

SUMMARY OF COUNTRY AND INSTITUTION PAPERS

Botswana

It is Government policy to encourage in-service training for technical education staff and every effort is made to provide facilities to enable serving technical teachers to study for internationally recognised professional qualifications. A member of the Botswana Polytechnic staff is designated as the Botswana representative of the City and Guilds of London Institute. Tutorial classes held at the Polytechnic in order to assist full-time technical teachers to carry out private study programmes for professional qualifications. In addition, every endeavour is made by the Government to obtain third country training awards for serving technical teachers who show potential and a determination to advance within the technical education system.

The need for well educated and trained technicians at basic, intermediate, and advanced levels is recognised by the Government and this is reflected in recent actions to improve the remuneration of technical teachers and instructors. The Salaries Review Committee has drawn attention to the loss of technical instructors, who have received overseas training, from the educational system. Recommendations for a separate salary scale for technical teachers and instructors are being considered.

A three year full-time course for training school leavers to become secondary school woodwork teachers is being offered and the trainees spend the first two years studying for the City and Guilds course 834 for carpentry and joinery, followed by a third year to study for the City and Guilds course 730 - Further Education Teachers Certificate. The Polytechnic is heavily dependent on expatriate teaching staff, but efforts are being made to increase technical teaching opportunities for nations by providing overseas training for Polytechnic students. Ways to provide training for such students within the country are being actively investigated. A vigorous programme to up-grade serving national technical staff through overseas training awards is in existence.

The Gambia

The Technical Training Unit at the Gambia College offers a technical education course within the College's primary teacher education programme. The main intake to the course is from technical students who have successfully completed two year courses at the Vocational Training Centre, leading to City and Guilds Certificates in mechanical engineering craft practice, welding and fabrication, automobile mechanics and woodwork.

- (a) teach pupils in the 12-16 age group the practice of simple craft, in the method "learning by doing".
- (b) develop a creative ability in students.
- (c) convince pupils of the worthiness of practical work and the satisfaction to be gained through handwork.
- (d) give school leavers who wish to enter a vocational training course a sound foundation for a career.

The course content includes the major subjects of metal work, woodwork and technical, together with a number of other subjects under a general heading of Methods (technical). In the metalwork and woodwork courses, emphasis is given to the manufacture of simple utensils and garden tools. The technical drawing course encourages students to produce teaching materials for later use in schools. Teaching practice is undertaken during the third term for a period of six weeks under the close supervision of lecturers. During teaching practice the lecturers and students hold regular consultations to improve the trainee's performance. The Gambia College organises annual in-service training courses for qualified teachers, in collaboration with the Department of Education.

Ghana

The three Polytechnics in Ghana, at Accra, Kumasi and Takoradi were found around 1954 as technical institutes. In the early years of operation the institutions relied heavily on expatriate staff but, by 1964 most of the expatriate staff had been replaced by nationals. Technical teacher training within Ghana was established in 1960 at the Kumasi Technical Training Centre, later to become the Kumasi Advanced Technical Teachers College.

There are three types of technical teachers in the Ghana Education Service:

- (a) technical/vocational subject teachers.
- (b) teachers of industrial arts subjects, woodwork and metalwork.
- (c) business and commercial subject teachers.

The general policy at national and institutional levels is that staff must be adequately qualified and relevant industrial or commercial experience before appointment. In practice it is extremely difficult to attract and retain staff from industry due to disparate pay scales, and some staff have to be recruited without the required industrial experience.

The Ghana Education Service is responsible for the recruitment and training of teachers. All new entrants are selected by interview and successful applicants for technical teaching posts are given an induction programme at the Advanced Technical Teachers College. After serving one year, or more, the technical teacher may qualify for the technical teachers certificate. Staff development officers are appointed within the Polytechnics to help new and inexperienced teachers by means of informal meetings and seminars, to discuss problems and identify training needs.

As an aid to staff development in the Polytechnics, all staff are actively involved in the administration of the institution through service on committees. In addition, specific administrative personal duties are assigned to individual teachers as part of their personal staff development. Staff are encouraged and given opportunities to refresh industrial experience by means of industrial attachments of between one and three months. Appropriate allowances are given as an inducement to undertake such attachments.

Staff evaluation is carried out through a system of staff appraisal reporting, initially by heads of department and finally by the Principal. Annual confidential reports on all staff are submitted to the Manpower Division of the Ghana Education Service. In addition to this formal appraisal, students are asked to submit unbiased reports on teaching staff, using staff evaluation forms. This information is used in the overall assessment of staff and the identification of training needs.

The main centre for in-service training is the Advanced Technical Teachers College, which has excellent facilities for this purpose. The College is developing a resource centre for use by staff from polytechnics and other institutions. Technical education staff have access to the facilities at the Institute of Education Planning and Administration, University of Cape Coast.

Kenya

The Kenya Polytechnic and the Mombasa Polytechnic are institutions of further education set up by the Government in 1961. The polytechnics offer technical and commercial courses, mainly at technician level, to provide skilled personnel for industry, commerce and the public service.

Since 1961 the polytechnics have received major inputs of technical assistance towards staff development from international agencies in the form of short-term visiting experts and counterpart training. The success of these training programmes is reflected by the number of Kenyans now in post. In 1967 the Kenya Polytechnic staff of 77 included 69 expatriates; by 1979 the establishment of 177 included 114 Kenyans. The need for expatriate staff in specialised areas is likely to continue for some time, but by 1985 it is expected that expatriate staff will be phased out at both polytechnics. Government scholarships and awards offered by international agencies are an essential part of staff development programmes in the polytechnics and a total of 50 awards are granted each year.

At the Kenya Polytechnic a staff development committee advises the Principal on staff training needs. Members of the Committee identify general and specific training needs in their own departments, particularly those related to technological change.

Induction training for new staff is considered to be a vital component of staff development programmes. Some new entrants to the polytechnic staff are recruited directly from institutions of higher education and industry and they often lack practical skills and teaching experience. The loss of experienced staff to industry and public service creates special difficulties in maintaining a good balance in the technical teacher force and reinforces the need to develop new entrants in the shortest possible time.

Lesotho

Before independence staff development and training for technical teachers received little or no attention. However, following independence a number of students from the Lerothdi Technical Institute were sent for teacher training in Israel and this became an established pattern for the development and training of staff at the Institute. In addition, some students were sent to Britain in order to obtain technical qualification, such as the City and Guilds Full Technological Certificate, and also Certificates

in Education.

Bi-lateral aid in the form of expatriate lecturers, included the use of counterpart training. For example, national counterparts have received training in the Federal Republic of Germany, after which they rejoined their German counterparts at the Institute. Industrial enterprises in Lesotho carry out training for their staff, using the most modern methods and techniques and the Institute staff are exposed to and benefit from such training.

In order to carry out staff development in other technical institutions in-service courses are arranged in collaboration with the British Council and visiting experts visit Lesotho to offer training in teaching aids and materials, and technical drawing. It is the firm policy of Government to encourage international contacts through exchange of ideas, information and staff attachments in order to promote staff development in the technical education institutions in Lesotho.

Malawi

The main centre for technical education is Malawi Polytechnic, which offers degree and diploma courses as a college of the University of Malawi, and technical, craft and secretarial courses under the auspices of the Polytechnic Board of Governors. In the past the Polytechnic has depended on the employment of expatriate staff, but a firm policy to develop national staff is steadily redressing the balance. Nationals appointed to lecturers posts are required to have a good first degree, but in some subject areas, notably engineering, it has been necessary to appoint diploma students as Staff Associates. Most lecturers have some industrial experience and it is a firm policy to encourage staff to extend such experience.

Policies on individual and general training needs are reviewed on a continuous basis by Heads of Department and close liaison is maintained between the Heads and the Principal on staff development programmes. A system of continuous assessment, coupled with annual confidential reports is used to identify training needs, in addition to providing recommendations for remuneration and promotion.

In 1978 the Polytechnic held a staff development workshop, assisted by staff from the Huddersfield Polytechnic. Since that time review sessions have been held and a further full workshop is planned. Specialist workshops, for example on language laboratories are planned to take place, with assistance from UNESCO and the British Council. The Polytechnic maintains close liaison with international agencies, associationa dn overseas technical institutions in matters related to staff development and training, as part of an overall policy to improve standards of performance.

Mauritius

Technical and vocational education and training is offered at two Industrial Trade Training Centres. At present there is no institution for training technical teachers and instructors and trainee staff are sent overseas for further practical and theoretical training provided by international agencies. The training of national counterparts is carried out through fellowships offered by the ILO, tenable in Britain and France. A Central Training Unit is being established in collaboration with the World Bank, in order to provide teacher training.

Nigeria

New entrants to the Polytechnic teaching force are expected to have high-level qualifications from universities, polytechnics or advanced vocational training institutions. The level of initial appointment depends on the length of post-qualification experience. Most Polytechnics face competition from industry in recruitment of staff and the loss of lecturers to universities and industry is a constant problem.

Some form of staff development has been established in all Polytechnics and there is an increasing attention to the need to establish formal, but practical staff development schemes to improve the performance of staff. Heads of Polytechnics have identified the major needs as, (a) industrial/professional work experience; (b) teaching experience; and (c) pedagogical and management training. The Council of Heads of Technological Institutions (COHEADS) has, since its inauguration in 1976, made major efforts to improve staff development in Polytechnics and Colleges of Technology through workshop, seminars and co-operative activities with overseas agencies and institutions. A recent example of this is a visit to Nigeria by a staff tutor from the UK Further Education Staff College, organised by the National Board for Technical Education, COHEADS, and the British Council. Some Polytechnics have established links with similar institutions overseas, with the purpose of improving staff training through exchange visits and short-term assignments to conduct training sessions.

The need for staff to undertake consultancy work to enrich experience is universally recognised and Dr Igharo, Chairman of COHEADS in his paper "Providing Adequate Staff For Nigerian Polytechnics and Colleges of Technology" sets out a case for establishing Consultancy Units within institutions, in order to formalise this important aspect of staff development.

Nigerian Polytechnics have played a major part in the formation of the Commonwealth Association of Polytechnics in Africa and will continue to make a substantial contribution to the on-going work programme of the Association in regional activities to improve staff development in member institutions throughout Commonwealth Africa.

Uganda

The origins of Uganda Technical College go back to 1928 when the Kampala Technical School opened. The school offered carpentry, building and tailoring courses to 60 students. The present College is a large technical education institution with a population of 800 full-time and 1200 part-time students.

Lecturers are recruited from three main sources (i) Universities, (ii) Industry, and (iii) Government department. Because of a scarcity of national staff with technical qualifications, some lecturers have been appointed without the requisite professional training. However, these entrants are placed on a two year probation period and are assessed by the Inspectorate before being confirmed in post.

In order to balance industrial experience with professional qualifications the College has a comprehensive staff development programme. Under this lecturers undertake industrial attachments on full salary. This form of staff development is augmented by consultancy work by staff and teaching loads are arranged to allow seven hours per week for external consultancy.

The number of expatriate teachers has dropped steadily over the last ten years. In 1969 the staff establishment included 51 expatriates and 17 nationals; by 1980 the respective numbers were 3 expatriates and 80 nationals.

In addition to general pedagogical training lecturers need to develop knowledge and skills in examination techniques and educational technology and the College staff development programme attempts to meet such needs.

Zambia

The main training resource for technical teachers in Zambia is the Technical and Vocational Teachers College, built in 1975 with assistance from the Swedish International Development Agency (SIDA). The College's main objective is to meet the growing demand for skilled and qualified teachers in commercial, industrial arts and technical subjects. The College offers a two year course divided into three main areas:

- (a) Skill training. A fourteen month course devoted to intensive skill training.
- (b) Industrial practice. Students are sent to selected companies for industrial experience to augment practical skills training and to provide an insight into the needs of industry. During this period the College lecturers visit students on their industrial attachments.
- (c) Teacher training. Students undergo professional training appropriate to technical education.

The College also offers a one year course for teachers who will serve in the trade and technical institutions.

The College operates a system of continuous assessment consisting of assignments, tests and research work. At the end of the course the students final grade is determined by a combination of continuous assessment and final examination marks.

Certification is carried out in a number of stages:

- (a) An interim Certificate, indicating final grades in each subject.
- (b) An interim Teachers Diploma underwritten by the National Examinations Council of Zambia.
- (c) A final Diploma after two years of successful teaching experience. The affiliation of the Technical and Vocational Teachers College to the University of Zambia is now in process and in due course to certification will become the responsibility of the University.

The College also offers several forms of training for industry and the educational services:

- (a) Training for personnel employed in the parastatal and private sectors.
- (b) Seminars for senior staff in the secondary education sector.
- (c) Refresher courses for serving teachers in subjects such as equipment care and maintenance.
- (d) A one-year up-grading course for serving secondary teachers.

Plans are being made to extend the range of courses offered by the College, for example, advanced courses for Principals, Inspectors and Supervisors. Subjects in these courses will include school administration, personnel management, organisation and supervision.

The Department of Technical Education and Vocational Training (DTEVT) is responsible for all technical and vocational education within the country. In addition to organising national courses for technical teachers, the Department also identifies and monitors overseas courses. Key training needs are:

- (a) Classroom and Laboratory work in technical subjects.
- (b) Industrial attachments.
- (c) Attachments to technical institutions for supervised teaching practice.

The Department recommends that an overseas course should lead to an award of a recognised diploma or certificate. Courses leading to university degrees are not always appropriate to the technical training needs of the Departments teaching force.

Plans are being made to use the facilities at the Polytechnics to up-grade the qualifications of technical teachers who have not attained a teaching diploma. It is considered that the need for post-diploma studies will continue to be met by overseas courses.