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aachgronnd
ThO world has watched for many years as the S outh AfriurL
educational system knnwn as Bantu Education collap sod. Lb11m"Ecu
star.; that fifty per ceni of thnse wh':- begin primary school dn
uni (:1nir qh even four yuars. mli.ch is considered the leVE' C15
baniu literacy. _ 1n i.he $e3ondary school system today. tits
general level of education 3 Fx.mdrl ed in the popular mluaan
that "no effective learning is tma! Jng plac ms". . I
The 'rural areas of SoutJI Africa. and especially the SD-ca
"homelands", suffer extreme deprivation in education. The sch.
that do exist teach Bantu Education - notorious for b :_
developed to "teach the natives to know their place" in an
m F. 5-1
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apartheid world. Children are condemned, under this system. to
fullfilling the roles cnvisag6d in the establishment of the
'native reserves" in 1913: to remain a pool of unskille 3
uneducated migrant labour for the "white"-owned factories and
miner. , - - 3 I
At the same time, the homelands remain ecunomically and socj.all:v
depressed. Hen go to urhan centres as migrant labour; women an&
children, the 61d and the sick are left behind, unemployed an Hi
unmmployable; With the high rates of unemployment currently in
South Afrj.can industry, many skilled workers are jobless, and
forced back to the homelzlnds: yet these too have no possible hope
of finding employment there.
tate alone must hm
It raunot be doubted. that the Smuth African S
sion in' terms 0;
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held responsible for the iuadaquate pro vi
quantity and quality of education for th majority of the
POPHIation; demands must be made on the sta to provide the
necessary resources to address the situation. At the same time,
itt must also be rebognised that the South African State'n
interests are opposed to the interests of the mass of the peSble
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The currex; government is ide-r- ogically .incapable of re
the educational crisis in the interests of the majoxity
pdpulation. t
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In these circumstances 11 is appropriate for communities to raise
the initiative whernvor ossible, to provide progle -: '
educatinn of their own uesign and under their own 00 ontrol,
meath their needs and leada effectively to accelerated 3:9-
creation, and helps map on: Lhe education of the future.
The K&Ngwane Project has bean developed within this context.
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Aims 1
The Kangwane Project is
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community-based instiz'. 7 gwane aime
education, developmeni and Joh-ereetian.
polymgcg-hnicgal educatu-vn and training based
principle and follow Um educatiu 11-wi't.
111.11'1'iuulnn.
The Kanwwane Project will cons-"JFJ. 0?: a main CE nLre and 6.1.53? Eilj-t
cenires, spread ,throughout the homeland. (See map). The
institutions making up the KL1 ngwane Project will be agencies of
development and produofinn enterprises as well, as places of
learning. Its far a fa, les and workshops will provide
opportunities for reinforc earning as well as for earning.
and may become future workp 01 some of its-shudenta.
then complete, the pzoie.t
main centre (which i
instructors), and for 30'
F
te' for 300 students at t)
3 upgrade teache a
.enta at each of the sub- cezitr em.
The pedagogy of he Kangwaue Project - its conient, it:
methodology and its linkages bel; ween th.cry and practice. - will
be ma ss- -directed aimed at minimising the divisions between
mental and manual work and maximising student enrolme 11L, designed
to educate heads, hearts and hands, to devel Up the different
talents of its learners as fully as possible, in t11.eir ow :1 and in
society a interes ate, and to cater for a range of intellectual
abilities and learning potentials. Using an exper11 men 1tal
curriculum and methodology, the project aims to develop an
education that prepares students to participate a5 fully
effective and cheative members of a new South frica
It is hoped that the Kangwane Project will serve a: a model 01
innovative education geared to development and job--creatio., for
replication in other parts of South Africa, and it will be -
monitored with this in mind so that necessary adjustments can be
made in the process of replication.
Kangwane has been chosen for the location of this model project
for several reasons. On the one hand, it remains one of the most
depressed homelands in the Ar-artheid system. On the other hand,
the current Kangwane Administration is willing to give support to
this approach, and is anxious to look for alternatives to the
Bantu Education system the homeland has now.
But paramount in the choice of Kanfwane as a location is the fact
that progreasive maaaebaaed structures have been strnngly
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established in Kangwana, through teacher and youth organisations.

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These organisationa, with dewP YU""5 i" 131% c.mmunivy and firm demncratic structures mi their own, are a main force behind the envisaged project, and must play -a determining role in its materialisatiou.

Accord.i.ngly. the preject in being developed in co-ordination with CO? -ATU 8 National EducaLiUn Committee and teachers of the National Education Union of Seuth Af'ica and communities in Kangwane, and has the approval of the Natienal Education Co-ordinating Committee and the AEC

Implemeniggjgigu: OrgEihlSniifJn and.,S.l2r..1..lc.t_lu:%.is_ . The Kangwane Project is currently co-sponsored and jbintly organised at three levels:' The Project Committee in KaNgwane has national links with 'progressive organisations (in par icuiar Cosatu'a National Education Committee, NEDCOH and NEUSA), and international educational support through the Foundation f0? 'Education with Production Internatj.onal.

The Project Committee is composed of representatives of HEUSA, COSAS. and the communities in which the suo-centree are in be located. The committee was formed in early 1990, andi has held a series of consultative workshops within Kangwane to ehplain ant develop the concept of the Project. The Committ 38 has begun to identify potential teaching staff and skilled workers from Kangwane who would lead production brigades and units. They have appointed a Project Coordinator, Sipho Suka i.

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In Cnn.iunction with NEDCC 'M fhe Project Connitte a commitment from the Kangwane homeland gove.rnme:1t the be donated for the project. lhis lanu has been identified (see attached map); final erreewe'h i p The curriculum and educational theory to be used in the project comes from the Foundation for Education with Preductign Inhernational. It has evolved through a number of educational Pr0jacts in various Front-line Statea, incldding Zimhaowc. Botswana, Lesotho, Zambia and Tanzania. The curriculum is outlined and.motivated in an accompanying booklet. s_ta.f_f__aud instruction

ihereever possible, the Project xpec; e to use Leaching And production staff from the target area.

To achieve this objective. the ?reiect will have to meke nee Of tea chefs, instructor3.and oihei personnel. who because of the

nature of apartheid education, may not always be adequately and appropriately qualified. Accelerated training and upgrading of teachers and instructional and other personnel will be provided through a mixture of in- service and sandwich courses, seminars, supervision on-the-job, study groups and distance education. The organisational structure of the Project will be designed to enable the best use to be made on-the-job of staff in training, during training.

The Project plans to implement this staff training through the system of sub-centres, served by a main, primarily upgrading and training centre. Every teacher from every sub-centre (and other Kangwane schools associating with the Project) will be required to spend one three-month term a year at the main centre. Staff of the main centre will also visit the sub-centres to conduct on-the-job-training. Each sub-centre will, in addition, have appropriately qualified, full-time facilitators present to assist the staff in their teaching. -

The students at the eub-centree will besides have access to support materials based on a distance education concept; including text-books, teachers' guides, study guides, tapes, kits, videos, slides and other audio- -visua cl materials,_ae aids to learning. A private radio network linking the main and subcentres will be set up to facilitate expert lectures and make effective use of such materials.

In order to replace teachers from sub-centres who will be attending their three month courses at the main centre, an additional 40 mainly academic will have to be employed by the project, who will themselves attend three month courses at the main centre and fill in for those who proceed to the caursea during their absence from the sub-centres.

The International Foundation for Education with Production (FEP International) will be offering crash courses to eacxez identified as the likely staff for 1the main. centre, and th senior staff likely to be chosen for the sub-centres. as well as other senior teachers nominated by the Kangwene Government later in 1990. These personnel will conduct crash courses late in 1990 and early in 1991 for teachers for the sub-centresr FEP International will moreover offer continuing crash courses and upgrading courses and is seeking to have pl iogrese ive Teacher Training Colleges and Universities introduce courses in the ewp curriculum as part of teacher training.

Wnrk_and, Study

The-involvementh of t.he 5!.udenf body in prgductive (and socially useful) work has pot tenfial e-: nomic and ped agogical (as well ax social) benefits. Apart from producing goods and services in the course of training, whie'l can meet their own needs ana _enerate income and so help meet the costs of education, students can also take part. whilst training. in the construction of buildings and the manufacture of plant, equipment, furnishings and fittings. and 50 reduce capital costs. These have proved to be effective self-reliant strategies elsewhere in accelerating the expans j.en ..u

,of educational and traininn (as vzell as employment) opportunities. .

The work-study princ iDl.B 3an also make possible double use cf facilities, especially alas grooms, and therefore reduce the number of classrooms needed for a given number of students, because half are working whilst the other half are in classrooms and vice versa. This has been an important feature of the Cuban .schools in the countryside.

The pedagogical benefits of the production linked to learning are maximised in the case of the adoption of the educat.i.on- with-production curriculum which Emphasisee dere elopment scientific and technological applications, management, envizonment an culture, and attar hes value to practical work n these areas. 50 stressing the links between theory and practipe.

Empqument_Genenation

The production enterprises :etabliehed by the "reject can. if v ${\bf 1}$

there is an expanding demand f0: their output, actua 1v ebeozb those trained in them 14 employees. But student: can else he ass isted the set up produ JOE .rs 'cooperatives which can become their future rorkplaces if other employment opportdnitieb are not available. To facilitate tlie, students must be involved in all aspects of production - technica.. organisational and managerial - during their education and training so that they can acquire the knowledge, skills and confidence to run such enterpriges after schooling.

Apprapniate_leehnolhgy

The adoption Of appropriate Ievele ef mechanised t:chnology .hal strike a balance het.ween maximal labour utilisatign at acceptable levels of remunexe tiun, and animn. coet-effective producfivitF-in another necessaly self-reliaut strategy, applicable to the development of the institutional and production infrast "uetu'e li reduced costs, as much as 10 ihe ongoing profitable production of goods and services.

The Role of Women

Women nften carry the worst burdens 9f the homeland system. _Thcy are expected to sustain families on money sent back by migrant Jahnur husbands: their potential to supplement this is limited to subsistence farming and little mare. The Project should provide women participants both with technical and managerial skille tn begin effective income generation in their own right. Women should be encouraged to join production units that are not those stereotyped as "women's jobs". such as car mechanics, plumbing, or construction. Yet at the same time, in chosing production uniLs for the project, skills and opportunities in areas traditionally more available to women must also be developed (given the "traditional" rural gender stereotyping of the area); such as textiles and clothing production Brigade ComnonentJ,Adult_Education and_LiLerac1 .Whilst nest young people learning at the Kangwane Project will follow the half-work.. ha f-study course, an option Hill be provided for youth who want Lo specialise in acquiring a craft skill. to enter a Brigade unit for which 25% of time will be allocated to academic and trade theory study 'on special syllabuses and 75% to craft skill training and production. In particular, and as a pilot project for this approach, a Builders Brigade will be set up as soon as possible during 1990, iv begin construction of the initial buildings that will be required for the Project to start operating in 1991. Community links

One of the key principles of a progressive approach to norastudy is that school and community should be closely linked and that students and their teachers should participate actively in the real life activities of the community, on a regular basis. Production, with all its various operations, is a major link-in the chain that binds school to its community and is a starting point for other links in the relationship. The school can play

Production, with all its various operations, is a major link-in the chain that binds school to its community and is a starting point for other links in the relationship. The school can play an important role in initiating community production enterprises and cooperatives and ether development activities, given the recervoir of skills and talents Which its professional and technical staff and students constitute. Such communi53 enterprises can, of course, he another source of employment for student graduates. Hareover, the Project will proyide adult education on the educatjon-with-production curriculum on spec: 3 syllabuses (as well as distance education on the H leVul curriculum), for workers and memberh Of the community dur-ng

earlyxevening hours. including teuhn cal Skill upgrading.

Si 23 'o_f _Rr,o.ie_ct_ _and. Student. En. 1:0. imeut. The main centre, which will increasingly become a teacher and instructor training centre with extension and support facilities for sub-centres and for schools in Kangwane associating with the Project, will when fully developed have the capacity for a student enrolment of 300 at any time, in ten classes of 30 students.

The academic staff will comprise 8 academic teachers whilst the necessary technical staff will be located mainly in the production units and paid from production income. The academic staff will each teach an average of 40 periods a week, a.workload of 26 hours and 40 minutes a week. In addition, each will have some evening study supervision duties on a rotating basis. The technical staff will be responsible for supervising students on. the job in production and providing training of a practical and theoretical nature.

Initially, the student body of the main .centre will comprise monitors, study group facilitators and teachers from sub-centres and other schools, as well as from distance education study groups, spending a term at a time, although an increasing number will be full-time trainee teachers.

Students at this main centre will follow the half-work, half-study approach. '

Each sub-centre will also have a student enrolment of 300 in 10 classes.

As in the case of the main centre, the half-work, half-study principle will be followed and each academic teacher will teach an average of 40 periods a week, a workload of 26 hours and 40 minutes a week: although they will all have additional duties such as supervising night studies.

In view of the work-study approach, five classrooms, one all-purpose laboratory and one all-purpose workshop will be required at the main centre and at each sub-centre.

Extra prowision in the form of a lecture room/theatre and a workshop for teaching aids production will be provided at the main centre.

In general, each sub-centre will have a selection of several different production activities. each under the separate technical management of competent technical personnel. The number

of production units at each will depend on resource availability and student labour requirements. Some 150 students have to be allotted to work on the different projects each morning and the other 150 each afternoon. In general, production activities such as construction and agriculture will absorb a considerable number of these, with smaller groups in the other units. The aim is to set up 8 sub-centres in addition to the main centre, over three to five years. Initially, whilst eub-centres are under construction, use may have to 'be made of temporary facilities and buildings belonging to sympathetic organisations, and hopefully the Kangwane Government. Timetahlingl_wnzkloade_and_39hedulee

As a model school piloting the integration of productive work with progressive education, the precise balance between the two must remain subject to on-going_evaluation by participants in the .project; including teachers, students, and production unit managers. Such scheduling must also take into account time spent on community projects as well as production units. . A projected schedule of work-study, for students at the senior secondary school level, probably of between 15 and 20 oyears of age, is outlined here.

As currently envisaged, students will be expected to devote 40 hours a week (or 8 hours a day) to work and study. The institutional day will start at 7.30 a.m. and continue until 5.30 p.m., with two half hour (mid-morning and mid-afternoon) tea breaks and a lunch break of one hour. Half the students (in all classes) will devote their mornings to study and the other half to productive work, changing roles in the afternoon. In addition, students will be expected to work one weekend in four on essential services.

Moreover it is recommended that the academic year should be forty weeks, which would normally leave twelve weeks for holidays. It is recommended, however, that every student should have to spend two out of the twelve weeks alyear in intensive production to maintain essential services during holiday periods, and that the learning body at the main centre and the sub-centres should be divided into groups to work'in rotation alongside the production management and labour force during academic holidays. (The production staff will have different and shorter holiday arrangements from academic staff). Academic staff will be expected to attend courses during the academic holidays.

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This arrangement will provide 20 hours a week of academic work (divided into 30 forty-minute periods), over 40 weeks a year, in athree year course. . - x

Periods will be allocated as follows, assuming use of the cote FEP curriculum (see syllabuses in accompanying booklet): Each period will be of 40 minutes duration.

Periods & Hours Per Year

Science 4 160 106 hrs 40 min.

Mathematics 4 160 . 106 hrs 40 min.

Cultural Studies 4 160 106 hrs 40 min.

Development Studies 3 120 80hours

Environmental & Social Studies 3 120 80 hours

Fundamentals of Production 3 120 80 hours

Communication - English 3 120 - 80 hours

Siswati , 3 120 80 hourss

. Introduction to Professional

Knowledge or Trade Theory ,1,3 120 80 hours 30

1200 309 hrs

Whilst some may feel that the time allocation for academic lessons is inadequate. it should be stressed that students will spend some time on evening study, preferably one hour a night (probably between 20 and 21 hours, after supper) and have access to distance education materials as study aids. It should be remembered, besides. that the student participation in all the various operations related to production. will provide a considerable practical basis that should reinforce learning. As is argued in the Introduction to the enclosed ewp curriculum booklet.the diverse content of the curriculum maximises the learning potential of the linkage of work and study, because so much of the realities of productive life find their reflection in the curriculum. In addition, the point has to 'be made that the education with production curriculum is an integrated one, reflecting a holistic approach, with a great deal of reinforcement of learning between and amongst the different eyllabuses. '

Physical training and exercises will be offered on a voluntary basis to early risers. Staff members at the sub-centres will be trained at the main centre in this activity by a trained teacher and will be expected to share the task for extra pay. At the end of the day, 30 to 40 minutes will be devoted between 17.45 and 18.30 to sports practice. Weekends, other than the one in four devoted to essential work. will be free for sports, club activities and relaxation.

The Physical Trainer at the Main Centre will also be Sports Master andl will teach physical training and gymnastics and facilitate the introduction of diversified sporting activities throughout the Project. To this extent he will, like the extension staff at the main centre; make regular visits to the sub-centres, to conduct courses at each.

Whilst the sub-centres will not be boarding schools, some boarding facilities might be provided for those students who live at great distances from the sub-centres, to facilitate their participation in the productive work programmes, the evening study arrangements and in physical training. sports, club and recreational activities. '

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Production units must be chosen for their educative as well as income-generating capacity, and where possible should be taken into account in academic work. Productive work will entail a blend of manual and mental work, the use of the mind and the -intelligent use of the hands, the development of craftsmanship. the development of finger skills and the development of sound working attitudes and non-exploitative working relationships. Students will gain a pride and satisfaction in their work. (All the learning domains, the cognitive. the affective and the psychomotor will be reinforced in a process that should be satisfying and challenging. This will be particularly so because the level of mechanisation chosen as part of appropriate technological application will not require either excessively heavy manual or repetitive work. This alternation of 4 hours each of work and study, with adequate breaks in between, should by providing variation, offer stimulation rather than exhaustion. E:9ductixe_andlageiallx_useful_Aqtixities

The choice of productive activities will depend to some extent on resource potential and availability in the areas served by_the main centre and sub-centres of the Project, but perhaps more heavily on projections of demand (which of course should not be static), and production units may vary from sub-centre to sub-centre accordingly. Ultimately, decisions on which activities will be incorporated will depend upon evaluation by community EfouPs and project participants, jointly.

Given actual experience add studies undertaken elsewhere in socio-economic conditions not dissimilar from Kangwane, as well as on the basis of what is known about the territory, it is felt

that there is enough information tb start productive activities in some of the following fields, which are not dependent on special local resource requirement or exceptional conditions: afforestation, seedling nursery, and timber utilisation. arable agriculture (adopting Permaculture principles)s conservation, animal husbandry, game ranching. fish farming and beekeping, dam and weir construction, road construction, brick and tilemaking and ceramics and glassmaking, monumental masonry, tanning and leather goods production, small hotel management and catering, food processing, retail trading, textile manufacture. 'cotton and wool spinning and weaving, milling, light engineering, vehicle repair and maintenance, autobody repair (panel-beating), engine reconditioning, printing and binding, construction, carpentry, plumbing. electrical wiring, and electrical end electronic appliance repair. ;. 7

Productive activities are being considered in other fields but information is still to be gathered, These activities would only be introduced in the third and later phases of the project gt although rough estimates of likely costs are included in the .project coatings for these phases. These will be reviewed as the project develops. The fields being considered include: small scale mining and mineral processing (including limebqrning and a mini-cement plant), essential oil distillation, and chemical manufacture, biotechnology. electroplating, engraving, renewable energy utilisation and plant manufacture, soapmaking, and handmade paper production. Further studies and consultations currently being undertaken by FEP International may result in the identification of additional activities. 1 t Computer studies will be offered to selected students working in the relevant units as a professional or technical study option. For this purpose a Computer studies teacher will be employed at the main centre, who will tour the sub-centres. In addition to these productive activities, students may choose

In addition to these productive activities, students may choose to take part in service activities like participating in literacy campaigns, working in the early childhood centres, teaching in pre-primary and primary schools and acting as study group leaders in adult and distance education, working in the accounting and 'administration offices,' and the libraries, of the institutions (which will all have word processing and some computer facilities).

There will be a need to set Up management units both at the main centre and the sub-centres to service the production units in all aspects of management and these will .have a core body of specialist students but will also admit other students for exposure to management practices, in short courses desigded to back up the study of Fundamentals of Production.

All productive activities will be backed up by appropriate courses in technical studies on syllabuses which FEP International is presently developing with qualified experts. These subjects will be examined and the results incorporated in the' general certificate of education to be issued by the University of Cambridge Syndicate. Each course will be conducted by an appropriately qualified instructor.

An educational radio network and a weekly newspaper will be run from the main centre, with taped inputs in the case of the radio; and written contributions and reports in the, case of the newspaper, from the sub-centres. This can also be- a student productive work option and courses in elementary Journalism and broadcasting can be taken as the professional course options. These service units will of course need to generate income, and efforts should be made to gain permission to enable the radio to broadast commercially and seek- advertising. The newspaper can become a Kangwane and Lowveld regional paper in English and Siswati and seek advertising. Both the radio and the newspaper will each need a full-time professional as technical or production staff, probably at the main centre.

In addition, a full-time librarian will be required at the main centre, who will also have to spend time regularly visiting the sub-centres to conduct courses. Elementary librarianship can be taken as a technical option. '

Budget and Phasing of Project

Project memoranda showing budgets for capital requirements and annual production expenditure and income are attached together with capital and income and expenditure estimates of the academic components of the project.

The Builders Brigade, will start as soon as possible (during the first half of 1990) to erect the initial buildings required at the main centre and at as many of the proposed sub-centres as possible so that a start can be made in these (and other baildings) in 1991.

The initial intakes at the sub-centres will be students entering a three year senior secondary M level Cambridge course in the ewp curriculum. These will be selected through admission and aptitude tests from second year junior secondary students. The total first intake will be 100 at each sub-centre. It is also

intended that any underutilised facilities at the main centre will be used to take in additional senior secondary students or fulltime teacher trainees. Not more than 10% of urban residents will be permitted to enrol as full time students. 'Facilities can be used in the evenings for distance and adult education students.

A later stage of the project. to cover Junior secondary courses. will depend on progress in developing the ewp curriculum. a production plan and technical studies courses at that level and identifying a suitable examining authority. Further development of the project at primary level will again depend on progress in formulating acceptable primary syllabuses related to -the ewp curriculum at the higher levels, Position papers on the sponsors's approach to ewp at these levels are attached. 1' Management -

It is generally desirable that the management of the academic' components of this proposed' institution should geflect the objectives of the centre as a whole in encouraging democracy and student initiative, and should be the same in the workplace as in the school. , ."

It is proposed, on an experimental basis, that the Board of this innovative Project should represent all interests involved. -It should, thus, comprise representatives of each of the following: Parents, Teachers, Workers. Students, Management of Production Units. the Kangwane Government, other community leaders, Traditional authorities, COSATU and SAFEP. 'Eeeeibilitx- S.E.Idiee

'If feasibility studies are required for any component of the project, the terms of reference for such study should be drafted bytthe Coordinator designate in consultation. with the parties that have been involved in conceiving and promoting the project and any donor involved. Attached is a rough outline of points that might be examined in a feasibility study.

The composition of any feasibility study team should be agreed between the sponsoring parties and the major potential donors. Einancing

This concept paper, together with budget outlines, phased annual development and costing outlines - including an initial budget

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for launching the project, to be3 raised in 1990 - and ether attachments 1noted earlier, comprise the substantive project proposal for submission to donors. - V9

Certain basic assumptions on lwhich-the financial estimateshahe based are as follows:

- 1. The Kangwane Government will be expected to finance some ef the capital and recurrent expenditure relating to the academic . component and more especially teachers salaries; $^{\prime}$
- 2. Students as well as student "teachers will be expected to -contribute to the costs of their education and upkeep through their productive unit activities; student teachers -will Cbe expected to pay for board and lodging while at the main centre. _ VIf the student labour earnings fexceed tagreed contributions; a. payment approved_ by school authorities and students for personal expenses will be made and 'the balance kept in gtrust ,forethe student until completion of the etudies. 79' tan. Financial Control f;. . Ff'hf

It is proposed that the organisations which have taken the main '1 initiative in raising the funds for _this project jshould appoint an interim financial committee to receive and administer the funds until the management, accounting Vand auditing structures of the project are in place. 'ldaflff 25 June 1990