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1878

Ellen Swallow Richards Historical Statement
to Edward Atkinson Secretary of the
Committee on Subscriptions - re Women's
Learner

AC 0298

BOX 1 FOLDER 4

Edward Atkinson Esq. 1.
Sec^y of the Committee on Subscrip^{ns}

In answer to your note of June 27 asking for a consecutive history of the Woman's Laboratory, I beg to submit the following statement of the circumstances which have directly influenced the establishment of this department.

In 1867 among the Lowell free lectures given at the Institute were two courses in Chemistry by Professors Eliot and Storer, open to both sexes.

In 1868 Laboratory exercises were given instead of Lectures. These continued with the exception of one year until 1877. They have been, more than any other one cause, instrumental in fostering an interest in the subject.

About 1870 the laboratory of the

Girls High School of Boston was²
put in working order and it has
done excellent service in scientific
teaching.

From 1868 to 1873 the introduction
of laboratory instruction in Chemistry
made rapid advances in the Schools
of New England, aided very large-
ly by the publication of Eliot and
Storer's Manual.

During these five years some
fifteen women teachers availed them-
selves of the Lowell course at the
Institute each year, several coming
for two successive years in order
to attend both the General Chemistry
and the Qualitative analysis courses.
Others, who were not teachers, attended
these lessons but it is with the teachers
mainly that the interest has devel-
oped thus far.

In the winter of 1872-3 an in-
termission of the Lowell class occur-
red

At the same time a young woman³ from a medical college came to Boston to obtain instruction in analysis. She applied at the Institute, but Prof. Crafts saw no suitable way of accommodating her in his already crowded rooms. He, however interested himself in the matter and with the cooperation of the Head Master of the Girls' ^{High} School, Dr Samuel Eliot, obtained leave of the city to use the well equipped laboratory for a short course in analysis. The instruction was given by Miss Bessie T. Capen and myself under the direction of Prof. Crafts.

Through the interest of Dr Eliot the Woman's Education Association furnished the necessary funds, and thus began their connection with this branch of woman's education. This class numbered sixteen students.

The Lowell Class was resumed the next winter and as the interest

in the science increased. Prof Nichols⁴ endeavored to meet the needs of teachers and others by offering a course in Quantitative Analysis to a few who had taken both the elementary courses in previous years. In 1875 five women (no men) took up this ^{new} work with marked success. So far as I know, this was the first class of the kind for women.

At this period, Harvard University opened its summer school of science, Chemistry being one of the branches taught. Other Colleges followed this example.

All this stimulated the desire for instruction in this department, and, during the autumn and winter applications were frequently made for instruction for a special end, and within a limited time.

The demand was so urgent that in 1876 the Professors of Chemistry in the

Institute provided for eight women⁵ in their own private laboratory, fitting it up at their own expense and giving what instruction they could, freely. The students paid a small fee to cover the cost of gas and water.

Thus the Professors have shown themselves ready to meet the demands of the time as far as the circumstances would admit. But it became evident that ~~the~~ demands were increasing so fast, that they could not be properly met within the limits of the Institute Building, and while it was a laudable thing to aid a teacher to fit herself, in one or two months to take a position for which she was not qualified without this aid, yet all true educators felt that such makeshift learning ought to be superseded by a regular course of instruction which should make

the woman, who took a position as a ^{4.} teacher of sciences, a fully qualified and well balanced instructor.

At this juncture there was a revival of the project for a separate building for the Chemical Department of the Institute, and some members of the Woman's Education Association, who had kept their interest in chemical education, made a suggestion to the effect that the Association as such should ascertain what were the intentions of the authorities in respect to providing for women in the new building. Several conferences were held between committees of the two bodies and, while the subject of the new building was postponed to the indefinite future, the claims of women were not so postponed, and a proposition, made by President Runkle, that a space should be fitted up in the gymnasium, was accepted, and the Association issued a circular asking

for \$2,000.⁰⁰/₁₀₀ to provide instruments and apparatus for a "laboratory for women, which should afford instruction in advanced Chemistry, in Mineralogy, Botany, Industrial Chemistry, as applied to Vegetable and Animal Physiology". The money or its equivalent was given within three weeks from the issue of the circular May 1876.

Mr Edward Austin gave a very valuable microscope, Mrs James Sever a polariscope, the Woman's Club a fine spectroscope.

During the summer the space for the laboratory was changed from the original plan to the front of the special building erected for the school of Mechanic Arts. The increased space, thus allotted, involved increased expense, and in 1877 the W. E. Association contributed \$500.⁰⁰/₁₀₀ more towards this expense.

In November 1876 the Woman's

Laboratory was opened to students.⁸
It has the reputation of being as pleasant and convenient as any in the country. It consists of five rooms; three of them for women exclusively, viz. the chemical laboratory, library and weighing room combined, and the reception room. The Industrial and Optical laboratories are shared with the Institute students although the instruments belong to the woman's department.

In the two years of its existence this department has furnished instruction, for a longer or shorter time, to 43 women. About two thirds have been teachers or fitting to be teachers. 5 were married women, 3 of them in middle life, 6 young women of wealth and leisure have studied for their own benefit. 2 are fitting themselves for professional chemists. 21 have taken mineralogy. All have had more or

less practice with the microscopes⁹ and spectroscopes. Teachers from ten institutions in the State of Massachusetts have been taught here, 2 colleges, 3 seminaries, 3 high schools, 2 private schools.

The methods of instruction are at present adapted to the individual, and the length of time at her disposal. For the next ten years the teaching must be largely of this special and individual character, if it is to do the most good. Women over 25 years of age have missed the scientific education of the present day, yet they ask for and they must have the knowledge of the present. The laboratory was opened to meet this very want, and while it will strive to create new and wider fields for woman's work in the professional branches of applied chemistry, it will hold as its first duty the teaching of

those who cannot go back into the schools and colleges. For this reason it makes the most liberal arrangement as to hours so that the busy woman may yet find some hours each week for science. For teachers, courses of study covering one or two years according to the previous knowledge of the student are arranged. For young from private schools, who have not had laboratory practice, there are several fascinating subjects open:— for instance Determinative Mineralogy, which, since the publication of Prof. Brush's book, rivals Botany in interest for the general student. It is quite possible to gain a valuable knowledge of stones even without previous chemical training. The number of women, who have taken it up within the last three years, is a good test of its charms.

In chemistry there are several

subjects which come directly into every womans province whether she is scientific in other ways or not, or whether she ever uses the knowledge directly or not:- the cleaning and dying of various fabrics; the chemistry of certain culinary processes as fermentation; the use and abuse of soda; also the manufacture of some articles of every day use as glass and pottery; the detections of a adulteration in foods and drinks. All of these are important as well as interesting. In vegetable and animal physiology there are also several distinct branches, which teach the use of the microscope and its accessories.

The results have been very gratifying. The students give promise of ability to contribute their share towards the worlds progress in investigation and research. Several branches seem to have been waiting for just such workers. Household chemistry for instance.

All of which is respectfully submitted
 Ellen Swallow Richards