History of Education: Foreign Educational Tradition
История на образованието: чуждестранна образователна традиция

ROBERT COLLEGE – THE FIRST AMERICAN COLLEGE AROUND THE WORLD

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Abstract. Robert College (RC), the first American college around the world, was founded by Mr. Christopher Rheinlander Robert in Istanbul (Constantinople) in 1863. The college started education with 20 students with the leadership of Dr. Cyrus Hamlin. Initially two departments of instruction were planned: preparatory and collegiate.

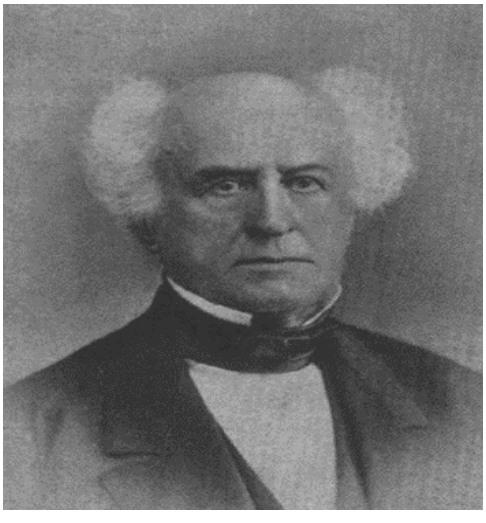
Keywords: Robert College; Bogazici (Bosphorous) university; chemistry education; Bulgarian graduates of RC

Introduction

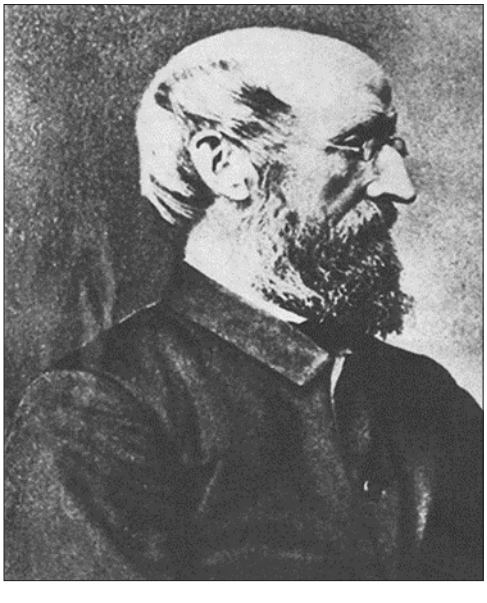
The idea to construct an American College was initiated at the end of Crimean war in 1856 (Freely, 2009). First, it was planned to be in Samokov (Bulgaria) in 1862 but this project was unsuccessful.

Later, the graduates of Yale University – Messrs. James and William Dwight suggested the American Board build a college in Constantinople (Washburn, 1909; Greenwood, 2003). After their offer, the negotiations between Cyrus Hamlin who was serving in Bebek Seminary and Christopher Robert started. In 1863, the college started education with 20 students with the leadership of Dr. Cyrus Hamlin. Initially two departments of instruction were planned: preparatory and collegiate (Washburn, 1909). The former one was equivalent to freshman in the American academic system. Besides its religious bases, with the great desire of American Board, a serious curriculum was gradually developed. Initially the program of the Robert College was published in five languages. The first graduates were only two students from two nationalities: Prof. Hagopos Djedjizian, an Armenian, and Petco Gorbanoff, a Bulgarian (Washburn, 1909). Slavic and Bulgarian language and literature were also included in the curriculum and after the graduation of Prof. Stephan Panaretoff, he became an instructor in the college. The first chemistry course was declared to be held in 1868 with the lecturers Reverend George A. Perkins and Dr. Hamlin. Later Albert Long became the professor of natural science from 1872 to 1901 (Washburn, 1909). Chemistry lessons were taught about 5 hours a week. In 1892, the Chemical Department was established in the new college building, named Science Hall, in the basement (Washburn, 1909). Chemistry courses, especially

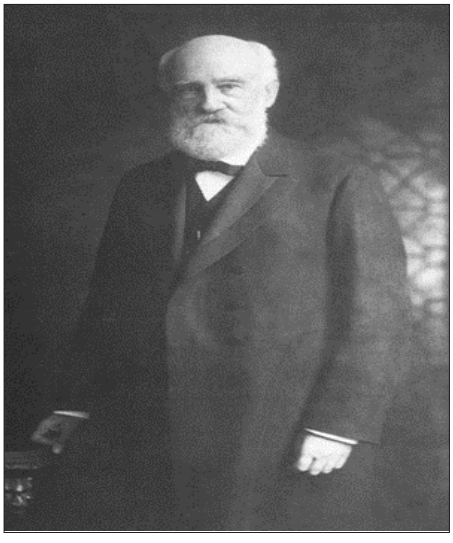
with the establishment of Faculty of Engineering in 1912 (Freely, 2009), became a serious subject in different fields.



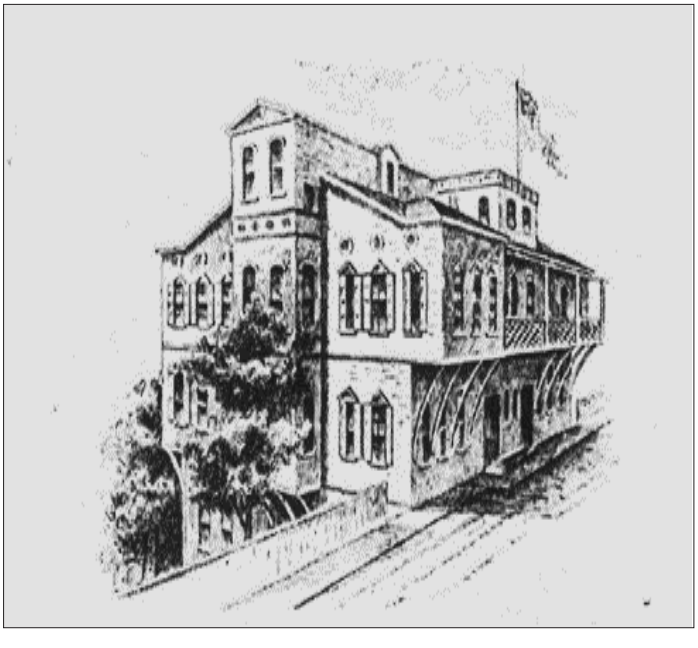
Christopher Robert (Greenwood, 2003)



First President of RC – Cyrus Hamlin (Freely, 2009)



Second President of RC – George Washburn



Bebek Seminary (Greenwood, 2003)

Aim

The purpose of this paper is to investigate the historical background and role of Robert College in the development of social, cultural, educational and political structure of the Balkans.

Research questions

1.What is the role and effect of qualified pedagogues in training students from different nationalities?

2. How chemistry education developed at Robert College from the end of 19th century up until now?

3. What are the elements of constructivist approach in the education system and curriculum of the college?

Methodology

The methodology includes the analysis of three historical books: (i) Bridge of Culture: Robert College – Bogazici University, How an American College in Istanbul Became a Turkish University by John Freely; (ii) Robert College: The American Founders by Keith Greenwood; (iii) Fifty years in Constantinople and recollections of Robert College by George Washburn.

Documents from old graduates and information from interviews with graduates of years 2001 – 2003 are included as well.

Findings

Initially, when Robert College was founded in 1863, science education was not in the core of the idea of its educational system. Along with the religious education, there were many attempts to change the curriculum of the college. There was a conflict between Dr. Hamlin and other staff for the period 1863 – 69. Greenwood (2003) states that Perkins objected vigorously to "teaching the rudiments of Latin and English grammar when scientific apparatus, mineralogical and geological specimens collected by Dr. Hamlin are dirty and have lost all their labels."[1)] The first graduates were only two students from two nationalities: Prof. Hagopos Djedjizian, an Armenian, and Petco Gorbanoff, a Bulgarian (Washburn, 1909).

Slavic and Bulgarian language and literature were also included in the curriculum and after graduating, Prof. Stephan Panaretoff became an instructor in the college.

Seven requirements for tutors are registered in the college records. One of them is: *A mercenary person, or one who would go to make money, is not wanted*. (Greenwood, 2003).

Hamlin Hall in 1873 (Washburn, 1909)

Table 1. The number of students for the first 24 years of RC (Washburn, 1909)

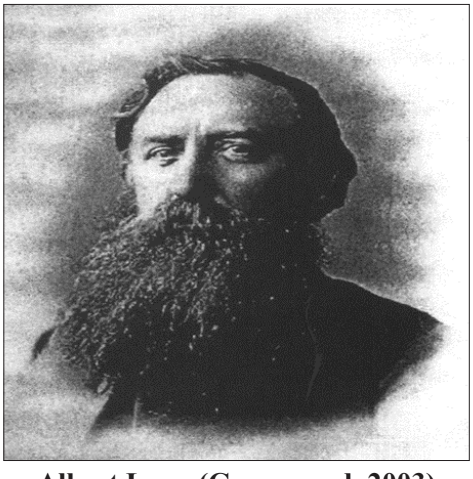
APPENDIX

A. Number and Nationality of Students and Graduates Each Year

	Registered Students						Graduates				
Year	Registered	Boarders	Armenians	Bulgarians	Greeks	Others	Graduates	Armenians	Bulgarians	Greeks	Others
1	20	16	0	0	2	18	0				
2	28	25	1	1	4	22	0				
3	51	44	20	9	6	16	0				
4	96	76	19	13	18	39	0				
5	102	79	14	16	33	34	2	1	1	0	0
6	95	73	11	41	17	23	6	0	5	0	1
7	96	66	35	38	22	25	1	1	0	0	0
8	143	98	35	41	33	34	5	0	5	0	0
9	218	164	80	40	34	64	8	0	6	1	1
10	257	189	98	38	48	73	1	0	1	0	0
11	237	172	87	43	43	64	5	0	5	0	0
12	208	163	55	45	48	60	11	3	7	1	0
13	191	152	54	33	39	65	15	7	7	1	0
14	135	98	43	42	14	38	14	6	5	2	1
15	128	93	35	50	11	32	8	3	3	1	1
16	162	111	50	54	32	26	11	5	6	0	0
17	209	149	74	77	27	31	7	3	4	0	0
18	232	158	85	89	28	23	12	2	9	1	0
19	259	173	94	105	24	37	9	4	5	0	0
20	243	165	83	110	26	24	10	4	5	1	0
21	215	142	82	91	29	13	22	7	14	1	0
22	173	115	63	71	28	11	15	4	9	1	1
23	182	120	64	71	37	10	20	8	12	0	0
24	182	130	53	70	36	23	26	10	13	3	0

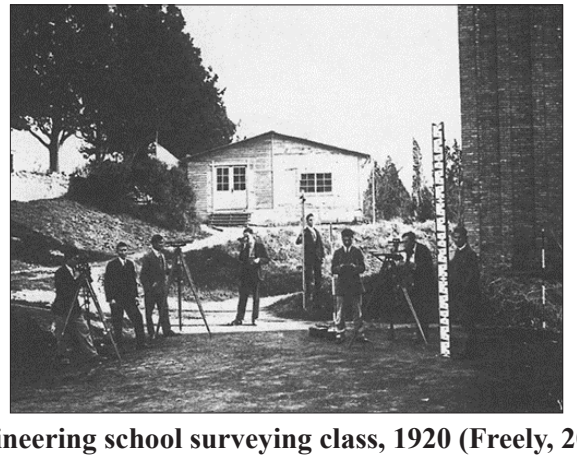
Development of the Chemistry Department

The first chemistry course was declared to be held in 1868 with the lecturers Reverend George A. Perkins and Dr. Hamlin. Later Albert Long became the professor of natural science from 1872 to 1901 (Washburn,1909).



Albert Long (Greenwood, 2003)

Professor Ormiston came in 1885 and became Professor of Chemistry, Geology and Mineralogy (Washburn,1909). Chemistry lessons were taught about 5 hours a week. In 1892, the Chemical Department was established in the basement of the new college building, named Science Hall. For the great works of Albert Long, this hall later was named as Albert Long Hall.



Engineering school surveying class, 1920 (Freely, 2009)

CHEMISTRY

Professor SCOLES, Mr. PASCHE.

1 – 2. *General Chemistry.* – A study of the more familiar elements and compounds. An elementary study of chemical reactions and a development of chemical laws.

Required of all Juniors 1922-23. Required of all Juniors, except A. B., 1923 and thereafter.

Two periods of class work and two double periods of laboratory work each week throughout the year.

3. *General Chemistry.* – A study of fundamental principes and the non-metallic elements.

Required of all Engineers.

Three lectures and two double periods of laboratory work each week. First Semester.

4. *General Chemistry and Qualitative analysis.* – Continuation of 3. Tests for and separation of the common metallic and non-metallic ions.

Required of all Engineers.

Two lectures and two double periods of laboratory work each week. Second Semester.

5. *Qualitative Analysis.* – Tests for, and separation of the common metallic and non- metallic ions and a study of the theory of separation.

One lecture and two afternoons of laboratory work each week.

First Semester. Prerequiste 1 and 2.

6. *Quantitative Analysis.* – Theory and practice of elementary gravimetric and volumetric analyses. The more important processes are applied to the commonly occurring elements, especially those of economic and industrial importance.

One lecture and two afternoons of laboratory work each week. Second Semester. Prerequisite 5.

7. *Quantitative Analysis.* – Elementary gravimetric and volumetric analysis Proximate analysis and calorific value of coal; testing of burning and fuel oils; testing water for boiler use; elements of gas analysis.

Required of all Engineers.

One lecture and two afternoons of laboratory work each week. First Semester. Prerequisite 4.

8. *Organic Chemistry.* – General organic chemistry. The Aliphatic Series with special reference to the more important hydrocarbons and their derivatives.

Two lectures and one afternoon of laboratory work each week. First Semester. Prerequisite 2 or 4.

9. *Organic Chemistry.* – A continuation of 8. The Aromatic Series with special reference to the compounds of theoretical and practical importance.

Two lectures and one afternoon of laboratory work each week. Second Semester. Prerequisite 8.

RC Chemistry courses from catalogue of 1922

According to the catalogue of the college from 1922[2)], chemistry courses were led by Prof. Scoles, Mr. Pasche at the Collegiate Department and Prof. Scoles, Dwight L. with assistant Mr. Pasche at the Faculty of Engineering. According to the prospectus from 1931, the head of the Chemistry Department was Troland, John, A.R[3)].

Chemistry Education and Foundation of the Faculty of Engineering

According to Washburn (1909), in 1900 after the Missionary Conference, with the decision of American Board, they resolved, "to do everything that was necessary for the development of the College on the model of the best colleges in America, to make it thoroughly up to date in its material equipment and in its curriculum, personnel and spirit." It was decided to supply new chemical and physical apparatus. Chemistry courses, especially with the establishment of Faculty of Engineering in 1912, became a serious subject in different fields.

CIVIL ENGINEERING COURSE

First Year

No.	*First Semester*		No.	*Second Semester*	
13	Plane Trigonometry	3 - -	14	Analytic Geometry	3 - -
61	Wood Working	1 - 2	62	Wood Work and Foundry	1 - 2
21	General Chemistry	2 - 2	22	General Chemistry	2 - 2
7	English	5 - -	8	English	5 - -
11	Advanced Algebra	2 - -	12	Advanced Algebra	2 - -
53	Drafting (3)	1 - 2	16	Drafting (4)	1 - 2
		20			20

Note. — The first column of the two indicates the number of recitations per week and the second the number of three hour periods given to work of a laboratory character in the respective subjects.

Note.- The faculty reserves the right to change the position of the various subjects in the courses and not to give certain courses if the demand, in their opinion, will not warrant it.

Second Year

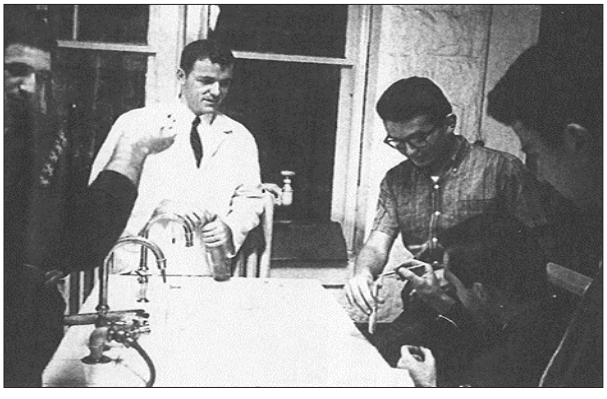
No.	*First Semester*		No.	*Second Semester.*	
17	Calculus	4 - -	18	Calculus	4 -----
63	Forging and Machine Work	1 - 2	102	Plane Surveying	2 - 2
31	Physics	4 - 1	32	Physics	4 - 1
23	Eng. Chemistry	1 - 2	130	Excavation and Tunneling	3 -----
9	English	2 - -	72	Geology	3 - 1
71	Geology	3 - 1			
		21			20

Electives: Economic History 2, Mechanism 2 —1

Course plan and description for civil engineers from 1922[2)]

Chemistry Education & Constructivist Ideas at Robert College

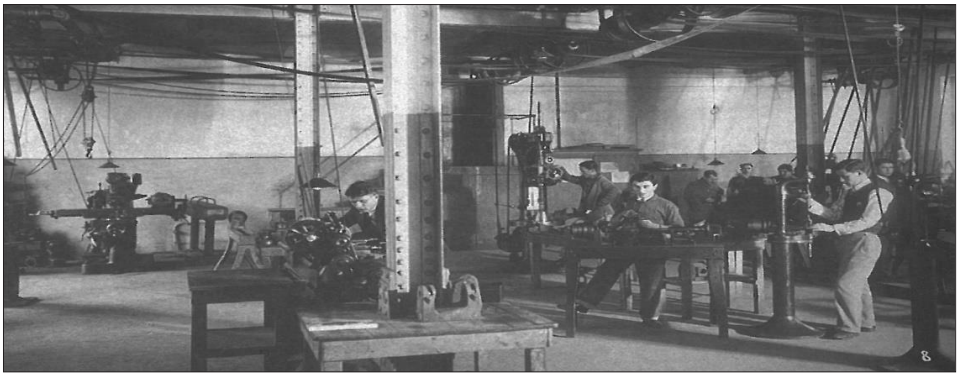
The elements of constructivist idea of the college can be seen in the stated aim of Department of Chemical Engineering in the book of Freely (2009).



Professor Donald Rogers with students in chemistry lab, 1960 & Scince Hall (Freely, 2009)

The aim is to train engineers who will be mainly concerned with the development of manufacturing processes in which chemical and / or physical changes of materials are involved and who will be able to design, construct, operate and maintain the equipment in which these operations and processes will take place" (Freely, 1909, p. 398).

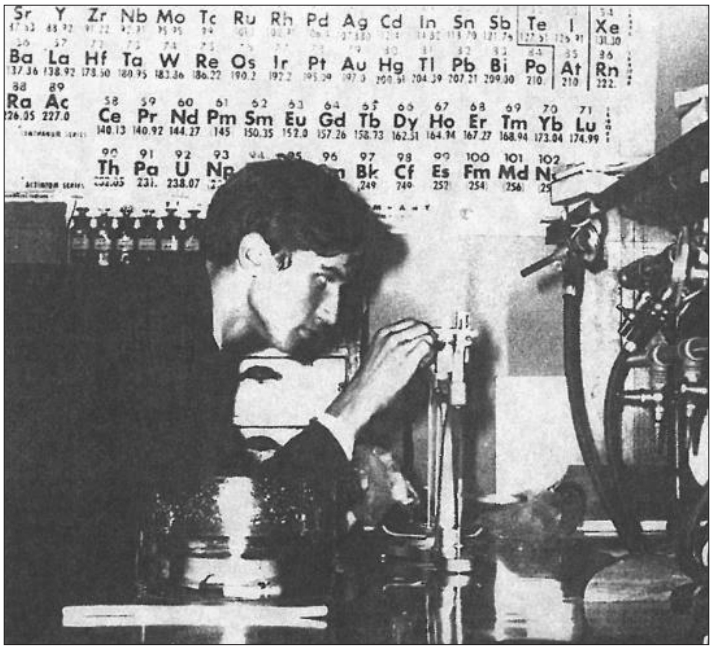
Chemistry building



RC: Gates Hall Engineering Building, Power Room, c. 1920s. (Freely, 2009)

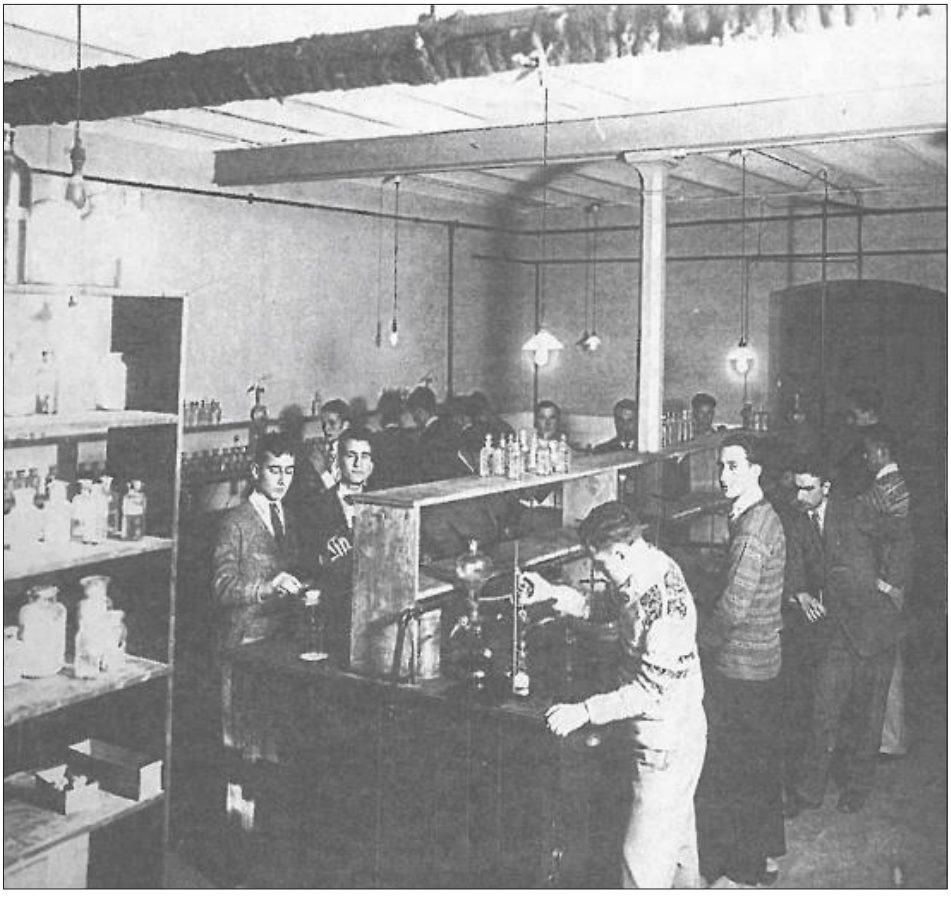
The statement of Washburn (1909), "Our theory of education is not new. In substance it is as old as Plato and Aristotle." proves the constructivist elements, idea and philosophy in the education system of Robert College.

Robert College, Chemistry Department, based in the South Campus of the college, made great contributions to the chemistry education of Balkan countries until 10 September 1971.



a

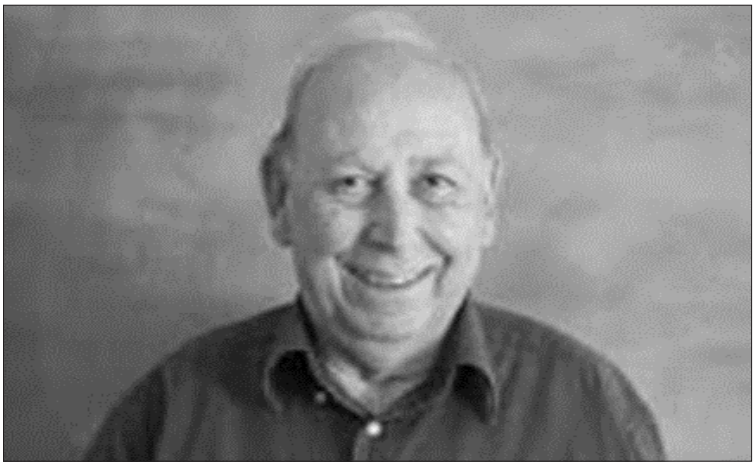
b



Student in Robert Academy chemistry lab, 1960 & RC: Engineering School chem. laboratory class (Freely, 2009)

From Robert College to Bogazici (Bosphorous) University

After this period, Robert College was renamed to Bogazici (Bosphorous) University. In 1984, with the completion of Squared Block in the North Campus, the Chemistry Department moved here and provided greater facilities and subjects with great investments. Bedi Ziver, who instructed the author as well, was one of the most prominent lecturers in Robert College and at Bogazici University. He worked in Robert College from 1959 to 1971 and during these years, he received the award McNeill – the best lecturer, twice with the votes of the students from the Engineering Faculty. In 2005, with the decision of senate, he was honored as "Adjunct Professor."[4)]



Bedi Ziver (1932 – 2015)

Science Education Department (SCED)

Now, the Faculty of Chemistry has 30 full-time and three part-time staff with nine research groups. Teaching Chemistry (SCED) is offered with a BSc program within the Faculty of Education. Chemistry teacher candidates can have courses from departments of chemistry, physics, biology, mathematics, languages etc. In the curriculum of Teaching Chemistry, there is a subject named Educational Psychology. Constructivist approach is an essential part of this material. In 1998, a professor from Harvard University, Dr. Bruce Beykont came to Bogazici University and made great contributions to initiate constructivist practices in science education.

a

b 

Faculty of Education – the last building at the front North Campus, Chemistry Dept. – Squared Block on the right

Results and discussion

Robert College played an important role in the formation of personalities of leaders and politics in the Balkans in the previous century. Its establishment was difficult but the fruits of works of Hamlin are unforgettable. Many Bulgarian, Armenian, Greek graduates received qualified education. Chemistry education with the works of Prof. Albert Long was the base of the establishment of the Engineering faculty. Piaget (1952) and Vygotsky (1978) developed the theory of constructivist approach during the 20th century, but the elements of this approach like inquiry-based education and project-based learning were applied in Robert College, which can be seen in the documents. George Washburn, the second president of RC, says: "Our theory of education is not new. In substance it is as old as Plato and Aristotle." In the history of Robert College, science education plays an important role. The proof can be given the Science Hall which is the second constructed building with great contributions. Besides this, classroom environment plays important role for the attitudes of students. It is clear that the classroom environment can promote students' positive attitudes toward science (Emilov & Tafrova – Grigorova, 2016).

The great work of Dr. Albert Long for twelve years in Bulgaria before the foundation of Robert College (Washburn, 1909) influenced the interest of Bulgarian students to study there. After the translation of the Bible into Bulgarian by Dr. Albert Long and Dr. Riggs for the period 1871 – 1872 and during the 19th and 20th years of Robert College, significant increase in the number of Bulgarian students

was observed. George Washburn, as a second president, visited his students from Sofia and Plovdiv several times.

Graduates and their wives, Sofia, 1904 (Washburn, 1909)

Famous Bulgarians graduated from Robert College (Washburn, 1909)

1869 – 1870

Petco Gorbanoff – instructor of Bulgarian language, lawyer
Jordan Economoff – Protestant clergymen
Stephan Thomoff – Protestant clergymen
Theodore Djabaroff – prominent official
Peter Mattheoff – occupied high ministerial and diplomatic positions in the Bulgarian Govt.
Naiden Nicoloff – banker

1871

Prof. Stephan Panaretoff instructor of Slavic and Bulgarian language and literature, famous politician
Constantine Stoiloff – the ablest statesman in Bulgaria, Prime Minister of Bulgaria
Ivan Slaveikoff – leading literary man
Ivan S. Gueshoff – Minister of Public Instruction
Petco Taptcheleshloff – merchant

1872

Peter Dimitroff – Mayor of Plovdiv, 1881 – 1890
Constantine Calchof – wealthy banker and politician
Dimitry Economoff – high official

Ivan D. Gueshoff – high official
Stephan M. Camburoff – entered the army and died in 1882

1873

John J. Sitchanoff – pastor of the Protestant church in Plovdiv
Famous Bulgarians graduated from Robert College 1874
7 Bulgarians – One teacher, one Prime Minister, one minister, one private secretary of Prince Alexander and Prince Ferdinand and remaining three – high officials in Bulgaria.

1875

Notes from G. Washburn (1909): *"All of the Bulgarians became distinguished men, four of them as soldiers. Two of them commanded regiments in the famous battle of Slivnitza , one of whom was killed. His name was Marinoff, one of the most attractive men who ever graduated at the College. The other died in 1902 as Minister of Public Works in Bulgaria. The other two are among the best officers in the Bulgarian army to-day, one of them as general. Of the others one is a physician, one is a judge of the Court of Appeals at Sophia and one was secretary of the same court."*
Mr. Ludskanoff from class 1875 distinguished himself on the staff of General Skobeleff.

1876

Six graduates – 2 high officials, 2 teachers, 1 literary men, 1 successful merchant.
General Vinaroff presented Bulgaria at Hague Conference in 1907.

1877

Three Bulgarians – One jurist and diplomatist, two officers in the Bulgarian army.

1878

Six Bulgarians – One teacher, two lawyers (one became a famous judge), one officer, two were dead.

Other Famous Bulgarians graduated from Robert College

Mr. Voicoff – 1883 graduate – Instructor of Robert College; Stoicoff – Principal of naval officers in Bulgaria.
Judge Karandjuloff (1879 graduate) presented Bulgaria at Hague Conference in 1907.

Conclusion

While applying modern methodologies and technologies in education for the future generations, the past contributions of great people and notable institutions in history should not be forgotten. It is a fact that in a short period, after the foundation of Robert College, plenty of graduates became notable political leaders and intellectuals, which is the result of the great pedagogy and educational methodology applied at the college.

NOTES

1. Perkins to Robert, December 16, 1864, NECAS.
2. Robert College of Constantinople ~ Catalogue 1922
https://archive.org/stream/RobertCollegeOfConstantinopleCatalogue1922/bulgaria_robertcollege-TR_djvu.txt
3. Robert College of Constantinople ~ Catalogue 1931
4. Bogazici University web site. www.boun.edu.tr

REFERENCES

Emilov, I. & Tafrova-Grigorova, A. (2016). A cross-national study of the learning environment in chemistry classes at Albanian, Kosovar, Romanian and Turkish secondary schools. *Int. J. Sci. & Math. Educ., 14,* 107 – 123.

Freely, J. (2009). *A bridge of culture: Robert College – Bogazici University, how an American College in Istanbul became a Turkish university*. Istanbul: Bogazici University Press.

Greenwood, K.M. (2003). *Robert College: The American founders*. Istanbul: Bogazici University Press.

Piaget, J. (1952). *The origins of intelligence in children.* New York: International Universities Press.

Vygotsky, L.S. (1978). *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press.

Washburn, G. (1909). *Fifty years in Constantinople and recollections of Robert College*. Boston: Houghton Mifflin Co.

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