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**Russian Revolution and Central Asian Education: A Case Study of Uzbekistan's Technical and Higher Education**

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**Abstract**

Russians started conquering the parts of Central Asia from 17<sup>th</sup> century. During the next two centuries they conquered whole region. Subsequently after the glorious Revolution of 1917, it came under the Soviet rule. Russian Czars tried to introduce modern education in Central Asia, but they failed. Thereafter Soviets followed upon a programme of eliminating mass illiteracy. Not only mass illiteracy, they introduced special technical and higher education in the region. With the result in the Central Asian Republic of Uzbekistan there were two-thirds of populations having secondary and higher education. Besides different technicians were available to be employed in the flourishing industrial sector of USSR, The aim of this paper is to give a brief account to show how soviets eliminated mass illiteracy in the region and particularly how technical and higher education was introduced and developed in Uzbekistan under the Soviets.

**Keywords:** Czars; Soviets; Education; Literacy; Development; Technical Education; Higher Education; Institutes;

Russian Czars started conquering Central Asia from early 17<sup>th</sup> century, when they conquered Siberia. At the same time the Dzhengharian Oirots (Kalmyks) from the Mongolia began to make incursion into the northern Central Asia i.e., Kazakh lands. The Kazakhs were in no position to offer a unified resistance. In 1726 the Kazakh khan Abul Hair, sought Russian protection from new Mongol inroads and requested the Russian government to include the Kazakhs in its empire. Early in the 18<sup>th</sup> century the Kazakhs were divided into two section or hordes, as they were called, one of these inhabiting territory bordering China, recognized the suzerainty of the country: the other located near Russian, came under the influence of the latter, and in 1731 negotiation started between the Kazakhs khans and the Czarist Government for the acceptance of Russian suzerainty<sup>1</sup> but by the mid 19<sup>th</sup> century all their lands were completely under the Russian control, with that the Russian troops

occupied the town of Suzaq, Chulmaq- Kurgan, Aulie-Ata, Chimkent and Turkistan<sup>2</sup>.

The Kazakh territory was included in the Russian empire and re-divided into new administrative areas. Administratively the Kazakh territory of Central Asia was divided into six provinces (oblasts) Agmola, Semipalatinsk, Uralisk, Torghi, Semireche and Syr- Darya. Aqmola and Semipalatatinsk oblast was under the jurisdiction of the Governor-Generalship of western Siberia after 1882, the governor General of the Steppe. Where as Ural usk and Torhgi oblasts were under the Governor- Generalship of Orenberg (after 1891, directly under the Ministry of internal affairs) these four oblasts were together called, The Steppe region, (Kari). Syr- Darya was under the jurisdiction of the Governor General of Turkistan, though in 1882-1897 Semireache

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<sup>1</sup> W. P and Zelda K. Coats, *The Soviets in Central Asia*, London, 1952, p. 28.

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<sup>2</sup> K.M. Baipakov and B.E. Kumekov," The Kazakhs," *History of Civilization of Central Asia*, Vol. V, Eds. Chahryar Adle, Irfan Habib and Anara Tabyshalieva, UNESCO, 2003, p. 100.

was under the Governor generalship of the steppe<sup>3</sup>.

Turkistan (Central Asia region except Kazakhstan) was started conquering from 1860's. Tashkent was the first to be conquered in 1864 by general Chernaieff and was made the capital of already annexed parts of Turkistan in 1865. Tashkent was followed by Zarafshan valley by general Romanvoski in 1866. It included Irjai, Khojand (known for its fortress), Ura Teppe and Jizak<sup>4</sup>. By a Ukase of 11<sup>th</sup> July 1867 the whole Turkistan was placed under the Governor General with its headquarters at Tashkent. K. P. Von Kaufman was the first governor general of the region. He conquered Samarqand in 1866 which was followed by Sharisabz in the same year.

Following that Bukhara was pacified and then the Amir Muzaffared Din was assumed to take the sovereignty of the territory as a Russian Vassalage. Similarly the Khan of Khiva signed a peace treaty in 1873 and became a humble Vassal of Russia. Kokand (ancient Fargana) was the last to be annexed by the Russian Czars in 1876 under the command of general Skobeieff and was given the formal name of Fargana<sup>5</sup>.

Soviet power was established in Central Asia in November 1917. In April 1918, the Turkistan Autonomous Soviet Socialist Republic (ASSR) a vast region in Central Asia was proclaimed. Bukhara and Khiva were captured in 1920 and became nominally the independent Soviet Republics. In 1924 they too were incorporated in Turkistan ASSR<sup>6</sup>.

On 27 October 1924 the Soviet Socialist Republic of Uzbekistan (SSR) was established

(including until 1929 the Tajik ASSR). The areas which were previously the parts of the republics of Turkistan, Bukhara and Khorezm and which were predominantly inhabited by the Uzbek population were merged in the Uzbek Republic<sup>7</sup>. In May 1925 the Uzbek SSR became a constituent Republic of Union of Soviet Socialist Republic (USSR), which had been established in December 1922. During Czars, there were mainly four types of schools. One Russian, that provided education in Russian language, second Russian native schools which provided education in both Russian and native languages, third Maktabs, the primary schools of Muslim learning and fourth the Jadid schools that is the modern schools of Islamic learning. All these schools could not attract the students with one reason or the other.

With the result the literacy level of Turkistan remained very low and could not reach to a satisfactory extent. According to the 1897 census there was only 8.1% literacy in present day Kazakhstan, 3.6% in Uzbekistan, 7.8% in Turkmenistan, 2.33% in Tajikistan, 3.1% in Kyrgyzstan<sup>8</sup>. By 1914-15 among the Uzbeks in the age group of the 9-49 literacy rates were said to have been 5.6% (men 3.6% , women 2%), in Turkmenistan it was 7.8% (men 5.1%, women 2.7%), in Tajikistan it was 4.9% (men 3.9%, women 1%), in Kyrgyzstan it was 5.8% (men 5%, women 0.8%)<sup>9</sup>.

The situation in Russia was not too much different at this time but many had picked up education seriously; still it was believed that for the total liquidation of illiteracy, Russian needed not less than 180 years to educate men and 300 years for women<sup>10</sup> while as it was

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<sup>3</sup> Kimitaka Matsuzato, *Regions: A Prism to View the Slavic- Eurasian World*, Japan, 1960, p. 76.

<sup>4</sup> Francis Henry Skrine and Edward Denison Ross, *The Heart of Asia*, London, 1899, pp. 248-253.

<sup>5</sup> Francis Henry Skrine and Edward Denison Ross, *The Heart of Asia*, London, 1899, pp. 253-259.

<sup>6</sup> *The Europa World Year Book*, Vol. II London, 1996, p. 3497.

<sup>7</sup> R. Vaiduanath, *Formation of Soviet Central Asian Republics*, New Delhi, 1967, p. 205.

<sup>8</sup> Kozlow, Viktor. (1998). *The Peoples of Soviet Union*, London, p. 160.

<sup>9</sup> Thakur, Vishvanath "Development of Public Education in Soviet Central Asia (1917-1939)" *The Journal of Central Asian Studies*, Vol. III, Srinagar, 1992, p. 49.

<sup>10</sup> Obrazovanco, Naragnoe (1972). *Peoples education in USSR*, Moscow,. p.12; C.f. Vishvanath Thakur, "Development of Public Education in Soviet Central Asia

estimated that education to the non-Russian people of Imperial Russia would take thousand years<sup>11</sup>. The October Revolution of 1917 changed every aspect of life in Russia. Power came into the hands of working class, with the concept of the "Dictatorship of the Proletariat". In the economic sphere private property was abolished and all of it came into the hands of the state, with the establishment of workers control over the industries. In agriculture, land was nationalized and as such was owned by the state and given over to the peasants for use. Socially the Revolution laid the foundation of the classless society and the state guaranteed every citizen free medical care, unemployment allowance, equal access to culture and cultural developments with free and equal education to all.

Soviets created the educational system that was universal in whole of Soviet Union with little changes, here and there, taking place at various periods of time. The graphic below gives the visual representation of the Soviet education system delivered through various learning units at different levels. Central Asians soon after Soviet occupation followed this system in particular after Stalin enforced the Soviet policies in letter and spirit even with the might in his command. The result was that the traditional system of education disappeared and only the new system was allowed to run and deliver at various levels.

Soviets revolutionized the education sector with tremendous expenditure of money, labour and power. In 1917-18 Lenin signed thirty decrees on public education and cultural construction. A great number of schools were constructed with required teachers to be employed. In July 25, 1930 the Central Committee of Russian Communist Party passed a historical resolution under the head, "on all general compulsory education" which

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(1917-1939)", *The Journal of Central Asian Studies*, Vol. III, Srinagar, 1992, p. 48.

<sup>11</sup> Vishvanath Thakur, "Development of Public Education in Soviet Central Asia (1917-1939)", *The Journal of Central Asian Studies*, Vol. III, Srinagar, 1992, p. 48.

declared that from academic year 1930-31 there would be free compulsory education up to the fourth grade and seven year compulsory education in industrial cities and workers settlements<sup>12</sup>. Further ten year plan for the abolition of illiteracy among urban dwellers between the ages of 18 and 35 and among rural inhabitants between 14 and 30 was adopted by the end of the 1934<sup>13</sup>. In addition to that, government organized general educational recourses to raise "the cultural and political level" of adults in urban centers. Library, clubs, cottage reading rooms, and peasant houses were established in numerous towns and villages. In order to encourage workers to master literacy and other basic educational skills the government promised higher wages and technical work levels of those who met the higher requirements, like to pass special tests to qualify<sup>14</sup>.

To recover those youth who failed in primary schools or simply did not enroll compulsory primary schools were organized for those aged between 11- 15, a form of remedial primary education. By all these measures the literacy level which was around 5% in the region during

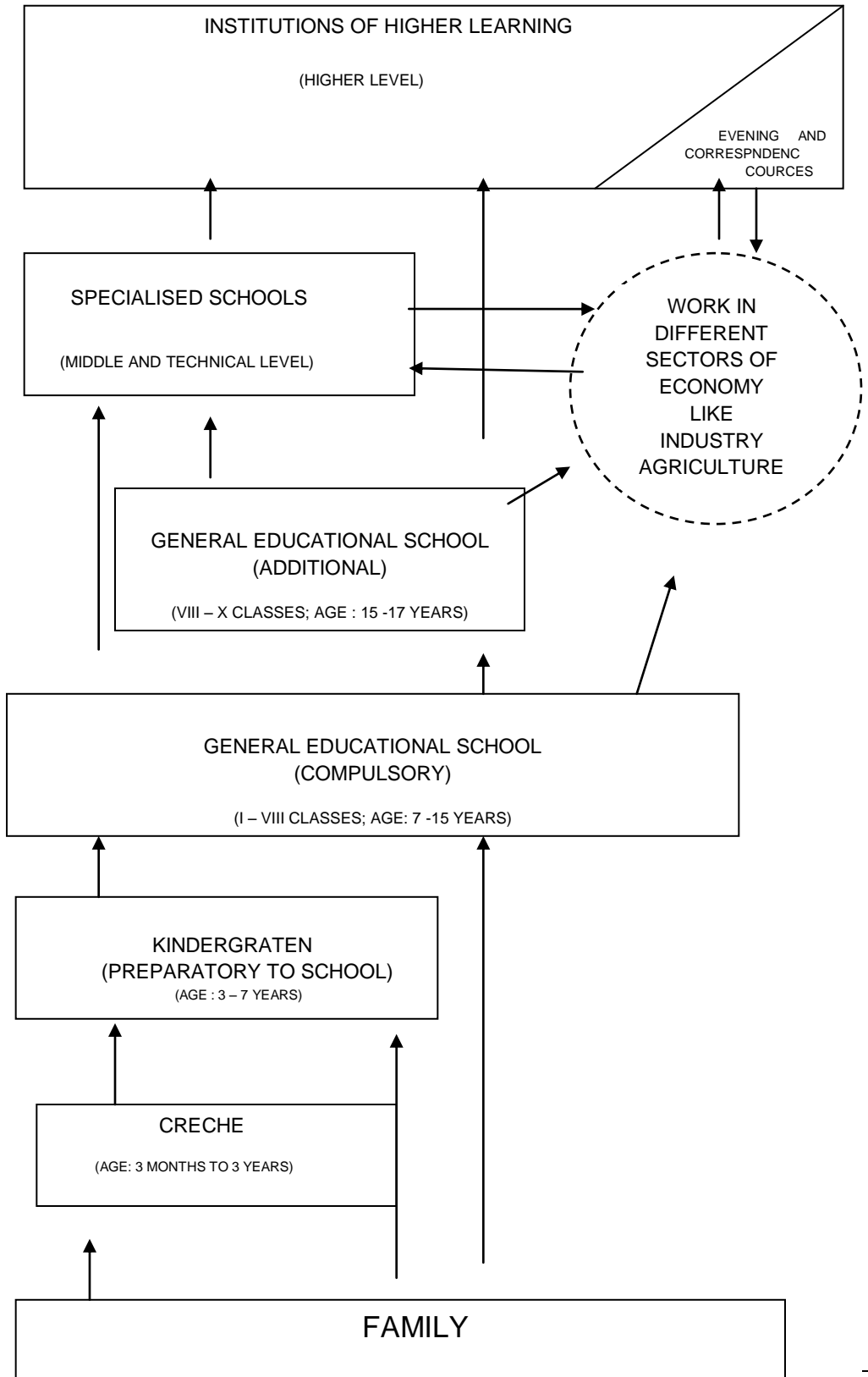
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<sup>12</sup> Vishvanath Thakur, "Development of Public Education in Soviet Central Asia (1917-1939)", *The Journal of Central Asian Studies*, Vol. III, Srinagar, 1992, p. 56.

<sup>13</sup> Alexander G. Park, *Bolshevism in Turkistan 1917-1927*, New York, 1957, p. 372.

<sup>14</sup> W. K. Medlin, W. M. Cave, F. Carpenter, *Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan*, Lieden, 1971, p. 99.

**System of Educational Organization**



Czars showed a substantial increase in the subsequent period as shown in table I

**Table I:** Literacy level of Central Asian Republics from 1926 to 1959

Country	Literacy %		
	1926	1939	1959
Kazakh SST Total	25.2	83.6	96.9
Women	14.5	75.8	95.1
Uzbek SSR Total	11.6	78.7	98.1
Women	7.3	73.7	97.3
Turkmen SSR Total	14.0	77.7	95.4
Women	8.8	71.9	93.4
Tadzhik Total	3.8	82.8	96.2
Women	0.9	77.5	94.6
Kirgiz SSR Total	16.5	79.8	98.0
Women	8.4	74.4	97.0

**Source:** Naseleniye SSSR, 1973, PP. 44-47; c.f, Viktor Kozlow, *The peoples of Soviet Union*, London, p.160.

What the table indicates is that the initiatives taken by Soviets short result in a very short span of time. In just 40 years of Soviet occupation there was revolutionary impact, which has no precedence in world history. Thereafter by 1970 it had reached up to 99 to 100%<sup>15</sup>. Besides the elementary education Soviets introduced technical and higher education. The brief account of these two aspects is as follows-

**Technical Education:**

Professional technical education was the unique feature of Soviet system of education. It just begins after the 9 or 11 years of school education and as indicated in the graphical representation above. It was a bridge between the school education on the one hand and higher education on the other. A professionally oriented course produced the middle rung cadre in medicine, engineering, agronomy, veterinary specializations, etc<sup>16</sup>. The need for educating the workers in 1920 gave the birth to a system of schools where teaching was linked with the

needs of the industry<sup>17</sup>. To begin with short term courses for technical training of the native workers were started. Apprentice training programmers in factories were initiated for the unskilled workers already employed. For the skilled and unskilled workers a chain of evening schools called rabfaks (workers) faculties were started<sup>18</sup>. Thereafter specialized technical schools were established for training in engineering, economic planning, medicine, agriculture, education, etc<sup>19</sup>.

The technical schools were of two type's short cycle vocational schools and technicums (polytechnics) or specialized technical schools. In the former students were enrolled for a period of two years after the eighth standard. They trained skilled workers. Only 30% of total students got enrolled in them. To get enrolled in the specialized technical schools the students were required to face an entrance test for the admission after having completed the secondary education up to the 10<sup>th</sup> level. The duration of courses varied from three to four years depending upon the choice of the course or its availability in the school and after completing the courses the graduates worked as supervisors in various sectors in different fields of industry, agriculture, etc<sup>20</sup>.

The technical courses that were taught in these schools were the backbone of ever growing industry of the Soviet Union. There was steady growth of enrollments in both the types of institutes. In the short cycle semi professional courses, there were 1.5/1000 persons of the population enrolled in 1928, which increased up to 1.7/1000 in 1933, to 3.2/1000 in 1938 and to 5.3/1000 in 1958<sup>21</sup>. This steady growth of

<sup>15</sup> John Glenn, *The Soviet Legacy in Central Asia*, New York, 1999, pp. 82-83.

<sup>16</sup> Javed Ashraf, *Soviet Education Theory and Practice*, New Delhi, 1978, p. 121.

<sup>17</sup> Ali Mohammad, *Social Transformation in Central Asia*, New Delhi, 2004, p. 71.

<sup>18</sup> Shams-Ud-din, *Secularization in the USSR: A Study of Cultural Policy in Uzbekistan*, New Delhi, 1982, p. 146.

<sup>19</sup> Vadin Madish, *The Soviet Union*, New Jersey, 1991, p. 230.

<sup>20</sup> Basile Kerblay, *Modern Soviet Society*, London, 1983, p. 160.

<sup>21</sup> W. K. Medlin, W. M. Cave, F. Carpenter, *Education and Development in Central Asia: A Case Study of Social*

enrollment was dependent on growth of these types of schools in the republic as well as on the growth of middle level graduates passing out of the general level of the schools. Besides the growth of the enrollment was meant to meet the demand of the requirement in the industry and other sectors that was growing at a rapid pace.

The number of polytechnic graduates was 2/1000 persons of the population in 1928, which subsequently dropped to 1.4/1000 in 1940, but then grew to 2.2/1000 in 1958 and 2.3/1000 in 1960<sup>22</sup>. As compared to short cycle professionals there was lower number of enrollment in the longer version. It was because of the fact that job opportunities for secondary graduates were not available in large numbers. The specialized technical school graduates had specialization in the fields of transport and communication, agriculture, economics, law, education, health, and arts to cater the needs of these sectors of specialized class of people who joined mostly as supervisors. The table II gives the year wise number and percentage of these students enrolled in different sectors from 1940-1958.

was recorded from 1959 to 1970<sup>23</sup>. In 1980 the number of specialized technical schools had reached up to 222<sup>24</sup> and in 1985 the number was 249<sup>25</sup>. After passing out of these institutions students joined the respective fields. They continued their studies side by side with the work and had the right to go to higher

education; the only condition was to pass the entrance examination<sup>26</sup>.

### **Higher Education**

Higher education was the culmination of all formal education. Either directly or through evening or correspondence course, any body that had finished the basic school education could go to this stage. It was acquired through two types of institutes namely universities and independent institutions. A university system consisted of several 'faculties' (schools) and 'chairs' (departments). Major programmes offered by universities included natural and mathematical sciences, social and political sciences, humanities and jurisprudence (law schools). Usually university education lasted for five to six years. Successful completion of three year courses conferred the degree of Aspiruna which was equalent to post graduate research degree<sup>27</sup> (with out any bachelors degree) leading further to a candidate (Ph. D) degree<sup>28</sup>, after further stay of two to three years education.

As early as 1918 Lenin set the RSFSR people's commissar of education the task of opening of a university in Tashkent, the then capital of Turkistan Autonomous SSR. The university named as Turkistan University or the Central Asian State University was established on 7 September 1920<sup>29</sup>. The university started full scale operation in 1923 when 2900 students found admission in different faculties. At that time there were about 200 staff members and of these 47 were professors<sup>30</sup>. Almost all of them were Europeans send by Moscow and Petrograd (now Leningrad) universities with

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*Change in Uzbekistan*, Lieden, 1971, p. 110.

<sup>22</sup> W. K. Medlin, W. M. Cave, F. Carpenter, *Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan*, Lieden, 1971, p. 114.

<sup>23</sup> Mark Dickens, *Soviet Language Policy in Central Asia*, [www.exus.com](http://www.exus.com)

<sup>24</sup> E. Yuspov, "Achievements of The Socialist Cultural Revolution", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, p. 113.

<sup>25</sup> D. A. Alimova and A. A. Golavano, "Uzbekistan" *History of Civilisation of Central Asia*, Vol. VI, London, p. 235.

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<sup>26</sup> Javed Ashraf, *Soviet Education Theory and Practice*, New Delhi, 1978, p. 123.

<sup>27</sup> Javed Ashraf, *Soviet Education Theory and Practice*, New Delhi, 1978, p. 129.

<sup>28</sup> Vadin Madish, *The Soviet Union*, New Jersey, 1991, pp. 220-232.

<sup>29</sup> W. P. and Zieda K. Coats, *Soviets in Central Asia*, 1952, p. 209.

<sup>30</sup> Shams-Ud-din, *Secularization in the USSR: A Study of Cultural Policy in Uzbekistan*, New Delhi, 1982, p. 146.

books, educational and laboratory equipments of all kinds<sup>31</sup>.

Many research institutes like that of physics, mathematics, botany, zoology, chemistry, etc were set up at the university. The aim was to study the republics natural riches and to involve young teachers and students, particularly from among the local nationalities in research work<sup>32</sup>.

Another university named Uzbek State University was started initially as a pedagogical institute in 1927, in 1930 it was recognized into Pedagogical academy and in 1933 it was established into full fledged university. The university not as large as the Central Asian University at Tashkent was having some 900 students, fourteen professors and seventy one lecturers and assistants in 1933<sup>33</sup>. The third university in Uzbekistan was established in 1976 at Notos in Karakapakistan<sup>34</sup>. Institutes were professional schools with specific specializations in fields like medicine, electrical engineering, civil engineering, agriculture, and foreign studies, art academics and musical conservatories<sup>35</sup>. After the formation of Uzbekistan Republic in 1924 the university education began to take more active part in aiding the economic development. By 1930 some departments of the Turkistan University had become so large and extended their work that they became separate colleges and institutions. These include the industrial, medical, irrigation and mechanization, finance, and economics institutes. Besides that the pedagogical institute in Tashkent and the institute of national economy in Samarqand too were initially part of the Central Asian

University<sup>36</sup>. Several other institutes of higher learning were established in the country. These include teachers training institutes in Fargana, Anidijan, Urgench, Kokand and other cities<sup>37</sup>.

In 1932 the Uzbek SSR formed the committee to manage Scientific Research Institutes and in 1940 Uzbek branch of Academy of Sciences was formed. On 4 November 1940 it was transformed into the Uzbek Academy of Sciences<sup>38</sup>. Many more, higher educational institutions were established through out the country. In capital Tashkent by 1957 there were fifteen such institutions, which included besides Central Asian University (renamed in 1961 as Tashkent State University), the Polytechnic Institute (geology, mining, mechanical engineering, chemistry, building), the Textile Institute, the Railway Engineering Transport Institute, the Electro Technical Communication Institute, the Agricultural Institute, the Irrigation and Agricultural Mechanization Institute, the Finance and Economics Institute, the Theatrical Institute, the Medical Institute, the Pharmaceutical Institute etc<sup>39</sup>. The number of students who graduated from all these higher educational institutes increased steadily. In 1923-24 academic year only 21 Uzbek student were enrolled in the Central Asian University<sup>40</sup>. By academic year 1939 the number of students who graduated from different higher educational institutes reached up to 20,000 and by 1959 the number was 1,05,000 and the number of persons having higher education per

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<sup>31</sup> W. P. and Zieda K. Coats, *Soviets in Central Asia*, London, 1952, p. 209.

<sup>32</sup> A. Sadykov, "The Strength of Science lies in its Links with Life", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev. Moscow, 1982, p. 90.

<sup>33</sup> W. P. and Zieda K. Coats, *Soviets in Central Asia*, London, 1952, p. 210.

<sup>34</sup> Ali Mohammad, *Social Transformation in Central Asia*, New Delhi, 2004, p. 73.

<sup>35</sup> Vadin Madish, *The Soviet Union*, New Jersey, 1991, pp. 231-232.

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<sup>36</sup> W. P. and Zieda K. Coats, *Soviets in Central Asia*, London, 1952, p. 209.

<sup>37</sup> A. Sadykov, "The Strength of Science lies in its Links with Life", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, p. 91.

<sup>38</sup> Eric W. Sievers, "Academy Science in Central Asia", *Central Asian Survey*, Vol. 22, No.s 2/3, London, 2003, p. 264.

<sup>39</sup> Alec Nove and J. A. Newth, *The Soviet Middle East A Model For Development*, London, 1967, pp. 80-81.

<sup>40</sup> Shams-Ud-din, *Secularization in the USSR: A Study of Cultural Policy in Uzbekistan*, New Delhi, 1982, p. 146.



thousand of population increased from 0.2 in 1928<sup>41</sup> to 3 in 1939 to 13 in 1959<sup>42</sup>.

### Consequences

Soviet system of Technical and Higher education had far reaching consequences in Uzbekistan. A good number of higher educational institutes were established. Before the Revolution there was hardly any such institute in the country. By 1983 there were three universities and thirty nine other higher educational institutes with thousands of students enrolled in them. With the result more than 2/3rd (735/1000) of population aging between 10 and 49 were having higher or secondary education<sup>43</sup>. All what was achieved by this huge educational set up can be categorized under the following headings.

- 1) Industrial set up was established in the country in which the labour force of various categories like factory workers, office workers, technicians and supervisors were employed.
- 2) Scientific research institutes were established in which there were more than 35,000 researchers, researching on the different fields in 1980<sup>44</sup>.

- 3) Power production which was just 3.3 million KWh's in 1913 reached up to 33.9 billion KWh's in 1980<sup>45</sup>.
- 4) In agriculture cotton cultivation was revolutionized. The tremendous increase in its cultivation rose from 425 acreage of land in 1913 to 1878 acreage in 1980<sup>46</sup>.
- 5) There were sea changes in the health conditions of the people. As before the Revolution there was hardly any doctor, now in 1980,s there were about 46,500 doctors in the republic with the proportion of 34.7/1000 of population<sup>47</sup>.
- 6) Life span of the people increased from 32 years before 1911 to 70 years in 1990<sup>48</sup>.
- 7) Standard of living increased by getting employment in different sectors of economy like industry and agriculture farms. As such people are now living in well furnished houses as compared to Czarist period when they were living in mud houses<sup>49</sup>.
- 8) Social set up of the society was changed by the Uzbek Communist Party through communist ideology of education<sup>50</sup>

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<sup>41</sup> W. K. Medlin, W. M. Cave, F. Carpenter, *Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan*, Lieden, 1971, p. 114

<sup>42</sup> Lawrence Krader, *The Peoples of Central Asia*, Netherlands, 1963, p. 238.

<sup>43</sup> M. Akhunova, "Emancipation of Women: A Great Gain of Socialism", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, p. 141.

<sup>44</sup> A. Sadykov, "The Strength of Science lies in its Links with Life", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, P. 102.

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<sup>45</sup> A. Sadykov, "The Strength of Science lies in its Links with Life", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, p. 97.

<sup>46</sup> B. Tulepbayev, *Socialist Agrarian Reforms in Soviet Central Asia and Kazakhstan*, London, 1968, pp. 153-158.

<sup>47</sup> A. K. Patnaik, "Education, the Press and the Public Health", *History of Civilizations of Central Asia*, Vol. VI, London, p. 584.

<sup>48</sup> Megali Berbteri, Alain Blum, Elenna Dolkigh and Amar Ergashev, "Nuptility, fertility, use of contraception and family policies in Uzbekistan", *Population Studies*, Vol. 50, No. 1, Chicago, 1996, p. 69.

<sup>49</sup> Aziz-ur Rehman Khan and Dehram Ghai, *Collective Agriculture and Rural Development in Soviet Central Asia*, London, 1979, p. 45.

<sup>50</sup> S. Tursunmukhamedov, "Changes in Social and Class Structure of Society", *Socialist Uzbekistan: A Path Equaling Centuries*, Ed. P. N. Pedoseyev, Moscow, 1982, p. 149.

**Table II:** Polytechnic graduates from 1940-58 (in number and percent)

Field	1940	1941-45	1946-50	1951-55	1956	1957	1958	Total
Industry Transport- communication	341 (10)	1139 (17)	5719 (19.6)	11098 (24.5)	4043 (25.4)	3825 (23.4)	4959 (27.6)	31124 (23.4)
Agriculture	219 (6.4)	935 (14)	528 (18.1)	7925 (17.5)	3262 (22.9)	3510 (21.6)	4546 (25.2)	25686 (19.3)
Economics	203 (5.9)	135 (2)	2256 (7.7)	3390 (7.5)	1172 (8.2)	938 (5.8)	1330 (7.4)	9424 (7.1)
Law	-	66 (1)	697 (2.4)	247 (0.5)	-	-	-	1010 (0.8)
Education	1189 (34.5)	1830 (27.4)	9155 (31.4)	14155 (31.2)	3406 (23.9)	3981 (24.5)	3511 (19.5)	37227 (28)
Health Phys. Ed.	1445 (41.9)	2472 (37)	5793 (19.8)	7535 (16.6)	2182 (15.3)	3568 (22)	3416 (19)	26366 (19.8)
Arts	48 (1.3)	96 (1.4)	288 (1)	943 (2.0)	158 (1.1)	432 (2.7)	226 (1.3)	2191 (1.6)
Total	3445 (100)	6673 (100)	29197 (100)	45293 (100)	14223 (100)	16254 (100)	17988 (100)	132978 (100)
Total graduating by corresponding	-	42 (0.6)	4615 (15.8)	5293 (12.5)	1125 (7.9)	1081 (6.6)	1110 (6.1)	13649 (10.3)

**Source:** W. K. Medlin, W. M. Cave, F. Carpenter, Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan, P. 114. The table III gives the year wise number and the enrollments of students in the polytechnic schools from 1914- 1958.

**Table III:** Number of polytechnic schools and their enrollments from 1914-1958

Year	No. of schools	No. of students
1914	1	86
1927	41	7138
1940	98	25089
1950	91	40370
1955	100	58112
1958	84	54500

**Source:** W. K. Medlin, W. M. Cave, F. Carpenter, Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan, p. 120. Thereafter, there was gradual increase in the number of these schools and the corresponding enrollments, because there was substantial increase in the population of the republic. The high birth rate of 53% of the Uzbek population

The table IV gives the total number of higher educational institutes and the number of students enrolled during different years.

**Table IV:** Number of higher educational institutes and student enrollments

Year	No. of educational Institutes	No. of students (in thousands)
1923-23	1	2.7
1927-28	3	3.9
1940/41	30	19
1955/56	36	66
1958/59	31	88
1960/61	30	101
1983/84	42	287

**Source:** Compiled on the basis of W. K. Medlin, W. M. Cave, F. Carpenter, *Education and Development in Central Asia: A Case Study of Social Change in Uzbekistan*, p. 250; Lawrence Krader, *The Peoples of Central Asia*, p. 238; Shirin Aknier, *Islamic Peoples of The*

*Soviet Union*, p. 280. As the table indicates there was decrease in the number of institutions from 1955/56 to 1960/61. This is mainly due to the discontinuing of the setting up of the higher institutes in small towns and the tendency of amalgamation of smaller ones and moving them to the capital<sup>51</sup>.

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<sup>51</sup> Alec Nove and J. A. Newth, *The Soviet Middle East: A Model For Development*, London, 1967, p. 81.