure for the operation of the Scheme of vocationalised Higher Secondary Education in Commerce would depend on the following aspects :—

A. The structure of institutes that would be suggested for conducting Higher Secondary education. In some cases such institutes may be Higher Secondary Divisions, precisely classified and developed at certain upgraded schools for holding classes. In other cases, there may be institutes of the type of Junior Colleges or alternatively, there may be Departments of Commerce Studies started in Polytechnics. There may also be instances of certain University colleges coming forward to form separate units under their managements for conducting such courses,

B. The structure of training organisation for teacher training programmes.

C. Liaison with Industries,

D. Structure of Examination Body that would operate the examinations in Commerce subjects.

Note.—A separate board of examinations in Commerce is the most appropriate agency with functions such as—

(i) Arrangement of Paper Setting.

(ii) Assessment of Examiners.

(iii) Conduct of the Examinations.

(iv) Evaluation : Evaluation reforms.

(v) Curriculum reforms.

Such a unit of examination may have to ensure co-ordination with other agencies such as Professional Bodies and also the Universities in the State.

It is possible to visualise that the growth of vocationalised education in Commerce would follow in future. To undertake the range of activities in the initial stages and also to manage the super-structure which would be raised with the growth in future, the administrative control of this branch of education should be in the hands of an authority with status and powers in line with that of others in charge of Technical education and Industrial training, Health and Para-medical services education. But in any case, this structure should not be less in stature than a Directorate if schemes are to be promoted on sound lines and their development is to be ensured at appropriate levels.

Here again, the cost of such a total administrative machinery is difficult to assess. It would depend upon the Pattern that is held permissible, the number of officers that may become necessary in relation to the number of institutes and their region-wise spread-over. The decentralisation of administrative units to ensure effective supervision, assessment and control, the strength of the office staff, etc.

The consideration of cost of operating courses under the proposed scheme of Vocationalised Higher Secondary Commerce Education is based on a number of factors which would appear indefinite for the initial stages. The factors which would constitute elements of cost are broadly listed as under :—

(1) The items of expenditure—It is usually customary to list out items of admissible and inadmissible items of expenditure when standard formula is to be derived. At this stage of the scheme, evolution of such a schedule of items of expenditure is difficult to attempt as there is no experience of working of such institutes and such courses.

(2) The intake capacity of each institute for the courses is not known and therefore, the proportion of staff to classes cannot be fixed. This proportion also cannot be fixed because of (A) the extent to which the subjects will have to be taught in regular classes.

(B) Tutorial classes, and (C) workshops being unknown at present.

(3) The proportion of full time staff to part-time staff cannot be worked out.

Strengthening of Administrative Machinery for operation of Vocationalised Commerce Education.

Need for a Directorate of Business Education stressed.

Cost of operating the Courses proposed.

(4) The mode of payment of remuneration to staff is not fixed. Usually staff for such part-time activities are paid by fees per lecture. In case of whole time staff that becomes necessary, separate payscales than those of secondary teachers may have be devised. In this case also, it is not certain as to the extent to which whole time staff would be engaged.

(5) The formula of secondary schools viz. 1.5 has limited or no scope for its application in case of such type of courses. In a secondary school, the course offered consists of 7/8 subjects and this is done as a whole time activity of the school. In the scheme proposed under Vocationalised Commerce education, the students would be offering either one unit of two years' duration of a course or two units of one year's duration each. Thus, the number of subjects would be smaller than under the secondary education pattern. The intake capacity of a secondary school is 55 per division, whereas in a course under Higher Secondary scheme, the intake capacity may be (1) smaller (2) may be required to be smaller-because of objectives of instruction (3) smaller batches may become necessary for practical work, workshop practice or tutorial work.

It is, therefore, advisable at this stage to develop enrolment standards and expenses patterns coursewise with experience and on try-out basis. Because this is a new activity and, therefore, efforts to make the courses result oriented may have to be made sometimes even by resorting to *ad hoc* or special measures. Therefore, insistence on a formula of cost etc. may not be very convenient at this stage.

In any new scheme, it is always the case that experience of any nature of its working cannot be assumed for financial calculations. It is, therefore, customary to arrive at financial requirements on *ad hoc* basis leaving some room for adjustments which may become necessary with experience in future.

The estimates of probable number of students that may come forth during 1974-79 and of the areawise spread-over of the institutes are awaited from Dr. Nandedkar, additional Man-Power Officer. Added to this would be another factor of provisions of Government owned and managed institutes in certain areas where private institutes may not get footing will also have to be taken into consideration while working out cost.

However, some estimates could be derived on the basis of approximate per pupil cost with reference to expected rate of enrolment (as per Dr. Nandedkar's report) if such rate of enrolment is arrived at on the basis of year to year progression to correspond with the phases of Five Year Plan.

APPENDIX 'A'

Teacher Training Aspects

Training of Commerce teachers has so far suffered from the following circumstances :

1. Commerce graduate teachers could never expect to get full-time load of Commerce subjects for Preliminary teaching in the institute that employs them i. e. a secondary school with Commerce as one of the courses considered provided by it. He has thus to share the teaching of other non-Commerce subjects.

2. The Commerce courses conducted by secondary schools have indicated tendencies of recording enrolments at times, making the position of Commerce teachers more unstable.

3. Under the present arrangements of pay scales, Commerce teachers have not been granted a separately recognised incentive pay scale to keep them stable in that employment. Turnover of Commerce teachers from teaching to non-teaching jobs may be significant.

4. Commerce teachers offer non-Commerce subjects for methodology at training probably because such training may be offering them advantages of stable employment and also a rise in School-administration. Alternatively, the arrangements of methodology in relation to Commerce subjects have not been provided by the Training colleges in their programmes.

In consequence, therefore, the Secondary Teacher Training Colleges could never concentrate in the past on developing the methodology of teaching Commerce subjects. This reaction equally holds good in respect of stenography teachers.

The problem of training of teachers for Higher Secondary Vocational subjects of Commerce needs to be examined on a different plane. This problem has so far probably not received the attention it deserves and, therefore, it opens out a new field of enquiry.

The dimensions of the new problem of Teacher Training.

In the scheme of Higher Secondary Vocational Education in Commerce, stress has been already laid on ensuring practical orientation to instruction because the objectives of the courses demand that the courses should have status of employment orientation, self-employment, career-orientation etc.

This direction of objectives would certainly entail that traditional methods of instruction will have to be replaced by others which would be practised or work or experience oriented. For this, the institutes conducting the courses will have to bring into use different methods such as use of workshops, laboratory and simulation techniques, school visits to firms, i.e. Offices, Workshops, Market areas, Docks, Stock-exchange Banks, Insurance organisations to mention a few instances. All this programme will need proper planning and execution for making it purposive and meaningful.

The training courses may be devised for new and emerging trades and occupations. These courses will have to be taught at higher secondary levels. The age groups of students coming in for training under such schemes would be different than the normal age group of students with which teachers have to deal with in secondary schools.

It has been observed that popular support to schemes of further education in Commerce would be through the arrangements of attendance at such courses on part-time basis. In this connection, it is significant to note that courses are also being operated by some Universities on the basis of correspondence method. In Western countries, the idea of Open University is gaining support.

If these contemporary developments have relevance, it may be true to say that it is common place to expect Commerce education to depend to a considerable extent on part-time faculty engaged primarily in Commercial/Industrial work in order that instruction at such courses should have a close link with the working conditions. It appears, therefore, that problems of teacher training would have bearing on the sources of recruitment of faculty.

If Commerce education is going to draw its supply of teachers on part-time basis from business and commercial world, there is going to be a confrontation that may have to be faced in motivating the part-time faculty to undergo training in the aspects which are considered desirable from educational point of view. Such aspects may be for instance, educational theories, developments etc. Part-time teaching has so far not developed and identified on a large-scale and regulated basis, with a class of teachers. Many individuals take to part-time teaching because it suits them. It, however, appears that many such people may not desire and also have the time in case they are required to undergo training. In such a case conference, seminar, approach may enthrust them for their participation.

Supporting therefore, that faculty from Commerce and Industry would be entering the field of Commerce teaching to the extent to which it would be interested, endeavours will have to be made to motivate fresh entrants as whole time teachers and training schemes will have to be devised for them.

Such teachers would be required to teach Commerce subjects as per the needs of areas of training at higher Main secondary level. Their basic knowledge of the subject matter must be sound and diverse to cover broadly the indications programme of training adopted at the institute/s. If their matter content by virtue of their business qualifications for the lines is not broad-based, as it should be, opportunities for orientation in particular direction may have to be provided of training to them.

For attainment of particular competencies for practical experience for teachers, it may be necessary to provide broadly for the following arrangements :—

(A) Introducing teachers to business situations by means of :

(i) Consultancy work,

(ii) Sabbatical,

(iii) Participation in training programmes (of appropriate grade) of practical training or inservice training held by firms or professional bodies.

(B) Experience at Summer Institutes or Schools.

(C) Attaching such teachers to institutes like Bankers' Training School, Management Institutes where opportunities may be available to examine problems of business implications and also methods of solving them.

(D) Development of Commercial Museum or Business Laboratory or Workshop at the training Institute for trying out different methods of instructions.

(E) To offer the facilities of teaching practice in institutions of appropriate grade by keeping in view the higher secondary vocational aspects of the courses.

Training Organisation.

When considered from this point of view, the institutions of the type of Secondary Teacher Training Colleges would not be the appropriate and adequate agencies to undertake this work. The work is not of training in pedagogy alone. But it concerns methodology of skill and business subjects to be applied not in relation to secondary standards but at the extra-University standard with the objective of acquiring employment orientation to the instruction. This is a very comprehensive work and it would bring along with it related problems of research.

Cell for Training and Research.

It is advisable therefore, to develop a cell for training and research. Initially a cell continued for training and research functions may be located at Sydenham College of Commerce and Economics, Bombay. Training Cells may however be undertaken at regional centres like Poona, Nagpur, Aurangabad at Senior Institutes of Commerce if demand for the same is justified.

The advantages of attaching the cell at Commerce College are obvious. In a College of Commerce, there is academic atmosphere and equipment to promote studies in the direction of teacher training. There are a number of full time senior professors of Commerce as also part-time professors in the field of studies such as Accounting, Auditing, Costing, Marketing and Mercantile Law. They have at their disposal quite a useful experience from working life.

There are senior research students working on several problems of business interest under the guidance of senior professors. Many of the teachers could be associated with some useful activities of practical importance with the help of Commerce College staff.

Commerce Colleges are teaching a variety of Commerce subjects at different levels. The teacher trainees would be able to practise their teaching techniques at appropriate level of classes or courses, with the guidance of Commerce College staff.

On the side of pedagogy etc. special lecture courses could be conducted in consultation with the Area Training Authorities and Professional bodies.

In the first instance, therefore, Research-cum-Training Cell may be located at Sydenham College of Commerce and Economics, Bombay.

Combination of commerce college and a training cell would also enable to keep the cost to the lowest possible extent than it would be otherwise if separate units are contemplated. It would have yet another advantage, that some of the senior students of the commerce colleges may be motivated in the prospective line of Commerce-teaching thereby facilitating in future both supply and training of teachers which otherwise have proved intractable problems.

Main areas of Training content for Faculty.

- * Theory and Practice of Education with particular stress on the education of the Adolescent.
- * Methods of teaching skill-subjects and business subjects. This should include various methods of teaching in class-room, use of case studies, role play, audio-visual aids and similar techniques, etc.
- * Intimate knowledge about training programmes for Business and Office education.
- * Imparting practical competencies to teachers through methods enumerated above under the title of "indications for the lines of training".
- * Educational psychology with stress on the development of teaching methods and practice in skill-subjects in relation to different age-groups of students.
- * Philosophy of Education with particular emphasis on development of Commerce and Industrial education at different levels on comparative basis.

Cost of Training Programme.

Since no such institutes are available for the training of Commerce or Business Education Teachers, it is difficult to arrive at the exact cost that may be involved.

It is also observed that other institutes such as Secondary Teachers' Training Colleges could hardly participate in the programme of this type and therefore, cost-cannot be shared with them.

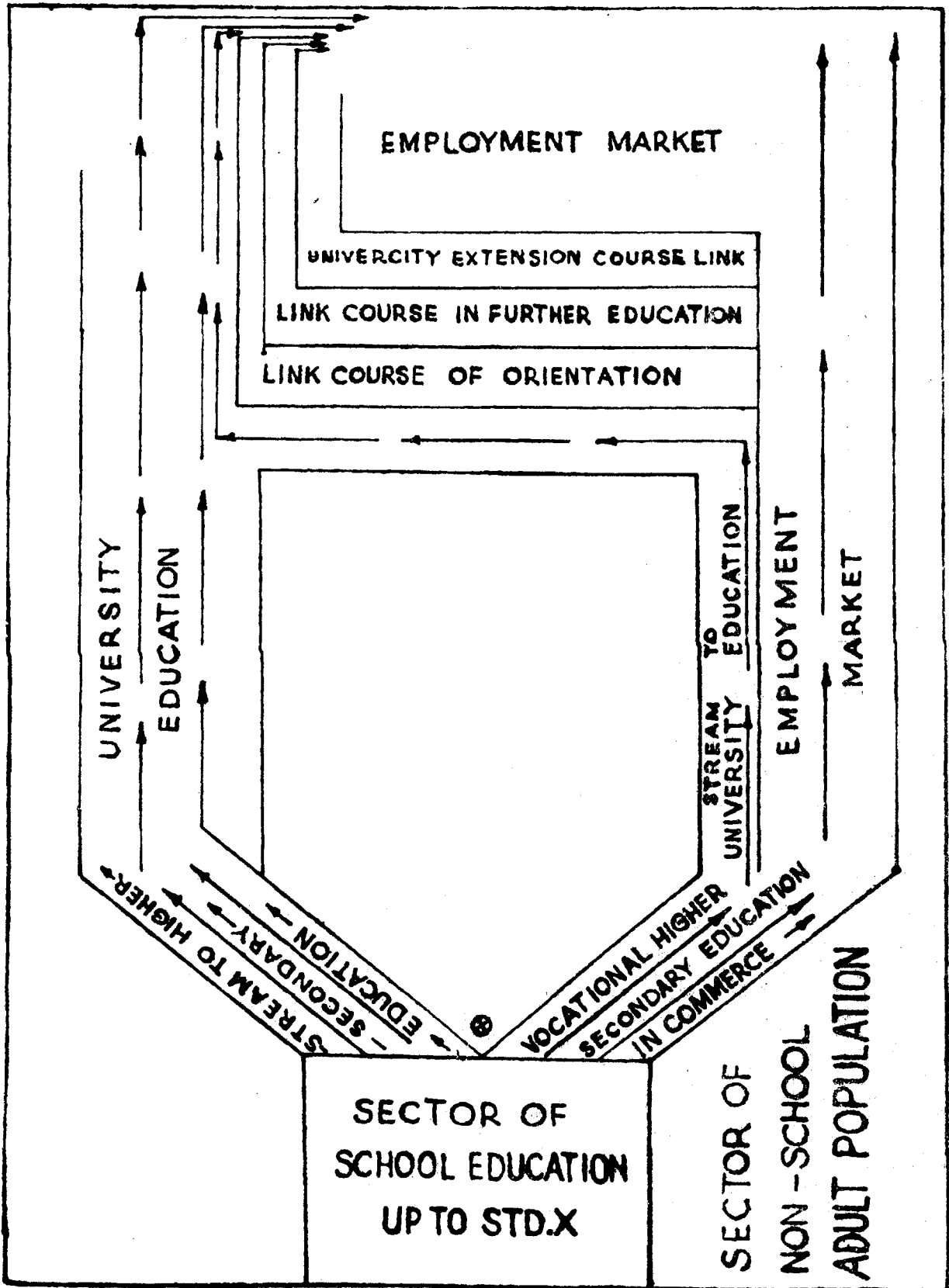
At this stage, it is difficult to assess the exact intake of Commerce teachers in the new system of higher secondary vocational courses. The sources of their recruitment, qualifications at recruitment will have to be properly specified so as to make the assessment of their training needs possible.

Each training unit suggested under this arrangement would require a workshop of its own. The unit would also require a section of library.

The duration of the course for graduate teachers and teachers of stenography and allied subjects may be one academic year.

Since this is an innovative concept to be developed with experience, standardisation of cost would be difficult in the initial stages. Based on the intake on 25 teachers for one academic session of a year, the cost may be budgeted per institution on *ad hoc* basis.

* Vocational Higher Secondary Education in Commerce is shown because this report deals with *commerce education* under the scheme of Vocationalised Higher Secondary Education.



APPENDIX 'C' (STATEMENT-1)

Number of students enrolled for Government Commercial Diploma Examination to be held in April/May 1973.

1. L. N. Mehta Institute of Commerce, Ghatkopar	110
2. Arun School of Commerce, Bombay-54	31
3. Andheri Institute of Commerce, Bombay-69	14
4. Bandra School of Commerce, Bombay-50	96
5. King's Circle Institute of Commerce, Bombay-22	152
6. Deccan Institute of Commerce, Bombay-28	34
7. Geetanjali Commercial Institute, Bombay-62	36
8. Mayfair Commercial Institute, Bombay-58	12
9. Laxmi Educational Institute, Bombay-22	70
10. Premier Institute of Commerce, Bombay-1	09
11. The Laxmi Institute of Commerce, Bombay-28	151
12. Institute of Commerce, of the Western India Chamber of Commerce.	55
13. Bombay Institute of Commerce, Bombay-1	260
14. Bombay Institute of Commerce, Bombay (Late Admissions).	24
15. S. P. Mandali's Institute of Commerce, Matunga	168
16. Davar's College of Commerce, Bombay-1	220
17. Sir J. J. Commercial Institute, Bombay	54
18. The Bombay Education Institute, Bombay-28	58
19. The Dombivli Institute of Commerce, Dombivili	37
20. Kalyan Commercial Institute, Kalyan	30
21. K. E. M. Society's Institute of Commerce, Bhivandi	14
22. Potdar Institute of Commerce, Thana, Batch No. 1	55
Batch No. 2	16
23. Commercial Institute of Rajapur High School, Rajapur	28
24. Deccan Commercial Institute, Ahmednagar	23
25. Deccan Institute of Commerce, Poona-2	283

Total .. 1,999

APPENDIX 'C' (STATEMENT-2)

INFORMATION AS ON 21ST OCTOBER 1972

1. Number of Students enrolled for Government Commercial Diploma Examination, April 1972	1,799
2. Number of students enrolled for Government Commercial Diploma Examination, October 1972	1,912
3. Number of Secondary High Schools with Commerce in Maharashtra State	563
4. Number of Recognised Institutes for Government Commercial Diploma	66
Bombay	39
Thana	08
Kolaba	01
Ratnagiri	01
Nasik	02
Ahmednagar	01
Pune	04
Satara	01
Sangli	01
Kolhapur	03
Nanded	02
Wardha	01
Nagpur	01
Goa	01
Total	66
5. Number of recognised institutes for Government Commercial Certificate Courses	681

APPENDIX ' C ' (STATEMENT-3)

The Statement showing the Number of Students Enrolled at the Institutes in the Maharashtra State for the Sessions—November, 1971 and April, 1972

District	October/November 1971 Session		April/May 1972 Session	
	T/W	S/H	T/W	S/H
01. Greater Bombay	10,435	1,116	9,195	911
02. Thana	2,015	0,439	1,955	421
03. Kolaba	0,290	0,005	0,309	010
04. Ratnagiri	0,372	0,009	0,444	008
05. Nasik	0,458	0,000	0,521	000
06. Dhulia	0,597	0,012	0,412	005
07. Jalgaon	0,900	0,019	0,886	015
08. Ahmednagar	0,284	0,051	0,471	079
09. Pune	3,794	0,344	2,707	338
10. Sangli	0,401	0,015	0,324	019
11. Satara	0,298	0,000	0,359	000
12. Sholapur	0,522	0,000	0,413	000
13. Aurangabad	0,142	0,000	0,190	000
14. Kolhapur	0,275	0,000	0,245	000
15. Parbhani	0,244	0,000	0,260	000
16. Bhir	0,081	0,000	0,114	000
17. Nanded	0,388	0,010	0,452	013
18. Osmanabad	0,532	0,000	0,512	000
19. Buldana	0,250	0,030	0,252	031
20. Akola	0,670	0,031	0,671	056
21. Yeotmal	0,197	0,000	0,201	000
22. Amravati	0,412	0,021	0,391	021
23. Wardha	0,526	0,024	0,377	043
24. Bhandara	0,411	0,000	0,338	000
25. Chandrapur	0,076	0,000	0,052	000
Total	25,319	2,222	22,812	2,096

APPENDIX 'D'

Report on 'Uniform pattern of Higher Secondary Education'—Study Group for Vocationalisation of Secondary Education—'Commercial Course-Group III'

Report of the discussion held in the meeting of Group III Commercial Courses. The Meeting was held in Sydenham College, 'B' Road, Churchgate, Bombay, on Saturday, 11th November, 1972 between 11-30 a.m. to 5.00 p.m. and on Sunday, 12th November, 1972 between 9-00 a.m. to 12-30 p.m. On Saturday, 11th November, 1972, Dr. K. S. Basu, Director, Jamnadas Bajaj Institute of Management Studies was in the Chair and proceedings of the meeting were carried out under his Chairmanship. On Sunday, 12th November 1972, Dr. A. U. Shaikh, Secretary to the Government of Maharashtra, Education Department, was in the Chair and proceedings of the meetings were carried out under his Chairmanship.

The main aim of the Committee is to suggest to the Government the different areas of Vocationalisation Courses in Commercial. The different areas of Courses are, therefore, decided first. In this course, main emphasis is given to Commercial Courses, such as office routine working, Accountancy, shorthand, typing etc. The courses should also be such that after 10th Standard, the students should be able to work in profession i.e. either in office, Bank, Insurance Company, etc. as Clerk. On behalf of the Directorate of Art, there was not much to be suggested. I pointed out that our courses are full-fledged courses and they are of special nature and therefore, Fine Art and Commercial Art courses cannot be included in Commercial Courses as short term Vocationalisation Courses.

The part-time courses in this Institute, I have suggested, may be on the areas of Vocationalisation. They are (i) Photography, (ii) Display and Decoration Courses which could be considered as Certificate Courses, and students after 10th Standard can take these Courses and after completion of one year Certificate Course, they can work as Photographers for factories and for Commercial Houses. The students taking the Display Design and Decoration with the combination of Salesmanship can work in shops and Co-operative stores. These two Courses have the capacity of self-employment also.

The students who prefer to go for higher Art under the Directorate of Art, the number of courses are in existence where students would be admitted after 10th standard. Some of these Courses are spread all over Maharashtra in different Government Arts Schools and Government Recognised Art Institutes.

Above is the information I have explained to the Committee.

I have to point out to the Director of Art, Maharashtra State, Bombay, that instead of including the Director of Art in Commercial Courses, Group III, I am of the opinion that the Directorate of Art has to play role more in Group II—where Industrial, Vocational and Technical Education Courses are being discussed and may, therefore, be included in Group II.

A SCHEME FOR TRAINING COURSE FOR PUNCH OPERATORS IN THE BUREAU OF ECONOMICS AND STATISTICS

Introduction.—The training of punch operators is carried out by various institutions in Bombay including the I. B. M. and other agencies supplying the equipments of tabulation, etc. The fees charged by the private institutions for training the punch operators are quite high and the persons who are trained in these institutions are not found to be very suitable for recruitment as punch operators in the Bureau. It is observed that their speed is very low and they are required to be given further practical training in the Bureau after they are recruited. It is also observed that their knowledge is only restricted to punching and verifying and as they are not aware of the further processing of punch cards their knowledge is very limited. It is, therefore, felt that training courses for punch operators may be taken up in the Bureau of Economics and Statistics.

Qualification and Age.—The qualification for admission to this course will be S. S. C. and a candidate must have attained the age of 18 years.

Duration of Training.—The duration of the training will be two months. During the period of training the trainees will be given practical lessons in punching and verifying, while lectures will be delivered with regard to the working of other machines such as automatic punch and verifier, sorter, tabulator, reproducer.

The training for the first six weeks will take place for one hour every day after 5 p.m. in the tabulation section of the Bureau. The machines for the training will be the scrapped punches and verifiers. After the candidates get sufficient experience, they can be asked to attend training during office hours when they can get practical experience of working on the regular punches and verifiers. Thus the training for the remaining two weeks will be for about three hours every day so that the trainees can attain the required speed.

Examination and certificate.—After the two months course is completed, trainees will be given practical test and also a theoretical paper so that their knowledge can be tested both in the theoretical and practical fields. They can then be given a certificate mentioning therein that they have attained the required minimum speed for qualifying for this certificate. The examination will be conducted by the Agency that may be decided upon by Government to conduct other vocational examinations.

Number of Trainees in each batch.—About 20 trainees can be trained in each batch so that during the period of one year 100 persons can be trained providing for the gaps between two consecutive courses.

Fees for the course.—It is learnt that fees ranging from Rs. 200 to Rs. 250 are charged by the private institutions for training of punch operators. It is felt that if the training is taken up in the Bureau it may be possible to train the persons for fees ranging from Rs. 100 to Rs. 125 for the whole course.

Expenditure.—No expenditure will be incurred on purchase of equipment as the punches and verifiers are already available in the Bureau. The only expenditure will be of recurring type in the nature of remuneration to the lecturers and the cards etc. which will have to be provided to the trainees during the training course. The scheme can be operated as self-supporting.

APPENDIX 'H'

**REPORT OF THE GROUP IV ON SERVICES—PARAMEDICAL
SERVICES, HOME SCIENCE, TRAINING OF TEACHERS &
SUCH OTHER ALLIED COURSES**

**APPOINTED BY THE STUDY GROUP ON
VOCATIONALISATION**

OF

SECONDARY EDUCATION

CONSTITUTED BY THE

STATE COMMITTEE ON UNIFORM PATTERN OF EDUCATION

IN

MAHARASHTRA STATE

Chairman

Dr. A. U. SHAIKH

Convenor

Shri V. V. CHIPLUNKAR

**Report of the Group IV-Services—Paramedical, Home Science, Teacher Training
and similar other Courses—of the Study Group on Vocationalisation**

1. Dr. A. U. Shaikh, Chairman.
2. Dr. H. E. Zhala, Director of Medical Education and Research, Bombay.
3. (Miss) Thangam Philip, Principal, Institute of Nutrition and Catering, Bombay.
4. Smt. Bhanumati Desai, Tata Institute of Social Science, Bombay.
5. Mrs. F. J. Tarapore, Principal, S. N. D. T. College of Home Science, Karve Road Poona-4.
6. Dr. (Miss) Mehroo Bengalee, Counsellor, St. Xavier's Institute of Education, 40-A New Marine lines, Bombay-20.
7. Director, State Institute of Education—Convenor.

1. This Sub-Group was concerned with services—Para-Medical, Home Science, Teacher Training and similar courses.

2. Since other sub-groups are working on Agricultural, Commercial, Industrial and Technical courses which would by and large be for boys, this sub-group felt that the needs and suitability for girls be particularly kept in mind while drawing up a list of courses. While legally women are not debarred from entering into any occupational field, it is realised that certain fields are more congenial to the natural bent of women, their aptitude and their emotional make up. The Sub-Group has borne this fact in mind while considering the courses.

3. The latest report of the Directorate of Employment (State Employment Review, 1970-71) shows that the largest number of employment seekers about 37 per cent comes from the non-S. S. C. literate group and that the number is ever increasing. Indeed the drop-out takes place not only on reaching the S. S. C. level but much earlier e.g. the statistics collected by the Research unit of the Directorate of Education given in Tables Nos. I to III shows that 71.4 per cent of the girls who enter primary schools into Std. I drop out by the end of Std. IV, 84.1 per cent drop out by the end of Std. VII and 91.8 per cent drop out by the end of Std. X. Out of 6,64,718 girls entering Std. I only 53,840 reach Std. XI. It is, therefore, considered necessary to provide outlets for the large number of drop-outs who with suitable training could be made employable. The employment review also shows that the next largest percentage of employment seekers—34 per cent is made up of matriculate, non-intermediate, unskilled candidates. Beyond the academic S. S. C. they have no other training and hence for them the waiting period to get into clerical jobs is far too long. At the same time it is observed that a large number of vacancies remains unfilled owing to non-availability of suitable candidates. The employment review states that as many as about 7,000 notified vacancies were cancelled by the employment exchanges for want of suitably qualified candidates and that employers have reported about 1,200 vacancies remaining unfilled every year. Remembering that not all vacancies are reported to the employment exchanges it will be seen that the number of vacancies remaining unfilled must be much larger. It has thus become necessary to provide alternative avenues of training and through training to enter into the World-of-Work those candidates who have passed the S. S. C. examination and would then be weaned away from crowding the colleges. The dimensions of the problem can be gauged from the numbers of boys and girls taking and passing the S. S. C. examination of March and October, 1971 given in tables Nos. V to IX. As many as 1,69,444 boys and girls passed and 1,26,363 failed in the two examinations of March and October in one year. This number is increasing from year to year.

4. The group further felt that the courses to be introduced should be of a short duration and so graded as to permit a boy or a girl who has completed the lowest course grade to qualify with experience and further training if necessary for higher grades without having to go back to an academic institution and to secure higher academic qualifications. This would enable the boy or girl to progress in his or her line of work and the prospect of a decent job would not deter him or her from taking to the lowest grade course.

5. The problem of drop-outs is not restricted to cities only. Indeed the problem is present in the areas even in the remote villages. While suggesting the courses the needs of and suitability for the students in the rural areas and the requirements of the society these have also been kept in mind. It is felt that in many a case particularly for girls full time employment may not be desirable but a part time employment to eke out the income of the family besides providing an outlet for the use of the knowledge and skills gained in school and other training institutions would be welcome. This has induced this group to suggest courses with such possibilities. This would further give the additional advantage of abating the migration of the rural population to urban areas. A definite trend towards urbanisation is seen from Table IV which gives district-wise figures of the rural and the urban population as per the 1961 census and the 1971 census. While the urban population has gone up by 3 per cent the rural population has fallen by 3 per cent. If training and employment opportunities are created in the rural areas this migration towards cities can be checked. The present district-wise employment figures are given in Table X reproduced from the State Employment Review.

6. The question of facilities for training is tied up with the provisions of diversified courses. It is suggested that the existing training institutions be utilised as far as possible e. g. by timing the new courses in the mornings and evenings. There is a net work of teacher training institutions and industrial training institutes in the State. Courses allied to their main courses can easily be started at these institutions with a little extra investment. Only in the case of courses for which no training facilities exist in the district it would be necessary to set up a polytechnic type institution to provide these courses. With this end in view, the courses suggested have been grouped suitably into allied courses to indicate which of them can be introduced in a single institution. To keep costs down it is recommended that a multipurpose institution be set up wherever necessary to give courses in a number of fields.

7. Since it is extremely difficult to draw a line of demarcation between when a course is to be considered technical and when vocational and when not belonging to these fields, it is possible that some of the courses suggested by this group may have been considered by the other sub-groups also. It is also likely that some of the courses suggested already exist. In such cases, expansion of the existing training facilities and a little modification for instituting lower and higher grade certificates are suggested.

8. It is recommended that a stipend of Rs. 75 per month be paid as an inducement to each student who joins any of these courses in the initial stage that is to say for the first five years as this is a new step in the direction of vocationalisation of secondary education. Once the courses are popularised and stabilised, the number of stipends may be reduced gradually. Also the services of the staff of the training institutions may be utilised in conducting these courses since they are of an allied nature. This would entail extra work for the staff on a part time basis for which it is recommended that an honorarium of Rs. 200 per month be paid to each of them at a flat rate. Where new institutions have to be set up the cost of building, staff salaries etc. has also been worked out. As regards training of instructors for different courses is concerned it is envisaged that present expertise already available would be utilised. This will help to keep down the cost of the entire programme. The facilities for training of instructors can be evolved and further expanded in the second phase after five years.

9. The accompanying list enumerates the courses suggested put into suitable groups, the duration, entrance requirements, award of each course, a brief description of the need and utility of the group of courses and the financial implications. At the head of each group of courses is given the likely training institution for introducing the respective group of courses. If all the courses are introduced with success, it is expected that about 6,000 pre-S. S. C. drop-outs and 22,000 S. S. Cs. per year would be provided avenues for improving their employability, which in fact would help to compensate for the very large percentage of drop-outs indicated above.

10. In the light of past experience in respect of employment of candidates trained by the I. T. Is. etc., it is strongly recommended that Government should issue a directive to Employers industrial and others, that they should give preference in employment to the trainees trained out by these institutions in these courses so that the special skills imparted by the special institutions and the funds spent on them will not go waste. The employers may also depute their employees who may already be in employment for the special training in these institutions.

SUB-GROUP IV

Service, Para Medical Courses, Home Science, Teacher Training and similar other courses

Name of the course	Duration in Years					Expected earnings	Expected Avenues of employment	Need and Utility
	Pre-S. S. C.		S.S.C.		H.S.C.			
	Cert. Jun.	Cert. Sen.	Cert. Sen.	Diploma	Diploma			
1	2	3	4	5	6	7	8	9

I. PARAMEDICAL COURSES

(To be run in Government and Municipal Hospitals and Medical Colleges).

1. Ward Attendant ..	1	1				100—200	Private hospitals, Pharmaceutical concerns, Educational Institutions, Municipality, Government Factories and Industries.	All the personnel mentioned are of vital importance and the scarcity is so acute that any number of trained people can easily be absorbed in the evergrowing population. Mostly all the hospitals in best of the city areas are understaffed especially, for attendants and nurses. Technicians are needed more and more, for no doctor is prepared to diagnose unless, X-Rays, and other examinations of the patients are completed. Because of overcrowding the spread of diseases is so quick that there is always a dearth of vaccinators and sanitary inspectors. The Modern advances in sciences and technology have to give immediate relief to the patients in terms of different therapies.
2. Attendant in obstetrics Department	1	1				100—200		
3. First Aider	1	1				100—200		

II. MUSIC, ART, CRAFT

I. Music and Dramatics Academy

1. Acting	1	2	1	2		160—250	Private Dramatic Companies, Educational Institutions.	More groups of individuals have started their own entertainment parties—useful for all social and cultural gatherings.
2. Singing (Orchestral) ..	1	2	1	2		160—250		
3. Instrument playing ..	1	2	1	2		160—250		
4. Stage Management and Production.				2		160—250		

Name of the course	Duration in Years					Expected earnings	Expected Avenues of employment	Need and Utility
	Pre-S. S. C.		S. S. C.		H. S. C.			
	Cert. Jun.	Cert. Sen.	Cert. Sen.	Dip-loma.	Diploma			
1	2	3	4	5	6	7	8	9
5. Dramas and film editing ..				1	2		160—250	Private Dramatic Companies, Educational Institutions.
6. Motion picture Photography.				1			160—250	
7. Broadcasting Sound and T. V.						‡	160—250	
8. Music Teacher ..				1	2		160—250	Educational Institutions .. Every Educational Institution needs the services of a Music teacher.
II Art Academy—								
1. Drawing and Painting ..	1	2	1	2			160—250	Art, Commercial and Industrial concerns.
2. Modelling and Sculpture ..	1	2	1	2			160—250	
3. Fashion Designing ..	1		1	2	1		160—250	Art, Commercial and Industrial concerns and private.
4. Textile Designing ..	1	2	1	2			160—250	
5. Jewellery Designing ..	‡	1					160—250	
6. Window display ..			1				160—250	
7. Floristry (Flower making and Flower arrangement).		1					160—250	
8. Interior Decoration. ..	1	2	1	2			160—250	More and more individuals and entrepreneurs are going for it.
9. Drawing teacher ..			1	2			160—250	Educational Institutions .. Services essential for creative development of pupils.
III Tailoring Academy—								
1. Tailoring (Men) ..	1	2	1	2			160—250	Private, Commercial, Industrial. Readymade clothes are in vogue as much as tailored clothes—hence the demand is mounting. Fewer people have facilities at home.
2. Tailoring (Women) ..	1	2	1	2			160—250	
3. Tailoring (Children) ..	1	2	1	2			160—250	
4. Knitting, Embroidery and Fancy work.	1	2					160—250	
5. Hosiery ..	1	2					160—250	Educational Institution .. Essential
6. Upholstry ..	‡	1					160—250	
7. Sewing and Embroidery teacher.	1	2					160—250	
IV Beauty Care Academy								
1. Hair Dressing ..	‡	1					160—250	Private Beauty Saloon .. People are becoming more conscious of the services at present—very high earnings.
2. Cosmetics ..	‡	1					160—250	
3. Beauty care ..	‡	1					160—250	

Name of the course	Duration in Years					Expected earnings	Expected Avenues of employment	Need and Utility
	Pre- S. S. C.		S. S. C.		H. S. C.			
	Cert. Jun.	Cert. Sen.	Cert. Sen.	Diploma	Diploma			
1	2	3	4	5	6	7	8	9

V CRAFTS ACADEMY

1. Leather Work ..	1	2	1	2		100-200	Private, Co-operative Societies, Cottage Industries, Government.	These household crafts are not only popular in Indian market but as well as in the International market. The need is therefore, to finance the craftsman and help him have a productive market for his goods.
2. Pottery ..	1	2				100-200		
3. Cane Work ..	$\frac{1}{2}$	1				100-200		
4. Cardboard and book-binding	$\frac{1}{2}$	1				100-200		
5. Dolls and educational toys	$\frac{1}{2}$	1				100-200		
6. Brush making ..	$\frac{1}{2}$	1				100-200		
7. Bidi making ..	$\frac{1}{2}$	..				100-200	
8. Pharmaceutical Packer ..	$\frac{1}{2}$	1				100-200		
9. Carpet weaving ..	$\frac{1}{2}$	1				100-200		
10. Cotton weaving (Hand) ..	$\frac{1}{2}$	1				100-200		
11. Cotton spinning (Hand) ..	$\frac{1}{2}$	1				100-200		
12. Wool weaving (Hand) ..	$\frac{1}{2}$	1				100-200		
13. Textile Dyeing and Printing ..	$\frac{1}{2}$	1				100-200		

III. HOME SCIENCE AND CATERING TECHNOLOGY

1. Finishing School (house craft)	1	2	1			160-250	Private, Commercial, Industrial, Educational, Institutions, Hotels, Hospitals.	The scope of progress and development is undoubtedly great—more and more people are getting used to eating outside, specially is the case in cities where the career woman has no time to devote to household chores. Laundering is fast improving and people prefer having their clothes laundered than washed at homes. Dieticians are in great demand in most of the progressive hospitals.
2. Laundry Attendant ..	$\frac{1}{2}$	1				160-250		
3. Laundry work ..	1	2	1			160-250		
4. Flower making ..	$\frac{1}{2}$	1	$\frac{1}{2}$			160-250		
5. Flower arrangement ..	$\frac{1}{2}$	1	$\frac{1}{2}$			160-250		
6. Home Science ..			1	2		160-250		
7. Restaurant and Counter Service.	$\frac{1}{2}$	1				160-250		

Name of the Course	Duration in Years					Expected earnings	Expected Avenues of Employment	Need and Utility
	Pre-S. S. C.		S. S. C.		H. S. C.			
	Cert. Jun.	Cert. Sen.	Cert. Sen.	Dip- loma	Diploma			
1	2	3	4	5	6	7	8	9
8. Cookery ..	½	1	½			160—250		
9. Bakery and confectionary ..	1	2	1			" "		
10. Canning and Food Preservation.	1	2	1			" "		
11. Hotel reception ..			½		2	" "		
12. Hotel Management ..			2	3		220—350		
13. Dietetics ..						220—350		
14. House-Keeping ..			½			160—250		
15. Hostel Warden ..			1			" "		
16. Pickles, Papads and Farsan making	½					" "		
17. Fruit Syrups making ..	½					" "		
IV. TEACHERS' TRAINING								
<i>I. Primary Teachers</i>								
1. Nursery School Instructor.			1	2		160—250	School, Private Classes.	So far neglected—sound investment as such a facility would bring about educational consciousness amongst people.
<i>II. D. Ed. Colleges</i>								
1. Diploma in Education ..			1	2		160—250	School	At primary level, more and more can be absorbed—dearth of special teachers like P. T., Craft, audio-visual experts, projectionists, etc. is felt.
2. Physical education Instructor.			1	2		" "		
3. Yoga Instructor ..			1	2		" "		
4. Craft teacher ..			1	2		" "		
5. Projectionist. ..			½			100—200		
<i>III. B. Ed. Colleges</i>								
1. Library Assistant ..			1	2	1	160—250	Schools, Colleges, Public libraries.	Lack of these special assistants disturb the smooth working of a school.
2. School Laboratory Assistant.			1			100—200		
3. Work-experience teacher. ..			1	2		160—250		Work experience, occupational information, youth employment officer will be extremely useful, if Vocationalisation has to be seriously implemented.
4. Occupational information Teacher.					1 (Cert.)	160—250	School Government and Private.	
5. Youth employment Officer ..					1 (Cert.)	160—250		

Name of the Course	Duration in Years					Expected earnings	Expected Avenues of Employment	Need and Utility	
	Pre- S. S. C.		S. S. C.		H. S. C.				
	Cert. Jun.	Cert. Sen.	Cert. Sen.	Dip- loma	Diploma				
1	2	3	4	5	6	7	8	9	
6. Teaching Adults ..						2	Ra. 160—250	Schools, Classes.	Is a permanent need in our country. These specialised courses play a vital role if the handicapped are expected to be self-employed, to lessen the drain on society.
7. Teachers—Mentally handicapped.						2	220—350	Specialised Institutions.	
8. Teachers—Visually handicapped.						2	" "		
9. Teachers—Deaf ..						2	" "		
V. SOCIAL WORK									
<i>Social Work Institutions—</i>									
1. Creche ..	‡	1					100—200	Private Industry, Entertainment houses.	The need of all such workers is growing leaps and bounds as more and more women have to accept employment. In the fast changing norms of Society the role played by these personnel is immense.
2. Family and Child Welfare ..			1	2			160—250	Private, Government, Industry.	
3. Labour Welfare ..			1	2	1		" "	Industry, Government, private.	
4. Social Work ..			2	3	2		220—350	Private, Government hospitals, clinics.	
VI. PERSONNEL SERVICES									
<i>I. Personnel Services Academy—</i>									
1. Library Science ..			2	3	2		160—250	Private, Government, Educational Institutions, Press, Industrial and commercial, consulates, Court, travel agencies.	Personnel services are always in demand—with the increasing tourist facilities, more and more people are required. With innumerable language facilities more literature requires to be printed in different languages.
2. Translator ..			1				" "		
3. Interpreter ..			1	2	1		" "		
4. Journalist ..					2		220—350		
5. Linguistics ..							" "		
6. Tourist Guide ..							" "		
7. Travel Agent ..					2		" "		
8. Shop attendant ..	‡	1					100—200		
9. Attendant Court ..	‡	1					" "		
<i>II. Printing Academy—</i>									
1. Press Reporting ..			2	3	2		220—350	Press, Private, Government, Industrial and Commercial.	Printing has a tremendous future, and individuals in the various services provided by the press have indeed a bright future.
2. Press Photography ..			1				160—250		
3. Composing and Proof Reading ..			1				" "		
4. Block making ..			1				" "		
5. Lithography ..			1				" "		
<i>III. Physical Education School—</i>									
1. Physical Education ..	1	2	1	2			160—250	Private Educational Institutions..	Gymnasiums and yoga exercises are becoming very popular.
2. Yoga training ..	1	2	1	2			" "		
<i>IV. Driving School—</i>									
1. Driving light and heavy Vehicles.							220—350	Private	It is difficult to find sufficient number of efficient drivers.

VII. WORK EXPERIENCE PROJECTS

- | | | |
|---|---|---|
| 1. Library work | 2. Proof reading | 3. Photography |
| 4. Project work | 5. Beauty care | 6. Hair Dressing |
| 7. Laundry work | 8. Flower making | 9. Flower arrangement |
| 10. Cookery | 11. Bakery and Confectionery | 12. Reception |
| 13. Window display | 14. Stage production | 15. Sewing, Knitting, Embroidery and Fancy work |
| 16. Dolls and Toy making | 17. Leather work | 18. Pottery |
| 19. Cardboard and Book-binding | 20. Bangle painting-Saree Bordering | 21. Necklace making |
| 22. Purses, Pouchs and School bags making | 23. Paper craft | 24. Making kites |
| 25. Cane work | 26. Soap making | 27. Shop attendant |
| 28. Coaching the lower classes children and the weak once | 29. First Aid | 30. Pre-Primary teaching |
| 31. Primary teaching | 32. Collection and dissemination of career literature | 33. Survey of emerging job opportunities |
| 34. Maintenance of cumulative record cards | 35. Editing class and house newslettg. | 36. Employment Interview |
| 37. Taping Music and books for blind welfare | 38. Household Transactions—banking insurance, budgeting | |

Rate of Retention of Girls—

TABLE I : 1959-60 TO 1969-70

Std.	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
Year ..	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Enrolment. ..	5,92,595	3,09,136	2,44,516	2,12,101	1,64,130	1,36,624	1,15,188	92,208	77,922	71,171	48,148
Rate of retention. ..	100·0	52·2	41·3	35·8	27·7	23·1	19·4	15·5	13·1	1·20	8·1

TABLE II : 1960-61 to 1970-71

Year ..	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Enrolment ..	6,24,953	3,25,176	2,56,408	2,25,404	1,81,790	1,51,185	1,27,256	1,02,294	86,352	75,679	51,021
Rate of retention ..	100·0	52·0	41·0	36·1	28·1	24·2	20·3	16·3	13·8	12·1	8·2

TABLE III : 1961-62 to 1971-72

Year ..	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72
Enrolment ..	6,64,718	3,46,480	2,99,075	2,54,983	2,03,334	1,67,871	1,37,311	1,08,825	91,827	81,452	53,840
Rate of retention ..	100·0	52·1	45·0	38·4	30·0	25·2	20·6	16·3	13·8	12·2	8·1

From the above three tables, it seems that (i) The average rate of retention in Std. IV for the above three batches is 36·77 i.e. the average percentage of drop-outs is 63·23, (ii) The average rate of retention in Std. VII for the above three batches is 20·1 i.e. the average percentage of drop-outs is 79·9, (iii) The average rate of retention in Std. XI for the above three batches is 8·1 i.e. the average percentage of drop-outs is 91·9.

TABLE IV

POPULATION
1961 Census

1971 Census

	Rural per cent	Urban per cent	Total	Rural per cent	Urban per cent	Total
Gr. Bombay	00·00	100·0	100·0	00·00	100·0	100·0
Thana	69·8	30·2	100·0	63·9	36·1	100·0
Ratnagiri	91·9	8·1	100·0	91·6	8·4	100·0
Nasik	74·4	25·6	100·0	71·4	28·6	100·0
Kolaba	89·9	10·1	100·0	87·9	12·1	100·0
Dhulia	84·1	15·9	100·0	82·7	17·3	100·0
Jalgaon	77·5	22·5	100·0	76·4	23·6	100·0
Bombay Division ..	56·1	43·9	100·0	51·4	48·6	100·0
Ahmednagar	89·5	10·5	100·0	89·0	11·0	100·0
Poona	61·9	38·1	100·0	52·2	47·8	100·0
Satara	88·9	11·1	100·0	86·8	13·2	100·0
Sangli	84·4	15·6	100·0	81·4	18·6	100·0
Sholapur	72·1	27·9	100·0	72·7	27·3	100·0
Kolhapur	80·7	19·3	100·0	78·5	21·5	100·0
Poona Division ..	77·7	22·3	100·0	68·9	31·1	100·0
Aurangabad	85·9	14·1	100·0	83·2	16·8	100·0
Parbhani	86·2	13·8	100·0	83·9	16·1	100·0
Bhir	90·2	9·8	100·0	88·4	11·6	100·0
Nanded	85·6	14·4	100·0	79·0	20·6	100·0
Osmanabad	89·4	10·6	100·0	87·5	12·5	100·0
Aurangabad Division ..	87·4	12·6	100·0	84·6	15·4	100·0
Buldhana	83·5	16·5	100·0	82·5	17·5	100·0
Akola	77·9	22·1	100·0	76·4	23·6	100·0
Amravati	73·9	26·1	100·0	72·6	27·4	100·0
Yeotmal	87·4	12·6	100·0	86·4	13·6	100·0
Wardha	76·4	23·6	100·0	75·5	24·5	100·0
Nagpur	47·9	52·1	100·0	45·7	54·3	100·0
Bhandara	89·3	10·7	100·0	88·6	11·4	100·0
Chandrapur	92·3	7·7	100·0	89·8	10·2	100·0
Nagpur Division ..	77·6	22·4	100·0	76·1	23·9	100·0
M. S. ..	71·8	28·2	100·0	68·8	31·2	100·0

The percentage increase in population in the urban areas is higher in the following districts in order of decreasing sequence.

1. Poona 9·7
2. Nanded 6·2
3. Thana 5·9
4. Nasik 3·0
5. Sangli 3·0

The percentage increase in population of the urban areas is lower in the following districts in order of increasing sequence.

1. Ratnagiri 0·3
2. Ahmednagar 0·5
3. Sholapur 0·6
4. Bhandara 0·7
5. Wardha 0·9

TABLE V
MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION, POONA
POONA DIVISIONAL BOARD, POONA.

S. S. C. Result - March, 1971

District	Students appeared			Students passed		
	Boys	Girls	Total	Boys	Girls	Total
Greater Bombay	33,048	21,022	54,070	18,246 (55·2)*	14,170 (67·4)	32,416 (60·00)
Poona	13,158	5,626	18,784	7,670 (58·2)	3,830 (68·1)	11,500 (61·2)
Ahmednagar	8,501	2,047	10,548	4,147 (48·7)	1,445 (70·5)	5,592 (53·0)
Nasik	8,569	2,704	11,273	4,220 (49·2)	1,480 (54·7)	5,700 (50·6)
Dhulia	6,353	1,295	7,648	2,575 (40·5)	615 (47·4)	3,190 (41·7)
Jalgaon	10,246	3,180	13,426	4,708 (45·9)	1,429 (44·9)	6,137 (45·7)
Thana	6,966	4,285	11,251	3,630 (52·1)	2,371 (55·3)	6,001 (53·3)
Kolaba	3,427	1,428	4,855	1,443 (42·1)	638 (44·6)	2,081 (42·9)
Satara	8,446	2,067	10,513	3,978 (47·1)	1,038 (50·2)	5,016 (47·7)
Sangli	7,238	1,926	9,164	3,510 (48·5)	1,004 (52·1)	4,514 (49·3)
Kolhapur	8,520	2,150	10,670	4,115 (48·2)	1,110 (51·6)	5,225 (49·0)
Sholapur	8,724	2,456	11,180	4,643 (53·22)	1,041 (42·3)	5,684 (50·8)
Ratnagiri	6,788	2,977	9,765	2,864 (42·2)	1,632 (54·8)	4,496 (46·0)
Total	1,34,370	53,163	1,87,533	68,503 (50·9)	31,803 (59·8)	1,00,306 (53·5)

* Figures in the brackets show the percentage of passing.

1. The following districts have the highest percentage of results :

Boys	Poona	58·2
Girls	Ahmednagar	70·5

2. The following districts have the lowest percentage of results :

Boys	Dhulia	40·5
Girls	Sholapur	42·3

TABLE VI

MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION, POONA
POONA DIVISIONAL BOARD, POONA.

S. S. C. Result - October, 1971

District	Students appeared			Students passed		
	Boys	Girls	Total	Boys	Girls	Total
Greater Bombay ..	5,057	6,727	1,1784	1,793 (35.4)*	2,212 (32.8)	4,005 (34.1)
Poona	2,249	845	3,094	872 (38.7)	223 (26.4)	1,095 (35.4)
Ahmednagar	1,774	248	2,022	584 (32.9)	44 (17.7)	628 (31.1)
Nasik	2,051	464	2,515	863 (42.1)	154 (33.1)	1,017 (40.4)
Dhulia	1,554	160	1,714	409 (26.3)	66 (41.2)	475 (27.7)
Jalgaon	1,852	422	2,274	622 (33.5)	72 (17.1)	694 (30.5)
Thana	1,635	941	2,576	600 (36.6)	281 (29.8)	881 (34.2)
Kolaba	554	217	771	160 (28.8)	63 (29.0)	223 (28.9)
Satara	1,992	243	2,235	715 (35.8)	82 (33.7)	797 (35.7)
Sangli	1,634	282	1,916	518 (31.7)	82 (29.1)	600 (31.3)
Kolhapur	2,271	287	2,558	649 (28.5)	97 (33.7)	746 (29.2)
Sholapur	1,875	413	2,228	607 (32.3)	102 (24.6)	709 (31.0)
Ratnagiri	831	380	1,211	303 (36.4)	99 (26.1)	402 (33.2)
Total ..	27,138	11,629	38,767	9,270 (34.1)	3,577 (30.7)	12847 (30.1)

*Figures in the brackets show the percentage of passing.

1. The following districts have the highest percentage of results :

Boys ..	Nasik ..	42.1
Girls ..	Dhulia ..	41.2

2. The following districts have the lowest percentage of results :

Boys ..	Dhulia ..	26.3
Girls ..	Jalgaon ..	17.1

TABLE VII
MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION, POONA
NAGPUR DIVISIONAL BOARD

S. S. C. Result - March, 1971

District	Students appeared			Students passed		
	Boys	Girls	Total	Boys	Girls	Total
Akola	7,310	1,999	9,309	3,760 (51·4)*	1,163 (58·2)	4,923 (52·9)
Buldhana	6,165	1,168	7,333	2,879 (46·6)	557 (47·7)	3,436 (46·9)
Yeotmal	5,259	1,178	6,437	2,283 (43·4)	596 (50·6)	2,879 (44·7)
Amraoti	9,536	2,555	12,091	2,708 (28·3)	1,069 (41·8)	3,777 (31·2)
Wardha	4,063	1,742	5,805	1,779 (43·7)	846 (48·6)	2,625 (45·2)
Chandrapur	5,149	1,627	6,776	2,307 (44·8)	587 (36·1)	2,894 (42·7)
Bhandara	7,063	1,651	8,714	3,783 (53·5)	864 (52·3)	4,647 (53·3)
Nagpur	10,992	5,452	16,444	5,224 (47·5)	2,299 (42·2)	7,523 (45·0)
Total	55,541	17,372	72,913	24,720 (44·5)	7,981 (45·9)	32,701 (44·8)

*Figures in the brackets show the percentage of results.

1. The following districts have the highest percentage of results :

Boys ..	Bhandara ..	53·5
Girls ..	Akola ..	58·2

2. The following districts have the lowest percentage of results :

Boys ..	Amraoti ..	28·3
Girls ..	Chandrapur ..	36·1

TABLE VIII

MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION, POONA.
NAGPUR DIVISIONAL BOARD.

S. S. C. Result, October 1971

District	Students appeared			Students passed		
	Boys	Girls	Total	Boys	Girls	Total
Akola	1,429	405	1,834	450 (31·4)*	135 (33·3)	585 (31·9)
Buldhana	1,565	213	1,778	654 (41·7)	123 (57·7)	777 (43·7)
Yeotmal	911	195	1,106	298 (32·7)	108 (55·3)	406 (36·7)
Amraoti	1,645	495	2,140	520 (31·6)	185 (37·3)	705 (32·9)
Wardha	958	330	1,288	301 (31·4)	105 (31·8)	406 (31·5)
Chandrapur	901	234	1,135	299 (33·1)	82 (35·0)	381 (33·6)
Bhandara	889	284	1,173	294 (33·1)	113 (39·7)	407 (34·7)
Nagpur	2,378	1,355	3,733	841 (35·3)	335 (24·5)	1,176 (31·5)
Total ..	10,676	3,511	14,187	3,657 (34·2)	1,186 (33·7)	4,843 (34·1)

*Figures in the brackets show the percentage of results.

1. The following districts have the highest percentage of results :

Boys ..	Buldhana ..	41·7
Girls ..	Buldhana ..	57·7

2. The following districts have the lowest percentage of results :

Boys ..	Akola ..	31·4
Girls ..	Nagpur ..	24·5

TABLE IX
MAHARASHTRA STATE SECONDARY SCHOOL EXAMINATION BOARD
AURANGABAD DIVISIONAL BOARD.

S. S. C. Results, March 1971

(October 1971)

District	Students appeared	Students passed	Percentage	Students appeared	Students passed	Percentage
Aurangabad	*9,255	3,754	40·6	3,387	952	28·1
Bhir	5,517	2,492	45·2	1,637	505	30·9
Nanded	5,547	2,179	39·3	1,872	664	35·5
Osmanabad	10,705	4,990	46·6	3,436	1,011	29·4
Parbhani	4,437	1,878	42·3	976	422	43·2
Total ...	35,461	15,293	42·1	11,308	3,554	31·4

*Separate figures for boys and girls are not available:

1. The following districts have the highest percentage of results:—

March .. ..	..	..	1971	Osmanabad	..	46·6
October .. ..	..	..	1971	Parbhani	..	43·2

2. The following districts have the lowest percentage of results:—

March .. ..	..	..	1971	Nanded	..	39·3
October .. ..	..	..	1971	Aurangabad	..	28·1

TABLE X

The Statement showing employment variations and Work seekers by areas in the State.

Region/District	Employment March, 71 (in lakhs)	per cent change 71/70	Work seekers at the end of March 1971		per cent change 71/70	
			Total	Unskilled	Total	Unskilled
1	2	3	4	5	6	7
Thana	1.48	+ 3.6	14,521	6,303	+ 54.2	+ 25.5
Alibag	0.27	+ 9.0	6,215	2,304	+ 80.2	+ 20.1
Ratnagiri	0.34	+ 2.8	5,696	2,637	+ 3.9	+ 9.8
I-Konkan	2.09	+ 4.1	26,432	11,244	+ 44.1	+ 20.3
Bombay	11.11	+ 3.2	79,304	39,599	+ 26.1	+ 21.0
Poona	2.67	+ 4.2	47,841	28,112	+ 33.2	+ 36.7
II-Industrially developed areas	13.78	+ 3.2	1,27,145	67,711	+ 28.7	+ 27.0
Jalgaon	0.84	+ 11.7	12,947	6,962	+ 1.0	+ 45.9
Dhulia	0.44	+ 10.9	7,069	4,034	+ 12.2	+ 21.4
III-Khandesh	1.28	+ 11.5	20,016	10,996	+ 4.7	+ 35.8
Ahmednagar	0.67	+ 2.1	5,996	2,212	- 12.3	- 28.6
Satara	0.43	+ 4.4	5,774	2,884	+ 4.3	+ 22.1
Sangli	0.45	+ 1.5	8,805	3,935	+ 43.6	+ 23.5
Sholapur	1.00	+ 2.8	9,744	4,185	+ 6.5	+ 18.1
Kolhapur	0.55	- 2.1	8,286	3,618	+ 43.5	+ 64.7
Nasik	0.78	+ 6.1	18,003	10,228	+ 7.3	+ 4.3
IV-Western Maharashtra	3.88	+ 2.6	56,608	27,062	+ 12.8	+ 1.6
Aurangabad	0.45	+ 1.8	14,585	6,065	+ 25.1	- 4.0
Parbhani	0.24	+ 4.0	4,889	2,117	+ 34.2	+ 81.3
Bhir	0.34	+ 49.9	3,906	1,631	- 38.6	+ 55.2
Nanded	0.32	+ 0.2	5,320	2,702	+ 22.9	+ 56.0
Osmanabad	0.26	+ 5.4	6,858	2,674	+ 1.7	+ 0.3
V-Marathwada	1.61	+ 9.8	35,558	15,189	+ 8.6	- 2.3
Buldhana	0.20	- 2.5	5,416	1,798	+ 31.4	+ 38.9
Akola	0.42	+ 4.9	8,912	2,381	+ 16.0	+ 10.7
Amravati	0.37	- 1.3	10,314	3,087	+ 21.7	+ 10.1
Yeotmal	0.25	- 1.1	4,628	1,319	+ 28.6	+ 41.2
Wardha	0.33	+ 20.0	6,110	2,624	+ 19.0	+ 3.8
Nagpur	1.52	+ 1.2	34,743	14,125	+ 40.8	+ 11.5
Bhandara	0.33	+ 4.6	14,467	9,114	+ 15.5	+ 115.7
Chandrapur	0.38	+ 4.4	10,475	3,715	+ 31.8	+ 8.0
VI. Vidarbha	3.80	+ 3.0	95,065	38,163	+ 28.2	+ 24.9
Grand Total	26.43	+ 3.9	3,60,824	1,70,365	+ 23.0	+ 18.7

FINANCIAL IMPLICATIONS FOR

I. PARA MEDICAL COURSES

I. *Ward Attendant*—

2. Junior courses per region per year (12 trainees per course)=24 trainees per year.
 ∴ Total trainees for the whole State (10 regions)=240

∴ Total cost by way of Staff salaries per region	Rs.	10,800
∴ Total cost for the whole State		1,08,000
∴ Stipend per trainee Rs. 75 p.m. Stipend for 12 trainees for 12 months per region Rs. $12 \times 12 \times 75 = 10,800$.		10,800
∴ Stipend for the whole State		1,08,000
∴ Contingencies per year per Region=Rs. 1,000		
∴ Contingencies for the whole State		10,000
	Per region	Whole State
	Rs.	Rs.
Stipend	10,800	1,08,000
Salaries of staff	10,800	1,08,000
Contingencies	1,000	10,000
	<u>22,600</u>	<u>2,26,000</u>

II. *First-Aider*—

- 3 months course—4 courses per year per region. Each batch of 12 students
 = 48 students per region
 = 480 students for the whole State.

Total cost by way of salaries per region per year	Rs.	13,000
Total for the Whole region		1,30,000
Stipend at Rs. 75 per student p.m. per region= $75 \times 12 \times 12 = 10,800$		10,800
∴ For the whole State		1,08,000
∴ Contingencies per year per region		1,000
∴ For the whole State		10,000
	Per region	Whole State
	Rs.	Rs.
Stipend	10,800	1,08,000
Salaries	13,000	1,30,000
Contingencies	1,000	10,000
	<u>24,800</u>	<u>2,48,000</u>

III. *Labour Room Attendant*—

- 2 courses per year (6 students per batch)
 12 students per region per year
 120 students whole State per year Stipend $6 \times 75 \times 12 = 5,400$ per region
 ∴ Whole State=Rs. 54,000
 Salaries per region per year
 ∴ Salaries for whole State

Contingencies Rs. 1,000 per region per year		1,000
Total contingencies		10,000
	Per region	Whole State
	Rs.	Rs.
Stipend	5,400	54,000
Salaries	7,500	75,000
Contingencies	1,000	10,000
	<u>13,900</u>	<u>1,39,000</u>

IV. Name of the course—Dispensing opticians only one course at Nagpur is possible.

Non-recurring	Recurring	Rs.
Rs. 5,000	Stipend for 12 trainees $12 \times 75 \times 12$	10,800
	Salaries	12,600
	Contingencies	1,000
		<u>24,400</u>
Hostel accommodation for all the trainees of all the courses at Rs. 1,00,000 per region		10,00,000
		for whole State
Total	Recurring for the region	for the whole State
Stipend	37,800	2,80,800
Salaries	43,900	3,25,600
Contingencies	4,000	31,000
	<u>85,700</u>	<u>6,37,400</u>
Non-recurring for hostel per region	1,00,000	10,00,000
		5,000
	<u>1,85,700</u>	<u>16,42,400</u>

FINANCIAL IMPLICATIONS FOR

II. HOME SCIENCE AND TAILORING ACADEMY

	Rs.	
(i) Tailoring (Men) 1 course per region per year.		
∴ 20 trainees per course	..	..
Stipend per region = $20 \times 12 \times 75$	..	18,000
For the whole State	..	1,80,000
Salaries (at the rate of Rs. 500 per teacher per month) per region $12 \times 500 = 6,000$	..	6,000
for the whole State	..	60,000
Contingencies per course per region	..	1,000
Contingencies for the whole State	..	10,000
Total—Recurring per year for the whole State	..	2,50,000
Non-recurring for all the courses	..	1,00,000
Total—for the State	..	3,50,000
(ii) Tailoring for women 1 course per region $20 \times 10 = 200$ whole State.		
Stipend per course per region = $20 \times 75 \times 12 = 18,000$	..	18,000
For the whole State	..	1,80,000
Salaries etc, region 12×500	..	6,000
For the whole State	..	60,000
Contingencies per region	..	1,000
Contingencies for the whole State	..	10,000
	Region	State
Stipend	Rs.	Rs.
Salaries	18,000	1,80,000
Contingencies	6,000	60,000
	1,000	10,000
	25,000	2,50,000
Non-recurring per region	..	10,000
Whole State	..	1,00,000
Total	Rs.	
	2,50,000	Recurring
	1,00,000	Non-recurring.
	3,50,000	

(iii) Tailoring for children (The same as for men)		
(iv) Knitting and embroidery (rate Rs. 400 p. m.)		
Salaries— 4,800 per year per region	..	48,000
Stipend Rs. $20 \times 75 \times 12 = 18,000$	..	1,80,000
Contingencies Rs. 1,000	..	10,000
Non-recurring Rs. 5,000	..	50,000
		(per State)
(v) Hostery and Servicing—The same as above.		
Only non-recurring Rs. 10,000.		
(vi) Embroidery as above.		
Non-recurring	Nil	
(vii) Uphostery as for tailoring for men		
Non-recurring only Rs. 5,000 per region.		

FINANCIAL IMPLICATIONS FOR

HOME SCIENCE

1 course per region per year.		
∴ 20 trainees per region.		
= 200 trainees per year for whole State.		
Stipend = $12 \times 20 \times 75 = 18,000$ per region.		
State = 1,80,000		
Salaries per region		
1 Lecturer (500 p.m.)	} 12 × 900	10,800
1 Assistant (400 p.m.)		(per region)
Whole State		1,08,000
Contingencies		1,000
		(per region)
		10,000
		(whole State)
Non-recurring per region	..	50,000
For whole State	..	5,00,000
Total Recurring		
	Region	State
	Rs.	Rs.
	18,000	2,98,000
	10,800	
	1,000	
	29,800	
Non-recurring equipment	..	50,000
Equipment	..	50,000
Non-recurring for Hostel Building	..	4,00,000
Building for Academy	..	3,50,000
		5,00,000
		40,00,000
		35,00,000

Total for—

II. HOME SCIENCE AND TAILORING ACADEMY

				Region	State
				Rs.	Rs.
Recurring					
Stipend	..	..	..	1,44,000	14,40,000
Salaries	..	..	..	44,400	4,44,000
Contingencies	..	..	..	8,000	80,000
Total				1,96,400	19,64,000
Non-Recurring					
Equipment	..	..	..	1,00,000	10,00,000
Hostel Building	..	..	..	4,00,000	40,00,000
Building for Academy Total	..	..	..	3,50,000	35,00,000
Total				8,50,000	85,00,000
Total : Recurring; Non-recurring				10,46,400	1,04,64,000

FINANCIAL IMPLICATIONS FOR

III. TEACHERS TRAINING COURSE

Total Trainees per Course per year at the rate of 40 trainees per course	Tr. Dist.
	40 × 26 = 10,40
Total Trainees for all the 15 courses per year	Tr. Courses
	1,040 × 15 = 15,600
(Total Trainees per District)	Tr. Courses
	40 × 15 = 600
Total Stipend per District per year	12 × 75 = 900
(at the rate of Rs. 75 p.m. per trainee)	Rs. 600 × 900 = 5,40,000
Total stipend per year for the whole State.	5,40,000 × 26 = 1,40,40,000
Hostel for trainees Rs. 1,00,000 for one hostel for 40 trainees	Total for 15 × 40 = 600 trainees
	Rs. 15,00,000 per district
	Rs. 15,00,000 × 26
	Rs. 3,90,00,000 for the whole State.
Part time staff per course per District at the rate of 1 person for carrying 10 trainees = 4.	
For 15 Courses 15 × 4 = 60	
Total honoraria for Staff per year per District, (Rate Rs. 200 p.m. per head)	60 × 200 × 12 = 1,44,000
Total honoraria for the Whole State	Rs. 1,44,000 × 26 = 37,44,000
Contingencies per institute per year for all courses (at the rate of approx. 1,000 per course).	Rs. 15,000
Contingencies for all the Course for the whole State	Rs. 3,90,000

TOTAL ESTIMATES

				Per District	Whole State
				Rs.	Rs.
Recurring					
I Stipend	..	..	..	5,40,000	1,40,40,000
II Part-time honoraria	..	..	..	1,44,000	7,37,44,000
III Contingencies	..	..	..	0,15,000	0,03,90,000
Total				6,99,000	1,81,74,000
I Non-Recurring					
Total				15,00,000	3,90,00,000
				21,99,000	5,71,74,000

FINANCIAL IMPLICATIONS FOR

IV. MUSIC AND DRAMATIC ACADEMY

8 Courses per region per year 20 trainees per course 160 trainees per region per year.

				Region	State
				Rs.	Rs.
Recurring					
I. Stipend	..	..	..	1,44,000	14,40,000
II. Salaries	..	..	..	38,400	3,84,000
III. Contingencies	..	..	..	5,000	0,50,000
				1,87,400	18,74,000
Non-recurring					
I. Hostel Building	..	..	..	4,00,000	40,00,000
II. Equipment	..	..	..	34,000	3,40,000
Total—curring and Non-recurring				4,34,000	43,40,000
				6,21,400	62,14,000

FINANCIAL IMPLICATIONS FOR

V. ART ACADEMY

9 Courses in all 180 trainees per region 1800 trainees for whole State.

				Region	State
				Rs.	Rs.
Recurring					
1. Stipend	..	..	..	1,62,000	16,20,000
2. Salaries	..	..	..	10,800	1,08,000
3. Contingencies	..	..	..	5,000	50,000
				1,77,800	17,78,000

	Non-recurring	Region Rs.	State Rs.
1. Building for Hostel	4,50,000	45,00,000
2. Equipment	14,000	01,40,000
		<hr/>	<hr/>
		4,64,000	46,40,000
		<hr/>	<hr/>
Total—recurring and non-recurring ..		6,41,800	64,18,000

**FINANCIAL IMPLICATIONS FOR
VI. BEAUTY CARE ACADEMY**

3 courses per region per year.
10 trainees per course.
30 trainees per region.
300 trainees for the whole State per year.

	Recurring	Region Rs.	State Rs.
1. Stipend .. .. .	.. .. .	27,000	2,70,000
2. Salaries .. .. .	.. .. .	40,000	4,00,000
3. Contingencies .. .. .	.. .. .	5,000	50,000
		<hr/>	<hr/>
		72,000	7,20,000
		<hr/>	<hr/>
	Non-recurring		
1. Hostel accommodation .. .. .	.. .. .	1,00,000	10,00,000
2. Equipment .. .. .	.. .. .	40,000	4,00,000
		<hr/>	<hr/>
		1,40,000	14,00,000
		<hr/>	<hr/>
Total—recurring and Non-recurring ..		2,12,000	21,20,000

**FINANCIAL IMPLICATIONS FOR
VII. SOCIAL WORK**

4 Courses per region per year
20 trainees per course per year
800 for the whole State ..

	Recurring	Region Rs.	State Rs.
1. Stipend	72,000	7,20,000
2. Salaries	12,000	1,20,000
3. Contingencies	4,000	40,000
		<hr/>	<hr/>
		88,000	8,80,000
		<hr/>	<hr/>
1. Hostel Accommodation	2,00,000	20,00,000
		<hr/>	<hr/>
Total ..		2,88,000	28,80,000

**FINANCIAL IMPLICATIONS FOR
VIII. PERSONNEL SERVICES**

6 courses per region per year.
20 trainees per course.
120 trainees per region.
1200 trainees per year for the whole State.

	Recurring	Region Rs.	State Rs.
1. Stipend .. .. .	.. .. .	1,08,000	10,80,000
2. Salaries .. .. .	.. .. .	18,000	1,80,000
3. Contingencies .. .. .	.. .. .	6,000	60,000
		<hr/>	<hr/>
		1,32,000	13,20,000
		<hr/>	<hr/>
	Non-Recurring		
1. Hostel Accommodation .. .. .	.. .. .	3,00,000	30,00,000
2. Equipment .. .. .	.. .. .	10,000	1,00,000
		<hr/>	<hr/>
		3,10,000	31,00,000
		<hr/>	<hr/>
Total—recurring and Non-recurring ..		4,42,000	44,20,000

**FINANCIAL IMPLICATIONS FOR
IX. REGIONAL FOOD CRAFT INSTITUTES**

	Recurring	Region Rs.	State Rs.
1. Stipend .. .. .	.. .. .	1,29,600	12,96,000
2. Salaries .. .. .	.. .. .	1,25,000	12,50,000
3. Contingencies .. .. .	.. .. .	72,000	7,20,000
		<hr/>	<hr/>
Total ..		3,26,000	32,66,000
		<hr/>	<hr/>
	Non-recurring	Region Rs.	State Rs.
1. Building for Hostel accommodation .. .. .	.. .. .	18,62,500	1,86,25,000
2. Equipment etc. .. .. .	.. .. .	2,30,000	23,00,000
		<hr/>	<hr/>
		20,92,500	2,09,25,000
		<hr/>	<hr/>
Total—recurring and non-recurring ..		24,19,100	2,41,91,000

Total Estimated expenditure for one year

Academy	Stipend	Salaries Honoraria	Contingen- cies.	Equipment	Building	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I Para-medical ..	2,80,800	3,25,600	31,000	5,000	10,00,000	16,42,400
II Home Science and Tailor- ing.	14,40,000	4,44,000	80,000	10,00,000	75,00,000	1,04,64,000
III Teacher Training ..	1,40,40,000	37,44,000	3,90,000	....	3,90,00,000	5,71,74,000
IV Music and Drama ..	14,40,000	3,84,000	50,000	3,40,000	40,00,000	62,14,000
V Art ..	16,20,000	1,08,000	50,000	1,40,000	45,00,000	64,18,000
VI Beauty Care ..	2,70,000	4,00,000	50,000	4,00,000	10,00,000	21,20,000
VII Social Work ..	7,20,000	1,20,000	40,000	....	20,00,000	28,80,000
VIII Personnel Services ..	10,80,000	1,80,000	60,000	1,00,000	30,00,000	44,20,000
IX *Catering and food craft.	12,96,000	12,50,000	7,20,000	23,00,000	1,86,25,000	2,41,91,000
Total ..	2,21,86,800	69,55,600	14,71,000	42,85,000	8,06,25,000	11,55,23,400

*The estimated expenditure for organising the various Vocational Courses in the academies proposed for the entire State would amount to Rs. 1,155 lakhs for one year. This includes expenditure on stipends, salaries, contingencies, equipment and buildings. Besides the orientation workshops of 10 days duration for instructors will be required to be organised for instructors before the implementation of this scheme. Organisation of such workshops would entail an additional expenditure of Rs. 480 lakhs. Thus, the total expenditure for the entire programme would amount to Rs. 1,160 lakhs.

APPENDIX 'I'

**REPORT OF THE GROUP V ON CAREER GUIDANCE
APPOINTED BY THE STUDY GROUP ON
VOCATIONALISATION
OF
SECONDARY EDUCATION
CONSTITUTED BY THE
STATE COMMITTEE ON UNIFORM PATTERN OF EDUCATION
IN
MAHARASHTRA STATE**

Chairman

Dr. A. U. SHAIKH

Convenor

Dr. G. H. NAFDE

Report of the Sub-Group V-Career Guidance-of the Study Group on Vocationalisation of Secondary Education

1. Dr. A. U. Shaikh Chairman
2. Dr. G.H. Nafde, Principal, Institute of Vocational Guidance and Selection, Bombay. Convenor
3. Shri K. V. Limaye, Assistant Vocational Guidance Officer .. Member
4. Dr. (Miss) Mehroo Bengalee, Professor and Counsellor, St. Xavier's Institute of Education, Bombay. Member
5. Shri Y. D. Mahajan, Assistant Director of Employment .. Member
6. Shri S. V. Apte, Principal, S.P.H.J. High School, Bordi .. Member
7. Miss S. Panandikar, Ex-member, Education Commission .. Member
8. Mrs. Madhuri Shah, Education Officer, Bombay Municipal Corporation. Member
9. Shri Soli Pavri, Principal, J. M. Multipurpose Higher Secondary School, Road No. 7, Juhu Scheme, Vile Parle (West), Bombay-56. Member
10. Dr. D. J. Nandedkar, Additional Manpower Officer P.D., Bombay .. Member

Meetings held on 18th November, 1972 and 16th December, 1972 in the Chamber of Dr. A. U. Shaikh, Secretary, Education Department, Government of Maharashtra.

STUDY GROUP ON VOCATIONALISATION OF SECONDARY EDUCATION

REPORT OF SUB-GROUP V CAREER GUIDANCE

Introduction

An eminent thinker like Vinoba Bhave considers that a good educational programme should cover Yoga (self-control and self-adjustment), Uddyoga (Pre-Vocational and Vocational adjustment) and Sahayoga (Social adjustment). Maladjustment in any of these dimensions not only makes the person unhappy and unsuccessful but can also affect the national production and adjustment. These are the three areas the Guidance movement wants to cover though it lays more stress on Uddyoga. Vocation is not merely a means of earning bread but also a way of life which one is required to lead during the major portion of his life. Thus, Vocational Guidance is really education the scope of which extends beyond one's School/College career.

Guidance has been going on since time immemorial in an informal way. When one consults (or makes complaints about) his friend, teacher, parents etc. he really seeks Guidance or adjustment in any one of the above mentioned fields. Like all the other areas, Guidance is also being developed on scientific lines on the basis of experiments and research. It is, therefore, appropriate that we also take advantage of this.

For the development of an effective Guidance Service, we, therefore, need (1) effective Guidance agencies which should be within the reach of those who need it, (2) Proper Guidance tools (psychological and non-psychological) which will be the outcome of a good research programme and (3) effective training programmes for Guidance Workers alongwith the supervision of their work. Dr. Kale committee has, therefore, suggested the opening of Guidance Centres in the districts, Bureaux of Guidance in the regional headquarters and the strengthening and upgradation of the Institute of Vocational Guidance and Selection, Bombay to a Directorate.

All the aspects mentioned above viz. (1) Guidance Service (2) Development of Guidance Tools (Psychological and Non-Psychological) and (3) Training Programme for the Guidance workers have to go on simultaneously. In spite of the limited staff at the disposal of the Institute the necessary spade work has been done by the Institute of Vocational Guidance and Selection, Bombay, its Sub-Bureau in Poona and St. Xavier's Institute of Education, Bombay.

Please see appendices A and B.

Though the work will appear large in quantitative terms, in the light of the requirements for the State it is very insufficient, especially, when, with the Vocationalisation of Education, the large numbers of drop-outs (about 83 per cent of those who join school do not pass S.S.C.) and the higher secondary students would be served, the importance of development of Guidance services cannot be over-emphasised.

The Group met twice (18th November, 1972, 16th December, 1972) and considered the various needs of Guidance. The Group felt that steps should be taken to get a large number of career masters trained, so that every high school will have adequate number of career masters (at least 3 per high school). Even the primary schools should have career masters. These may preferably be the heads of the schools. A small Guidance committee which will include the trained career masters i.e. the head master, and one or two senior teachers should function in a primary school.

Looking to the large number of schools, the work of training these career masters may have to be done by the training colleges in the state.

The junior training colleges would run the three weeks career masters courses for their teacher trainees, during their two years training programme in the junior training colleges. For this purpose it will be necessary to provide a trained person in Vocational Guidance to these colleges. This person will be trained by the Institute of Vocational Guidance and Selection, Bombay in the three weeks' Career Masters course and one year Diploma course. In fact, it is necessary to have a Guidance Centre in each Junior College of Education. We should have a Guidance Centre which in addition to training the teachers would also do some Guidance Service work.

Similar work can be done by the Secondary Training Colleges too.

However to cut down the expenditure in the beginning the Group felt that as a first step only one of the members of the existing staff of each of the colleges of education be got trained from the Institute of Vocational Guidance and Selection, Bombay and he be assigned the above mentioned work. It is recommended that an allowance of Rs. 50 per month, be paid to the staff member doing this work. He may also be given a clerk and a peon to assist him. Similarly the programme would be restricted to the Government Colleges of Education (45 Junior Colleges, 15 Secondary Training Colleges). The details of this are given in the recommendations. As the secondary training colleges come under Universities a meeting of the concerned authorities of the Universities may have to be called so as to get the approval of universities, if, such an approval is necessary for running Career Masters courses by the Colleges.

Provision of Guidance Service to a very large number can be done by opening a large number of Guidance Centres. Each Guidance Centre would serve a group of educational Institutions. Each Guidance Centre will have one Assistant Vocational Guidance Officer, one Technical Assistant, one clerk, and one peon. It is proposed that there should be at least one centre in each developmental Block. Thus 300 centres will have to be started. The details can be seen under recommendations.

If Guidance work has to go on well in the schools it is necessary to make some provision for the inspection of the work. This is the weakest part of our work today. The Institute of Vocational Guidance and Selection, Bombay with its very small staff (9 out of which 2 posts are vacant because of the very low pay scales) cannot supervise the work of over 1,000 Career Masters and a few teacher Counsellors spread all over the State, except by sending out occasional Questionnaires. Therefore it is felt necessary that the Inspectorate of Education in every District should have one officer, trained in Vocational Guidance in the one year Diploma course.

Similarly it is worthwhile to have a Guidance Cell in the technical training colleges.

For serving the above agencies it will be necessary to develop the Institute of Vocational Guidance and Selection, Bombay so that it can undertake the training of a large number of counsellors per year i.e. at least about 100, produce the occupational information material for the above mentioned 300 Guidance Centres and the Colleges of Education, develop Psychological Tools for Guidance and Selection. (The selection situation provides the best experimental ground for the psychological tools apart from the fact that the Industry and Government Departments get better recruits and they come closer to the Institute and provide sample population for research whenever necessary). It should also expand the Guidance service facilities so that the trainees undergoing Diploma courses in Guidance would get a larger number of clients for their practice.

To control all the above activities it would be necessary to establish an independent Directorate of Guidance similar to the Directorate of Art services help of which would be availed of by the Directorate of Education and the Directorate of Technical Education, the Directorate of Employment etc.

Suitable accommodation or an independent building should be provided for the Institute of Vocational Guidance and Selection, and the Directorate of Guidance Services, Bombay. To attract and retain good persons in the field it may be necessary to give them reasonable scales of pay (Many members of the staff including head of the Department have left the Institute for better prospects outside). In view of this, UGC scales have been suggested wherever relevant.

A sub-committee consisting of persons like Miss S. Panandikar, Dr. G.H. Nafde, Dr. M. Bengalee etc. may be formed to suggest the contents of the Career Master's course for the primary teachers. They may also review the Career Master's course for the Secondary School Teachers, college teachers and the Diploma course in Vocational Guidance and give their suggestions.

Recommendation No. 1—Opening of Block Guidance Centres

It will take many years to provide one counsellor in every school (There are over 6,000 secondary schools and 45,000 primary schools). Therefore the only solution we can think of is to open Guidance Centres which will cater to the needs of Groups of Institutions (each group of about 10 schools). A Guidance Centre has one more advantage i.e. it can extend its services even to the college population, if possible and feasible.

Staff of the Guidance Centre

- One Assistant Vocational Guidance Officer (Cl. II) (Rs. 400—950)
- One Technical Assistant (Rs. 225—400)
- One Clerk (Rs. 115—215)
- One Peon (Rs. 75—100)

Functions of the Guidance Centre

- (a) They will offer guidance services to groups of 5 to 10 institutions especially to those which do not have counsellors on their staff by visiting these schools.
- (b) They will offer Guidance Services to other clients from colleges etc. approaching the centre.
- (c) They will supervise the work of the Career Masters and the counsellors in the block.
- (d) They will work in co-ordination with the district Employment Exchanges.
- (e) They will organise *ad-hoc* Vocational Courses for the shortage categories with the help of extension services of the Agriculture, Technical etc. Departments.

Financial Implications

	Rs.
One Assistant Vocational Guidance Officer (Cl. II) (400—950)	07,320·00 (per year).
One Technical Assistant (Rs. 225—400)	04,968·00
One Clerk (Rs. 115—215)	02,674·00
One Peon (Rs. 75—100)	02,065·00
Travelling Allowances	01,000·00
Contingency	02,000·00
	20,027·00
For 25 Block Guidance Centres	5,00,675·00
For 300 Block Guidance Centres	60,08,100·00

This will have to be a phased programme.

Recommendation No. 2—Training of Career Masters for Secondary Schools by the B.Ed. Colleges

If the training of Career Masters has to be undertaken on a large scale it may have to be done by the B.Ed. Colleges in the State, in addition to the Institute of Vocational Guidance in Bombay, its Sub-Bureau in Poona and the St. Xavier's Institute of Education in Bombay. For this it is necessary to provide at least two trained Diploma Holders in Vocational Guidance (12 months course) to each of these colleges. These two members would be organising the Guidance Departments in the College. However to cut down cost we may train one of the existing members of the staff of the B.Ed. Colleges in the Career Master's Course (of three weeks) and the Diploma course (of one year) and assign him Guidance work for which he may be paid an allowance of Rs. 50 per month. In addition he may be given a clerk and a peon to help him. The Programme may be restricted to the 15 Government B.Ed. Colleges in the State.

Functions of The Full College Guidance Department For B.Ed. Colleges

1. To conduct Career Master's courses—
 - (a) for B.Ed. trainees, and
 - (b) for the secondary schools teachers.
2. To organise the Guidance Services.
3. To run Refresher Courses for Career Masters.
4. To organise Careers Conferences.
5. To organise *ad hoc* Vocational Courses in the locality with the help of the Agriculture Department, the Technical Education Department, the Employment Exchanges etc. This will be done mainly for the shortage categories of the jobs of the locality.
6. To give guidance to the B.Ed. trainees who need the same. This guidance will be limited to vocational and personal guidance.
7. To offer advice and help to the Career Masters in the schools which come under the Extension Department of the college.

Staff

The full Staff of an independent Guidance Centre in a college should comprise of—

One Professor of Guidance	..	..	..	(Rs. 700—1,250)
One Senior Lecturer in Guidance	..	..	..	(Rs. 400—950)
One Clerk	..	..	..	(Rs. 115—215)
One Peon	..	..	..	(Rs. 75—100).

The Professors/Lecturers will be trained in the one-year Diploma course during which trainees will be paid a stipend at Rs. 100 per month in addition to their pay.

However to cut down the cost the following staff is suggested as a first step:—

One Professor/Lecturer in charge of guidance activities (An allowance of Rs. 50 per month to be paid to him for this work) (Scale Rs. 700—1,250), one clerk (Rs. 115—215), one peon (Rs. 75—100).

However the smaller staff will concentrate on the training of career masters and on doing some client work.

Expected Results

Each college would train about 100 Career Masters per year. Thus the 15 Government B.Ed. Colleges would train about 1,500 Career Masters.

Financial Implications

(a) *Training of the Staff of the B.Ed. Colleges.*—A Professor/Lecturer will be trained and will be appointed as Professor/Lecturer in-charge of the Guidance activity after training.

Average Pay of the substitute of one Senior Lecturer (Rs. 400—950) Rs. 7,320 per year

Stipend at Rs. 100 per month Rs. 1,200 per year.
T.A. etc. Rs. 150 per year.

Total .. Rs. 8,670

Training of one member from each of the 15 Government colleges per year Rs. 1,30,050

The expenditure of the College Guidance Department after it starts functioning :—

	Rs.
The special pay of the Professor/ Lecturer-in charge of Guidance (Rs. 50 per month).	600 (per year).
Contingencies	2,000 (per year).
T. A.	1,000 (per year).
Total ..	<u>3,600</u>
Expenditure on 15 Guidance Departments in Government Colleges of Education.	54, 000 (per year).

(However a full Guidance Department, if it is opened later on, would cost Rs. 2,38,680 during training and Rs. 3,19,800 after training for 15 Government B.Ed. Colleges as per the note for the 2nd meeting of the Career Guidance Sub-Group held on 16th December 1972).

Recommendation No. 3—Training of Career Masters for the Primary Schools by the D.Ed. Colleges

At present there are 45 Government D.Ed. Colleges and 90 private D.Ed. Colleges. Guidance services to the Primary School students can be given by training the Head Masters and or Senior Teachers of the primary schools in the Career Masters Courses. If this is to be done, two members of the staff of each of the D. Ed. Colleges need to be trained in the one year Diploma course in Vocational Guidance. However to cut down the costs only one member of the staff of each college be got trained in the Career Masters and the Diploma courses The programme may be limited to the Government colleges only.

Functions of the Full Guidance Departments of D.Ed. Colleges

- (1) To conduct Career Masters Course (3 weeks) for—
 - (a) D.Ed. Trainees every year. (b) Head Masters and/or Senior Teachers of the Private schools.
- (2) to run the Guidance Services for the local population.
- (3) to do the extension work in the schools.
- (4) If possible organise *ad-hoc* courses for the shortage categories of jobs in the area with the help of the Agricultural, Technical and Employment Department etc.

However the small department will concentrate on Career Masters Training and some Guidance Service work.

Staff

The staff of the full Guidance Department would be as below :—

- One Senior Counsellor (Qualification based pay *plus* Rs. 50) (Rs. 165—400).
- One Junior Counsellor (Qualification based pay *plus* Rs. 50) (Rs. 165—400).
- One Clerk (Rs. 115—215)
- One Peon (Rs. 75—100)

However to cut down the cost only one lecturer will be trained. He will do the Guidance work in addition to teaching for which he will be paid an allowance of Rs. 50 per month.

Expected Results.—Each D.Ed. College will train about 100 Career Masters per year including the D.Ed. Trainees and the Head Masters and/or Senior Teachers of the Primary Schools.

All the 45 Government D.Ed. Colleges would train about 4,500 Career Masters per year.

Financial Implications

	Rs.
(1) The pay of the Substitute during the one year training of the Senior Counsellor (Rs.165-400) (Qualification based pay).	4,580·00 (per year).
(2) Stipend	1,200·00 (per year).
(3) Travelling Allowance	150·00 (per year).
Total ..	<u>5,930·00</u>

The Expenditure for training 2,66,850 (per year).

One Guidance Counsellor for each of the 45 Government B. Ed. Colleges would be trained,

Expenditure on running the Guidance Departments of the D.Ed. Colleges:

	Rs.
(1) Pay of Senior Counsellor (Rs. 165-400) (Qualification based pay <i>plus</i> Rs. 50.)	5,360·00
(2) Pay of one Clerk (Rs. 115—215)	2,674·00
(3) Pay of one Peon (Rs.75—100)	2,065·00
(4) Contingency	2,000·00
(5) Travelling Allowances	1,000·00
Total ..	13,099·00

The Expenditure of the Guidance Departments of 45 Government D.Ed. Colleges. 5,89,455 (per year).

Expenditure of the full Guidance Department if set up in the 45 Government Colleges, would be Rs. 5,34,200 before training and Rs. 8,30,655 after training as per the note for the second meeting of Career Guidance Sub-Group held on 16th December, 1972.

Recommendation No. 4—Provision of Career Masters in Secondary Schools

At present we are having about 6,000 secondary schools. A few of them will become Higher Secondary Schools. If we consider these aspects of Guidance, namely, (1) Information and Record, (2) Testing and Counselling, and (3) Placement, at least the first part which is mainly the non-test guidance needs to be made available to every child. This is done by the Career Masters who are trained in a 3 weeks course. Every school should have at least on an average 3 Career Masters. Thus, we would need about 20,000 Career Masters.

Functions of a High School Career Master

- (1) Giving orientation talks to the new-comers.
- (2) Taking a Vocational Guidance period in Standard X (The pamphlet, How to Use Vocational Guidance Period in Standard X is given free to every Career Master). This will have to be done in Standard IX. At least one period per week will be required for this.
- (3) Organising a Careers Information Centre in the schools i.e.—
 - (a) Organising a Careers Section in the library and reading room.
 - (b) Displaying advertisements and other information sent by this Institute on the school notice Board.
- (4) Organising Careers Conferences and exhibitions in the area.
- (5) Organising Careers Film-shows.
- (6) Organising visits to the different places of work and if possible organising the job experience for the students.
- (7) Helping the other teachers in filling Cumulative Record Card.

Expected Results

About 100 Career Masters will be trained by each B.Ed. College as mentioned in the Recommendation No. 2. Thus 15 Government B.Ed. Colleges would train about 1,500 Career Masters.

Financial Implications

	Rs.
Travelling Allowances—Training of 1 Career Master	150.
The other expenditure is shown in Recommendation No. 2. Cost of training 100 Career Masters per year by each of the 15 Government B.Ed. Colleges (i.e. 1,500 Career Masters per year) will be about.	2,25,000 per month.

Allowances

After training each Career Master will get an allowance of Rs. 20 per month for doing the Guidance work. So 1,500 Career Masters trained by Government B.Ed. Colleges would get. 30,000 (per year).

The expenditure will not increase after we have about 20,000 Career Masters in all schools.

The permanent cost of these 20,000 Career Masters would come to 4,40,000 (per year).

However, the Committee felt that, to cut down the cost, no allowance be paid to the Career Masters. Hence the cost on this account would be NIL.

Recommendation No. 5.—Inspection of Career Masters in the Schools

Like all the educational activities in the schools the guidance work also needs inspection, if it is to go on efficiently. It is therefore necessary to attach one Assistant Vocational Guidance Officer (Class II) to the Office of every Education Officer in the District. He will of course be a Diploma holder in Vocational Guidance. In addition if possible the Assistant Deputy Educational Inspectors may also be trained in Career Masters course.

Functions of the Assistant Vocational Guidance Officer

1. To inspect the work of Career Masters in the schools and counsellors in the schools. This Institute has devised questionnaires for this work.

This inspection can also be done by forming a panel of A.V.G.O., the Guidance Officer of the Guidance Centre and the Training College Guidance Officer.

Financial Implications

One Assistant Vocational Guidance Officer per District for 26 Districts (Rs. 400—950).	Rs. 2, 00, 000 (per year) (including Travelling Allowance at Rs. 1,000 per year per District).
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Recommendation No. 6.—Guidance cell in the Technical Training Colleges Conducted by the Director of Technical Education.

The Director of Technical Education runs training courses for the teachers in the Technical Institutions. These teachers can also do some guidance work in their Institutions. It is, therefore, proposed that a Guidance Department be established in the Technical Training College also.

The Functions of this Department would be as follows :—

1. To conduct the Career Masters Training for the teachers of the Training Institutions.
2. To give guidance to the Teachers trainees whenever necessary.
3. To provide Guidance service to the local population.
4. To help the Institute of Vocational Guidance in conducting research regarding the aptitude tests etc. used for various selections like selection for I.T.I. etc.
5. To organise the *ad-hoc* Vocational Courses for the shortage technical categories with help of the Technical Institute.

Staff

1. Vocational Guidance Officer (Rs. 700—1,250).
- 1 Assistant Vocational Guidance Officer (Rs. 400—950).
- 1 Clerk (Rs. 115—215).
- 1 Peon (Rs. 75—100).

Expected Results

In about 2 years all the technical institutions will have Career Masters on their staff. These Career Masters will organise Occupational Information service in their institutions and thus, will constantly be giving latest information about the various technical courses, about their prospectus, supply demand position, etc.

Financial Implications

	Rs.
Pay of the V. G. O.	11,000·00 (per year).
Pay of the Assistant V. G. O.	7,320·00 "
Pay of Clerk	3,018·00 "
Pay of Peon	2,065·00 "
Travelling Allowance	1,000·00 "
Contingency	2,000·00 "
Total ..	26,403·00

Recommendation No. 7.—Provision of Counsellors in Secondary Schools

Even with 300 Block Guidance Centres all over the State it is desirable that large educational institutions are allowed to appoint their own counsellors. The Counsellors may draw the qualification based pay with an additional allowance of Rs. 50 p.m. as per G.R., R.D.D., No. DSR. 2469-V, dated 10 August 1970. Schools having a strength above 500 and upto 1,000 (in the High School Classes) may be allowed to appoint a part time School Counsellor, the Schools having strength of more than 1,000 may be allowed to appoint a full time Counsellor. If however the Block Guidance Centres do not come into existence the schools having strength upto 500 may be allowed to appoint one Teacher Counsellor (Part time). If this strength is 500 to 1,000 the school be allowed to appoint school Counsellor (full time). The same proportion may hold good for larger strength.

Functions of a School Counsellor

1. Educational Guidance i.e., guiding pupils in selecting their subjects on the basis of their aptitudes and interests. We now have large battery of tests of which validity, reliability, norms etc. have been found under our conditions.
2. Helping the Head Master in selecting pupils for various courses, etc., on the basis of their aptitudes and interests and allocating them to various branches.
3. Tackling problems of scholastic backwardness in all classes.
4. Vocational Guidance in top classes.
5. Dealing with simple problems of a personal nature, problems of getting along with others, etc.
6. Interviewing the parents.
7. Sending the report to the Employment Exchange, whenever asked for.
8. Referring the serious cases to the relevant agencies.
9. Organising job experience to the students, if possible, with the help of agencies like Rotary Club, Lions Club, etc.

The Counsellors will be trained by the Institute of Vocational Guidance and Selection, Bombay and the St. Xavier's Institute of Education, Bombay in their regular Diploma courses in Vocational Guidance.

Financial Implications

Cost of training—

	Rs.	
Pay of the substitute per trainee (Rs. 165-400) ..	4,580	(per year).
Stipend at Rs. 100 p.m.	1,200	”
Travelling Allowance	150	”
	5,930	”
For training about 20 by the Institute of Vocational Guidance and Selection, Bombay.	1,18,600	
Allowance after training—		
For the 20 trainees by the Institute every year (Special Pay Rs. 50 plus Qualification pay at Rs. 15 i.e. Rs. 65).	15,600	
Plus Contingencies at Rs. 500 per School	10,000	
	25,600	
Total ..	25,600	

Recommendation No. 8.—Expansion of the Institute of Vocational Guidance and Selection

To expand the guidance services we need more trained persons, continuous preparation and revision of guidance material and continuous research. Any short-coming in any of these will affect the guidance work in the schools and the work for the general public. The foregoing schemes can come into force properly only if the central institute provides for their needs. The Institute of Vocational Guidance and Selection in Bombay therefore needs to be strengthened and expanded considerably.

Function

1. Train 100 Counsellors per year as against a very small number now.
2. Conduct Refresher Courses/Workshops etc. for the Counsellors.
3. Prepare the psychological material for guidance and selection, for example tests, etc.
4. Prepare career literature of the State-wise etc.
5. Conduct the research work in the problems of importance for guidance and selection.
6. Continue to offer actual guidance services.
7. Conduct Career Masters courses for the college professors.

Staff.—The Institute should have following 5 major Departments :—

	Rs.
(A) <i>Training and Research</i> ..	1 Professor of Guidance .. 700-1,250
	2 Lecturers in Guidance .. 400-950
	2 Counsellors .. 300-625
	4 Technical Assistants .. 225-400
	4 Clerks .. 115-215
	1 Naik .. 80-110
	3 Peons .. 75-100

		Rs.
(B) <i>Test Construction</i>	..	1 Psychometrician .. 700-1,250
		3 Assistant Psychometricians .. 400-950
		6 Technical Assistants .. 225-400
		1 Artist .. 270-550
		6 Clerks .. 115-215
		3 Peons .. 75-100
		1 Naik .. 80-110
(C) <i>Selection</i>	..	1 Vocational Guidance Officer .. 700-1,250
		3 Assistant Vocational Guidance Officers .. 400-950
		4 Technical Assistants .. 225-400
		6 Clerks .. 115-215
		1 Naik .. 80-110
		3 Peons .. 75-100
(D) <i>Occupational Information</i>	..	1 Vocational Guidance Officer .. 700-1,250
		2 Assistant Vocational Guidance Officers .. 400-950
		4 Counsellors .. 300-625
		4 Technical Assistants .. 225-400
		4 Clerks .. 115-215
		1 Naik .. 80-110
		3 Peons .. 75-100
(E) <i>Guidance Clinic</i>	..	1 Vocational Guidance Officer .. 700-1,250
		1 Assistant Vocational Guidance Officer .. 400-950
		2 Social Workers .. 270-550
		2 Technical Assistants .. 225-400
		2 Hon. Visiting Psychiatrists .. 400 fixed
		2 Clerks .. 115-215
		2 Peons .. 75-100
In addition there will be	..	1 Principal .. 1,100-1,600
		1 Office Superintendent .. 300-830
		1 Librarian .. 160-325
		1 Accountant .. 150-300
		2 Head Clerks .. 210-350
		4 Clerks .. 115-215
		3 Peons .. 75-100
		1 Naik .. 80-110

Expected Outcome.—In about 3 years time enough number of Diploma holders will be trained so that the College Guidance Departments and the Guidance Centres will have the adequately trained staff.

Continuous revision of the Guidance pamphlets, monographs, etc. will be done. At present this Institute is having a set of 76 monographs, 35 guidance series and 21 pamphlets. More will be added to this number, and they will be made attractive.

At present this Institute is having about 43 tests in the usable condition. A continuous addition to this will be done. This is a very time consuming job.

Financial Implications

		Rs.
(A) Training and Research	.. .. .	92,217 (per year).
(B) Test Construction	.. .. .	96,976 ..
(C) Selection	.. .. .	96,976 ..
(D) Occupational Information	.. .. .	85,017 ..
(E) Guidance Clinic	.. .. .	58,958 ..
In addition	.. .. .	63,877 ..
Contingencies	.. .. .	20,000 ..
Total		.. 5,14,021 ..

Recommendation No. 9.—Directorate of Guidance

To supervise the training and the guidance services in the State it is recommended that the Directorate of Guidance Services be created. The functions of this Directorate would be.—

1. To control and supervise the training programmes of both of Career Masters and Counsellors at the various places and at the Institute in Bombay.
2. To inspect the Institute and the District Guidance Centres etc.
3. To help various agencies in selection work.
4. To administer, plan and execute guidance services in the State (including recognition, grant-in-aid to private guidance agencies).
5. To co-ordinate the work of Government and non-Government (University Employment Bureaux etc.) guidance agencies.
6. To co-ordinate the guidance services of the Education Department with those of the Labour Department.
7. To conduct Government examinations in Guidance.

The following staff will be needed for the purpose.—

- 1 Director of Guidance Services at least of the level of the Director of Art (1,600—1,800)
- 3 Dy. Directors of the level of the Principal (1,100—1,600)
- 1 Office Superintendent (300—625)
- 1 Accounts Officer Class II (300—830)
- 1 Head Clerk (210—350)
- 3 Senior Clerks (150—300)
- 7 Junior Clerks (115—215)
- 1 Stenographer (180—400)
- 1 Naik (80—110)
- 9 peons (75—100)

Initially, during 1973-74, 1 Director, 1 Dy. Director, 1 Accounts Officer, 1 Senior Clerk, 3 Clerks, 1 Stenographer, 1 Naik and 3 Peons.

			Rs.
Pay and Allowances of the above staff			1,01,392 (per year).
Travelling Allowances			0,20,000 ..
Contingencies			0,20,000 ..
Total ..			1,41,392 ..

Recommendation No. 10.—Building for the Institute, Hostel and Directorate

At present the Institute of Vocational Guidance and Selection which is a State office is located in 2 small verandahs. It has no class-rooms of its own. The Secondary Training College has been good enough to spare some space for running the diploma courses and for conducting testing programmes during vacations. It may not be possible for the college to offer the same facility throughout. The proposed expansion would be impossible unless a separate building is provided to locate the Institute and the Directorate of Guidance. In addition a hostel for the students who would be coming for the diploma and the career masters courses is also needed.

The Institute will be undertaking the training and research and therefore it should be in Bombay where a large number of guidance cases (12000 a year) come so that the trainees would get practice in handling these cases (which is a speciality of these courses as said above). In addition the city has the largest number of schools, colleges, students population, industries, training institutions, etc.

It is preferable to house the Directorate of Guidance in the building of the Institute in Bombay so that it can have a better supervision on the guidance work.

It is worthwhile to mention here that the Principal, S. T. College, Bombay had offered the tennis court in the Hostel compound for the proposed building of the Institute.

Recommendation No. 11.—Regional Vocational Guidance Bureaux

Although this could not be discussed in the meetings, it is being suggested that at the Regional Head quarters, we should have Regional Vocational Guidance Bureaux. This is necessary in view of the fact that there will be 300 Block Guidance Centres, about 60 Guidance Departments in the Government D. Ed. and B. Ed. Colleges who would constantly need help and material of regional importance and co-ordination.

Functions of Regional Vocational Guidance Bureaux

(a) They will conduct course for training the Career Masters for the region, who would organise the Occupational Information and the Record Service in the education Institutions.

(b) They will conduct refresher courses, seminars, etc. for the trained guidance workers and headmasters etc.

(c) They will prepare the Occupational Information literature especially of the local importance for the guidance workers in the region.

(d) They will offer the actual guidance service to the clients approaching them.

(e) They will work in co-ordination with the Employment Unit.

Staff	Rs.
(a) One Vocational Guidance Officer	Cl. I (700—1,250)
(b) Two Asstt. V. G. Os.	Cl. II (400—950)
(c) Two Counsellors	Cl. III (300—625)
(d) Two Tech. Asstts.	Cl. III (225—400)
(e) Four Clerks	Cl. III (115—215)
(f) Four Peons	Cl. IV (75—100)

Expected Results

As above mentioned functions will be carried out.

Financial Implications

Together with the contingencies (Rs. 2,500)

Rs. 75,000 per year per Bureau 5,25,000 per year.

APPENDIX ' A '

A Note on the work of the Institute of Vocational Guidance and selection, Bombay.

Upto 31st March 1972

Towards the end of 1950 the Government of Bombay set up the Vocational Guidance Bureau in Bombay with the following immediate objectives:—(1) Collection of Occupational Information for the guidance of school leaving boys, (2) Preparing a Cumulative Record Card for use in Schools and (3) Construction of Psychological Tests suited to Indian conditions.

In 1957 the Bureau was expanded and converted into the Institute of Vocational Guidance with emphasis on training and research. Simultaneously two Sub-Bureaux were established one each at Poona and Ahmedabad to look after the guidance services in these Regions and making expert guidance available at the Regional headquarters.

In 1960 with the bifurcation of the Bombay State, the Sub-Bureau at Ahmedabad went to Gujarat. Under the Third F. Y. P. the Institute of Vocational Guidance was made into the Institute of Vocational Guidance and Selection in view of its increasing help requested by industries for selection purposes.

Activities.—The Institute is engaged in a large number of activities which may be conveniently described under three sections : (1) Occupational Information Section, (2) Psychological Section and (3) Training Section.

Occupational Information.—The Institute collects information about training courses, both University and non-University, occupations, apprenticeships, jobs, etc. This information is disseminated to the students and the public through replies to personal and postal queries, career talks in schools, compilation and publication of career literature in the form of pamphlets, monographs and folders, organising career exhibitions and career conferences, articles in the Press, Radio talks and through the Career Masters trained by the Institute. The Institute publishes a quarterly newsletter which is circulated to all the Career Masters to keep them abreast of the latest development in the field of guidance and also sends them copies of important advertisements from time to time.

Psychological Section.—Individual counselling for the choice of an appropriate career is given to those who call personally at the Institute and need it. Intelligence and Aptitude testing is undertaken to assist Headmasters of schools in the selection of pupils for admissions, in classifying pupils of a multipurpose higher school for the various diversified courses, Government departments and private industries in selecting apprentices, scholars or recruits to specific jobs. Rest and ardisation of suitable foreign tests, construction and standardisation of psychological tests suited to Indian conditions and validation studies for purpose of predicting success in various training courses and occupations are undertaken.

Training Section.—The Institute conducts two types of courses—(i) the Career Master's Certificate Course of Full-time three weeks duration with emphasis on occupational information. Teachers trained in this course work as Career Masters in their schools where they are given one period per week in Std. X time-table for dissemination of occupational information through Career talks etc. and (ii) the higher course for the specialised Diploma in Vocational Guidance of full-time twelve months duration with emphasis on aptitude testing and counselling. Teachers trained in this course, work as School Counsellors or Teacher Counsellors (*i. e.* full or part time Counsellors respectively) in their schools and use psychological tests to assist the Head Master in the selection and classification of pupils and the pupils in the choice of a course or career. The institute keeps in touch with the Schools or Teacher Counsellors trained by it, through the Newsletter, visits to their schools by the staff of the Institute, Seminars, Refresher Courses, the annual State Vocational Guidance Conferences, etc.

Achievements.—The following figures give an idea of the achievements of the Institute in the various activities. These figures are from April, 1951 when the Bureau virtually started functioning. Also since the new areas integrated with the Bombay State at the time of the States Reorganisation did not have any vocational guidance services the figures pertain to the Institute at Bombay and the Sub-Bureau at Poona.

1. Number of individuals guided personally	.. .. .	2,33,251
2. Number of postal queries replied	.. .. .	0,82,241
Total number of individuals guided personally by post	.. .. .	3,15,492
3. Publications—		
(a) Number of Pamphlets	.. .. .	21
(b) Number of Monographs	.. .. .	76
(c) Number of Guidance Series.	.. .. .	35
(Some of them running into 8th edition or revised many times and some are in both the languages English and Marathi)		
4. Newsletter No. of the last issue	.. .. .	91
5. Career Conferences	.. .. .	489
6. Number of Posters prepared	.. .. .	about 70
(There are 4 sets in Marathi and 1 in English)		
7. Number of individual counselling cases	.. .. .	2,881
(It is a very time-consuming job).		
8. Number of Orientation Courses conducted	.. .. .	44 ^o
9. Number of Career Masters' Courses (for School Teachers)	.. conducted	29
10. Number of Career Masters' Courses (for college Teachers)	.. conducted	2
11. Number of Career Masters trained (School Teachers)	.. .. .	about 1,122
12. Number of Career Masters trained (College Teachers)	.. .. .	35
13. Number of Courses in Diploma in Vocational Guidance	.. conducted	16
14. Number of Counsellors trained.	.. .. .	163
15. Number of Psychological tests restandardised or newly constructed and standardised—	With norms	43
on about 185 different groups.		

Besides the above a large fund of occupational information has been collected. Schools, Government departments and private industries have been assisted on a large number of occasions.

APPENDIX ' B '

St. Xavier's Institute of Education, Vocational Guidance Bureau and Counselling Centre

Established in 1960

Sought recognition from Government for conducting two training programmes for *teachers* :

(1) Career Master's Course, (2) Diploma in Vocational Guidance Course. (Counselling).

Training of Guidance Personnel has trained the following number of counsellors (year wise)

1960-61	..	..	..	5
1961-62	..	..	..	4
1962-63	..	..	..	8
1963-64	..	..	..	8
1964-65	..	..	..	4
1966-67	..	..	..	11
1967-68	..	..	..	8
1969-70	..	..	..	8
1970-71	..	..	..	10
1971-72	..	..	..	6
			Total	72
1972-73	..	..	..	7 (under training).
				79

The above trained counsellors are now working in different capacities as follows :—

1. Counsellor in College 1; Counsellors in schools 9; Teacher counsellors in Schools 11; Vocational Guidance Bureaus 4; In consultancy services 2; Counsellor in Industry 1; In child guidance clinics 1; Private practice 6; Psychiatric wards of hospitals 3; Professors 2; Principals of schools (Maharashtra State) 3; Principals of schools (outside Maharashtra State) 6; Principal of College 1; Teachers 6; Settled abroad 10; Settled as housewives 5; Died 1; Total—72.

The Institute has trained the following number of Career Masters :—

October, 1961	..	..	90
„ 1966	..	..	79
„ 1967	..	..	54
„ 1968	..	..	78
„ 1969	..	..	50
„ 1970	..	..	55
„ 1971	..	..	70
„ 1972	..	..	50
		Total	526

The Career Master's Course is usually conducted in the Diwali Vacation.

2. *Follow-up programme.*—The Institute has so far conducted two follow-up programmes of trained counsellors and Career Masters to help them function efficiently. At such meetings the counsellors have shown desire that the Institute should have more orientation and refresher courses in order to help them with the changing educational and vocational pattern.

3. *Seminars/Colloquims for Heads of Schools.*—Three such Seminars have been held in the last ten years.

4. *Educational bifurcation.*—The Institute takes up testing of secondary school pupils at the bifurcation stage on contract basis. The aptitude test battery including ten tests of intelligence, special abilities, interest and personality, trails is administered in two sessions of three and a half hours' each and the report is submitted to the Head of the School, Along with psychological tests, Cumulative record cards and questionnaires of the Head of the school, teachers, parents and pupils are scrutinised. Such contracts are almost permanent of 12 Secondary Schools in and outside Maharashtra State.

5. *Talks to parents-Teachers.*—Almost every month the staff of the Institute is engaged in giving talks of educational, vocational and personal guidance to parent-teacher bodies.

6. *Career Exhibits and Job-analysis studies.*—The Institute has more than 500 charts on different Careers and these are loaned to Schools and Colleges for their respective functions. At most of the Career conferences the illustrative charts and monographs prepared by the Institute's students are very popular and always in demand. The Institute has prepared 75 job analysis studies to facilitate dissemination of Career information.

7. *M. Ed. Vocational Guidance.*—The Institute caters to the practical work of M. Ed. Students of Vocational guidance group through individual sessions.

8. *Counselling Centre.*—The Institute entertains individual personal problem cases twice a week on Thursdays and Saturdays between 2-30 and 5-30 p.m. This clinic work is done almost free of charge for, at the initial stage only the registration fee is required to be paid.

St. Xavier's Institute's Vocational Guidance Bureau and Counselling Centre offers the following services to the students' community :—

(A) *Information Service :*

- (1) Educational Courses,
- (2) Career opportunities,
- (3) Occupational information,
- (4) Scholarships and loans,
- (5) Foreign University courses,
- (6) Community resources.

(B) Psychological Testing Service (Group and Individual) :

- (1) Intellectual evaluation,
- (2) Specific abilities assessment,
- (3) Measures of interest,
- (4) Personality adjustment,
- (5) Aptitude scales,
- (6) Achievement tests.

(C) Counselling Service :

- (1) Educational problems,
- (2) Vocational guidance,
- (3) Personal and social problems,
- (4) Problems of the handicapped,
- (5) Slow learners and the gifted.

(D) Advisory Service :

- (1) Parent-child relationship,
- (2) Guidance to teachers, Career masters and Counsellors,
- (3) Maintenance of Cumulative Record Cards,
- (4) Guidance to Heads of schools.

(E) Training Guidance Personnel :

- (1) Career Master's Certificate Course,
- (2) Diploma in Vocational Guidance Course (Counsellors).

APPENDIX 'U'

Report of the State Level Committee constituted by Government to examine the various issues and to make recommendations in the matter of implementation of the proposal to locate Higher Secondary Classes in colleges and to make suggestions to the universities in the matter of a Common Pattern of Degree Courses constituted under Government Resolution, Education Department, No. USG.-6473/U, dated 18th May 1973.

CHAPTER I
INTRODUCTORY

Appointment of Committee and Terms of Reference

The Government of Maharashtra appointed the committee by their Resolution, No. USG-6473/U, dated 18th May 1973, the relevant portions of which are quoted below :—

“ A meeting of the Vice-Chancellors with the Minister for Education was held in the Syndicate Room at the University of Bombay on 26th April, 1973, to discuss the various issues connected with the proposal to run higher secondary classes in colleges and the formulation of the uniform three years degree course. In this meeting it was decided that a committee may be constituted to examine the various issues and to make recommendations in the matter of implementation of the proposal to locate higher secondary classes in colleges and also to make suggestions to the Universities in the matter of a common pattern of degree courses. In order to get this done, Government is pleased to appoint a committee under the Chairmanship of Principal T. K. Tope, Vice-Chancellor of the Bombay University, Bombay, consisting of the following official and non-official members:—

1. The Vice-Chancellor, Bombay University, Bombay .. Chairman.
2. The Vice-Chancellor, S. N. D. T. Women's University, Bombay .. Member
3. The Vice-Chancellor, Poona University, Poona Member
4. The Vice-Chancellor, Nagpur University, Nagpur Member
5. The Vice-Chancellor, Shivaji University, Kolhapur Member
6. The Vice-Chancellor, Marathwada University, Aurangabad .. Member
7. Dr. A. U. Shaikh, Secretary to Government, Education Department. Member
8. Dr. B. C. Haldar, Director of Higher Education, Maharashtra State, Member
Poona.
9. Shri T. V. Chidambaran, Registrar, Bombay University, Bombay. .. Member-Sec-
retary

Shri T. V. Chidambaran should work as Member-Secretary of the Committee. The Committee should be authorised to co-opt any other person(s) as member(s) of the Committee.

All the members of this committee should be treated as members of a State Level Committee for all purposes.

2. The committee should examine the various issues and make recommendations in the matter of implementation of the proposal to locate higher secondary classes in colleges and also make suggestions to the Universities in the matter of a common pattern of degree courses. The committee has been given power to invite Principals from each of the University (to be nominated by the Universities) and three Principals of Government Colleges (to be nominated by the Director of Higher Education) to discuss with the committee the various administrative issues and particularly the one arising out of the dual control and that the committee should take into account the view of the Principals in formulating its recommendations.

3. The committee should submit its recommendations and suggestions within a period of one month from the date of issue of these orders. ”

The Vice-Chancellors of the Krishi Vidyapeeths in the State were co-opted to the committee in order to have the benefits of their advice in suggesting new pattern of University courses under the new system.

The Committee held four meetings. The first in Bombay at the University of Bombay on 9th June 1973, the second in Poona at the University of Poona on 27th June 1973, the third in Nagpur at the Nagpur University on 20th July 1973 and the fourth and final meeting in Bombay at the S. N. D. T. Women's University on 5th August 1973.

The attendance of the members at different meetings was as under :—

Name of the member	Bombay 9th June 1973	Poona 27th June 1973	Nagpur 20th July 1973	S. N. D. T., Bombay 5th August 1973
1	2	3	4	5
1. The Vice-Chancellor, University of Bombay, Bombay.	P	P	P	
2. The Vice-Chancellor, S.N.D.T. Women's University, Bombay.	P	..	P	
3. The Vice-Chancellor, Poona University, Poona ..	P	P	P	
4. The Vice-Chancellor, Nagpur University, Nagpur.	P	P	P	
5. The Ag. Vice-Chancellor, Shivaji University, Kolhapur.	P	P	P	
6. The Vice-Chancellor, Marathwada University, Aurangabad.	..	P	P	
7. The Vice-Chancellor, Mahatma Phule Krishi Vidyapeeth, Rahuri, District Ahmednagar	P	P	P	
<i>and</i>				
Kokan Krishi Vidyapeeth, Dapoli, District Ratnagiri.				
8. The Vice-Chancellor, Marathwada Krishi Vidyapeeth, Parbhani.	..	..	..
9. The Vice-Chancellor, Punjabrao Krishi Vidyapeeth, Akola.	P	..	P	
10. Dr. A. U. Shaikh, Secretary to Government Education Department, Sachivalaya, Bombay-32.	P	P	P	
11. Dr. B. C. Haldar, Director of Higher Education, Maharashtra State, Poona.	P	P	P	
12. Shri T. V. Chidambaran, Registrar, University of Bombay and Member-Secretary of the Committee.	P	P	P	

At the second meeting held on 27th June, 1973, at the University of Poona, the Committee held discussions with the following Principals nominated by the Poona, Shivaji and Marathwada Universities :—

Principals nominated by the University of Poona—

1. Principal D. A. Dabholkar, Fergusson College, Poona.
2. Principal K. P. Mangalwedhekar, Sir Parashurambhau College, Poona.
- *3. Principal M. P. Mangudkar.

Principals nominated by the Shivaji University—

1. Principal N. B. Tare, Willingdon College, Sangli.
2. Principal P. G. Patil, Chhatrapati Shivaji College, Satara.
3. Principal R. K. Kanbarkar, The New Law College, Kolhapur.

Principals nominated by the Marathwada University—

1. Principal G. R. Mahisekar, Yeshwant Mahavidyalaya, Nanded.
2. Principal S. K. Mohgaonkar, Dr. Ambedkar College of Arts and Commerce, Aurangabad.
3. Principal N. Y. Dole, Maharashtra Mahavidyalaya, Udaigiri, District Osmanabad.

*Principal M. P. Mangudkar nominated by the Poona University was unable to meet the Committee.

At the third meeting held on 20th July, 1973 at Nagpur University, the committee held discussions with the following Principals nominated by the Nagpur, Bombay and S. N. D. T. Universities :—

Principals nominated by the Nagpur University—

1. Principal M. M. Lanjewar, Dhanwate National College, Nagpur.
2. Principal G. M. Kulkarni, S. B. City College, Nagpur.
3. Principal B. N. Waradpande, M. M. College of Science, Nagpur.

Principals nominated by the Bombay University—

1. Principal P. M. Potdar, Parle College, Bombay.
2. Principal S. M. Parekh, Bhavan's Hazarimal Somani College, Bombay.
3. Principal G. P. Palekar, R. A. Podar College of Commerce and Economics, Bombay.

Principals nominated by the S. N. D. T. Women's University—

1. Principal D. S. Pathak, S. N. D. T. College, Bombay.
- *2. Principal (Smt.) Kumud Patwa, Sir Vithaldas Thackersey College of Home Science, Bombay.
3. Principal (Smt.) Dhairyabala Vora, Shri Maniben M. P. Shah Women's Arts College, Bombay.

*Principal (Smt.) Kumud Patwa, one of the Principals nominated by the S.N.D.T. University, was present in Nagpur but was unable to meet the Committee owing to sudden indisposition.

At the fourth meeting held on 5th August, 1973, at the S. N. D. T. Women's University, Bombay, the Committee held discussions with the following Principals of Government Colleges nominated by the Director of Higher Education :—

1. Principal M. G. Marathe, Vidarbha Mahavidyalaya, Amravati.
2. Principal S. D. Bal, Sydenham College of Commerce and Economics, Bombay.
3. Principal S. Naimuddin, Government College of Arts and Commerce, Aurangabad.

At the Conference of Vice-Chancellors with the Minister for Education referred to in Government Resolution, it was decided that each University be requested to appoint a study group to study comprehensively the various issues involved in the introduction of the new pattern of education and the decision to locate higher secondary course in selected colleges and the introduction of three year degree courses.

Study Groups were appointed by all the six Universities. The Committee had the benefit of the views expressed and the suggestions made in these reports in formulating their report. The reports of the study groups are appended to this report.

The Committee also considered a letter, No. VC-76, dated 12th May, 1973, from Dr. G. S. Mahajani, Vice-Chancellor of the Poona University, which is also appended to the report as Appendix 'A'.

Acknowledgement

The Committee thanks the Universities for offering accommodation and other facilities to the Committee in connection with its meetings. The Committee is also grateful to the Principals nominated by different Universities and the Director of Higher Education with whom it had discussions for their valuable assistance that it received from them in formulating its recommendations. The Committee's special thanks are due to Shri T. V. Chidambaran, Member-Secretary, for the readiness and willingness with which he bore the brunt of the Committee's work inspite of his own heavy official duties.

CHAPTER II

LOCATION OF HIGHER SECONDARY CLASSES

At the conference of Vice-Chancellors with the Hon'ble Minister of Education held on 26th April 1973, the Minister had stated *inter alia* that whilst under the new pattern of education large number of students would choose vocational courses qualifying themselves for employment, it was expected that 50 per cent. of the students would still be in the main stream proceeding to higher education. The committee was given to understand by the Director of Higher Education that most of the colleges of whom inquiries have been made by him whether they were desirous of conducting higher secondary classes had intimated to him their willingness to conduct classes more or less in accordance with the Scheme in that behalf which was circulated to them, *vide* Director's circular No. NGC-HSC/1073-A, dated 10th April, 1973. A few colleges may not like to conduct the higher secondary classes but by and large from the reports of the study groups and the discussions we had with the Principals it is evident that most of the colleges would like to have higher secondary classes located in them. Not only that it was pointed out to us by the Principals nominated by the universities of Poona, Marathwada and Nagpur that if the higher secondary classes were not attached to the colleges in rural areas, the strength of the colleges would fall precipitately and even the existence of some of the colleges may be in danger. In fact the suggestion was made to us by Principals that where a society runs high schools as well as colleges in a taluka place, preference should be given for the location of higher secondary classes to a college run by the society rather than a high school. It was pointed out by the Principals nominated by the Marathwada University that in Marathwada some of the colleges at present are not viable. 40 per cent. of the strength of colleges of students of the P. U. C. classes, if these classes are taken away from the colleges, there will be non-utilization of their facilities. There was also the question of absorption of staff which may be found surplus by colleges on account of discontinuation of Intermediate/Pre-Degree classes. The location of higher secondary classes in colleges would help solve this problem.

The desirability of location of academic courses in colleges for the maintenance of standards was pointed out by Dr. G. S. Mahajani, Vice-Chancellor of Poona University, at our first meeting. He was of the view that academic courses should be located in colleges only as he felt that if schools were allowed to conduct the courses, Government would be flooded with applications for recognition of schools and it would be difficult to ensure maintenance of proper standards of education.

The Principals nominated by the University of Poona expressed the view that at least for some years the XII Class i.e. the second year class of the higher secondary courses should be attached to colleges only. They were apprehensive that schools will not be able to cope with the problems of providing qualified teachers and laboratory equipment etc., for at least 10 to 15 years. They were afraid that if the classes were transferred to schools without their being duly prepared to take them up, there would be confusion and that confusion could be avoided by dividing the classes into part I and Part II and by attaching part II, that is, Class XII to colleges. They expressed the view that attaching classes to schools without their being prepared to cater fully would be "a built-in-mechanism of lowering the standards". They were of the view that period of transition during which higher secondary classes should be attached to colleges might be a decade.

Another reason for locating higher secondary classes in colleges will be that the pupils will have the benefit of receiving instructions from senior teachers and this would help raising the standard of instruction and attainment. On the other hand giving opportunity to teachers of higher secondary classes to teach college classes is necessary for providing them with opportunity of promotion to higher grades in the institution under the same management and also for stimulating them to study deeply their respective subjects.

In view of what is stated above, we welcome the decision of Government to locate higher secondary classes in colleges. We are of the view that classes should be located in all colleges which are willing to have them. This arrangement will in our opinion, benefit the colleges as it will not suddenly upset their finances and would also academically benefit the students of the higher secondary classes of whom are likely to proceed to take degree courses in the same institutions.

In view of the observation and recommendations made by us in Chapter III of this report, higher secondary classes located in colleges should form a separate Unit.

As regards the suggestion that academic type of higher courses should be located in colleges only, our colleague Dr. Shaikh, pointed out that such an arrangement would neither be desirable nor feasible. Three and a half lakhs students will be passing the S. S. C. examination in 1975 and colleges alone would not be in a position to cope with the large numbers.

As regards upgrading of schools to meet the requirement of higher secondary classes Dr. Shaikh indicated that 10 to 15 per cent of the schools would be upgraded to a sufficiently high level to

prepare students for higher secondary courses without in any way, lowering standards. In fact he was of the view that the students coming to the universities from upgraded higher secondary schools would be better in quality than the students coming to universities after passing the present S. S. C. examination. He also pointed out that it was necessary to attach higher secondary classes to schools in rural areas in order to help diversification of courses as well as bringing higher education within the reach of rural population and for helping higher education to take root in rural areas.

Dr. Shaikh was hopeful that after the Fifth Plan period higher secondary schools would be in a position to undertake the entire responsibility for conducting higher secondary education.

Whilst we realize the need for locating all types of higher secondary courses in schools, we would urge that good care should be taken in selecting schools and in bringing them to the standard required by appointment of well qualified teachers and provision of proper library, laboratory and workshop facilities.

Owing to increase in the number of students in degree and post-graduate classes many of the colleges also might like to shed the higher secondary classes and become purely degree institutions. We are of the opinion that after coming into operation of the new pattern, Government should not grant affiliation to any college except for degree courses. Higher Secondary courses may be run along with degree courses by the existing colleges but new colleges should be affiliated only for degree courses. We are however, of the view that location of higher secondary classes in colleges should not be considered as a transitory measure.

The Board of Higher Secondary Education should not entertain an application for affiliation of an institution for conducting higher secondary classes without the concurrence of the University concerned. The committee was of the opinion that location of higher secondary courses in collegiate institutions along with the degree courses would require adjustments in the rules of the Universities.

So far as the transition period is concerned the committee recommends that students passing the S. S. C. examination under the existing pattern i. e. those passing the examination after XI Std. of schooling in 1975 and subsequent years should go to colleges only as at present, and complete their college education under the existing pattern viz. one year pre-university course and three-years degree course in universities other than the Bombay University and two years' Intermediate and two years' degree course in Bombay University. The last S. S. C. examination for those under this pattern should in our opinion be held in April, 1977.

So far as the students passing the S. S. C. examination after XIth years course is concerned the strength of a division and other teaching arrangements may remain the same. This means that there will be no extra expenditure to the colleges in dealing with students passing the S. S. C. examination after XIth year of schooling.

We are of the opinion that purely vocational types of courses should not be located in colleges. However, if some colleges are prepared to have courses preparing students for middle cadre jobs like secretaries, accountants etc. courses may be run for their benefit in subject having affinity to the academic subjects, so that for some students such courses may serve as terminal courses.

Diversification of courses in the essence of new pattern of higher secondary education and diversified courses should be offered in different kinds of institutions to serve as terminal courses. The introduction of such diversified courses would also reduce the pressure on schools and colleges and obviate students proceeding to universities merely for the sake of obtaining degree without any objective in view.

The quantum of tutorial work to be prescribed for the higher secondary classes was very high and the number of students in a class was lower than that in a University class. It was pointed out by the Principals nominated by the Marathwada University that it would be very difficult to accommodate such a large number of tutorials within normal weekly time-tables and this point needed consideration.

In the course of discussion, it was indicated by the Director of Higher Education that the question of reduction of tutorials was under consideration.

As regards the strength of higher secondary class, we would recommend that it may be of 80 to 90 students and that the batches for tutorials may be of 25 to 30 students.

As regards fees for the higher secondary class, we recommend that the rate of fee should be uniform for classes in higher secondary schools as well as those located in colleges.

The per-capita expenditure on students of higher secondary class will be high as the number of students will be very small and teaching will be intensive etc. This should be taken into account in fixing the term fees.

With regard to medium/media of instruction for higher secondary classes located in colleges, we recommend that the medium/media of instruction for higher secondary classes should be the medium/media adopted by the University concerned for degree classes and that the Universities should be consulted in the matter.

CHAPTER III

ADMINISTRATIVE AND OTHER ISSUES ARISING OUT OF THE DECISION TO INTRODUCE HIGHER SECONDARY COURSES AND THEIR LOCATION IN COLLEGES

Various issues arise out of the decision to introduce Higher Secondary Courses and to locate them in colleges. They may briefly be stated as under:—

1. Impact of the introduction of Higher Secondary Courses on the finances of the Universities and colleges.
2. Dual control of the University and the proposed Board of Higher Secondary Education over colleges.
3. Issues pertaining to the teaching staff of colleges and need for increase in the maximum quantum of work that can be assigned to teachers under the present terms and conditions of service of college teachers in view of the location of Higher Secondary classes in colleges, the teaching of which will require a much larger quantum of work per week than the work which at present can be assigned to a college teacher.
4. Allocation of physical facilities such as class rooms, laboratories, library, accommodation and the arrangement of supervision of Higher Secondary classes and the status of higher secondary teachers and students as members of the college and problems of discipline of students.
5. The problem of ensuring that courses of study and syllabi for Higher Secondary Classes meet the requirements of the Universities and the standard of education in the Higher Secondary classes is adequate for admission to degree courses.
6. Securing uniformity in academic terms, vacations and holidays for Higher Secondary classes and degree classes conducted in colleges.

These issues were discussed by the Study Groups appointed by different Universities. We also discussed them with the Principals nominated by different Universities who met us. Our observations and recommendations are as under:—

(1) *Impact of the introduction of Higher Secondary Courses on the finances of the Universities and Colleges.*—The proportion of students in the Inter/Pre-degree classes to those in degree classes is very high. The Universities will lose considerable revenue which they at present get on account of enrolment fees, examination fees and other fees from students of Intermediate/Pre-degree classes. Government will, therefore, have to make larger contributions for meeting the deficits of the Universities. We recommend that loss of revenue that the Universities will have to suffer on this account should be fully matched by increase in Government grants to Universities.

Owing to fall in total number of students, change in the structure of staff pattern, the higher *per capita* cost of conducting college classes etc. the finances of the existing colleges will also be adversely affected and Government should review the present rules regarding grant-in-aid to colleges to ensure the viability of the colleges under the new pattern of education.

As the strength of Higher Secondary classes will be much smaller than Intermediate and degree classes and more intensive training and teaching is envisaged the *per capita* expenditure on students of Higher Secondary classes will be much higher than that on students of the present Intermediate/Pre-degree classes. However, colleges will have to make structural alteration to buildings for providing smaller class rooms, demarcation of library, laboratory and other physical facilities. This is likely to involve considerable expenditure. Provision of co-curricular activities and maintenance of cumulative record of individual student as envisaged in the scheme circulated to colleges by the Director of Higher Education also involve additional expenditure on staff.

The various Study Groups as well as Principals stressed the point that care should be taken to see that institutions are not required to bear any additional financial burden because it is difficult to meet the current deficits out of collections of donations and it is practically impossible to think of any increase in tuition fees. We endorse in this connection the following recommendations made by the Study Group appointed by the Bombay University:—

1. that Government should meet the entire deficit that may be incurred by colleges in running Higher Secondary classes ;
2. that capital grants should be made available to colleges for the purpose of making additions and alterations to buildings and equipment of laboratories and the library etc.;
3. that whatever scheme of assistance for capital expenditure is made applicable to schools should also be made applicable to colleges.

We are in sympathy with the plea that in mofussil areas where colleges depend for their existence mainly on enrolment in Predegree classes it should be ensured that the scheme of locating Higher Secondary classes in High Schools as well as colleges does not upset the finances of such colleges. We are conscious that in order to make the limited financial resources of State go as far as possible the existing resources of the colleges is men and materials need be utilised as best as possible and economics effected wherever possible. So far as additional accommodation is concerned it was felt that colleges can make do with the addition of a room or two only. The administrative staff of degree and Higher Secondary classes located in colleges may with advantage be the same. One of the advantage of locating Higher Secondary classes in a college was that economy could be effected by using the same building for the two units.

(2) *Dual control of the University and the proposed Board of Higher Secondary Education over colleges.*—The mode of control over Higher Secondary classes located in colleges evoked much discussion in our meetings and Study Groups have also given prominence of this question in their recommendation.

The Study Group appointed by the University of Poona was of the opinion that the setting up of a Higher Secondary Board was unnecessary and urged that the setting up of a Higher Secondary Board should be avoided for the following main reasons:—

1. It will involve Government into heavy administrative expenditure.
2. It will have disastrous repercussions on the financial resources of Universities and colleges which Government will not be able to compensate.
3. It will have all the evils of dual control on the colleges, of the Higher Secondary Board on the one hand and the University on the other hand with all its ramifications of student discipline, staff integration, division of library and laboratories etc. etc.
4. The Universities with their established academic climate are a better machinery for the advancement of higher education and the fitting up of a few college and University teachers bodily into the mould of the bureaucratic Higher Secondary Board can never be an adequate substitute.
5. The development grants obtained at present by Universities and colleges should be availed of to the utmost as the State Government cannot give these grants when all its finances are exhausted by the payment of mere maintenance grants.

The Study Group of the Bombay University recommended that the Board proposed to be constituted under the Act of legislature should be concerned only with laying down the contents of the courses and the conduct of examinations.

The Study Group of the S.N.D.T. Women's University favoured the idea of having two separate Boards one for general academic courses and the other for vocational courses for the following reasons:—

- (a) It was understood that there will be two separate Boards at the S.S.C. level one for general courses and one for technical courses. The same pattern should be followed in respect of Higher Secondary Education—one for general academic courses and the other for vocational courses.
- (b) The scope and area of work of both the Boards would differ.
- (c) Both the Boards would draw their representatives from different areas of specialization.
- (d) Comprehensive schools which were proposed to be set up earlier may not be set up during the Fifth Plan period.
- (e) The administration of the two Boards is also likely to differ.

The Study Group appointed by the Nagpur University was not in favour of setting up a new Board of Higher Secondary Education, since XI and XII classes of vocational pattern could be dealt with by the present Board of Technical Education.

The Study Group of the Marathwada University was in favour of handing over the administration of Higher Secondary classes to an independent Board of Higher Education. The Group was of the opinion that this would help Universities to concentrate their attention on Degree and Post-Graduate Degree/Diploma Courses and also to allow Universities to intensify and extend their research activities even in the affiliated colleges. The Group visualised two types of administration:—

- (i) Junior Colleges may be continued to be affiliated to the University; while the Higher Secondary Schools can work under the Board of Higher Secondary Education.
- (ii) Both Junior Colleges as well as the Higher Secondary Schools be affiliated to or recognised by the Higher Secondary Board.

So far as syllabus framing authorities are concerned, the Group recommended as under:—

The syllabus for the Higher Secondary School or the 2 year Junior College, being identical will have to be framed jointly by the Boards of Studies of the Universities and by the Board of Secondary or Higher Secondary Education and approved by th-

respective authorities. Necessary amendments in the Regulations of the Board of Secondary Education and in the statutes of the Universities will have to be made to see that the Committees which frame the syllabi and composed of the teacher—half from the Colleges and half from High Schools.

The Group suggested that in case Government contemplates the formation of a separate Higher Secondary Board, the composition of the Board should be more or less on the following pattern :—

(i) the composition of the Higher Secondary Education Board should be such as would permit College teachers and High School teachers to have equal representation.

(ii) the categories which should be represented on the Board be as follows :—

- (a) Heads of Junior Colleges and/or Higher Secondary Schools ;
- (b) Teachers from the Junior Colleges and/or Higher Secondary Schools ;
- (c) Experts ;
- (d) Representatives of local bodies ;
- (e) Officers of the Education Department and the Universities.

(iii) The Boards of Studies and all academic bodies should have equal representation of teachers from Junior Colleges and Higher Secondary Schools.

As regards the affiliation/recognition the Group suggested that the Junior Colleges and/or Higher Secondary Schools should be affiliated to or recognized by the Board of Higher Secondary Education. Before affiliation or recognition is granted for teaching any course, a regular Local Inquiry Committee should be sent by the Board to inspect the Junior College or the Higher Secondary School and it should be seen that the conditions laid down by the Local Inquiry Committee are strictly fulfilled by the institution.

The Study Group of the Shivaji University was of the view that a Secondary Board like the Boards of University Teaching and Research should be established under the control of each University. The Group recommended that the functions of the Board should be as follows :—

“This will be one of the Bodies of the University and will look after the recognition, academic and administrative aspects of the Higher Secondary Classes. This Board should have representatives of the High Schools conducting Higher Secondary classes. This will solve all difficulties arising out of the dual control if the Government forms a separate Higher Secondary Board. We already have a Secondary Education Board at the State Level which looks after S.S.C. Examination. There may be another Joint Board of Higher Secondary Education under the control of the University which may look after the recognition, academic and administrative side of Higher Secondary Education both at the College and High School Level. ”

The question of supervision and control of Higher Secondary classes and colleges was also discussed at length at the meetings of the committee both among members and Principals nominated by different Universities. The Principals nominated by the Poona University expressed before us the view that control over Higher Secondary classes should be that of the Universities in all matters but that examinations may be conducted by the Joint Secondary Boards. The Principals nominated by the Nagpur and Shivaji Universities with whom the matter was discussed expressed the views conforming to the recommendations of their Study Groups.

Our colleague, Dr. A.U. Shaikh, Secretary to Government in the Education Department, was emphatically of the view that a new legal entity—the proposed Board of Higher Secondary Education—will have to be created to cater to Higher Secondary Education under the new pattern, that it should have adequate financial and legal powers, should have jurisdiction over the whole State and Higher Secondary classes in colleges as well as in schools should have under its jurisdiction to secure uniformity in the matter of terms and conditions of service of teachers, courses of study and the teaching and training of students at the Higher Secondary stage.

Dr. Shaikh's view was that under the new pattern of education Higher Secondary stage will be the king-pin and the foundations of excellence would be laid at this stage and that it was necessary to create an entity such as the one envisaged above for ensuring efficient control, co-ordination and high standards of education at the Higher Secondary stage.

As regards the set-up the proposed Board of Higher Secondary Education, Dr. Shaikh informed us that the Board would have on it representatives of universities as well as schools and that it would have under it a Board of Technical Education responsible for various technical diploma courses. The object of having a Board for Technical Education under the Higher Secondary Board was to provide bridges for students offering adequate courses leading them to university courses if they wish to take those courses. The Board would be responsible besides laying down courses of study, and conducting examinations, for publication of text-books and conducting research on various problems pertaining to Higher Secondary Education. There will be provision in the constitution of the Board for the formation of Boards of Studies.

Considering the high cost of management of junior colleges, Dr. Shaikh was not in favour of starting of junior colleges and he was firmly of the view that Higher Secondary classes should be located in schools and colleges only.

One of our colleagues, Dr. G. S. Mahajani, expressed his personal view that at least for some time the establishment of a separate Board should be deferred.

Having considered carefully the views of the study groups and the Principals as well as those of Dr. A. U. Shaikh, we came to the conclusion on a balance of consideration that Higher Secondary Education—classes located in colleges as well as those located in schools—should be under the jurisdiction of a separate autonomous Board of Higher Secondary Education with adequate, legal, financial and administrative powers. In order to ensure that the work of the Board does not become unwieldy and that academic as well as terminal and vocational courses receive due attention, we would recommend that there should be two authorities under the Board, one responsible for academic courses and the other for terminal and technical and vocational courses. Adequate representation should be given to the universities on the Board as well as on the two authorities to be constituted under it as envisaged above. Provision should be made for joint consultation between the authority dealing with the academic courses and the authority dealing with the terminal and technical and vocational courses, so as to facilitate providing bridges for students following vocational courses to come to universities and *vice-versa*.

The standard of degree courses under the new pattern will depend to a large extent on the quality of a student entering the University after completing the Higher Secondary course. The proposed Board, therefore, should have adequate powers as well as resources to ensure high quality of instruction in Higher Secondary classes and should work in close collaboration with universities. In the matters such as inspection of Higher Secondary units located in colleges, terms and conditions of service of teachers in Higher Secondary units, maximum hours of work of teachers, vacations and holidays, there should be close co-ordination between the Board and the universities.

So far as the control of the University over colleges with regard to the Higher Secondary classes conducted in them is concerned, we have made observations and recommendations in Chapter II.

(3) *Issues pertaining to the teaching staffs of colleges and the need for increase in the maximum quantum of work that can be assigned to teachers under the present terms and conditions of service of college teachers in view of the location of Higher Secondary Classes in colleges, the teaching of which will require a much larger quantum of work per week than the work which at present can be assigned to a college teacher.*—There are several problems pertaining to teaching staff of colleges arising out of the location of Higher Secondary classes in colleges. It was urged before us by the Principals who met us that the staff of a college should be common for Higher Secondary classes as well as for college classes. Apprehensions were expressed that the transfers of some members of the staff to Higher Secondary classes would affect adversely the present status of teachers in the colleges who enjoy the benefits of the minimum scales of pay and terms and conditions of service laid down by the universities.

College teachers are eligible for the revised scales for pay sanctioned by the State Government in accordance with the recommendation of the University Grants Commission, namely, (1) Rs. 300–25–600 ; (2) Rs. 400–30–640–40–800 and (3) Rs. 700–40–1,100. Teachers attached to Higher Secondary classes will not be eligible for placement in these grades. Under the revised scales, all full-time Demonstrators and Tutors are given the grade of Rs. 260–15–400.

Further, it was feared that if there are two distinct classes of teachers, one for the degree classes and other for the higher secondary classes, the former class is likely to look down upon by the latter.

One of the views expressed before us was that teachers should be appointed on the staff of the college as a whole and all teachers should be eligible for the three revised grades. It was feared that if teachers are appointed for Higher Secondary classes only, there might be dissatisfaction and that segregation of teachers will lower academic standards. On the other hand it was submitted that standard would improve if degree class teachers participate in the teaching of Higher Secondary classes. It was felt that having two types of teachers under one roof was not proper.

Another proposal made to us in this connection was that for an interim period of 5 years at least there should be no demarcation of the teaching staff of the colleges between the college classes and the Higher Secondary classes and that time-tables also should be composite.

It was urged that the present teaching staff should be protected.

As all Higher Secondary classes were located in schools or colleges, they will come under the jurisdiction of the proposed Board of Higher Secondary Education. Teachers of Higher Secondary classes in colleges will form a separate class from the teachers of degree classes. When Intermediate/Pre-degree classes are discontinued, the colleges may

have surplus staff. So far as permanent teachers are concerned, option should be given to them either to go to the Higher Secondary Unit or to have their services terminated or to accept compulsory retirement with terminal benefits to which they may be entitled under the rules of the University. Assurance will be given to teachers who opt for the higher secondary unit that as and when vacancies occur in the collegiate unit, they will be taken on the staff of the college. A teacher transferred to the higher secondary unit may also be given a lien on his post in the college. Teachers who may have to retire compulsorily may be re-absorbed as and when vacancies occur.

Teachers who are transferred to higher secondary unit may be enabled to teach in the college class, but $\frac{3}{4}$ of their work should be with Higher Secondary Classes. It should be possible in calculating the quantum of grant to institutions to take into account work of teachers mainly attached to Higher Secondary Classes in college classes and *vice-versa*. We would suggest that one period with college class may be counted as $1\frac{1}{5}$ (one and one fifth) period with Higher Secondary Class. In our opinion, It would be in the interest of academic standards as well as the institutions and teachers to assign teachers of degree classes some teaching work with higher secondary classes. Pupils of Higher Secondary Classes will thereby have the benefit of receiving instruction from senior teachers and this would help raise the standard of instructions and attainment. On the other hand giving opportunity to teachers of higher secondary classes to teach college-classes is necessary for providing them with opportunity of promotion to higher grades in the institution under the same management and also for stimulating them to study their respective subjects. The colleges and the higher secondary unit can be compensated for the services rendered by their teachers to higher secondary classes and *vice-versa* on the basis of the formula mentioned above.

We recommend that Government should consider passing legislation with regard to permanent teachers of a college required to be transferred to the higher secondary unit providing for giving option to the teachers as recommended above and to other relevant matters.

Teachers who are not confirmed, but whose services may be required for the higher secondary unit may be appointed on the staff of the unit on the terms and conditions applicable to the higher secondary unit if they are acceptable to them. It is necessary in our opinion to protect atleast the emoluments in the college scale of confirmed teachers who may have to be transferred to the higher secondary unit. We realise that it may not be possible to give these teachers the same grades as their grades in the colleges as they will come under the common pattern of scale of pay of teachers in higher secondary classes. Their pay and allowances, if any, should, however, be fully protected.

We are of the opinion that it may not be necessary for colleges to effect retrenchment in the staff as a result of the new pattern of education, if higher secondary classes are located in them. Higher Secondary Classes would be smaller and more teachers would therefore, be required. Further, a considerable number of teachers would be deputed by the institutions for training in the institutions proposed to be started by the State Government for training of teachers and substitutes in their places will be required.

The Principals nominated by the Nagpur University in the course of their discussion with us pointed out that according to the circular issued by the Director of Higher Education, Lecturers, Tutors and Demonstrators in higher secondary classes were expected to have Master's Degree (M.A./M.Sc./M.Com.) in the Second Class in addition to the B.Ed. degree or orientation training and 5 years teaching experience in a secondary class or 3 years teaching experience in a college. As against this, the minimum qualifications prescribed for the post of Lecturer in a college is only a Second Class Master's Degree. In order to satisfy the requirement of qualifications of teachers of higher secondary classes, it would be necessary for colleges to transfer their senior teachers to the higher secondary unit. This would create difficulties as the scales of pay of teachers in higher secondary classes were not on par with the scales of pay of teachers in colleges and as the college classes will be deprived of senior teachers. We take it that the qualifications mentioned in the Director's circular are not to be taken as prescribed, but are only an indication of the type of teachers required for higher secondary classes and that necessary relaxation will be made with regard to teachers who may have to be transferred by a college to the higher secondary unit located in it. Though higher secondary classes and degree classes will be separate class of teachers, it is desirable in our opinion that there should be no major disparity in the maximum work allotted to teachers belonging to the two classes. As observed above, it would not be possible to cope with the weekly work schedule of higher secondary classes with the maximum work that can be assigned to a teacher under the rules of the University.

After careful consideration of all the relevant issues and after taking into consideration the views expressed by the Principals who had discussion with us, we recommend that the maximum work that may be assigned to teachers in higher secondary classes and teachers of degree classes should be as follows:—

For Higher Secondary Classes

Maximum number of periods of 45 minutes	.. .. .	30
Maximum number of lectures	.. .. .	18
(one period of lecture of 45 minutes equivalent to two tutorial periods or two hours of practicals.)		

For Degree Classes

Maximum number of periods of 45 minutes	.. ..	24
Maximum number of lectures	.. ..	18
(One period of lecture of 45 minutes equivalent to two tutorial periods or two hours of practicals.)		

In order to make it possible to college management to allocate and adjust the staff between the two units and also to make adjustment with regard to work-load of existing teachers and to make feasible allocation of work to college teachers in higher secondary class it may be necessary to make some provision in the Universities Acts to enable them for varying the existing terms and conditions of service of teachers.

The committee was of the view that appointment of demonstrators and tutors should be on a floating basis and that normal tenure of appointments should be three years and should be extendable to five years in the case of demonstrators. They should not be considered as teachers. The principle behind this recommendation was that the appointments were intended to provide opprotunities for deserving students to carry out research.

The committee was of the view that teachers of 10 years standing should not be required to undergo training. The committee was also of the view that the orientation course for teachers should be in the form of summer schools or on the line of newly formulated Diploma in Higher Education of the Bombay University and would suggest that courses of Diploma may sufficiently be widened to meet the needs of Higher Secondary teaching.

(4) *Allocation of physical facilities such as class-rooms, laboratories, library, accommodation and the arrangements of supervision of higher secondary classes and the status of higher secondary teachers and students as members of the college and problems of discipline of students.*—Though the higher secondary classes and the degree classes located in a college will be the separate units, in the interest of general economy as well as the good management of the Institution as a whole, we are of the opinion that the Principal of the College may be made responsible for the over-all administration of the degree unit as well as of the higher secondary unit. The day-to-day supervision of the higher secondary unit may be entrusted to a supervisor who may be subject to over-all control of the Principal. This arrangement will help co-ordination of the use of physical facilities in the institution or the college and the higher secondary units. The administrative staff of the Institution may be common to the two units. Provisions will have to be made for giving grants to the higher secondary unit and the degree unit on the basis of such sharing of facilities and staff.

So far as the teaching staff is concerned, we have already recommended that though the staff of the units will be separate there should not be complete segregation. Teachers of the degree class should be enabled to participate in the teaching to the higher secondary class and *vice versa*.

The teachers of the higher secondary class need not be considered as teachers of the colleges for the purposes of representation on the university authorities. Similarly, students of the higher secondary class should not be treated as students of the college for the purposes of representation on the university authorities:

The sports, recreation and other extra-curricular activities may, however, be common to the higher secondary and the degree classes. The teachers and the students should be answerable to the Principal through the supervisor of the higher secondary division for the purpose of discipline.

(5) *The problems of ensuring that courses of study and syllabi for Higher Secondary Classes meet the requirements of the Universities and the standard of education in the Higher Secondary Classes is adequate for admission to degree courses.*—As we have observed above, the success of the new pattern of education will depend largely upon the standard of attainment of students of the Higher Secondary Classes. In order that the new pattern of degree course may be successful, it is necessary that the students entering degree courses of the universities after passing the Higher Secondary Examination, are well fitted to take up the course. In order to achieve this objective, there should be close co-operation between the University and the proposed Higher Secondary Board of Education.

We have already discussed the ways and means of securing this co-ordination in the foregoing parts of this chapter. We understand that the Universities will be fully consulted and their views will be given full weight in drawing up the courses of studies in various subjects which are to be prescribed for the Higher Secondary courses.

The Boards of Studies which are to be constituted under the Board of Higher Secondary Education should have an adequate number of nominees of the University. The University should be consulted, from time to time, when changes in the pattern of examination and/or courses of studies are made.

So far as the location of the Higher Secondary Class in a school is concerned, we are of the opinion that the schools should be upgraded and adequately staffed and equipped to cope with the Higher Secondary Class and it should be ensured that the standard of

teaching and training in the schools, reaches the standard expected by the University for entrance to the degree courses under the revised pattern. We agree with the observations made by the Principals nominated by the Poona University who met us that the purpose of the introduction of the two years' degree course after Higher Secondary Course assumes that the standard of attainment of the pupils in the Higher Secondary Class will be high.

(6) *Securing uniformity in academic terms, vacations and holidays for higher secondary classes and degree classes conducted in colleges.*—The Study Group appointed by the S.N.D.T. Women's University recommended that the academic terms of higher secondary classes and degree classes should coincide. The Study Group of the Bombay University recommended that the total number of working days for colleges and for higher secondary classes should be the same and that the total number of working days for colleges should be more than those obtaining at present.

As regards the question of increase in the number of working days in the academic year, the Principals nominated by the Marathwada University were of the opinion that the number of days may be increased. They also agreed that the quantum of work should be increased. It was realised that the higher secondary curricula could not be completed within the present maximum work-load. The Principals were in favour of curtailment of vacations.

The Principals nominated by the Nagpur University stated that the duration of vacations in the University had already been reduced. We are of the opinion that the academic terms for degree classes and secondary classes located in the colleges should coincide.

We recommend that the duration of the summer vacations should be reduced. The total duration of the vacations should be uniform in all universities. The dates of vacations may vary in different universities to suit local convenience. The summer vacation may be reduced by 15 days and the winter vacation by 10 days. There should be only 4 public holidays. The colleges should have all public holidays and not more than three optional holidays at the discretion of the Principals. The Government colleges should observe uniformly with the other colleges.

In making this recommendation, we are aware that the examination programmes of the Universities presently extend over the entire summer and the winter vacations. In order to curtail the vacations, ways and means will have to be devised to hold all the examinations within shorter vacations proposed by us. We recommend that a committee consisting of Dy. Registrars In-Charge of examinations/Controllers of Examinations in the different universities be appointed to report as to how the examination programme could be accommodated within shorter vacations. The Conference and the Summer Institutes are held during the vacations. In order to enable the teachers to participate in the Summer Institutes, the University may request the University Grants Commission to suitably adjust the dates of Summer Institutes to be held in this region.

CHAPTER IV

COMMON PATTERN OF DEGREE COURSE IN THE UNIVERSITIES IN THE STATE

One of the terms of our reference is to make suggestions to the universities in the matter of common pattern of degree courses. The National Committee on 10+2+3 on educational structure envisages a three years' course for the first degree in Arts, Science and Commerce. However, it appears that the Central Advisory Board of Education and the Ministry of Education have an open mind with regard to the pattern of University courses and that they are not averse to the introduction of a two years' pass course and one year's honours course on an all India basis.

At our first meeting, we considered the letter from Dr. G. S. Mahajani, Vice-Chancellor of the Poona University, making the following suggestions:—

“(A) The formula 10+2+3 should be read as Matric+2+3 to avoid confusion. For, while in some States, 10 means Matric (School Leaving Examination), in some others (to wit Maharashtra), 11 means Matric. After 1975, a uniformity will be reached and 10 will mean Matric over the whole country.

(B) We feel that the formula be accepted in the form Matric+2+(2+1)”

The suggestion implies that a candidate should be enabled to have a pass degree at the end of four years after the Matric, and that those who want an Honours Degree will study for five years after Matric.

In support of his proposal Dr. Mahajani expressed the views that all entrants to the University need not be saddled with a three year degree course but that the generality of students may take a two years pass course and selected students may be admitted to an Honours Course of one year's duration. Such a pattern would be advantageous for those who wish to enter upon the law course. The National Defence Academy (N.D.A.) had decided to prepare its students for the B.A./B.Sc. pass degree of the Jawaharlal Nehru University and that adopting the pattern of a two year pass course after the proposed two year Higher-Secondary Course would be helpful to the N.D.A.

Dr. A. U. Shaikh, Secretary to Government in Education Department, was of the opinion that having a two year pass course and one year Honours course would result into saving the cost of educating the bulk of students for one year. He was also of the opinion that the Universities themselves should run the Honours Courses in order to reduce the cost.

The Study Group appointed by the Poona University was in favour of accepting the proposed pattern of 10+2+3. However, the Group recommended that it should be called Matric+2+3 as suggested by Dr. G. S. Mahajani, Vice-Chancellor of the University of Poona to avoid confusion. The Group felt that while the two year Higher Secondary Course should be accepted and welcomed, as a Terminal Course, it is advisable to split the next three years into 2+ = so that students wishing to join professional colleges after graduation (like Law Colleges) could get the pass degree after two years subsequent to the two years of the Higher Secondary Course, while others could study the Honours Course in the college for one more year. This arrangement would be most rational and academically sound and would achieve the purpose of raising the standard of the first degree. This arrangement will also accommodate the present three years' integrated degree course followed by colleges at the advice of the U.G.C.

The Study Group appointed by the Nagpur University and the Shivaji University were in favour of having two years' pass course and one year honours course.

The Study Group appointed by the Nagpur University pointed out that such an arrangement would obviate adding of one extra year to the educational structure obtaining in Vidarbha.

The Study Group appointed by the S.N.D.T. Women's University did not favour the idea of having two years' degree course for the following reasons:—

(a) A graduate at the end of fourteen years studies with only two years at the College Level, will fail to achieve the desired maturity to proceed into a professional course.

(b) The Pass Course and the Honours Course, with the duration of two years and three years, will create several academic and administrative problems and it would cause more confusion and difficulties.

(c) All universities, except one, in the State of Maharashtra have already accepted and implemented the three year Intermediate Course and it would not, at this stage, be desirable to change that pattern.

(d) The members felt that courses as envisaged, at the end of two years at the colleges, will not have much value.

(e) It is also not clear whether the Pass and the Honours Courses will be different right from the first year or whether the two years will be common for both the courses.

(f) If these courses are different, will a student be permitted to change over to the Honours course? If so, what will be the qualifying conditions?

(g) There will be disparity in respect of the M.A. and the M.Ed. students. A student to get his M.A. degree will require $10+2+(2+1)3+2=17$ years. A student to get his M.Ed. degree will require $10+2+2+1$ (B.Ed.) $+1$ (M.Ed.) $=16$ years.

The Principals nominated by the Shivaji University favoured with 10 (Matric) $+2+2+1$ formula. They pointed out that under this arrangement every stage was a sort of terminal point.

The Principals nominated by the Nagpur University also favoured with 10 (Matric) $+2+2+1$ formula.

The Principals nominated by the Marathwada University were of the view that the question of having $10+2+2+1$ pattern should be open for discussion to the Academic Councils of the universities.

After careful consideration of the matter and in the light of the discussions which took place at our meetings, we recommend that there should be two years' pass course of general course as may be decided by the academic authorities of the universities, and one year's Honours Course subsequent to Pass/General Course and that the first two years in the University should be common to the Honours as well as to the Pass/General Course.

We also recommend that the Honours Course should be conducted by the universities by utilising resources available in colleges in order to conserve and properly utilise the available resources and also to reduce the cost of educating the honours students. The universities having a large area under their jurisdiction may establish the centres of post-graduate instruction and services of teachers attached to the colleges may be utilised in these centres. It may be necessary to strengthen the University laboratories and libraries as also the laboratories and libraries in the selected colleges in connection with the introduction of the honours course. Our recommendation regarding introduction of two years' Pass Course and one year's Honours Course is subject to the pattern being adopted on an All India basis as well as by the academic authorities of different universities. We would stress that there should be uniformity in the pattern in the universities in the State to facilitate migration of students from one University to another.

UNIVERSITY OF BOMBAY

The second report of Study Group appointed by the Vice-Chancellor to study comprehensively the various issues involved in the introduction of the new pattern (10+2+3) of Education.

The Second meeting of the Study Group was held in the Syndicate Room, University North Wing, on Tuesday, 10th July 1973, when the following members were present:—

Principal P. N. Gidwani,
Principal P. M. Potdar,
Professor A. N. Kothare,
Rev. Lancelot Pereira,
Principal R. A. Kulkarni,
Principal Ram Joshi,
Principal M. N. Vakharia,
Principal S. M. Parekh,
Principal G.P. Palekar.

The Vice-Chancellor presided over the meeting.

In continuation of the recommendations made by the Group in their interim report, the Group decided to make the following recommendations:—

I. FINANCE

1. that Government should meet the entire deficit that may be incurred by colleges in running higher secondary classes;
2. that capital grants should be made available to colleges for the purpose of making additions and alterations to buildings, equipment, laboratories and the library etc.;
3. that whatever scheme of assistance for capital expenditure is made applicable to schools should also be made applicable to colleges;
4. that the Government should be requested to give clarifications early on the various points regarding pattern of assistance etc.

II. CURRICULAR CONTENTS AND EXAMINATIONS

5. that colleges should restrict themselves to academic leading to University courses;
6. that the S.S.C. examination under the present scheme should be held upto March, 1977.

III. TEACHERS

7. that a clarification be sought from Government whether teachers teaching higher secondary classes in a college will be eligible for the benefit of the U.G.C. scheme for the improvement of salary scales of teachers;
8. that the teaching staff should be common for higher secondary schools as well as college classes;
9. that the present teaching staff should be protected.

IV. MISCELLANEOUS

10. that higher secondary classes attached to colleges should not be taken away except when the college itself wants to send them without the consent of the management of the college.

Interim Report of the Study Group appointed by the Vice-Chancellor to study the various issues involved in the introduction of the new pattern (10+2+3) of education.

A meeting of the Study Group was held in the Syndicate Room, University North Wings on Wednesday, 6th June 1973, when the following members were present:—

Principal P. N. Gidwani,
Professor A. N. Kothare,
Principal R. A. Kulkarni,
Principal M. N. Vakharia,
Principal S. M. Parekh.

The Vice-Chancellor presided over the meeting.

After considering the matter at length the Study Group accepted in principle the new 10+2+3 pattern of education and decided to report as under:—

I. TEACHERS

(i) Work-load

- (1) that the work-load of the college teachers should be either 15 periods of lecturing work and 15 tutorials/seminars or 20 periods of lecturing work (3 tutorials being equal to 1 lecture), and should be applicable to both college as well as higher secondary teachers.

(ii) Terms and Conditions

(2) that the terms and conditions of service of teachers in the higher secondary classes and colleges should be the same;

(3) that the status of teachers both in colleges and higher secondary should be identical.

(iii) Orientation Course

(4) that the orientation course for teachers should be in the form of summer schools or as presently formulated by the University for the Diploma in Higher Education to be introduced from this academic year.

II. CURRICULAR CONTENTS AND EXAMINATION

(5) that the authorities that will lay down courses for higher secondary stage should frame them in consultation with industrialists for the purpose of knowing the requirements of the industries;

(6) that the diversified subjects prescribed for higher secondary should have vocational bias;

(7) that the Board proposed to be constituted under the Act of legislature should be concerned only with laying down the contents of the courses and the conduct of examinations;

(8) that the media of instruction should be as prescribed by the University as at present;

(9) that there should be two public examinations—one at the end of the first year and the other at the end of the second year of the higher secondary stage.

III. CLASS STRENGTH AND ACADEMIC TERMS

(10) that the strength of a class for higher secondary should be 75 which will bring about adjustments of laboratory and class room facilities presently available in colleges;

(11) that the total number of working days for colleges and for the higher secondary should be the same. The total number of working days for colleges should be more than as obtained at present;

(12) that the hours of instruction at higher secondary stage should not be rigidly laid down thus allowing adjustments for the total teaching programme in the college.

IV. ADMISSIONS TO PROFESSIONAL COLLEGES

(13) that admission to professional colleges like Medicine and Engineering should be made after the completion of two years of higher secondary course.

V. FINANCE

(14) that the financial implications of the scheme cannot be exactly worked out in the absence of information regarding the fees to be charged for the students studying in the higher secondary stage, the different subjects to be taught in the two-year of this stage with periods allotted per week to such subjects which will determine the teaching staff requirement and the formula for maintenance grant for the college agreeing to run such classes.

VI. MISCELLANEOUS

(15) that the facilities available to the students in the University of completing their degree courses either through the correspondence course or externally should be made available to the students studying for higher secondary courses;

(16) that there should be flexibility of changing over from vocational courses to University courses;

(17) that the Colleges will find it difficult to implement the scheme of running the higher secondary classes if it is not on a permanent basis.

SHRIMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

1, Nathibai Thackersey Road,
Bombay-20.

Ref. No. COM-74/73-74/

June 28, 1973

The Second meeting of the Study Group appointed by the Syndicate to consider the proposal to run Higher Secondary Classes, introduced under the new pattern of Education of 10+2+3 from June 1975, was held on Thursday, June 21 1973 at 3-00 p.m. in the Chamber of the Vice-Chancellor, when the following members were present :—

1. Smt. Sharda Divan, Vice-Chancellor,
2. Kum. Sulabha Panandikar,
3. Shri B. D. Karve,
4. Shri D. S. Phatak,
5. Smt. Kumud Patwa,
6. Dr. (Smt.) Dhairyabala Vora,
7. Smt. Kamalini H. Bhansali—Registrar, Secretary

Shri I. N. Kaji, Deputy Registrar and Shri D. R. Udeshi, Asstt. Registrar, were present on request.

Dr. (Smt.) Premlila V. Thackersey, Dr. B. C. Haldar, Dr. Smt. Madhuri R. Shah and Prof. A. N. Kothare had conveyed their apology for their inability to attend the meeting.

ITEM No. 1

MINUTES

I. **RESOLVED** that the minutes of the First Meeting of the study Group held on June 1, 1973, be confirmed.

Smt. Sharda Divan, Vice-Chancellor and Chairman, then signed the minutes.

ITEM No. 2

II. Considered the issues raised by the first meeting of the State Level Committee on the following items :—

- (1) Uniform pattern at the degree level.
- (2) Appointment of two boards, one for the main stream and the other for vocational courses.

Note.—At the outset, Smt. Sharda Divan, Vice-Chancellor gave a brief report of the deliberations held at the meeting of the State Level Committee held on June 9, 1973.

She made the following observations :—

1. The University of Poona and the Nagpur University had suggested that within the framework of 10+2+3; the proposal should be read as Matric +2+2+1.
2. The above formula implied that there would be a B.A./B.Com/B.Sc. Pass course at the end of two years at the College, after Higher Secondary (Std. XII).
3. The students who pass the B.A./B.Com/B.Sc. Pass Course should be eligible for admission to the B. Ed. Courses, the LL. B. Courses, the B. Lib. Science Courses and such other courses.
4. The students, who are keen to go in for a Post Graduate Degree Course in the Faculty of Arts, Science or Commerce, should necessarily go in for the Honours Course at the First Degree level which will be of three years' duration at the College after passing the Higher Secondary (Std. XII) Examination.
5. There was also a suggestion that there should be two separate Boards for Higher Secondary Academic Courses and Vocational/Technical Courses.

The members were also supplied with the notes as presented by the University of Poona, the Nagpur University and the Shivaji University in the above matter.

Smt. Sharda Divan then invited members to state their views [on what was stated by the above Universities in the State of Maharashtra.

There was a general discussion on the proposed new pattern of 10+2+2+1 within the pattern of (10+2+3.)

II. (1) (A) In the light of the above observations and the discussion on uniform pattern, it was resolved that the following items be forwarded to the State Level Committee for consideration :—

- (a) A graduate at the end of fourteen years of studies, with only two years at the College level, will fail to achieve the desired maturity to proceed in to a professional course.

(b) The Pass Course, and the Honours Course, with the duration of two years and three years, will create several academic and administrative problems and it would cause more confusion and difficulties.

(c) All Universities, except one, in the State of Maharashtra have already accepted and implemented the Three year Integrated Courses and it would not, at this stage, be desirable to change that pattern.

(d) The members felt that courses envisaged, at the end of two years at the College, will not have, much value.

(e) It is also not clear whether the Pass and the Honours Course will be different right from the first year or whether the two years will be common for both the courses.

(f) If these courses are different, will a student be permitted to change over to the Honours course? If so, what will be the qualifying conditions?

(g) There will be disparity in respect of the M. A. and the M. Ed. students. A student to get his M. A. Degree will require $10+2+(2+1)3+2=17$ years. A student to get his M. Ed. Degree will require $10+2+2+1$ (B.Ed.)+1 (M.Ed.)=16 years.

(B) RESOLVED further that it be also communicated to the State Level Committee that the study group of this University feels that the proposed pattern of $10+2+3$ will have greater impact than the pattern of $10+2+2+1$ proposed by some other Universities.

(C) RESOLVED further that the State Level Committee be also informed that the study group of this University is not in favour of the pattern of $10+2+2+1$ as it is likely to adversely affect the proposed pattern of the Three Years Integrated Course.

(D) RESOLVED further that it be also opined that the Study Group is of the view that if two types of Courses are felt necessary, their duration should be the same and that they be termed B. A. General and B. A. Special so that a diversification is introduced but the pattern remains the same, viz. $10+2+3$.

II. (2). *State Level Boards*.—Considered the question of desirability of having two independent Boards for the general academic courses and for the vocational courses instead of one comprehensive Board of Higher Secondary Education.

There was general discussion on the above matter. In the light of the above, it was resolved that the State Level Committee be informed that the Study Group of this University is in favour of two separate boards for the following reasons :—

(a) Since it is understood that there will be two separate Boards at the S.S.C. level one for general courses and one for technical courses, the same pattern should be followed in respect of Higher Secondary Education—one of general academic courses and the other for vocational courses.

(b) The scope and area of work of both the Boards would differ.

(c) Both the Boards would draw their representatives from different areas of specialization.

(d) Comprehensive schools which were proposed to set up earlier may not be set up during the Fifth Plan period.

(e) The administration of the two Boards is also likely to differ.

III. In the light of the discussion held at the meeting regarding the items recorded in the minutes of the first meeting, resolved that it be recommended to the State level Committee as under:—

(1) *Finances*.—The Government should frame a suitable grant-in-aid code for given general norms of financial pattern for institutions, desiring to attach Higher Secondary Classes, without delay, so that institutions can be in a position to take a firm decision in the above matter.

(2) *Academic Matters*.—(a) There should be proper co-ordination between the University, the Colleges and the Higher Secondary Board or the Machinery set up for the purpose.

(b) As regards uniform pattern the views expressed under Resolution II (1) (A) are reiterated.

(c) The Study Group is of the opinion that private studies should not be permitted for Higher Secondary education.

(d) The institution concerned should be permitted to teach in the medium/media of its choice.

(3) *Co-curricular programme*.—Some programmes should be organised on a common basis for students of the degree programme and the higher secondary classes. However, there should be several programmes which would be different for the two levels.

(4) *Teachers*.—(a) Teachers, either of the degree programme or the higher secondary, should be considered as teachers of the colleges concerned and matters like equation of work-load, timings, etc. should be properly worked out for smooth and co-ordinated working. They should all be responsible to the Principal of the college and will be governed by the conditions laid down by the college or the University.

(b) For recruitment of teachers of the higher secondary classes, the same procedure adopted for recruiting teachers of the degree classes should be followed.

(c) All the teachers of the College, whether appointed for the degree classes or the higher secondary classes, should be eligible for election or nomination to University bodies.

(d) The University will be the final authority in fixing the seniority of teachers, whether working entirely or partly for the degree classes or the higher secondary classes with reference to their promotion and allied matters.

(5) *Students.*—(a) For matters concerning discipline, all the students will be under the management, namely, the Principal of the college.

(b) There should be two student councils for the two units of degree classes and the higher secondary classes as several of the co-curricular activities would be at different levels, although there should be proper co-ordination between the two councils as some programmes would be common.

(6) *Administrative and Organisational Matters.*—(a) Academic terms of higher secondary classes and degree classes should coincide.

(b) Arrangements of examinations should be made by the Higher Secondary Board in consultation with the Universities, as more or less the same accommodation will be used for both the examinations.

(c) The University should lay down and approve the fee schedule for the higher secondary classes as is done hitherto for the colleges.

(7) *General.*—(a) Affiliated Colleges should forward their application for attaching Higher Secondary Classes to the University.

(b) The University should in general follow the procedure of extension/continuation of affiliation laid down, before making the recommendation to the Board of Higher Secondary Education or the machinery set up for the purpose.

(c) The Board should forward its decision to the University as is done for affiliation of colleges and not deal directly with the colleges concerned.

(d) The Study Group is of the strong and unanimous opinion that those colleges which are granted permission to attach Higher Secondary Classes in 1975 and thereafter should be permitted to continue them permanently, if they so desire, unless the University directs otherwise.

(e) The Higher Secondary Board or the machinery set up should have a bigger representation on the Board and its Committees from the University and the Colleges than from schools for better linkage and Co-ordination.

The meeting terminated with a vote of thanks to the chair.

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

A meeting of the Study Group appointed by the syndicate to consider the proposal to run Higher Secondary Classes, to be introduced under the new Pattern of Education of 10+2+3 from June 1975 was held on Friday, June 1, 1973, at 1-15 p.m. in the Chamber of Vice-Chancellor, when the following members were present :—

1. Smt. Sharda Divan, Vice-Chancellor (in the Chair),
2. Kum. S. Panandikar,
3. Prof. A. N. Kothare,
4. Shri B. D. Karve,
5. Principal D. S. Phatak,
6. Principal (Smt.) Kumud Patwa,
7. Principal Dr. (Smt.) D. P. Vora,
8. Smt. K. H. Bhansali, Registrar.

Shri I. N. Kaji, Deputy Registrar and Shri D. R. Udeshi, Assistant Registrar were present on request. Dr. (Smt.) Premlila V. Thackersey, Dr. B. C. Haldar and Dr. (Smt.) Madhuri R. Shah regretted their inability to attend.

1. Considered the recommendations of the Conference of the Vice-Chancellors with the Honourable Minister for Education, Government of Maharashtra, Bombay, on various issues connected with the proposal to run Higher Secondary Class in Colleges.

In the light of the discussion RESOLVED that the following recommendations be made to the State Level Committee about the issues that are likely to arise due to the introduction of the changed pattern of education, if the Higher Secondary Classes are attached to Colleges conducted by and affiliated to this University.

(1) *Finance. (a) Loss of revenue for conducting Courses.*—In view of the introduction of Higher Secondary pattern the loss of revenue to colleges is likely to be on the following items:—

(1) Loss of revenue from tuition fees of the first year of the college.

(2) Loss of revenue from tuition fees in subsequent classes, year by year, as the number is expected to decrease in the degree programme due to limitation of numbers, in the Higher Secondary.

(3) Higher category of teachers in the degree programme as the Junior Lecturers would either be transferred or relieved.

(4) Larger number of teachers will be required to be appointed in Higher Secondary classes as compared to the first year of college as hitherto, in view of changed norms for Higher Secondary.

(b) *Loss to University Revenue.*—Loss of examination fees of the first year students which is likely to be about 35 per cent to 40 per cent of the total revenue derived through examination and allied fees. In case, Higher Secondary Classes are attached to the Colleges, the loss of each college will have to be worked out which will depend on the enrolment, as larger colleges are likely to make-up the revenue to a considerable extent through tuition fees but smaller colleges will find it difficult to make up the loss in view of smaller classes, tutorials for each subject etc. as prescribed for Higher Secondary Classes.

(c) *Capital Expenditure.*—If Higher Secondary Classes are attached to colleges, they will require some additional class-rooms and a few laboratories to meet the needs of Higher Secondary pattern. The capital expenditure will also have to be worked out by each college in relation to the existing facilities available with the College and additional requirements in relation to subjects selected.

The Government will have to lay down the norms for financial assistance for capital as well as recurring expenditure to make good this loss to Colleges and Universities very soon so that colleges desiring to take up Higher Secondary Classes know of the financial position.

2. *Academic matters.*—(a) There will be two fold control in all academic matters—

(i) from Higher Secondary Board or machinery set up for the purpose in respect of the Higher Secondary Classes.

(ii) from the University for the degree classes. (i) and (ii) will have to be properly co-ordinated.

(b) The matter about uniform pattern at the degree level will have to be jointly considered by all Universities because it is only then that the Boards of Studies at respective Universities can start linking the courses of Higher Secondary to University degree course.

(c) Whether the Higher Secondary courses will be permitted to external candidates and if so, which ones and on what conditions is a matter which also requires consideration.

(d) It is presumed that the colleges of this University will be permitted to continue the media of instruction as hitherto.

(3) *Co-curricular Programme*.—There will be different co-curricular programme at the two levels. The programmes will have to be co-ordinated to avoid conflicts.

(4) *Teachers*.—The following are some of the issues likely to affect the position of teachers:—

(a) Sharing or loaning of teachers. If teachers are loaned on a full-time basis the change over from the College to Higher Secondary Classes will involve issues like salary scales, work-load, service conditions, holidays and vacations, seniority of teachers, etc.

(b) Position regarding election/nomination to University bodies will have to be clarified. It will have to be determined whether teachers of colleges as also Higher Secondary Classes will be considered teachers of the college or teachers of the two distinct units for the above purpose.

(c) Staffing pattern.

(d) Training of teachers.

(e) Machinery to recruit staff.

(f) Equating work-load etc.—Some formula for equating the work-load at the College and the Higher Secondary level will have to be fixed. A formula for payment to teachers shared by both the units will also have to be worked out.

(5) *Students* (a) *Discipline and Control*.—Higher Secondary Class students will be under the direct control of the Vice-Principal or the Superintendent. College students will be under the direct control of the Principal of the College. The dual control for students under the institution is likely to create discipline problems and create difficulties for enforcement of rules and discipline at the two levels.

(b) *Maturity of students*.—The maturity of students at the two levels has also to be considered.

(c) *Elections*.—The position of students in the two units for purposes of election to College bodies will also have to be determined.

(6) *Administrative and Organisational matters*.—Items requiring consideration—

(a) Sharing of administrative staff.

(b) Sharing of physical facilities.

(c) Maintenance of accounts, sharing of expenditure.

(d) Co-ordinating the working of the two units from the point of view of timings, vacations, loaning of teachers.

(e) Enforcement of general discipline.

(f) Records.

(g) Laying down fee schedule.

(7) *Control*.—The Principal of the college, attaching Higher Secondary Classes, will be responsible to his management, the University and the machinery accepted for the Higher Secondary and this triple control is likely to make administration difficult. The Vice-Principal or Superintendent appointed for Higher Secondary Classes will be under the general supervision of the Principal and hence in cases of a conflict some clear cut policy will have to be laid down.

As far as the University is concerned the relation between the University and the Higher Secondary Classes on the one level and the Higher Secondary Board on the other will have to be clearly laid down.

(8) *General*.—(a) The University will have to give permission, even by relaxing existing rules for enabling colleges to co-ordinate the Degree and the Higher Secondary programmes by making several adjustments but it would be in the greater interest of the implementation of the programme if the facilities as well as existing teachers who may not be required in view of Higher Secondary, are loaned to the Higher Secondary unit.

(b) The Higher Secondary classes attached to the Colleges should be governed by the rules of the University but these may be related to the requirements of the Higher Secondary.

(c) It is understood that attaching Higher Secondary Classes to Colleges is only a temporary arrangement and ultimately, within a period of about 10 years, all Higher Secondary classes will go to schools. What would be the position of the Colleges at that stage.

(d) It is understood that it is proposed to have a separate machinery for laying down courses, conducting examinations, preparing text books, recognising institutions and allied matters through an independent Board of Higher Secondary. This is meant to be as a link with the S.S.C. Board. It is felt that the link should be more with the University through greater representation, etc.

The meeting terminated with a vote of thanks to the Chair.

UNIVERSITY OF POONA, GANESHKHIND, POONA-7

June 23, 1973.

Ashadha 2, 1895.

A meeting of the Study Group on the new pattern of education (10 plus 2 plus 3) was held in the Principal's Chamber of the Sir Parasharambhai College, Poona-30, on Saturday, June 23, 1973, at 2-00 p.m. The following members were present :—

1. Dr. M. P. Mangudkar (Chairman),
2. Principal D. A. Dabholkar,
3. Principal K. P. Mangalwedhekar,
4. Principal M. S. Jamadgni,
5. Principal V. K. Nulkar,
6. Principal V. W. Deshmukh,
7. Professor P. S. Karekar.

The following tentative recommendations were made :—

(1) The Higher Secondary should be split up into Part I and Part II : Part I (XI Standard) and Part II (XII Standard).

(2) The teaching for Part I i.e. Standard XI may be done in classes of 60 and the teaching for Part II may be done in classes of 100, in order to get the students adjusted for later collegiate instructions.

(3) In order to avoid confusion in the initial years, institutions may be allowed to teach either Part I or Part II or both together as might suit the availability of assets.

(4) Vocational training courses may be conducted, preferably into independent institutions but students completing these courses should be eligible for admission to the University courses later on.

(5) The proposed pattern (10 + 2 + 3) can be retained with these modifications. These modifications may actually work out a practical solution for the transition period. In due course, institutions conducting Part I may also add Part II to their structure as also institutions initially conducting only Part II, standard XII, may add Part I, Standard XI, in course of time.

(6) The financial implications of any changes that are finally made must be fully worked out and care taken to see that the institutions are not required to bear any financial burden. They are patently not in a position to do so. It has also been the experience that current deficits cannot be met out of collection of donations and it is practically impossible in these days to think of any increase in tuition fees.

(7) It is quite likely that in the change-over the position of some of the junior staff may be adversely affected. It is the hope of the Committee that adequate care ought to be taken to see that the protection that they have already received under the University Rules is not taken away as a result of this change-over.

Dr. M. P. MANGUDKAR,
Chairman.

Development Officer.

NAGPUR UNIVERSITY

Report of the Study Group appointed by the Vice-Chancellor to study the Administrative, Educational and Financial aspects of the new pattern of Education (10+2+3).

The Study Group held three meetings and deliberated upon the various points pertaining to the new pattern of education as they will affect the University and its affiliated colleges. The Study Group now submits its report as under—

1. *Manner of implementing the new pattern.*—At present, in Maharashtra, there are four types of High Schools :—

- (a) Schools which send candidates for S.S.C. X Matric (in Vidarbha) ;
- (b) Schools which send candidates for XI Matric (as in Western Maharashtra) ;
- (c) Higher Secondary (Multipurpose) Schools which send candidates to the H. S.S.C. Examination which is equivalent to the Pre-University Examination of the University (as in Vidarbha) ;
- (d) Technical High Schools which send students for vocational Matriculation Examination (as in Vidarbha).

As regards (a), examination at the end of ten years should be termed as "Matriculation". As regards (b), the schools shall hereafter be as in Category (a), i.e. 10 years. As regards (c), the schools should not be allowed to continue their courses in Arts, Humanities, Science, Commerce and such other courses which are at present being run by the University as Pre-University Courses. These schools may, however, be permitted to have vocational, technical and/or agricultural subjects only. Schools under category (d) may be permitted to continue in specialised subjects in respect of technical, vocational and agricultural courses.

To achieve these four-fold objectives, the Study Group suggests the re-designation of the new pattern as :—

"Matriculation+2+3 (2+1)."

This designation will have effect of uniform ten years courses which may be called "Matriculation". Thereafter, the schools under category (c) alone will be able to add XII class. XI and XII classes of such schools shall lead to technical and vocational examinations. In other words, students passing "Matriculation" examination will have two courses open for them viz., (i) to go to the University, and (ii) to go to the XI and XII classes leading to technical and vocational education.

Students opting for vocational and technical courses will terminate their education at the end of XII class. They will not be eligible to join the University.

The classes for the middle two years course should be with the University (as at present) for the following reasons :—

A. ACADEMIC

- (i) The academic session, terms vacations, holidays, service conditions of teachers, etc. shall continue to be the same ;
- (ii) The pattern of syllabi shall continue to be the same ;
- (iii) The examinations shall continue to be held by University ;
- (iv) University has got a machinery for inspection to see that the colleges maintain academic standards under the rules laid down by it ;
- (v) They will get better teachers, who will also teach under-graduate and post-graduate classes.

B. ADMINISTRATIVE

- (i) There will be one common coherent and integrated Administrative Unit for each college for all the classes under the Administrative Head. This will eliminate the dual administration in collegiate institutions ;
- (ii) This will facilitate uniformity of standards of teaching discipline for students.
- (iii) Allocation of work amongst college teachers will be uniform ;
- (iv) Organisation of co-curricular and extra-curricular activities (such as games, sports, social gathering etc.) will be facilitated.

C. FINANCIAL

(i) At present about 40 to 50 per cent of the total No. of students constitute the Pre-University classes in colleges. The financial loss to the colleges (in the absence of these students) will be so great that many of the colleges will find it impossible to function ;

(ii) Facilities such as Library, Laboratories and other equipment (which have already been provided for these students in colleges) will be wasted and the schools, if given to run these classes, will have to spend huge amounts on providing these facilities. It will be a kind of "National Waste".

(iii) Even these colleges (which will be running without the XI and XII classes) will have huge deficits and Government will have to pay sizeable amounts by way of additional grant-in-aid.

(iv) *Effect on University.*—With the starting of Higher Secondary Schools, the present rate of enrolment for Pre-University and First Year Classes will have a steep fall, with the result that University revenue from enrolment fees, Annual and Examination fees, charges for mark-sheets and various types of certificates, will slump down by atleast eight lakhs of rupees.

D. OTHER FACILITIES

At present the U.G.C. gives financial assistance in a number of ways to collegiate institutions. This financial assistance will not be available to students, in case they are taken away from colleges and assigned to Higher Secondary Schools.

The Study Group is of the opinion that the pattern 10+2+3 be rearranged as 10+2+2+1. This modified pattern will not add one extra year's educational career to students. After matriculation, the two years (which should be retained with the colleges) may be divided into two: Pre-University Part I and Pre-University Part II. Thereafter the 3 year Degree Course be grouped as First Year and Second Year, at the end of which a "Pass" Degree may be awarded to the student. At the end of the third year, an "Honours" Degree may be awarded. This modification will save one year of these students who want to go to Law Course or B.Ed. Course, which are open after the first degree. These students who want to go to Medical and Engineering Courses may be allowed to join such courses after Pre-University Part II Examination (Courses and syllabi for which should be suitably re-drafted). This is possible only if these classes are given to the University which can have co-ordination in framing courses for Pre-University and Degree Classes.

To sum up, for the various reasons mentioned hereinbefore (academic, administrative, financial and others) the best thing would be to hand over classes XI and XII to the University. There will then be no need for setting up a new Board of Higher Secondary Education, since XI and XII classes of vocational pattern could be dealt with by the present Board of Technical Education.

SHIVAJI UNIVERSITY

Report of the Study Group appointed by the Syndicate of the Shivaji University regarding starting of Higher Secondary Courses.

Second meeting of the Study Group was held in the University Office on 11th June 1973, at 12-00 noon when the following members were present :—

- (1) Principal N. B. Tare (Chairman),
- (2) Shri S. R. Tawde,
- (3) Principal R. K. Kanbarkar,
- (4) Dr. V. A. Sangave.

Principal R. K. Kanbarkar and Dr. V. A. Sangave had participated in the discussion for a short time but had to leave as they had another meeting to attend in University. The first meeting was held in the University Office on 11th May 1973 and its decisions are also enclosed.

The Study Group considered in all aspects the Higher Secondary Course in the light of the points sent by the Member-Secretary of the State Level Committee appointed by Government for Higher Secondary Education, and the reports on the subject from the Poona and Nagpur Universities.

The Committee was to report as under:—

I. Organisational Pattern and Administrative Structure.—The formula should be 10+2+3 and should be known as matric+2+3 for smooth working.

The Study Group is of the opinion that the Higher Secondary Courses should be known as intermediate and of the duration of 2 years and thereafter at the end of the two years, general Graduate Degree be awarded and after one year Honours Degree which means that the entire general degree courses would have a pattern 10+2+2 and the honours Degree course 10+2+2+1. We recommend this slight rearrangement of the original pattern for the following reasons :—

(a) In this new arrangement every stage is a sort of terminal point at which students may branch out in various directions. This will prevent the overcrowding in the college classes for instance in the Honours.

(b) Students wanting to do law and similar course after graduation need not be forced to do five year's of study after Matriculation.

(c) Only Honours graduates be allowed to do Post-graduate studies.

(d) The quantum of syllabus in the new pattern has been considerably increased at every stage after the X year Examination (S. S. C. or Matriculation). Hence 4 years study should make a good pass or General Degree. This is the practice at present in many States even in our State of Maharashtra in the Vidarbha region. The general public in the Western Maharashtra may appreciate this change as the students will be earning members in the family a year earlier in these hard and difficult days.

II. Regarding the organisation of the Higher Secondary classes we feel that these classes should be in all the existing colleges and in some selected schools which would fulfill all the conditions laid down for recognition. In the rural area, these Higher Secondary classes should be located in the Colleges only. In the case of a tie between a College and a High School the preference should be given to the Colleges. This would ensure—

(a) High academic standard ;

(b) Economic viability of the existing colleges ; and

(c) Schools may not have to undergo unnecessary expenses on accommodation, science Laboratories, Libraries etc., and the students will be looked after locally by local Colleges.

III. There should be one common administrative unit for the college for the sake of uniformity of the standard of teaching, discipline of the students and for the organisation of co-curricular and extra curricular activities.

The courses of the Higher Secondary should form one unit in order to have continuity with the degree courses and post-graduate-classes where existing.

The Higher Secondary Courses should be under the control of the Principal but Higher Secondary classes should be a separate unit with an independent Head under the Principal.

The Schools may be allowed to conduct the Higher Secondary courses provided class rooms, laboratories, libraries etc. are fully equipped and facilities of qualified teachers are available, Definite conditions for the recognition of such schools may be laid down and strictly followed in order not to lower the educational standard.

The requirements for opening the two Higher Secondary classes in the schools should be examined thoroughly and only where adequate facilities for Library books, Laboratories equipment and qualified teachers are available the schools should be allowed to conduct the Higher

Secondary Courses, on their merits. Such schools should be given representations in the matter of framing syllabi, conduct of examination and on the other bodies in the University.

If the schools are to undertake the Higher Secondary Courses the students in their schools should not be forced to pursue their Higher Secondary Course in their schools but the students should be given a free choice to join any institute they like.

IV. *Accommodation*.—The present buildings of the Colleges will be inadequate to take extra classes in smaller divisions and therefore, the financial assistance for such building programme will have to be given by the Government.

V. *Financial*.—Government will have to come forward to pay large deficits for these colleges for running of Higher Secondary Courses.

If the pre-degree classes are taken away from colleges there would be a heavy financial loss to the colleges and it is likely that some smaller colleges would cease to function.

The colleges which already had facilities like laboratory equipment, library etc., will not have maximum use and will be under utilised and if the schools are to run these Higher Secondary Courses they will have to be provided for the huge amounts which would be a national waste.

University consequently, will also run into huge deficits as its revenue by way of examination fees etc., for the pre-degree courses will be severely cut down.

VI. *Control of the Higher Secondary Classes*.—We feel that some way out of the dual control has to be found out. This could be done by establishing a Body known as Pre-Degree for Higher Secondary Board like the Board of University Teaching and Research under the control of the University which may be instituted by the University Act. This will be one of the Bodies of the University and will look after the recognition, academic and administrative aspects of the Higher Secondary classes. This Board should have representatives of the High Schools conducting Higher Secondary classes. This will solve all difficulties arising out of the dual control of the Government forms a Separate Higher Secondary Board. We already have a Secondary Education Board at the State level which looks after S. S. C. Examination. There may be another Joint Board of Higher Secondary Education under the control of the University which may look after the recognition, academic and administrative side of Higher Secondary Education both at the College and High School level.

VII. *The Committee has to sum up the opinion as under*—(1) “ The pattern should be 10+2+2+1. X should be known Matric, next 2 years intermediate (Pre-Degree I & II), next two years general degree course and the last 1 year Honours Degree.

(2) If schools are allowed to conduct Higher Secondary courses the students of the schools should not be forced to pursue their studies further in their school but should be given a free choice to join any institution.

(3) To avoid dual control, University should be allowed to conduct the middle two years courses. In respect of affiliation, conduct of examination, framing of syllabus, terms and conditions, salaries of the teachers etc., there would be lot of trouble. The Government should seriously think about this.

(4) Government should bear all legitimate recurring and non-recurring expenditure for starting of the Higher Secondary Courses.

(5) University will incur larger deficits if the University is not allowed to conduct the Higher Secondary Courses.

(6) The Study Group favours the idea of the starting of vocational institutions.

VIII. The Study Group also feels that since the starting of the Higher Secondary Course by the Government would involve the academic, administrative and financial problems of each college, a meeting of the Principals should be called to discuss all aspects or reports may be sent to them to express their opinion in order to prepare a final report for submission to Government. This meeting should be held, if possible, before 27th June when the State Level Committee is meeting at Poona to discuss the matter with the representatives of the Principals of the Colleges in the Universities of Shivaji, Poona and Marathwada.

(Sd.) N. B. TARE (*Chairman*).

(Sd.) S. R. TAWDE.

(Sd.) R. K. KANBARKAR.

(Sd.) V. A. SANGAVE.

SHIVAJI UNIVERSITY, KOLHAPUR

Interim Report of the Committee appointed by the Syndicate to study the problems regarding starting of Higher Secondary Classes in Colleges.

A Meeting of the Committee was held in the University Office on 11th May 1973 at 1-00 p.m. when the following members were present:—

Principal N. B. Tare (Chairman),
Principal P. G. Patil,
Principal R. K. Kanbarkar,
Shri S. R. Tawde,
Dr. V. A. Sangave.

The committee considered the letter dated 10th April 1973 received from the Directorate of Higher Education, Maharashtra State, Poona regarding starting of Higher Secondary Classes in colleges as also proceedings of the conference of the Vice-Chancellors of the Universities in the State of Maharashtra with the Education Minister held on 26th April 1973. The Committee after considering the matter at length, decided as follows :—

(1) The Committee is in general agreement with the 10+2+3 pattern of education. All existing colleges should be allowed to start higher secondary classes and the existing formula for giving grants to colleges, H. S. classes should be modified and brought on the same lines on which the schools are aided at present. As the starting of the Higher Secondary Classes will require structural alterations and additions to the existing physical facilities such as class-rooms, laboratories, libraries, equipments etc. For first and second year higher secondary classes, substantial non-recurring grants should be provided for by the Government.

(2) Adequate representation on the Higher Secondary Board should be given to colleges conducting Higher Secondary classes in respect of forming of the syllabi, affiliation of institutions, co-ordination and control of teaching, inspection of institutions, conduct of examinations etc., and on the various committees of the Board.

(3) As the introduction of the Higher Secondary Classes under the control of the Higher Secondary Board will adversely affect the financial resources of the colleges *vis-a-vis* the degree classes, the Government shall have to revise the present grant-in-aid formula to the colleges.

(4) The strength of the degree classes will be considerably less than what it is at present as the Higher Secondary Examination will constitute as terminal point in itself having openings of different diversified courses thereafter. This will considerably lessen the total strength of the students in the University which in its turn affect the revenue of the University. Hence the Government shall have to make larger contribution to meet the deficit of the University.

(5) The Committee is of the opinion that the work-load of teachers of Higher Secondary classes in colleges need not be much higher than the maximum laid down by the University *viz.* 15 lectures + 4 Tutorials as each period is of 45 minutes duration. This will avoid the embarrassing situation of some teachers in the colleges working according to the terms and conditions of the University and some according to the terms and conditions of the Higher Secondary Board.

(6) Regarding control of the University and the Board of Higher Education it appears that the dual control over colleges is inevitable still the committee feels that in a college there need not be two separate entities *e. g.* the College Unit and the Higher Secondary Unit. There should be sufficient amount of flexibility in the day-to-day working of the college as a whole.

(7) (i) Regarding criteria of staff—The Committee is of the opinion that the teachers who have been approved by the University and who have ten years' teaching experience need not be required to undergo any orientation course.

(ii) The Teachers who have undergone inservice training *viz.* Summer Institute/Orientation Course should be deemed as trained for this purpose.

(iii) Orientation course proposed to be conducted by the Higher Secondary Board for teachers in colleges other than (i) and (ii) above should not be more than six to eight weeks duration as it would not be possible for the Managements of the colleges to spare their teachers for a full year's course.

(8) Having accepted the Higher Secondary Course, the Committee feels that the Universities in the State of Maharashtra should have a uniform up-graded three year degree course.

(Sd/-) N. B. TARE.
Chairman.

(Sd/-) S. R. TAWDE.

(Sd/-) R. K. KANBARKAR.

(Sd/-) V. A. SANGAVE.

(Sd/-) P. G. PATIL.

MARATHWADA UNIVERSITY

A meeting of the Committee appointed by the Vice-Chancellor to prepare a statement of the New Pattern of Education, was held in the Office of the University in the University Campus, Aurangabad, on January 7, 1973, at 12-00 noon. The following members were present :—

1. Principal G. R. Mhaisekar (in the Chair),
2. Principal K. D. Gadia,
3. Principal S. K. Mohogaonkar,
4. Dr. B. H. Rajurkar.

At the outset, the Registrar explained that the Maharashtra Government has appointed a Committee *vide* Government Resolution No. ECR-1072-R(I), dated August 31, 1972 under the Chairmanship of the Secretary, Education Department to study the problem and make suitable recommendations to Government regarding, the implementation of the decision taken by the Government of India at the Chief Ministers' Conference regarding the New Pattern of Education, *viz.* 10+2+3. The Registrar had also circulated the terms of reference made to this Committee by the Government of Maharashtra for the information of the Committee.

The note prepared by Principal G. R. Mhaisekar, Chairman of the Committee, on the uniform pattern of Higher Education and Collegiate Education in Maharashtra State was also circulated to the members of the Committee.

The Committee went through the terms of reference as also the note prepared by Principal Mhaisekar and RESOLVED to recommend to the Vice-Chancellor as under :—

(1) It was noted that the New Pattern of Education to be introduced in the State will be of two types :—

- (i) a Liberal Education type to be completely integrated with the Degree Course in different Faculties, and
- (ii) a Vocational, Professional and some Technical terminal Courses.

(2) These courses will be run by four types of agencies, *viz.*—

- (a) High Schools of Higher Secondary or Multipurpose character ;
- (b) High Schools of Professional or Technical Higher Secondary character ;
- (c) Junior Colleges ;
- (d) Institutions, which would like to run the two-year Terminal Course on Vocational basis.

(3) There will be Higher Secondary Schools (i) without Lower Secondary Classes, and (ii) with Lower Secondary Classes.

These two classes will have to go together to make the unit economically viable.

(4) There will be Colleges affiliated to the University which would be of the following type:—

- (a) Colleges which would like to run the 2+3 Classes; and
- (b) Colleges which would like to run only the 3 year Degree classes.

(5) There may be Colleges, which may be called Junior Colleges, which would like to run only the 2 year courses--both Liberal as well as Vocational Courses.

If the Junior Colleges have independent status and go to an independent Board, certain percentage of staff in the existing Colleges may have to be discharged. The probable solution would be---(a) to absorb some of the members of the staff in the Schools by relaxing technical qualifications, and (b) to continue the same members of the staff in the Colleges for introducing tutorials, etc., in order to enhance the standard of Higher Education. Such of the teachers as have put in ten years' service in Colleges should be deemed to be qualified teachers. However, if a Committee of experts feels, the teaching experience can be reduced and a saving clause be introduced to that effect.

(6) In the opinion of the Committee, the 2 year Degree Course of Liberal Education should be integrated with the Degree Course and thereafter it should be handed over to the Colleges, but the terminal course can be entrusted to the High Schools or to the Junior Colleges.

(7) High Schools of repute and sufficient standing be allowed to take up the responsibility to take Liberal as well as Vocational High School Secondary Course along with their Lower Secondary Classes. This would enable the Schools to enrich the staff-room and the physical facilities which are not normally available for lower secondary classes.

(8) The present Colleges, affiliated to the University, which may fulfil all the conditions laid down by Government regarding the staff, equipment, laboratories, library, etc., should be given preference for starting Junior Colleges if the Managements of Colleges are so prepared.

(9) *Syllabus*.—The syllabus for the two-year Liberal Education Course, whether it is conducted in the Higher Secondary Schools or Junior Colleges—will have to be the same.

(10) As far as Vocational Courses are concerned, they will have to be mostly single craft oriented or single proficiency oriented course, co-ordinating with the optimum knowledge of proficiency. A number of Professional and Vocational Courses will have to be thought of and will have to be well designed so that at the termination of the course the student will be able to enter in the walk of life confidently towards his living crafts. Theoretical papers may have little importance in framing the syllabus.

(11) *Syllabus framing Authorities*.—The syllabus for the Higher Secondary School or the 2 year Junior Colleges, being identical will have to be framed jointly by the Boards of Studies of the Universities and by the Board of Secondary or Higher Secondary Education and approved by the respective authorities. Necessary amendments in the Regulations of the Board of Secondary Education and in the Statutes of the Universities will have to be made to see that the Committee which frames the syllabi are composed of the teachers—half from the Colleges and half from High Schools.

(12) *Examination*.—Examinations can be conducted by two authorities (i) the Board of Higher secondary and (ii) the University.

Alternatively the examinations can also be conducted by the Board of Higher Secondary Education, both for Junior Colleges as well as for the Higher Secondary Schools.

(13) *Administration*.—Two types of administration can be visualized—

(i) Junior Colleges may be continued to be affiliated to the University while the Higher Secondary Schools can work under the Board of Higher Secondary Education;

(ii) Both Junior Colleges as well as Higher Secondary Schools be affiliated to or recognized by the Higher Secondary Board.

It may be, however, in the fitness of things, in view of the rising number of students in Colleges, to hand over the administration to an independent Board of Higher Secondary Education. This would help Universities to concentrate their attention on Degree and Post-graduate Degree/Diploma Courses. This will also allow the Universities to intensify and extend their research activities even in the affiliated Colleges.

(14) *Norms for Junior Colleges and Higher Secondary Schools*.—In order that the Junior Colleges and Higher Secondary Schools maintain standards of education and efficiency, it would be desirable to lay down certain norms from the beginning. The following are the few suggestions:—

(a) *Size of Class Rooms*.—It would be advisable to have smaller classes comprising at more than 50 students in any class conducted by the Junior Colleges or the Higher Secondary Schools.

(b) *Teacher-Pupil Ratio*.—The teacher-pupil ratio should be such as will permit an intimate contact of teachers with the students in order to facilitate proper discussions conduct of tutorials and even guidance outside class-room.

(c) *Physical Facilities*.—The place available to the Junior Colleges or the Higher Secondary Schools will have to be related to the physical facilities that may be made available by the Colleges or the Secondary Schools. If necessary, in order that the maximum use of the existing facilities is made, the Junior Colleges and Higher Secondary Schools may conduct their classes in the morning so that the physical facilities are available to the Colleges and Schools in the afternoon, at least until such time as the Junior Colleges and Higher Secondary Schools have their own independent buildings.

(d) *Equipment*.—In order to maintain the standards and proficiency, the Junior Colleges and the Higher Secondary Schools should be expected to provide all the necessary equipment and laboratory facilities according to the norms laid down by the University or the Board of Higher Secondary Education.

(e) *Staff*.—Certain minimum qualifications should be prescribed for teachers to be appointed in the Junior Colleges or Higher Secondary Schools. It is expected that the teachers to be appointed will possess postgraduate degree with additional degree in pedagogy. Such of the teachers as do not have a degree in pedagogy, but as have sufficient standing should be required to attend compulsorily the orientation courses.

(f) *Library*.—It must be made obligatory for the Junior Colleges or the Higher Secondary Schools to equip their Libraries with sufficient number of text books, reference books and periodicals. If necessary a phased programme for the development of the Libraries be prepared by the University or the Board of Higher Secondary Education.

(g) *Furniture*.—It must be made obligatory for the Junior Colleges or the Higher Secondary Schools to provide all the necessary class-rooms and the laboratory furniture before they are granted permission to start classes.

(This observation needs to be made, because quite a majority of the High Schools preparing students for the H. S. C. Examination at present make their students sit on the floors).

(h) In the opinion of the Committee it would be worthwhile if Government starts at least one Junior College and one Higher Secondary School at each of the Districts Places to provide as a model for other societies running private Colleges or High Schools.

(i) *Text-Books*.—The text books to be prescribed for the two-year course should be comparable with the standards of those of the existing Pre-University Course and the I-year of the Degree Course.

(15) *Higher Secondary Board*.—In case Government contemplates the formation of a separate Higher Secondary Board, the Committee suggests that the composition of the Higher Secondary Board should be more or less on the following pattern :—

(i) the composition of the Higher Secondary Education Board should be such as would permit College teachers and High School teachers to have equal representation.

(ii) the categories which should be represented on the Board be as follows :—

- (a) Heads of Junior Colleges and/or Higher Secondary Schools;
- (b) Teachers from the Junior Colleges and/or Higher Secondary Schools;
- (c) Experts;
- (d) Representatives of local bodies;
- (e) Officers of the Education Department and the Universities.

(iii) The Boards of Studies and all academic bodies should have equal representation of teachers from Junior Colleges and Higher Secondary Schools.

(16) *Affiliation/Recognition*.—The Junior Colleges and/or Higher Secondary Schools should be affiliated to or recognized by the Board of Higher Secondary Education. Before affiliation or recognition is granted for teaching any course, a regular Local Inquiry Committee should be sent by the Board to inspect the Junior College or the Higher Secondary School and it should be seen that the conditions laid down by the Local Inquiry Committee are strictly fulfilled by the institutions.

V. K. DHAMANKAR,
Registrar.

G. R. MHAISEKAR,
Chairman.

APPENDIX "A "

" Dear Principal Tope,

Please refer to your letter of May 10.

2. I had an occasion to consult a few local Principals here and our thinking is somewhat on the following lines. I give only the points :—

(a) The formula 10+2+3 should be read as
Matric+2+3.

to avoid confusion. For, while in some States, 10 means Matric (School Leaving Examination), in some others (to wit Maharashtra), 11 means Matric. After 1975, a uniformity will be reached and 10 will mean Matric over the whole country.

(b) We feel that the formula be accepted in the form
Matric+2+(2+1).

This implies that a candidate should be enabled to have a Pass degree at the end of *four* years after the Matric. Those who want a Honours Degree will study for *five* years after Matric. This arrangement is of a piece with what we have done for the LL. B. Course. Though the Bar Council recognises a *three* year LL. B. Degree, we have instituted a Degree (general LL. B.) after a two years' study.

There is nothing academically unsound in having a first (Pass) degree after 4 years from the Matric. The present pattern of the Bombay University is exactly the same.

Again, statistics show that some 85 per cent students stop their education with the first degree and do not proceed for the postgraduate studies. In their case, there is no point in adding one more year of study. For those good few (15 per cent) who wish to do higher work and research, an Honours degree of 3 years is the answer. That can be notionally equated to our present *previous* M. A. or M. Sc.

This arrangement will solve another problem. Entry to the Law Course can be given after the pass degree (Matric+2+2) as at present. It is not a sound proposition to ask a student to make his choice for law at the (Matric+2) stage. Bombay tried this experiment and failed. To try this experiment and add two years to the Law College is to my mind, a fantastic proposal.

(c) Where should the classes be held for the 2-year Pre-Degree Course i. e. the two-year Intermediate Course ?

In our view, these should be retained in the *colleges*. To start them in schools would require provision of resources in library books, equipment and teachers, whereas colleges have already got these.

Of course, those schools which have the higher secondary class at present (Matric+1) will continue to have it and they need not be disturbed. But, no school in future, be asked/allowed to open any post-Matric class.

(d) I am aware that with years, numbers will increase. To meet this problem, we should allow the growth of community/junior/intermediate two-year colleges in which vocational as well as transfer courses should be provided. The objective should be to provide places for all Matriculates who seek admission to the Intermediate Course. After the (Matric+2) stage, admission will be selective.

(e) Should we institute an Intermediate Board in addition to the present S. S. C. Board ? We do not favour it. Already there are two agencies—S. S. C. Board and the University) A third agency is superfluous. The Universities should conduct the examinations at the (Matric+2) stage. This will obviate financial difficulties.

(f) For the formulation of syllabuses for the (Matric+2 stage) vocational and transfer courses, Universities will set up a Board comprising its academic members as well as technical personnel from industries.

3. We are holding a meeting of all the Principals during the third or fourth week of May, 1973, to consider the issue.

With kind regards "

ADDITIONAL POINTS

A note on the pattern (10+2+3) in Educational Structure

Matriculation — School Leaving Examination.

We shall read 10+2+3 as Matric+2+(2+1).

The question is where the *middle* 2 years classes—Higher Secondary or Intermediate in old parlance—be run.

1. In Maharashtra, there are schools which have only the Matric Classes.

Some (mostly in Vidarbha and Marathwada) have (Matric+1) Classes.

2. I suggest that we do not disturb the schools at all. In future, Schools be allowed/advised to have only upto Matric Classes. In respect of the existing ones *status quo* will remain. This will obviate the need of making provision of library books, equipment of laboratories and of teachers in Schools.

3. These classes should be run by Colleges as in fact, as at present. Under the new pattern, one year will have to be added for Honours at the end of (Matric+2+2) stage.

4. If Schools are invited to open these two classes, there will be a flood of application from schools and it will be difficult to limit the number.

Further, the majority of students who leave education after the Matric, will be tempted to continue on in the schools. Government will have to take a heavy burden of finance in providing books, equipment and teachers in such (all) schools.

5. Question will arise whether teachers of these two classes should have salaries higher than those who teach up to the Matric. Today, as the classes are in colleges, they get lecturer's scales. If they are given in the schools, other teachers (up to Matric) will ask for the same on the ground of non-discrimination.

6. If these classes have to have vocational as well as transfer courses, schools will not be able to manage them. The fate of the multi-purpose schools should be a warning. No colleges can run these vocational courses. Therefore, a limited number of junior/community intermediate colleges be authorised to run vocational as well as transfer courses.

7. Thus, the two years after Matric be managed—

(a) by the present colleges, and

(b) by a limited number of junior two-year colleges.

The number of such limited junior colleges will depend upon the capacity of the nation to absorb the products of these vocational/terminal courses.

8. There need be no new Board for the (Matric+2) stage.

That will increase the financial difficulties all round.

(Sd.) G. S. MAHAJAN.