22.3 regional workshops where it was possible to bring together subject specialists with experienced writers/editors within their own discipline.

We recommended also that the Secretariat build up its knowledge of distance-teaching specialists, especially in the south, who might be able to undertake training activities and encourage them to join the CFTC register of consultants.

Chapter 4: THE NEW COMMUNICATION TECHNOLOGIES

23. Forty years after the building of the early computer ENIAC and twenty years after the first educational exchange by satellite, it was still unclear as we met how far the much heralded information revolution was solving or aggravating the problems of the south. One participant, from the south, warned us that if we stuck with the donkey cart we would have to put up with the manure. Others warned us as tellingly of the problems they faced in maintaining equipment for today's technologies.

24. It made sense to consider together the use of satellites and the use of computers in higher education: satellite links made possible communication networks which multiplied the power of even the smallest microcomputer. Both kinds of technology had been, and were being, developed principally for non-educational purposes and, for both, it was important that the voice of education, and of the public interest more generally, was heard as these developments went on. It was recommended that the Secretariat, in liaison with other co-ordinating agencies, should support measures to ensure that educational interests were taken into account as new communications technology was developed. In examining the use of computers and satellites it was, however, convenient to review experience separately. (We noted that other forms of technology, such as the use of video cassettes and video discs, had potential for distance teaching but these presented fewer fundamental difficulties than either satellites or computers on which we concentrated our attention.)

25. Two universities (of the South Pacific and of the West Indies) could report first-hand experience of the use of satellites. There had also been experience of education by satellite in India through the SITE experiment, but university links and exchanges had played little part in this. The University of the South Pacific had since 1972 made use of an American experimental satellite to link the main campus at Suva with university centres in other islands, in order to provide tutorial support to distant students. Satellite links were also used for administrative exchanges. In the West Indies the main use of the satellite network, which used commercial channels, was to link the separate campuses of the university. As in the South Pacific the network had been used for administration and for teaching but most of the teaching was for regular degree and certificate programmes, with a limited number of continuing education courses.

26. While these satellite links were important, particularly for archipelago universities, problems remained. Detailed costings were not available but the cost of getting access to satellite networks was a burden on both universities. For USP access to the ATS - 1 satellite for

tutorials was limited to a period from 6 p.m. to 8 p.m. (Suva time) from Mondays to Fridays and 2 to 3 p.m. and 6 to 7 p.m. on Saturdays. Other times were available for administrative purposes and for continuing education. And, while the satellite links might ease communication between campus and university centre, this was not the same as reaching a student who might live a two-hour journey across an island from their university centre.

27. Computers were being used for three purposes in distance education. First, they were being used to help managers in a role which did not differ fundamentally from their use in university (or commercial) management. Second, a number of institutions were using them for the production of teaching material, using word processing programs. In some cases this eased the co-operative production of materials at two sites, where both had compatible hardware and software. Third, computers were beginning to be used to teach students at a distance. In theory, it was possible for students to link their home computers with a university mainframe computer and so achieve long-range, two-way, communication of a highly sophisticated kind. There was, however, little practical experience of this so far.

28. Two broad problems, applying to both computer and satellite developments, confront us. The first concerns the information gap between the north and the south, and the extent to which the new technology might widen or narrow the gap. The second, which is related, concerns the production of teaching material or other software for use either on computers or through satellite broadcasts. We raised, but did not pursue in detail, questions about the production of software which reflected the interests of the south rather than of the north - a theme which lies behind the discussion of co-operation in the next chapter. The issues here are likely to become more important as direct broadcasting satellites, which require smaller and cheaper ground stations, come into use.

29. In considering these and other issues concerning the new technology it is useful to distinguish between current educational experience of the technology, technical possibilities, and policy issues. Bearing these distinctions in mind, it was recommended that the Secretariat should develop a capacity to inform governments and educational institutions, especially of small states, of policy issues concerning the application of communications technology to education.

Chapter 5: MOBILITY OF PEOPLE, INFORMATION AND MATERIALS

30. The long history of co-operation and exchange between Commonwealth universities formed the backdrop to our meeting. One of our intentions was to explore how far that tradition could be adapted to co-operation in distance education. We also had a specific concern with the mobility of students and wanted to see how distance teaching might increase, or make more readily and effectively available, opportunities for students to benefit from distant institutions. As expenditure on study abroad throughout the Commonwealth was estimated at $1.6 billion p.a. it was important to investigate the potential of moving information or materials as well as people.