

doing so the fact must be considered that it will be ever so much more difficult for the practising engineer to fill up any gaps in his general scientific education than to develop his knowledge of his own particular profession.

For this reason more stress must be laid upon diminishing the scientific education as little as possible; upon transmitting the principles of technical knowledge rather than upon a comprehensive teaching of technical details. Above all we must convince ourselves that the difficult tasks of the next few years can only be fulfilled by a far-reaching individualization of instruction. In order that such instruction will be suitable to the possibly very various stages of knowledge at which the young men returning will have arrived, each individual one will have to be assisted in filling up the gaps in his knowledge. In view of the want of uniformity, already referred to, in the preliminary education of the students, instruction by means of lectures alone will not suffice. The method of instruction used in normal schools must absolutely be adopted. Sufficient appliances for teaching must be maintained to even a greater degree than hitherto for laboratory and demonstration work. The necessary suitability of the instruction, together with the assurance of a thorough foundation, can only be attained by the provision of sufficient teaching staff. The chief professors must be provided with a sufficient number of qualified and experienced assistants and teachers. In the interest of a necessary rapid economic resurrection we must not shy at the expenditure necessary for this purpose.

Freedom for Teaching Staffs

Owing to the varied nature of the problems to be solved after the return of the young men, general guiding lines cannot be laid down. The teaching bodies of the technical universities and of the mining schools must therefore be allowed considerable freedom of movement during the transition period, in order to be able to decide in each instance how best to combine general interests with those of the students and of the technical schools.

The roads which lead to this goal may, of course, vary according to the quality of the available teaching staff, and of the students. Conditions laid down by the authorities for normal times will not be able to be strictly complied with during the transition period. It is, therefore, urgently pleaded that during a transition period of, say, two years, the technical universities and mining schools be permitted, on application being made by them, to suitably amend the conditions previously ruling. Advantage will have to be taken of such permission with reference to the services rendered to the army by the students when deciding the question of foregoing the twelve months' practical course, in some sections, and again when deciding questions concerning the period, the division and extent of the examinations, the periods over which the studies are to be spread, etc. By carrying out the measures here suggested very valuable experience will undoubtedly be gained which might be of the greatest service as a foundation for suggestions for more considerable university reforms later on.

Experts to Decide Careers

Further, the interests of the students could be considerably advanced by detailed, carefully thought out discussion by experts as to their professional careers. Even in normal times this would be so valuable that no section of the universities should be without it, but during the transition period, what with selecting a profession and discussing as to the most suitable form of studies, it is absolutely indispensable.

Sad to say it, but the fact must be faced, that the very great movements of fortune and losses during the war will render the continuation and completion of their studies very difficult or even impossible to many students. Assistance hitherto given by remitting tuition fees and in the shape of bursaries will be far from sufficing to ameliorate the very embarrassed state of many young men who are valuable for the further development of technics and industry. It may be assumed that the various governments will also be prepared to assist as much as possible in this direction. In this connection regulation and greater centralization of the bursary

system would be appropriate in order to divert the moneys already at disposal to those who, in the judgment of the teaching staff, are deemed most likely to make such assistance useful to the public weal.

Every suggestion leading towards rendering study less expensive must be fully and systematically discussed. In this connection the first question is one affecting the housing and subsistence of the students. These questions would be best tackled by a committee of the students themselves. This is all the more to be recommended as such a committee could also usefully co-operate in other questions affecting the collegiate life and concerns of the students. Noteworthy instances are to be found already in some schools and universities. It is to be hoped that the various governments and the secondary schools will energetically aid these efforts.

Help for Gifted Youths

We believe we are voicing general expectation when we say that technical people of standing will be disposed to assist particularly gifted youths in their studies by providing the means in those cases where these young men are not in a position to provide for themselves whilst carrying on their studies. We reserve to ourselves the right to approach the leading representatives of German economic life with suggestions of this nature in order to make sure of a sufficient and capable younger generation for the technical professions.

As briefly indicated here, it will, of course, be of considerable importance if the army authorities, as soon as the difficulties of the war permit, release first of all the teaching staffs of the technical universities and of the mining schools, in order that they may resume their professional activity, and also make it possible for the students to resume their studies at the earliest possible moment. With this object in view we beg on behalf of the educational authorities to petition the war departments concerned.

We beg to summarize the result of our discussions as follows:—

Petition to War Department

Your Excellencies are requested—

(1)—To give permission for universities and mining schools, upon request, during a transition period of four sessions after the war, to be allowed a freer hand regarding the regulations hitherto governing the execution and completion of study, the examinations to be recognized to the same extent as hitherto.

(2)—To make a grant of money for instructional purposes and to make provision for the requisite teaching staffs for this absolutely necessary instruction.

(3)—To energetically assist all efforts which will render it possible for a sufficient number of particularly gifted students who have little or no means to carry out their studies.

(4)—To make provision for the early return of students and teachers with a view to the resumption of complete educational activity.

In a bulletin issued by the Jefferson-Wright Co., of Toledo, Ohio, is given the result of a canvass of about 363 architects' offices in New England, the middle West and the middle Atlantic states, showing that industrial and office buildings are planned aggregating \$170,000,000. This is exclusive of Detroit and Eastern Michigan, where there are 2,064 projects aggregating approximately \$50,000,000.

Asking the government either to build a road from Trout Creek to Lowering, a distance of 40 miles, or else to repair the present road, a deputation of fifty residents of the Parry Sound district waited last Tuesday upon Hon. G. H. Ferguson, Minister of Lands, Forests and Mines, Province of Ontario. The minister promised that the Highways Department would make a survey and present an estimate of the cost, and stated that the road would at least be repaired. One of the speakers declared that the government has in the past spent upwards of \$100,000 in repairing the road, and that the money had been wasted.