

amount of brain-fag. A member of the Committee asked whether evening students ever became day students. I remember only one case where a Government servant asked for six months' holiday without pay in order that he might be able to qualify himself. He was a Government servant in a scientific Department in which his knowledge acquired in our laboratories would be of very great advantage, and it was a relief to us when consent was given that he might be away for six months and return to his work at the end of the time. Now, I want to say a little on the subject of research work in our University Colleges. It appears to me that the State in providing a university education for the masses is only justified in doing so on socialistic grounds, and these are, I think—first, that our graduates should be a body of men who shall raise the general character of the community and put ideals before their fellow-men; second, that they shall be scholars who will transmit accurate knowledge; and, lastly, that in them we might have a body of experts upon whom the State may rely to improve the general working efficiency of the community. Now, there are many who will at once tell you, and not without justification, that a great deal of our university education does not tend to produce people belonging to either of those three classes, but to produce a class whose highest ideal has been to put certain letters after their names. The socialistic idea of a university which I have formulated would be quite contrary to the notion that the State should provide a cheap education with the object of allowing a clever man to step from the masses into a close corporation—we will say, either as a solicitor or as a doctor—where he might use his cuteness for the exploiting of his fellow-man. That is certainly not the object of the State, and it is necessary that our university training should be directed in such a way as to minimize the possibility of such an abuse. It follows that the main object of a university education shall not be directed towards the passing of an examination. Nevertheless the only thing which the University Act seems to be directed to is improving the intellectual efficiency of the community by holding examinations. If you read the University Act you will find that it is examinations only that the University has to deal with at present, and that is one of the points on which we certainly need reform. Now, the passing of an examination is not a proof of efficiency. It is almost impossible to arrange an examination in such a way that it will be a proof of efficiency. Supposing you merely have the examination of a few hours, you give such a liberal premium to the man who is only a "crammer" that the student that has not had an ideal put before him, and who knows that the passing of an examination would be worth so much in pounds, shillings, and pence, will almost of necessity go to a "crammer," or will arrange his work on lines that will assuredly give him an examination success, however little real education he obtains. That there is that tendency I know too well. When I first came out here I stated that I was going to set out with the idea that every student was to be looked upon as potentially a research student—that is, as a student who might eventually become a person who could do high-class work. Then on that account I should endeavour in my lectures not to prepare for any examination, but to treat all the subjects in such a way that the student should really understand them, and, as far as possible, stimulate the students so that they might desire to ask questions in order to attain further knowledge, and I should lead them to find out answers to such questions themselves. At my next lecture about one-half of the students did not come; that is to say, they recognized that it was not going to be a training which would easily put them through an examination. I have repeatedly since had students who objected to going rigidly through a careful course of practical work. They would say, "We have already passed several examinations in this subject and we know a great deal about it." I have had to reply, "You have learned a text-book—you do not know the subject—and you must do these experiments," and it has generally ended in such students going away and taking a subject in which the text-book will practically suffice. I say that spirit is undoubtedly there, although it may not be largely distributed. If you encourage the student just to go on sitting for examinations you could easily keep him on to the lower plane. It is not the pass degree examination particularly: in one case an honours student came to me and asked what he should read. I said, "There are certain books, and I will give you a list of papers in the college library and others that I have in my own library which you must read." The man took a small book out of his pocket and said this is all the reading I can get through. He said "I will use this," and the examiner afterwards gave him first-class marks. That was the reading he had done. It was the cause of great amusement in the laboratory when the news came out that he had obtained first-class marks, more particularly when it was known that another man had failed who could have run rings round the successful candidate. I think that is sufficient to show there is danger unless we safeguard very carefully what is done in the examination. The present system cannot safeguard that. In fact, any system which does not take account of the work of the student during the whole course of his curriculum cannot, in my opinion, absolutely tell us who are the best people and who are not. I said that many students are satisfied if they are coached in their lectures. You know the boys at school learn so much a day, and if they learn systematically they probably get through matriculation and everything appears satisfactory. When they come to a University College we might treat them on the same lines and say, "I will give you a lecture; I will dictate notes to you, and shall expect you to know these notes"; and if, further, in making those notes I had carefully consulted all the examination papers for the last ten years—since history repeats itself more frequently in examinations than in anything else—I know the candidates who had committed the notes to memory would get through, and many of such candidates would proclaim me as a model teacher who never had a failure in his class. My Council, or many members of the Council—since a Council has little to judge by except examination results—if consulted, would be obliged to say of me, "He has been a most successful teacher"; but what would be the effect upon the students who are passing through my hands? Their knowledge would be confined within a narrow groove; anything that would not be likely to pay in an examination would be strictly discarded; and when these men got out into the world they would have no interest in the subjects which they had studied—or rather crammed. Such a system of preparation for examination by means of carefully dictated notes