INSTRUCTION IN HYGIENE IN TRAINING COLLEGES.

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(FELLOW.)

ABSTRACT.

WITH the desire to promote a fruitful discussion upon instruction in hygiene in Training Colleges, it seemed to me most important, in the first place, to present so far as possible an accurate statement of the existing position assigned to the subject in these institutions, as, without such information, suggestions might be advanced which have been already tested and found unfeasible, or schemes might be advocated for the realisation of which no facilities exist. To this end I addressed a series of questions or, more accurately, of statements, to the principals of sixty-five Training Colleges for teachers in elementary schools, and to fifteen University professors or heads of colleges concerned with courses of training for teachers in secondary schools, purposely framed in very general terms, dealing with somewhat contentious points, in order to elicit frank opinions and free criticisms; an end most satisfactorily attained. Courteous, valuable, and in many cases very full, replies reached me from thirty-three of the former and eight of the latter class of college; for which I desire to express my thanks, as well as my cordial appreciation of the time and trouble expended by my correspondents, and of the encouragement afforded me by the patience they exhibited with my somewhat crude enquiries. The genuine interest shown in their object is most satisfactory.

The eight answers which refer to courses of study in preparation for University Diplomas in Education point out, with one exception, that the limitations of a period of professional training confined to one year prevent any extended study of the subject of hygiene. It is stated as only possible to give from four to twenty theoretical lectures, with occasional demonstrations, on sections of the subject. The prevalent feeling seems to be that none but science graduates could attack the study from the biological side, and that any general knowledge of hygiene is unnecessary for the ordinary teacher. From this I dissent, but am disposed to agree

with the views of the one exception above referred to, whose experience is remarkably wide, and who considers that some part of the four years' work in girls' secondary schools might with advantage include a course in Domestic Science, designed to afford a training in applied science, which would give to all women at least a basis of practical hygienic knowledge upon which they could subsequently build according to the life-work they adopt. The University of Liverpool Department of Education offers courses,* however, admirably designed to afford teachers an ideal ground-work for their professional studies. It remains to be seen to what extent they will be selected by students.

I propose, however, to offer a brief *résumé* of, and to deal chiefly with, the material collected from thirty-three of our most representative Training Colleges for elementary teachers, in which, it must be remembered, the curriculum is necessarily framed to enable students to pass the Board of Education examination. Far too large a proportion of the two years' course is at present spent on the acquirement of subject-matter, instead of being devoted to a study of child nature and of methods of teaching adapted to its varying needs and phases of development. This false proportion in the expenditure of valuable time is stated on the best authority to be inevitable, until students enter college more adequately equipped in general knowledge.

With one exception all the Training Colleges reported that some attention is given to hygiene during this training period; but owing to the pressure of other studies it is usually ranked as of secondary importance. Nineteen colleges definitely stated that owing to the overcrowded state of the curriculum it is impossible to set apart much, if any, time for its study. Three, however (in each case women's colleges), confirm, by the syllabuses and time-tables they enclose, their assertion that it is feasible to treat the subject as of primary importance; these also emphasising its undoubted value as a useful means for co-ordinating other

* Diploma Course H.—Professor Sherrington, Professor Harvey Gibson.—PRINCIPLES OF GENERAL PHYSIOLOGY. Autumn Term, hour to be arranged. Vital functions; division of labour and specialisation of structure in the organism; nutrition, respiration, and exertion; diet and activity; temperature and heat-production, *e.g.*, in man; sensitivity and sense-organs, *e.g.*, of the child; protoplasmic movement, locomotion—active and passive; adaptation of life to its environment; variation, heredity, struggle for existence, and natural selection; cycle of life in the economy of nature.

Diploma Course J.—SCHOOL HYGIENE. Summer Term, Monday and Wednesday, 11.30—12.30. The course deals with: Bodily health; nutrition; food and dietary; the care of the teeth; respiration; ventilation; body-temperature, warming of rooms; clothing; the skin; chills and colds. The sense-organs and the nervous system; the eye, reading and writing; the lighting of rooms; the ear; the voice and throat; the muscular system, physical exercise; fatigue in the class-room and play-ground; growth and its periods. School-buildings and sanitation.

studies. Three more affirm that, could the necessary time be found, direct attention to the subject, or the acquirement of mere knowledge of the theory of hygiene, is of far less moment than training in habitual practice, and must not be confounded therewith. Thus the majority agree that insufficient attention is paid to hygiene at present; but to give more is impossible until the Board of Education reduces the grievous burden imposed upon these young students. The already overcrowded curriculum and the demands of the severe examinations required to gain the certificate granted by the central authority constitute a serious tax on immature powers.

My second inquiry referred to the method by which such hygiene as is included in these courses is studied. It appears that the subject is usually acquired in the form of disconnected fragments, no co-ordinating course existing to unite these into one whole. Some knowledge of the theory of personal hygiene, for instance, is gained in the courses on "Voice Production" or "Physical Training"; Child Hygiene is treated chiefly under "The Principles and Practice of Teaching," while a brief course on School Sanitation is always included; practical applications to human needs being also often made in the Nature Study course. With rare exceptions students are not introduced to the broad general principles upon which these various applications are based; neither is a foundation of elementary anatomy and physiology considered an essential preliminary. Sixteen colleges assent generally to this statement; in three more time is made to present the subject as a connected whole; while one finds the Board of Education Course in Hygiene useful for co-ordinating purposes. Others seem of opinion that the more or less fragmentary teaching serves to emphasise the wide scope of the subject, which thus presents itself under so many different heads; while, again, the superiority of practice to precept is urged in favour of trusting to indirect rather than to direct and continuous teaching. With all respect for the authorities who support this method of indirect training in hygiene, it is only right to point out that, in all other subjects, rule of thumb methods are giving place to those of a more scientific character. Though this indirect method is, in my opinion, to be strongly advocated throughout the early years of school life, it presupposes a teacher well grounded in the reasons for his example and practice. These can only be fully acquired by the ordinary means, that is by an intelligent study of theory, supplemented by experiment and practice; a method unnecessary and undesirable for children, but emphatically important for a teacher, who must be ready with his answers to endless questions, who must be able to point out the

folly of fads, and who should be sufficiently enthusiastic and scientific to revise his basis of hygienic theory periodically in the light of modern knowledge.

The third point raised in my questions was the method employed where "General Hygiene" as such is studied, whether it was treated as a purely theoretical subject, or intelligently and constantly co-ordinated with nature study and elementary science, and further vivified by practical applications made in schools and elsewhere. The majority replied that the first method is that usually employed, one says because no convenience exists for laboratory work. Seven out of the thirty-three speak of the employment in their colleges of the latter method; and one or two send interesting particulars of the way in which the General Elementary Science Courses are designed to promote this practical method. Three refer to the opportunities offered in women's colleges by the new optional subject "Housecraft," but agree that it will be rarely selected, on account of the choice of professional and other subjects more likely to appeal to teachers, and of the prohibitive amount of time and practical work which is required to qualify in it.

Equal diversity of opinion evidently exists as to the amount of interest taken by the students themselves in the subject of hygiene. Six principals only reply that real evidence of interest exists; and it is in three of those colleges that prominence is given not only to hygiene, but to the foundation studies of physics, chemistry, and biology, upon which it is based. In ten cases the want of interest is justified by renewed reference to the conditions of over-pressure, which make any attention to other obligatory subjects impossible, and give no leisure for thought or energy for a subject, which depends primarily for its interest upon personal observations and practical applications.

The following suggestions concluded the circular of enquiry, and though their conciseness rendered them liable to be misunderstood by those who viewed the subject from other standpoints, they served a useful purpose, for, without exception, comments and criticism of much service were made.

“In view (*a*) of the growing recognition of health as an essential means to individual efficiency and national prosperity, and (*b*) of the major importance of training young people to meet the problem of living with intelligence and success, the study of hygiene in Training Colleges should, *so far as is possible*,

- (i.) be accorded a more prominent place in the curriculum.
- (ii.) be based upon a preliminary *elementary* knowledge of anatomy and physiology, acquired by other than purely theoretical methods.

- (iii.) That the course in elementary physiology should be supplemented by a *brief* comparative study of child anatomy and physiology, to be closely connected with nature study or the elements of biology. The whole to precede or coincide with the study of child psychology.
- (iv.) That some acquaintance with the broad outlines of general hygiene should precede the more detailed study of school sanitation. This could be acquired without making increased demands on time if judicious applications to the methods, habits, and requirements of daily life were made during laboratory practice in physics, chemistry, and mechanics. The study of physiography, history, and geography could also contribute to this end, if the influence of environment, customs, economic conditions, and other factors were traced, as they affect human life on its biological side.
- (v.) That a brief co-ordinating course would be of great value during the final weeks of a student's training, in order to indicate the personal, educational and sociological importance of a right conduct of life."

With respect to the comprehensive scheme thus outlined, the principal of one college would like a somewhat similar one to be available for a few selected students in every training college, in order that by degrees there should be at least one expert in hygiene in each school.

Ten condemn the suggestions as too elaborate, framed for specialists and unsuited to general needs. On the other hand eleven express themselves as in substantial agreement with the proposals, with, of course, the necessary qualifications, that due regard must be had to the claims of other subjects, that the elementary study of anatomy and physiology must be governed by the amount of time at the student's disposal, and that, unfortunately, some of the subjects here co-ordinated with hygiene are not included in many courses of study. But with one consent these eleven deplore the absence of the time necessary for the adoption of any such scheme, owing to the fourteen or fifteen other subjects which *must* be taken. Four out of the number invite suggestions for a less exhaustive course, and one other correspondent considers that each college ought to have a well thought out syllabus in hygiene along these lines included in its scheme of work. Three heads of colleges express their conviction that there is no need for hygiene as such to be taught at all; indirect methods meet every requirement. Two more advocate affording opportunities for such study either before or after the Training College course. They propose that these should be offered during the pupil teacher stage (as is now being done under the direction of Dr. Brown Ritchie at Manchester), or could be provided for certificated teachers when engaged in school work, by means of classes which include both theory and practice, such as those carried on so successfully for

some years past in the West Riding of Yorkshire, Staffordshire, Sussex and elsewhere. Three well known principals of men's colleges write in favour of short, special, co-ordinating courses, indicating the many threads of which the web of hygiene is woven. These, it is thought, could be given to all second year students in every training college, by an expert lecturer, appointed (as one suggests) by the Board of Education. He further advises that a course of twelve such lectures should be compressed into a week or ten days, in order to concentrate attention entirely on the subject, and so to arouse the enthusiasm necessary to stimulate an active response to the representations made. The real intention of the suggestions is recognised by an expert in education, who occupies the post of principal of an important Day Training College, and who writes: "The general criticism will be that the scheme seeks to make hygiene the *core* of instruction in schools"; which is just the fact!

One college (Edge Hill Training College, Liverpool) provides a first rate scheme for co-ordinating hygienic principles with the whole course of study, which is reproduced by kind permission.

Miss Hale writes—

"Briefly this is *our* method of procedure:—

(1.) The students have an introductory address on the importance of health and attention to personal hygiene; certain practical rules being laid down which they are expected to keep.

(2.) During their first term a course is given on Elementary Anatomy and Physiology, so that they may take their Physical Exercises (Swedish) intelligently, as well as see the reason for the rules of health they must observe.

(3.) The two years' course of Elementary Science makes them acquainted with the elementary facts of Biology,* Physics and Chemistry, so that the phenomena of ventilation, respiration, energy, composition and decomposition, etc., are practically considered. These lessons mean four hours' weekly laboratory work, and the bearing of the experimental or observational work on human life and development is borne in mind.

(4.) The course in the Theory and Practice of Education includes consideration (accompanied by observation) of the static conditions of the school and the home (*i.e.* the proper rearing of children), School conditions (dynamic), air, light, warmth, children at work, etc., physical endurance and fatigue, detection of abnormalities, ailments, etc., etc., that is, a *special hygienic section* in which the subject of the physical well-being of children is dealt with in all aspects.

*"NATURE STUDY.—Animal Life. A study of the external characters, habits, mode of life, the chief features of the anatomy and the adaptation of structures to environment of the following animals:—1. Amœba, Hydra, Sea Anemone, Earth Worm; 2. Crab, Barnacle, Butterfly, Mussel; 3. Fish, Frog, Pigeon, Rabbit. The life-history of the above to be studied from direct observation as far as possible."

(5.) Coinciding with this, and generally treated of in the second year, is a course of Elementary Psycho-physiology, with a study of the nervous system, brain functions, etc., leading on to the final course, which is mainly *Ethical*.

(6.) The students are required also to write and discuss papers on such subjects as—

(a) The teaching of hygiene and temperance in the elementary school.

(b) The problem of the underfed scholar.

(c) School games.

(d) The class teacher's opportunities for the physical training of her pupils.

(7.) Short series of lessons (criticism and specimen lessons) are arranged and given by students to classes of children on the subject of hygiene or domestic science.

Systematic teaching has a tendency to become stereotyped or to lead to "water-tight compartment" teaching. It seems to me that the correlational method is better. Hygiene should be shown to be related to all subjects of the curriculum, inasmuch as by using these as instruments of education both mind and body are being exercised, and the conditions of such exercise are as important as the exercise itself, if not more so."

It is true that the expressions of opinion just summarized represent not more than 50 per cent. of the total number of those to whom I applied for assistance; nevertheless they are sufficiently varied to be taken as representative, yet enough in accord to permit of classification. It may be fairly assumed that in a small number of training colleges (say 6 per cent.) students are given a scientific and suggestive basis for the right conduct of their own lives, as well as for their guidance in their educational work. In approximately the same proportion general hygiene is entirely unconsidered, and little but indirect teaching given on the special sections which must be taken to qualify for examination purposes. Among 40 per cent. there is a strong feeling that more attention ought to be devoted to the general, as well as to the special, treatment of the subject; evidence existing of a genuine desire to welcome suggestions, or, where at all possible, to adopt broader, more comprehensive methods of instruction. Almost as large a proportion, on the contrary, distrust the hint of any additional straw being added to the overwhelming burden laid upon the shoulders of those for whose efficiency as teachers they assume responsibility. These correspondents either fail to appreciate any educational value in hygiene as a subject, or consider that up till now the study of theory has resulted in such remarkably little practice that its omission is to be preferred to its inclusion in their curricula; indeed, some state

that in any case the laws of health can be adequately acquired by attendance at popular lectures. The so-called simple laws of health, or, more accurately, the knowledge necessary to the right conduct of life under existing more or less artificial conditions, are not, as a fact, particularly simple, neither are they easy of practice where a hundred unsuspected difficulties reveal themselves, or as many deep-seated prejudices have to be uprooted. A merely popular presentation does not suffice to equip a teacher of the subject, neither is it fair to him or to his work to delay his introduction to it until he has realised his ignorance by bitter failure and vexatious errors of judgment. Teachers whose eyes are opened after years of work to all the subject includes regret most deeply, not only their own loss, but that of those over whom they exercise so much influence.

A strong feeling is plainly present among heads of Training Colleges that until the Board of Education readjusts its examination syllabus, and until it is provided that the two years of Training College life shall be entirely devoted to the special preparation necessary for a teacher's career, to discuss the introduction of another subject, no matter how urgent, is futile; distinctly ironical even in the case of hygiene. The hopeless tone which characterises several most interesting letters, while painful, should serve as a spur to quicken progress in the right direction.

It is surely time that the teaching profession be equipped so to cultivate minds and to develop bodies that the static fatalism of the past be replaced in the near future by more dynamic, progressive views of life's possibilities, which cannot be realised until the community is permeated by a better understanding of cause and effect in relation to healthful growth and adult efficiency. For man is himself the greatest moulding and controlling factor in the scheme of nature, and is now chiefly "destroyed for lack of knowledge," or of energy to apply it, not, as in former times, by force of circumstances beyond his power to control.

DR. H. MEREDITH RICHARDS (Croydon) suggested the importance of seeing the problem in its true perspective. Did they want to make teachers into hygienic experts, or simply to make them sufficiently informed to carry out the instructions of experts with intelligence, and to exercise the sort of care and oversight that an intelligent and solicitous mother of the educated classes exercises in her own family? Miss Ravenhill apparently wished to evolve an army of experts, which was impossible. Many teachers had no aptitude for scientific work, and even the full course which Miss Ravenhill recommended would be

insufficient for the purpose, as a full course in medicine would have to be superadded to the preliminary scientific teaching. The introduction of self-sufficient, half-trained "experts" into elementary schools was to be dreaded. It was unnecessary for teachers to be familiar with the mechanism of errors in refraction or with the pathological results that may ensue. For practical purposes it was enough to impress teachers with the fact that children who cannot read certain test types, or who exhibit obvious signs of eye-trouble, should be examined by an ophthalmic surgeon. But he was in accord with Miss Ravenhill's recommendations, and had been enabled to arrange for a series of such courses in Croydon.

DR. S. G. MOORE (Huddersfield) said an examination of the subject by the Board of Education was required, with a view to balancing two points of view as to the teaching of hygiene, so that, on the one hand, the science of the subject might be used as a sort of educational dumb-bell, and on the other, practical effort might be made to teach hygiene to the teachers in such a manner that an immediate effect would be likely to be produced in the death rates.

PROFESSOR BOSTOCK HILL (Birmingham) said he had no doubt that a preliminary course of physiology was very desirable. This should only be of an elementary type, enough, in fact, to enable teachers to understand the principles on which healthy living depends. This should be followed by teaching of general hygiene adapted to school life. Teaching hygiene to teachers is quite another thing to teaching hygiene to elementary scholars. The former should be scientific, the latter elementary. Miss Ravenhill had been criticised as being too ideal, but it was desirable to strive for something above what appeared to be immediately attainable. Her proposals, *inter alia*, appeared to suggest the establishment of a specialised class of teachers, but a knowledge of hygiene among all teachers was desirable, and this would best be accomplished by the Board of Education so altering the curriculum of our training colleges as to make physiology and hygiene a part of the normal work of the student.

MISS THEODORA JOHNSON (Clifton) advocated the training of teachers in the subject under discussion as early as possible, an experience of some twenty years having shown the great need of such knowledge. Many of the social problems before the Congress would not exist if that knowledge were common. Women fail signally in their own special department, the home, owing to ignorance. Such questions as infant mortality, overcrowding, improper feeding, etc., prove it.