

attempting to do practical work during the extent of one short teaching period. The consequence is that few of the students are really actively engaged, and the confusion entailed in distributing and collecting the apparatus and the wear-and-tear on the laboratory equipment are out of all proportion to the value derived from the lesson.

In view of the staffing-allowance made, and of the fact that junior and intermediate classes are taught for the most part in units of forty pupils or thereabouts, there should be no insuperable difficulty in arranging half classes of not more than twenty pupils for practical work, at any rate in the larger schools. If this were done the limiting factor would then be the amount of laboratory and workshop accommodation available, which would not in all cases be adequate.

In the workshops the chief problem is to find a balance between factors which are to some extent in conflict with each other; these factors are the maintenance of the interest of the pupils, the cultivation of an appreciation for and an increasing power of obtaining accuracy, and an output of reasonable quantity, quality, and utility. Not in all schools has anything like a reasonable balance yet been attained.

### III. MANUAL TRAINING.

#### ATTENDANCE.

An increase in the number of pupils receiving instruction in woodwork, metalwork, and domestic subjects under special instructors at manual-training centres has again to be recorded, the number for 1929 being 45,493, as compared with 44,265 for the previous year. Included in this total are 5,303 primary and secondary pupils from junior and senior high schools. Where possible, opportunity is given for attendance at the centres of pupils from private schools, and during the year some 3,563 boys and girls from such schools were so provided for. Instruction in advanced nature-study and elementary agriculture, involving practical work in school gardens and experimental plots, was taken by 50,267 pupils of Standard IV and upwards in primary and district high schools. Instruction in other science subjects, such as dairy science, physics, and chemistry, was given to secondary pupils of district high schools and also to 3,492 primary pupils of such schools as had no facilities for training in elementary agriculture. For the purpose of capitation grants all of this science work, which is conducted under the supervision of the special instructors, is classed under the general head of "Manual Training."

#### STAFFING.

For the conduct of instruction in the manual-training subjects referred to in the previous section, 154 classified specialist instructors were employed by the various Education Boards. In these numbers there has been an increase of eleven. Included in the total are twenty-three instructors engaged in the supervision of the teaching of nature-study, elementary agriculture, and science generally; in this number there has been no change for some years past. In some of the technical schools where appropriate workrooms are not fully engaged throughout the day, manual-training classes in woodwork, metal work, and domestic subjects are accommodated, and the services of forty-four teachers on the full-time staffs of such schools were so made use of for varying periods during the year. In only three centres were part-time instructors employed for ordinary manual-training subjects, but 494 local part-time teachers were engaged in needlework instruction in small schools which had no women teachers on the staff.

No great difficulty was experienced in filling vacancies in the ranks of teachers of domestic subjects, there being a sufficient supply of graduates and holders of diplomas from the Home-science Department of the University of Otago to meet the normal demand. For the provision of men teachers of handicraft no system of training in any way comparable with that at Otago University for teachers of domestic subjects is yet in operation, and, for the present, reliance must for the most part be placed upon the keenness which induces practical men to come over from the trades and take up the greater work of the instruction of the young and the adolescent. It is satisfactory to find, however, that almost invariably the love for the work of instruction is so strong that practical psychology soon becomes a matter of first-rate importance in the eyes of such men, with the result that the development of their powers as teachers is steady and sound. In the city centres of Auckland and Christchurch young men with trade experience are engaged as assistants, and under the direct guidance of the principal teachers secure a very satisfactory training in teaching methods which enables them to fill appointments in the field with greater confidence and facility. As the scope of manual training increases and developments bring about a more intimate relation between this feature and the ordinary work of the school, it will probably be found necessary, as indeed it is now seen to be desirable, to make some provision for college training in pedagogy for the teachers of handicraft.

At the August examination for the Handicraft Teachers' Certificate, twenty-one candidates presented themselves. Of these four obtained partial passes in Section I, three obtained partial passes in Section II, one passed in Section II, and one completed the whole examination, whilst twelve were unsuccessful. Of the three candidates who obtained partial passes in Section II one was also successful in completing Section I, the others having completed this section in a previous year. The issue of this certificate was first provided for in 1925, and the full examination has now been passed by three teachers. It necessitates three years' general and special study, and its requirements include a demonstration of skill on the practical side.