Comparative analysis of Czech and American educational system: Analysis done by means of survey of students

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1. Introduction

This bachelor thesis is called *Comparative analysis of Czech and American educational system: Analysis done by means of survey of students*. As the title indicates, this bachelor thesis deals with the American and Czech educational system and main differences between them. Further it includes research of fundamental knowledge of Czech and American students on the basis of the author’s own survey in collaboration with one Czech and one American school.

The thesis is divided into two main parts. The first part of the thesis is focused on the detailed analysis of both educational system as well as their development. Moreover, this section includes international researches comparing Czech and American students in diverse tested fields. The next parts describe the most prestigious universities in both states and the share of Czech and American population with tertiary education. This entire section is descriptive.

The second part is based on author’s own research which is divided into 2 parts – test of essential general knowledge and questionnaire. The test is aimed at comparison of students in a field of geography, biology, culture and arts, whereas the questionnaire inquires into information about the length of school day, school subjects, food style of students, after school activities. The author also finds out if the students have ever been bullied by another student or they have ever met with the bulling at their school.

The topic was chosen due to the fact that the author is interested in issues connected with education and its sequential progress. The facts used in the author’s thesis come from English and Czech resource materials. The thesis is based on printed and especially online sources.
2. The development of Czech educational system

The beginning of the Czech educational system is connected with the Maria Theresa’s reforms of education. In 1774, Maria Theresa implemented the General Regulations of the school which meant the general educational obligation for the children of serfs and the state assumed responsibility for educational matters. The significant turning point was implementation of the compulsory school attendance for girls by son of Maria Theresa in 1780. High schools as well as technical schools began to arise in this time. [1] [2] [3]

The contemporary theory of pedagogy developed in Czech National Revival’s era, at the turn of the 18th and 19th century. The Czech patriotic teachers struggled for the improvement of Czech language and tried to resist the growing Germanisation. [4]

In 1866 the significant change occurred in the Czech educational system when the law, which enabled teaching in both Czech and German, was implemented. In 1869 the eight years elementary compulsory attendance and the first nursery school were established. The law which imposed a ban on physical punishment in schools was implemented the year later. At the end of 19th century, the first high school for girls was established which led to the parity in education. Until this time, the girl’s education was primarily based on teaching handwork; less time was defined for reading, writing, mathematics and theology. [5] [6] [7]

From 1939 to 1945 during the German occupation, the Czech school system was substantially constrained due to closing of all Czech universities and revoking of more than 50 high schools. [8]

Post-revolutionary coup in February 1948 led to the nationalization of education and dissolution of competitive institutions and additionally to
the assigning special and nursery school to the school system according to the Act No. 95/1948 Sb.

In 1953 the compulsory education was curtailed from 9 years to 8 years and the eleven years secondary school was implemented according to the Act No. 31/1953 Sb. However, these modifications caused increase in the number of students who failed. In 1958 the prolongation of elementary school attendance was implemented and vocational schools were established.

In 1968 the Act No. 168/1968 Sb. was approved. It again initiated the four year education which ended with secondary school-leaving exam. Nevertheless, there was another alteration in the manner of the socialistic political thinking and 10 years later, the compulsory education was prolonged to 10 years according the Act No. 63/1978 Sb. The elementary school lasted 8 years and thereafter the 2 year education followed at any kind of secondary school. In contrast to the current education, the references were cardinal for admission to the secondary school, as well as were the political requirements.

After the Velvet Revolution\(^1\) in November 1989, the entire educational system was transformed. On the basis of the Act No. 172/1990 Sb. which regulated the law-making amendments of universities, the autonomy was returned to these tertiary institutions. The universities transformed into the discrete academic authorities who became entitled to provide the tertiary education and grant the degrees to students. [9] [10]

Since 1990 the system of schools has acquired their own legal subject and thus it has become independent in the financial and

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\(^1\) Velvet Revolution = revolution in Czechoslovakia which led to overthrowing of the communism, in November 1989 [13]
organizational matters to a certain extent. On the basis of the Act No. 564/1990 Sb. the municipality and the newly established education offices became autonomous in the fields of controlling the education system. The schools were divided into state, public and private on the basis of the single education law No. 111/1998, which was valid for the universities. New types of schools were created, especially technical schools and after 1989 also special schools\(^2\) which developed extensively.

The existing structure of the educational system is regulated by the Act No. 561/2004 Sb. about the preschool, basic, secondary, tertiary professional and other education, also by the Act No. 111/1998 Sb. which has regulated function of universities. [11] [12]

\(^2\) special school = type of school for children with special needs in a field of education [14]
3. The development of the educational system in the United States

The beginning of the American educational system dates from the 17th century, the so-called colonial era. The education in each of the 13 colonies developed slightly differently. The lessons were composed primarily from reading, writing, simple math, poems, and prayers and were offered only for the white children. The education took place primarily at home under the guidance of parents or private tutors. [15] [16]

In 1749 Benjamin Franklin, one of the Founding Fathers of the United States of America, established the Academy and College of Philadelphia, the first private American academy which offered practical education. The next important turning point in the development of education was the founding of the English High School of Boston in 1821, the first public high school. [17] [18] [19]

Between 1852 and 1912, the compulsory school attendance was implemented in all of the US states. During the years 1982 and 1992, 32 American states enabled homeschooling and by the mid-1990s all the states followed these amendments. Most schools for Caucasian students were separated from the Afro-American schools at the turn of the 20th century. [20] [21] However, „ on May 17, 1954, the Supreme Court issued its landmark Brown v. Board of Education of Topeka ruling, which declared that racially segregated public schools were inherently unequal. “ [22]
4. The educational system in the Czech Republic

The organisation of the educational system in the Czech Republic is divided into preschool (pre-primary), elementary (primary), secondary and tertiary (university) education. [23]

Pre-primary education includes nursery schools which are not compulsory and are designed for children from 3 to 6 years old. However, the participation in these schools is really high; approximately 84 % children from the age group 3 to 6 attend the nurseries. The presence of these institutions is relevant for the development of children. [24]

Compulsory education begins with the primary education in a comprehensive basic school, which has two stages and lasts 9 years. The first stage includes grades from first to fifth, which means primary school (ISCED 1\(^3\)), the second stage includes grades from sixth to ninth, in other words lower secondary school (ISCED 2). After finishing the first stage, pupils can continue at the basic school. The other option is to proceed with multi-year secondary general school or conservatoire, but these eventualities are used by 11 % of pupils in a case of multi-year secondary general school and only by 0.07 % of pupils in a case of conservatoire. Moreover there are special basic schools for children with a mental disability or autism. [26] [27]

The next level is upper secondary education, which includes secondary general school (ISCED 3A), as well as lyceum (ISCED 3A), secondary technical school (ISCED 3A), conservatoire (ISCED 3A), secondary vocational school (ISCED 3C) and secondary vocational school or practical school (ISCED 2C/3C). The aim of secondary general

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\(^3\) ISCED 1 (the International Standard Classification of Education) = international classification of education. ISCED 1 signifies elementary school [25]
school is to prepare pupils for tertiary education and similarly lyceum, secondary technical school and conservatoire is terminated by the school leaving examination. The final percentage of all graduates who finish upper secondary education with the school leaving examination is 74 %. The secondary general school lasts for 4 years in the case of completion compulsory school attendance, otherwise 6 or 8 years when the pupils change the school in the 7th or 5th year respectively. [28]

The conservatoire is a type of institution which secures the education in fields of dancing, singing, music and provides also with musical-dramatic art courses. The education at the conservatoire last 6 or 8 years and is ended by an absolutorium examination and awards “tertiary professional education in conservatoire” (ISCED 5B) and the degree of a “qualified specialist” (DiS.). [29]

Secondary technical (ISCED 3A, B) and vocational schools (ISCED 3B) provide predominantly practical education. Secondary technical school lasts for 4 years and is completed by the school-leaving examination. This type of school represents 37.5 % of students and the percentage is increasing. Moreover the interest in the secondary vocational schools moves upwards owing to the advertising campaign and granted scholarships. The secondary vocational school lasts mostly 3 years in contrast to technical schools and is ended by awarding the apprenticeship certificate⁴. [31] [32]

The tertiary education (ISCED 5A - 6) provides diverse study programmes which are accredited and approved by the Ministry of education youth and sports. There are conservatoires (ISCED 5B), tertiary professional schools (ISCED 5B), universities providing bachelor

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⁴ apprenticeship certificate = license which enables practice in a specific profession [30]
and master's studies (ISCED 5A), as well as doctoral studies (ISCED 6). [33] [34]

The curriculum system in the Czech Republic is based on the binding documents of the National Education Programme (NEP), which includes the requirements for the education and Framework Education Programmes (FEPs), which determines the education for its individual phase (preschool, elementary and secondary education) and main educational areas. [35]

4.1. Undergraduate and graduate programs in the Czech Republic

After the completion of high school, students can continue in their educational path with post-secondary education on undergraduate or graduate level.

The bachelor undergraduate program lasts from 3 to 4 years and is primarily aimed as a preparation for next study, specifically master’s study. After finishing it, the students obtain a bachelor degree (Bc.) or bachelor of Creative Arts (BcA.) accredited by the Czech Ministry of Education, Youth and Sports. However, students can acquire also some foreign academic degrees such as Bachelor of Arts (B.A.), Bachelor of Business Administration (B.B.A.) or Bachelor of Science (Bsc.) which are offered only by universities with implemented system of tuition fees. The students can opt for the extra-mural, presence or combined study programs according to Act no. 111/1998 Sb. The alternative way is to study online, but this option is offered only by some foreign universities yet and the termination of this type of study varies. The Czech state, public and private universities are finished with the successful passing of the final state examination and the defense of bachelor thesis.

The students can select from the wide range of different bachelor study programs focused on economics and management, languages and
international studies, law and public administration as well as information technology. Among the next prestigious bachelor programs rank humanities and social sciences, arts, medical science and pharmacy and also natural sciences. [36] [37] [38] [39] [40] [41] [42] [43] [44] [45] [46]

To earn the Bachelor of Arts degree lasts from 3 to 4 years. This type of degree is awarded to students from a field of liberal arts, sciences, philosophy or arts. In the Czech Republic, British university Prague College, foreign university, offer BA study programs. The study is rather aimed as a preparation of practical projects and lessons are only in English. Students can select presence or combined study. The full-time study costs 79.000 Czech crowns. The price of a part-time study ranges between 59.000 Czech crowns. [47] [48] [49] [50]

To earn the Bachelor of Business Administration degree lasts from 2 to 3 years. Students can choose extensive varieties of study fields from business administration’s field, accountancy up to strategic management. In the Czech Republic, University of New York in Prague offers this type of degree. After the finishing the BBA degree, students can continue in a subsequent degree, Masters of Business Administration which belongs to the master’s programs. The total price of the study costs approximately 51.000 Czech crowns. [51] [52] [53]

The Bachelor of Science is suitable for students who are interested in natural and social sciences, computer technology and mathematics. Prague College focuses on presence or combined study program of Bachelor of Science Computing which lasts 3 years, further it offers education in a technical field with orientation on theoretical and practical skills of a student. Lessons are held in English and the final price of this undergraduate program is 79.000 Czech crowns. [54] [55] [56]
The students of art school gain the academic title Bachelor of Creative Arts after the finishing three-year or four-year bachelor study program. In the Czech Republic, universities such as Film and TV School of the Academy of Performing Arts, University of West Bohemia, Technical University of Liberec and others provides this type of degree. [57] [58] [59] [60]

The master’s graduate program is a subsequent education after finishing the bachelor undergraduate program and lasts from 1 to 3 years. However, the length of study can be from 4 up to 6 years if the master’s program does not follow the bachelor’s program, for instance in the case with doctor degree (M.D.). The study is completed with the successful passing of the final state examination and defense of dissertation thesis. In the case of medicine and veterinary medicine the study is ended with PhD oral examination. In a field of economics and technology the students are awarded Master of Science degree (MSc), in a field of medicine Medical Doctor (M.D.), in a dental medicine Doctor of Dental Medicine (MDD), in a veterinary medicine and hygienics Doctor of Veterinary Medicine (D.V.M.), in a field of art a Master of Fine Arts (MFA). In other fields the students are awarded master’s degree (Mgr.) only. In the Czech Republic, students can choose from a wide range of different foreign master’s degrees including Master of Business Administration (MBA), Executive Master of Business Administration (EMBA) or Master of Law (LLM). [61] [62] [63] [64] [65] [66] [67] [68] [69] [70]

The Master of Business Administration is from one to two and a half year study program aimed at business and management field. The study is offered mainly to entrepreneurs, top managers, company’s owners to whom MBA provides education including theoretical and practical skills in a given area. The study is flexible, most often in a combined or online form and is finished by the defense of a final work and oral exam. The
cost of the whole MBA program ranges from 100,000 to 200,000 Czech crowns per academic year. In the Czech Republic universities such as University of New York in Prague, Brno Business School, Prague International Business School or Business Institut provides MBA studies. MBA degree is accredited by official body called the Association of MBA schools (CAMBAS) which help to keep the quality level of this degree comparable with foreign countries. [71] [72] [73] [74] [75]

The Executive Master of Business Administration is aimed at business, management and marketing field which offer students opportunity to gain quality skills required for a leading a business and management posts. The study lasts 2 years and it costs around 265 000 Czech crowns for the entire managerial study. In the Czech Republic, LIGS University provides this type of study in the form of blended learning⁵ and in Czech. After the finishing EMBA, the students can continue in the subsequent educational PhD program Executive DBA (Doctor of Business Administration). [77] [78]

The Master of Law is a postgraduate degree in a field of law suitable for students who would like to deepen their knowledge in a particular area such as tax, commercial, international or human rights law. Students have opportunity to study LLM in a distance or presence form at the Masaryk University, University of New York in Prague or Anglo-American University. The length of study varies as well as the amount of tuition fees. At the Masaryk University students pay 250 000 Czech crowns for 2 years of distance study. In comparison to the University of New York in Prague where the presence study costs only 225,000 Czech crowns and lasts 1 year. The Anglo-American University offers LLM study

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⁵ blended learning = a type of study which combines online and standard face-to-face learning with teachers [76]
in English at the cost of 7620 British pounds and the study lasts 1 up to 5 years. [79] [80] [81]

The students can continue in postgraduate doctoral studies after the attainment of the master’s degree. The entire doctoral program requires predominantly from 3 to 4 years on the basis of individual time plan; the research is focused on the field of one’s own study. The study is in presence or combined form finished by the State Doctoral Examination and defense of dissertation thesis which requires new contribution of findings. After the finishing the doctoral program, alumni are awarded with the PhD degree, in a field of theology with Th.D degree. In the Czech Republic it is possible to study foreign PhD programs in the Czech Republic including for instance Executive DBA degree that is offered by LIGS University in Prague. [82] [83] [84] [85]
5. The educational system in the United States

The school system in the United States is comprised neither of the unified educational structure nor the uniform syllabus owing to the fact that every federative state manages its own educational system. The level of the education is influenced only by the grants programs which are provided by the state. [86]

The system of education is divided into 4 grades, beginning with the elementary school, which means from a grades kindergarten up to 5th grade. The schooling in the United States includes also preschool preparation at the kindergarten, continuing with the junior high school, in other words middle school, comprised of 6th to 8th grade. After the finishing the junior high school, the high school ensues - incorporating 9th to 12th grade. This phase is comparable to the Czech secondary school. The students can deepen their knowledge and goes on with post-secondary education. [87] [88] [89] [90]

The children begin their compulsory education at the elementary school. Prior to the elementary school children can attend preschools including non-profit, church besides private schools which is offered for 3 and 4 year old. The preschools are concentrated on the activities which deepen basic skills, emotional and social children’s perception. In contrast to many European countries, only 60 percent of American children undergo the preschool education. [91]

The children attend the elementary school at the age of 5 or 6 until 11 or 13 when they continue at the junior high school. The syllabus at each elementary school varies, in contrast to the elemental subjects such as reading, writing, mathematics, social studies, art, science, music as well as physical education which are taught at all elementary schools in the same way. The school organization and level of offered education
depends also on the choice of the private or public school which are predominantly co-educational. The evident variance between them lies primarily in the process of admission and tuition costs. Precisely speaking the public schools do not charge the tuition as well as accept the admission of each child. On the other hand, the private schools require the high tuition costs as a condition of the admission. At the private daily school the average tuition fees amount to 17,441 dollars. Nevertheless, the parochial schools demand substantially lower tuition costs on average 2,607 dollars and provide religious education which is kept by Roman Catholic, Protestant churches or Jewish organization. [92] [93] [94] [95]

Junior high school, in other words middle school, includes grades from six to nine. It is attended by students after finishing the elementary school. The curriculum at the junior high school has become more adaptable incorporating opportunity to select the class according to the student’s skills and their interest in school subjects. [96]

The students begin to attend the high school at the age of 14. They graduate at the age of 18 which include the 9th up to 12th grade. The high school offers students wide-ranging choice of elective subjects. Nevertheless, the specific mandatory subjects are fixed, especially those for the high school graduation, comprised of English and another foreign language, social studies (comprised of geography, history as well as the government), general science, physical education, art and music. After the completion of the 12th grade and successful graduation students obtain the high school diploma. Students can enhance their opportunities access to higher education owing to Advanced Placement or International Baccalaureate courses. These educational courses are provided by the non-profit organization College Board and The International Baccalaureate Organization (IBO). [97] [98] [99] [100]
5.1. Undergraduate and graduate programs in the United States of America

After the completion of high school, students can continue in their educational path with post-secondary education on undergraduate or graduate level. The undergraduate level refers to the students who have not obtained bachelor’s degree or associate degree yet. The undergraduate study takes 2 or 4 years and is provided by colleges as well as universities.

Over the two-year colleges in the United States, known as junior, technical or community colleges, provide study programs focused on the general education with concentration on a specific area finished by the awarding of associate (intermediate) degree including different types Associate of Arts degree (A.A. degree), Associate of Science degree (A.S. degree), Associate of Applied Arts (A.A.A. degree) as well as Associate of Applied Science degree (A.A.S. degree). The students have to complete a two-year study with the final number of 60 credit hours to earn the associate degree. Students who want to continue a bachelor’s study program concentrate on non-applied courses. On the other hand, the students who want to join the workforce focus on applied courses. [101] [102] [103] [104]

Over 2,000 of four-year colleges and universities in the United States offer many diverse study programs to earn a bachelor’s degree. Depending on their major, students can opt for the Bachelor of Arts (B.A.), Bachelor of Science degree (B.S.), Bachelor of Social Work (B.S.W.), Bachelor of Engineering (B.Eng.), Bachelor of Science in Public Affairs (B.S.P.A) and many others. The students have to complete 4 years of their study and reach 120-128 semester credit hours to earn the bachelor’s degree.
The Bachelor of Arts degree and Bachelor of Science degree are focused on higher levels of academically oriented study. The Bachelor of Arts is concentrated on the fields of social sciences, humanities or fine arts in contrast to the Bachelor of Science degree, which is primarily oriented on physical or mathematical sciences. The Bachelor of Social Work program is aimed at the study of social work and liberal study that are connected with the practice in a social service agency. On the other hand, the Bachelor of Engineering program offers engineering education containing the study of science and mathematics. The Bachelor of Science in Public Affairs program is oriented on students who want to major in public policy, economy and social welfare. [105] [106] [107]

A graduate study offers education at the master’s and doctorate levels which are provided by universities. The master’s study program lasts from 1 up to 3 years. The requirements for the admission to the master’s program are different. Some universities insist on a letter of recommendation and Graduate Record Exam\(^6\) (GRE) or Graduate Management Admission Test\(^7\) (GMAT), others require only an application and transcript. Another requirement refers to non-native English speakers who have to prove their English skills via language test such as Test of English as a Foreign Language (TOEFL)\(^8\). [111] [112]

By and large, the master’s study program is divided into two types that are called course-based and research-based. The main difference

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\(^6\) GRE = computer-based or paper-based standardized test inquiring the knowledge of students from a field of analytical writing, quantitative reasoning, verbal reasoning [108]

\(^7\) GMAT = computer-based standardized test inquiring the knowledge of students from a field of quantitative, verbal and integrated reasoning as well as analytical writing. GMAT is used as admission test for management programs. [109]

\(^8\) TOEFL = “standardized test of English language proficiency for non-native English language speakers wishing to enroll in U.S. universities.” [110]
between them lies in the length and the way of study. Course-based master's degrees include instructions rather via lectures and seminars than carrying of student's own research which is typical for research-based master's degrees. [113]

The costs of tuition range from 12,000 dollars up to 30,000 dollars per year according to the type of school, study program and also the student's nationality. The highest school fees are implemented at the private schools for the international students as well as residents from different American states and can include technology, sport centers, activity and health insurance fees. [114] [115]

In the United States there is no united system of master's degrees. Students in the United States have opportunity to choose from a wide range of master's programs. Among the most prevalent master's study programs are the Master of Business Administration (MBA), Master's in Engineering, Master's in Management, Master's in Tourism and Hospitality, Master of Public Administration (MPA) and many others. The Master of Business Administration program educates students in the field of business management and after 2 years of study, the students have considerable advantages in obtaining the better job position as a senior or executive. The Master's in Engineering educational program are directed at teaching of mechanical engineering, electrical engineering and computer engineering. The Master's in Management program major in area of international business and allows working opportunities in engineering industry. The interest in this study program has increased by 73 % in 2013 – 2014. The Master's in Tourism and Hospitality program prepares students for tourism industry and management. On the other hand, Master of Public Administration concentrates on education focused on law, government and also public sector management. [116] [117] [118] [119] [120] [121]
After the completion of master’s degree students can deepen their knowledge and continue a doctorate study, although it is possible to earn a doctorate after finishing the bachelor’s degree, which allow some institutions in the United States. Doctorate study is a highest academic study program in the United States of America and is aimed for preparing students for the employment in research positions in academia or on a specialized position oriented on their branch. The study can be full-time or part-time, lasts five to eight years and is ended by the student’s individual research which is dissertation thesis focused on a specialized topic related to the field of a student’s study program.

Doctorate programs offer wide range of different study programs granting academic degrees such as a doctor of philosophy (PhD), professional degrees such as doctor of education (EdD) or doctor of business administration (DBA). The programs of philosophy doctorate vary immensely on the area in which the students are interested. On the whole, the PhD study offers the highest education in a particular area. [122] [123]

The doctor of education programs offer study designed for students interested in jobs on academic positions at colleges and universities, private enterprises and non-profit-making establishments. The study lasts three to four years and tuition fees for PhD students range between 28,000 and 40,000 dollars per year. [124] [125]

The doctor of business administration degree is recommended primarily to senior managers who are interested in management and research in this area. The courses are arranged as blended-learning or distance learning, thus enable managers to enhance their expertise without restrictions in their current work. The study is particularly oriented to applied research and lasts 3 up to 5 years. The requirements for
obtaining the degree are comprised of successful defense of dissertation thesis and the publishing of academic articles. [126] [127]
6. The percentage of Czech and American population with tertiary education

In the last 30 years the number of population with tertiary education has been increasing according to the publication *Education at a Glance 2010*\(^9\). In the majority of the OECD lands is the percentage of population with tertiary education higher in the age group 25 – 34 years old than those at the age of 55 – 64 years old. In 2008 in the OECD\(^{10}\) lands the average percentage of achieved tertiary education was 35 % of population at the age of 25 – 34 years old and 25 % of population at the age of 55-64 years old (information in “Education at Glance” are usually published with 2 year delay due to different time period and methods of gathering data). [130]

In 2008 the number of population with tertiary education in the United States was approximately 40 % at the age of 25 – 34; the same percentage is at the age of 55 – 64. However, the percentage of the Czech people with the tertiary education at the age of 25 – 34 is significantly lower, approximately about 10 % and about 20 % at the age of 55 – 64. The average level of tertiary educated in OECD lands is 28 %, 44 % of secondary education and merely 29 % of compulsory education. (see Appendix No.1) [131]

Compared with 2012, the percentage of tertiary – educated Czech adults in the age group 25 – 64 years old is much lower than the percentage of tertiary – educated American adults in the same age group. [132]

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\(^9\) *Education at Glance* = the annually published publication by OECD from the year 1996. This publication includes data monitoring the development of the educational system and the comparison of these systems within the OECD countries. [128]

\(^{10}\) OECD (Organisation for Economic Co-operation and Development) = international organization which co-ordinates economy of member as well as non-member states [129]
Younger adults have averagely reached the higher level of tertiary education than older adults by more than 20 % and the age group 25 – 34 has 40 % more of tertiary education than most OECD states. [133]
7. The most prestigious universities in the Czech Republic and in the United States of America

The most prestigious universities rankings depend on chosen criteria which do not evaluate directly the quality of education. However the rankings are focused on the worldwide repute and interest in given universities, survey of the graduates as well as expert’s opinions. The worldwide repute of schools shows how many percent of their students travel to any foreign university. The interest of a school shows the probability of admission and also the proportion of admitted to registered students. If the school carries out the periodical surveys of their graduates, it improves its prestige. The other important point for comparing the cachet of Czech universities is the expert’s opinion and acquiring the points given by the Research and Development Council. These criteria are applied also in a foreign rankings and comparison. [134] [135]

In the field of economy, Institute of Economic Studies of Charles University in Prague offers the best education which gains dominance in the worldwide repute and also wins obviously according to the Research and Development Council. In the field of law, the first-rate education provides the Faculty of Law of Charles University in Prague. The Faculty of Mechanical Engineering of Technical University in Liberec takes the first place in the field of engineering due to its worldwide repute, foreign experiences of its teachers and good-quality of its research. The Faculty of Electrical Engineering of Czech Technical University in Prague is regarded top in the field of information technology which can boast about considerable experience of its teachers. The best choice in the field of architecture is the Faculty of Architecture at the Czech Technical University in Prague due to increased attendance of its teachers at the foreign universities. The prestige of this faculty is also increased by the
fact that many of her students have studied abroad. In the area of sociology and psychology, the Faculty of Social Studies of Masaryk University is considered to be most acclaimed. [136] [137] [138] [139] [140] [141] [142]

In comparison to the Czech universities, the best American education in the field of economy offers Harvard, followed by Massachusetts Institute of Technology and Stanford University. Among the most prestigious schools providing education in the area of law ranks Yale, Harvard and Stanford University. If students would like to obtain the considerable engineering education, the best choice for them is Massachusetts Institute of Technology, Stanford University as well as the University of California, Berkeley. Massachusetts Institute of Technology, Carnegie Mellon University and the University of Texas in Austin are counted among the top universities offering study programs in information technology. Cornell University in Ithaca and Harvard University in Cambridge take the lead in the field of architecture. If students would like to obtain a top education in the field of sociology, Harvard University as well as the University of California in Los Angeles are the grandest universities for them. The prominent universities for psychology include Harvard University followed by Stanford University and the University of California, Los Angeles. [143] [144] [145] [146] [147] [148] [149]
8. PISA international research

The main purpose of the PISA\textsuperscript{11} research, which is the project of the OECD, is to obtain information about disposition of fifteen years old students for further study. The research is divided into cycles and it surveys only one field of numeracy, literacy and knowledge from natural science.

In 2006 the results of the Czech students in numeracy were above-average and much better than the results of the students from the United States, which were below-average, thus under the average of the OECD states (see Appendix no. 2).\textsuperscript{151} Approximately one fifth of the students did not possess elemental knowledge in mathematics according to the OECD. In international comparison are the results of the boys are often better than results of the girls. However, in 2006 the differences among Czech girls and boys in numeracy were not noticeable.\textsuperscript{152}

In 2006 the Czech students achieved the best knowledge of natural science and were ranked among the twenty states with above-average results. On the other hand, the results of the American students were unfavorable and below-average (see Appendix no. 2). In comparison with other concerned fifty-seven states only nine states had substantially better results than the Czech Republic.\textsuperscript{153}

In 2006 the Czech students were below-average in the results of literacy (see Appendix no.2). Regarding the gender, the girls achieved better results than the boys and this difference was the most considerable in the Czech Republic. The best results reached the students of Korea and Finland, who were placed in all surveyed fields in the leading positions. The United States of America were excluded due to errors,

\textsuperscript{11} PISA = Programme for International Student Assessment = international research in a field of education [150]
which were caused during the preparing process of PISA tests. [154] [155]

To sum it up, the Czech students of grammar schools were placed better than the students of schools without the secondary school-leaving exam. The most considerable differences occurred among students of vocational schools\(^{12}\), on the other hand the most balanced results were found at the four-year grammar schools. [157]

In 2009 as well as it was in 2000 the PISA research was focused on literacy. Apart from the fact that it examined the level of literacy, this survey was additionally concentrated on the progress of student’s literacy since 2000. The focus groups were fifteen years old students in the ninth grade and first-year students at secondary school. The results of students were divided into six levels according to their reading skills. The sixth level means that the respondent has excellent reading skills. On the other hand, the respondent on the second level possesses only a fundamental skill in the field of literacy and the students under this level achieve the worst results leading to serious problems in studying. Almost one fourth of the Czech students (23.1 \%) were put into the first two levels which is more than the average of OECD states (18.8 \%). [158]

In 2009 the Czech students were below-average due to their results in a field of literacy. On the other hand, the students from the United States were statistical much better than Czechs. It cannot be compared to the year 2006 due to the excluding of the United States from that research. In contrast to 2006 score that was 483, the Czech result deteriorated with average score of 478 points in 2009. (see Appendix no. 3). [159] To sum it up, the best results were achieved by the students of the Korea and Finland same as in 2006, only with a slight deterioration.

\(^{12}\) vocational school = the type of studies specialized in technical branches [156]
According to the gender, the girls had the higher score than the boys in all participated states. [160]

In 2012 PISA surveyed a field of literacy, numeracy and knowledge of natural science. Moreover PISA research was focused on the numeracy and financial literacy in detail in 2012. In 2008 the OECD launched the INFE project\(^\text{13}\) for the development of financial skills. At this time the INFE project has covered more than 220 institutions from more than 100 countries. The research has focused on the development of the appropriate educational implements for improving financial skills level in the particular countries. [162]

In 2012 65 countries of the OECD and around 510 000 students between the age of 15 years 3 months to 16 years 2 months participated in the PISA project again. [163] In a field of numeracy, the Asian students achieved the best results, contrary to the result of Czech students whose final scores were average. In a field of numeracy, the results of the Czech students deteriorated in comparison to 2003, when the final scores were above-average. The American students were placed under the average of the OECD countries in a field of numeracy. (see Appendix no. 4). [165] To sum it up, the literacy and natural science results of the Czech students improved since 2009. In majority of the OECD countries the boys were better than the girls in mathematics. However, the girls were better in the literacy. The differences between genders in the natural science test were insignificant. [164]

To summarize it, the PISA is the project of the OECD and it has focused on the research of student’s abilities and knowledge indispensable to successful employment on the labor market. The project of the PISA began in 1998 and was concentrated on the

\(^{13}\text{INFE= International Network on Financial Education}\) [161]
research of 3 fields - literacy, numeracy and natural science. The survey has happened every 3 years and always has paid attention mainly on one from the examined fields. Furthermore, in 2012 the surveyed issues in that particular cycle of the project have extended to more fields, for example the financial skills. [166] [167]
9. TIMSS research

Trends in International Mathematics and Science Study (TIMSS) is a research study in mathematics and science and a project of the International Association for the Evaluation of Educational Achievement (IEA). [168]

The main aim of the TIMMS research is to improve the quality of mathematics and science knowledge of all students in participating lands. This study was started in 1994/1995 for the first time and has been repeated in four-year cycles. The Czech Republic has been participating in 1995, 1997, 2007. In 1995 the Czech students of fourth and eighth grade were tested in mathematics and they deteriorated from this year until 2007. The Czech students were superior in mathematics in 1995. However, they were below-average in 2007 compared to other participating states. The results of mathematics of the Czech students concerning the gender did not differ in both years - 1995 and 2007. In 1999 the Czech students of eighth grade were examined and their score diminished as well as the Czechs fourth and eighth grade in 1995 and 2007. [169] [170] On the other hand, the students from the United States were above-average and substantially better than Czech students (see Appendix no. 5). [171]

In 2007 the Czech students were better-than-average in natural science as well as in 2005. The Czech eighth-grade students achieved superior final scores in natural science in all examined years, nevertheless, their score diminished from 1995 to 1999. The Czech score did not drop in the following years. In summary, the Czech fourth and eighth-grade students were placed among the most successful students in 1995. On the contrary, the score of eight-grade students diminished in 1999, probably due to changes connected with prolongation of
elementary school from eight to nine years, in 1995/1996. The eighth grade students from the United States achieved worse results in natural science than Czech students in the years 1995, 1999, 2007. Nevertheless, the American students improved within years 1995 and 2007. Conversely, the scores of Czech eighth grade students diminished within these years (see Appendix no. 6). [172] The fourth grade students from the United States were better than Czech students in natural science in years 1995 and 2007 (see Appendix no. 7). [173]
10. The main differences between Czech and American educational system

The Czech educational system varies from the American system primarily in the field of structure and methods of teaching. The American system does not have integrated structure of curriculums which differ from state to state, in contrast to the Czech system which is fixed in the unified education law. In the United States the compulsory education is divided into 3 stages which are represented by the elementary, middle (junior high) and high (secondary) school, compared to the Czech Republic whose compulsory system is split only into 2 phases. The elementary schools in the United States correspond to the first level of elementary schools in the Czech Republic which consist from first to fifth class. The American middle (junior high) school is identical to the second level of elementary Czech school comprised of sixth to ninth class. The compulsory high (secondary) American school corresponds to the Czech high schools which are not mandatory. Moreover, the length of compulsory school attendance in the United States lasts 11 up to 13 years contrary to the compulsory attendance for Czech pupils which is 9 years. [174] [175] [176] [177]

The study at the American high school is more flexible owing to the fact that students can adapt their study content to their own interests. The students are also entitled to create their schedule which is distinct from the Czech students who have to study according to the fixed class schedule. The American students learn the same subjects every day during the whole semester, unlike the Czech students whose structure of taught subjects is different every daytime. Exams at the American high schools are focused on working with texts and writing essays in contrast to the Czech exam system which consists predominantly of testing students from the definite discussed subject matters. The American
teachers prepare report cards for parents of pupils in every school trimester that includes information about subjects in which the students deteriorated. In the Czech Republic the parents of students are invited to parent-teacher meeting to discuss student's results. The American teachers do not have their own office. They spend the entire lessons and even breaks in their class, contrary to the Czech teachers who spend their free time in offices. The American high school is ended by graduation after the fulfilment of requirements including attainment of certain number of credit hours, unlike Czech high school which is ended by the fulfilment of all school subjects and final exam. [178]

Contrary to the Czech educational system, the United States is associated with plenty of non-state schools which have status of the private schools offering a higher level of education. However, tuition fees at private schools range from 10 000 to 35 000 USD, while the study at state schools is free of charge. [179]

The fees at the majority of universities in the United States are regarded as the key which factor absolutely affects the educational system, mutual relationships and responsibility. As a matter of fact, this whole system is based on the principle of market. Education costs money and information that students obtain, may be converted into money. In contrast to the Czech structure, which indicates rather relationships among subordinates and superiors, in America there is more preferred team cooperation between lecturers and students. [180]
11. Practical part

The author’s practical part is called Analysis done by means of survey of students. The author focused on the Czech and American pupils owing to the fact that the entire bachelor thesis concerns with the American and Czech educational system and their comparison.

At first, the author addressed Ms. Emily Dykstra, teacher at the Cavelero Mid High School from the United States of America. The author was in contact with the teacher via the social web system called facebook and the author’s final questionnaires were sent via email. During the preparation of questionnaires the author’s addressed personally the Czech elementary school in Tabor, namely the school of Bernard Bolzano. The author collaborated with the teacher Aleš Sekal who specializes in the physical education, physics, information technology, civics and he teaches the 6th grade students. [181]

Emily Dykstra has master's degree from Lesley University and she focuses on teaching of 8th grade English and US History. She has been teaching for 17 years and she has considerable experience with education of students at elementary, middle, high school as well as mid high school. During the 2010 – 2011, she participated in Fulbright Teacher Exchange Program which enabled her to switch school and present manner of living with one teacher form the Czech Republic. The Exchange Program gave her an opportunity to apply gained experience into her teaching syllabus and cooperate with the Czech teachers on the common projects. [182]

The author’s survey is anonymous, the students only stated their age and gender. The questionnaires are aimed at the students of 12 to 14 age range and they are divided into 2 parts. The first part includes questionnaire inquiring into information about the length of school day,
school subjects, food style of students and after school activities. The author also tried to find out if the students have ever been bullied by another student or they have ever met with the bulling at their school. The first part contains 20 open questions.

The second part is focused on the research of general essential knowledge of students. The author selected 30 questions directed at the field of geography, biology, history and arts with taking into consideration of different curriculum of American and Czech educational system. The questions are multiple choices.

41 students from the Czech elementary school and 41 students from the American mid high school in the age range from 12 to 14 participated in the author’s research. To be more accurate, 17 Czech women and 24 Czech men, 20 American women and 21 American men.
The following table shows summary of all 30 questions from the field of geography, biology, culture and arts, which were used for the survey.

<table>
<thead>
<tr>
<th>Question</th>
<th>good answers/overall number of Czech respondents</th>
<th>good answers/overall number of American respondents</th>
<th>percentage success of Czech respondents</th>
<th>percentage success of American respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) In what hemisphere is the Arctic located?</td>
<td>29/41</td>
<td>26/41</td>
<td>71</td>
<td>63</td>
</tr>
<tr>
<td>2) In what hemisphere is the Antarctic located?</td>
<td>30/41</td>
<td>28/41</td>
<td>73</td>
<td>68</td>
</tr>
<tr>
<td>3) How is called the “layer of gases surrounding the Earth”?</td>
<td>41/41</td>
<td>39/41</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>4) What is the largest state in the world according to area?</td>
<td>24/41</td>
<td>40/41</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td>5) What is the largest island in the world according to area?</td>
<td>30/41</td>
<td>29/41</td>
<td>73</td>
<td>71</td>
</tr>
<tr>
<td>6) What is the largest continent in the world according to area?</td>
<td>35/41</td>
<td>33/41</td>
<td>85</td>
<td>80</td>
</tr>
<tr>
<td>7) What is the longest river in the world?</td>
<td>41/41</td>
<td>39/41</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>8) What is the capital of United Kingdom of Great Britain and Ireland?</td>
<td>40/41</td>
<td>40/41</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Question</td>
<td>Score1</td>
<td>Score2</td>
<td>Score3</td>
<td>Score4</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>9) What is the name of a navigator who discovered America?</td>
<td>40/41</td>
<td>39/41</td>
<td>98</td>
<td>95</td>
</tr>
<tr>
<td>10) What is called the capital of the Czech Republic?</td>
<td>41/41</td>
<td>36/41</td>
<td>100</td>
<td>88</td>
</tr>
<tr>
<td>11) What is called the capital of the United States of America?</td>
<td>37/41</td>
<td>41/41</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>12) From which continent come the native Indians?</td>
<td>36/41</td>
<td>34/41</td>
<td>88</td>
<td>83</td>
</tr>
<tr>
<td>13) What is the name of the Austrian-born German leader who started the World War II.?</td>
<td>39/41</td>
<td>40/41</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>14) Which of these books wrote the English poet and playwright William Shakespeare?</td>
<td>39/41</td>
<td>38/41</td>
<td>95</td>
<td>93</td>
</tr>
<tr>
<td>15) Which of these books wrote the British novelist J. K. Rowling?</td>
<td>36/41</td>
<td>36/41</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>16) What is called the animal which carries its young in its abdominal pouch?</td>
<td>41/41</td>
<td>41/41</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>17) Which of these animal use gills for breathing?</td>
<td>40/41</td>
<td>41/41</td>
<td>98</td>
<td>100</td>
</tr>
<tr>
<td>18) How does the traditional Christmas Eve dinner in the Czech Republic look like?</td>
<td>39/41</td>
<td>33/41</td>
<td>95</td>
<td>80</td>
</tr>
<tr>
<td>19) How many planets are in our solar system?</td>
<td>36/41</td>
<td>37/41</td>
<td>88</td>
<td>90</td>
</tr>
<tr>
<td>20) How many days have a Gregorian calendar year?</td>
<td>37/41</td>
<td>38/41</td>
<td>90</td>
<td>93</td>
</tr>
<tr>
<td>Question</td>
<td>Czech</td>
<td>American</td>
<td>Czech %</td>
<td>American %</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------</td>
<td>----------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>21) When is the leap year?</td>
<td>36/41</td>
<td>39/41</td>
<td>88</td>
<td>95</td>
</tr>
<tr>
<td>22) What is the name of the first Afro-Am. who was elected president of the United States of America?</td>
<td>35/41</td>
<td>41/41</td>
<td>85</td>
<td>100</td>
</tr>
<tr>
<td>23) What is called the traditional Venetian rowing boat?</td>
<td>35/41</td>
<td>40/41</td>
<td>85</td>
<td>98</td>
</tr>
<tr>
<td>24) What is oasis?</td>
<td>41/41</td>
<td>41/41</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>25) Who was Julius Caesar?</td>
<td>39/41</td>
<td>37/41</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>26) What is the capital of France?</td>
<td>41/41</td>
<td>39/41</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>27) Which of these states do not belong to the European Union?</td>
<td>32/41</td>
<td>41/41</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td>28) Which celebration is associated with a pumpkin?</td>
<td>39/41</td>
<td>40/41</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>29) What is called the highest mountain in the world?</td>
<td>41/41</td>
<td>40/41</td>
<td>100</td>
<td>98</td>
</tr>
<tr>
<td>30) Who was Pablo Picasso?</td>
<td>37/41</td>
<td>36/41</td>
<td>90</td>
<td>88</td>
</tr>
</tbody>
</table>

The subsequent 30 bar charts demonstrate the overall successfulness of Czech and American respondents in per cent. The blue color shows the success rate of Czech pupils. On the other hand, the red color demonstrates success of American respondents.
1) In what hemisphere is the Artic located?

2) In what hemisphere is the Antartic located?

3) How is called the “layer of gases surrounding the Earth”?
4) What is the largest state in the world according to area?

5) What is the largest island in the world according to area?

6) What is the largest continent in the world according to area?
7) What is the longest river in the world?

8) What is the capital of United Kingdom of Great Britain and Ireland?

9) What is the name of a navigator who discovered America?
10) What is called the capital of the Czech Republic?

11) What is called the capital of the United States of America?

12) From which continent come the native Indians?
13) What is the name of the Austrian-born German leader who started the World War II?

14) Which of these books wrote the English poet and playwright William Shakespeare?

15) Which of these books wrote the British novelist J. K. Rowling?
16) What is called the animal which carries its young in its abdominal pouch?

17) Which of these animal use gills for breathing?

18) How does the traditional Christmas Eve dinner in the Czech Republic look like?
19) How many planets are in our solar system?

20) How many days have a Gregorian calendar year?

21) When is the leap year?
22) What is the name of the first Afro-American who was elected president of the United States of America?

23) What is called the traditional Venetian rowing boat?

24) What is oasis?
25) Who was Julius Caesar?

26) What is called the capital city of France?

27) Which of these states do not belong to the European Union?
28) Which celebration is associated with a pumpkin?

29) What is called the highest mountain in the world?

30) Who was Pablo Picasso?
The author found out on the basis of own research of essential general knowledge that Czech students made 0 – 5 mistakes in questions number 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 25, 26, 28 and 29. The American students made 0 - 5 mistakes in questions number 3, 4, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30.

Czech students made 5 – 10 mistakes in questions number 6, 12, 15, 19, 21, 22, 23 compare to the American respondents who made 5 -10 mistakes in questions number 6, 10, 12, 15, 18, 30. Czech students made the most mistakes which means 10 and more in the questions number 1, 2, 4 and 5 in contrast to the American respondents who made the most mistakes in question number 1, 2 and 5.

From the research follows that knowledge of Czech and American pupils in the age group from 12 to 14 years old is considerably equal, but the Czech respondents were a bit better in the field of geography, history and arts. On the other hand, the American pupils demonstrate a little better knowledge in a field of biology and common knowledge. The survey shows that the significant distinction arise primarily in questions number 27 with the difference 22 per cent between Czechs and Americans and also in a questions 22 and 8 with the difference 15 per cent.

The Czechs had significant problem with the questions focused on countries which do not belong to the European Union and with the question about the first Afro-American elected president of United States of America. On the other hand, the author considers the question “How does the traditional Christmas Eve dinner in the Czech Republic look like?” to be most problematic for American pupils.
The author found out on the basis of own questionnaire that all from the involved Czech students state they have 5 up to 8 lessons at the school a day. All the respondents are taught by 7 to 8 teachers. The Czech students learn 15 subjects in their school, including mathematics, Czech, arts, physics, English, German, geography, biology, history, information technology, music, physical education, human and the world of work, civics, education to health. Students also have 2 elective subjects incorporating English and German language. The most favorite subjects for women are mathematics, physical education and English. All of these subjects got 4 votes. On the other hand, the least favorite subject for women is mathematics again. 8 women out of 17 voted for mathematics. The second least favorite subject is physics with 5 votes and in the third place is German with 5 votes. The most favorite subject for men is physical education with 8 votes. In the second place is geography with 5 votes and the third place belongs to English with 4 votes. The men do not like mathematics the most, 10 men vote for mathematics. In the second place is German with 5 votes and the third place occupies Czech, physics and history with 2 votes.

The respondents from the United States claim they have 6 lessons a day and learn subjects including English, Spanish, health, history (Washington history, United States history), science, music, choir, mathematics, language arts, and gateway to technology. The students have also an opportunity to opt for one elective subject. All the respondents are taught by 6 teachers. The most favorite subjects for American women are English and physical education. Both got 5 votes. On the other hand, the least favorite subjects for women is mathematics. 9 women out of 20 voted for this subject. The second least favorite subject is US history with 5 votes and in the third place is Spanish with 2 votes.
The most favorite subject for American men is mathematics with 10 votes. In the second place is physical education with 5 votes and the third place belongs to science with 3 votes. The men do not like Spanish the most, 11 men vote for Spanish. In the second place is health education with 6 votes and the third place occupies choir with 3 votes.

The author’s research shows that the most of the Czech students spend 10 to 20 minutes on homework a day in comparison with the American students. The most of American respondents spend 1 to 2 hours on homework a day.

All the Czech respondents learn English and German except 1 who learns Italian compared to American respondents who learn only Spanish as a foreign language.

The Czech elementary school has outside playground for students compared to the American mid high school which has no playground.

The research shows the Czech respondents have longer breaks between individual lessons compare to the American students who has only 4 minutes between classes.

The Czech students have lunch mostly at 12 or 13 o’clock unlike Americans who have lunch at 11.30. In contradistinction to Americans who have only 30 minutes for their lunch, the Czech students have 45 minutes for lunch. All of the Czech students eat in the school lunchroom except 1 who buys his own lunch as opposed to the American students who prefer their own lunch from home. The Czech students favor the typical Czech meal as dumpling with sauce and meat contrary to American respondents who prefer pizza or sandwich.

The both schools differ in offering of after school activities. 10 out of 17 Czech women participate in the after school activities, most of them enjoy tennis and dancing. 14 out of 24 Czech men engage in after school
activities, especially in football, tennis and floorball. 9 out of 20 American women participate in the after school activities, the most of them enjoy soccer and tracks. 13 out of 21 American men engage in after school activities, especially wrestling and cross country.

The Czech respondents have double lessons of physical education once a week. The American respondents have physical education every day in the first semester of school which means that they have physical education for only a half of the school year and they have health education in the second half of the school year.

The author’s research shows that 5 out of 17 Czech women have met with the bullying at their school; one of them has been bullied by another student. 6 out of 24 Czech men have met with the bullying at their school and 4 of them have been bullied by another student. The proportion of Czech students to American students who have met with the bullying at their school do not almost varies. 5 out of 21 American men have met with the bullying at their school and 3 of them have been bullied by another student. 4 from 20 American women have met with the bullying at their school and 2 of them have been bullied by another student.

All of the respondents have their own locker for personal things.

Both school allows the use of electronics (cell phones, ipods, etc.), but only during breaks.

The questionnaire shows that the Czech and American students do not wear the uniform at their schools.
12. Conclusion

The main goal of the author’s thesis was to analyze the Czech and American educational system.

This goal was reached by the detailed description of both systems ensued by the author’s own research of Czech and American respondents of the same age. This research included test focused on the comparison of general essential knowledge of students from the fields of geography, biology, arts and a questionnaire. The questionnaire inquired into information about the length of school day, school subjects, food habits of students and their after school activities.

The Czech educational system began to shape in the 18th century, in the time of Maria Theresa. The important turning point was the implementation of the general educational obligation in 1774. Since then the Czech schooling has been extensively changing into the current fixed form. The contemporary arrangement is divided into preschool, elementary, secondary and tertiary education.

The initiation of American educational system is dated from the 17th century, the period of so-called colonial era. The significant milestones in the development of education are considered the implementation of the compulsory school attendance in all federative American states in the late 19th and early 20th century as well as the abolishment of racial segregation at the American school in the fifties of the 20th century.

From the research follows that knowledge of Czech and American pupils in the age range from 12 to 14 is considerably equal, but the Czech respondents were a little bit better in the field of geography, history and arts. On the other hand, the American pupils demonstrated a little better knowledge in the field of biology and common knowledge.
The questionnaire showed that the syllabus of Czech and American respondents slightly varies. The Czech pupils learn 15 subjects at their school, including mathematics, Czech, arts, physics, English, German, geography, biology, history, information technology, music, physical education, human and the world of work, civics, health education. Students also have 2 elective subjects that incorporate English and German language. The author found out that the respondents from the United States learn subjects including English, Spanish, health, history (Washington history, United State history), science, music, choir, mathematics, language arts, and gateway to technology. The students have also an opportunity to opt for one elective subject.

The Czech pupils have 5 up to 8 lessons at school a day contrary to the American respondents who have 6 lessons a day. The Czech pupils are taught by 7 up to 8 teachers in contrast to the American respondents who are taught only by 6 teachers. The author also found out that the most of the Czech students spend 10 up to 20 minutes on homework a day in comparison to the American students. Majority of American respondents spend 1 up to 2 hours on homework a day.

The author concerned also with the problem of bullying and the research shows that 5 out of 17 Czech women have met with the bullying at their school; one of them has been bullied by another student. 6 from 24 Czech men have met with the bullying at their school and 4 of them have been bullied by another student.

The proportion of Czech students to American students who have met with the bulling at their school does not almost vary. 5 out of 21 American men have met with the bullying at their school and 3 of them have been bullied by another student. 4 from 20 American women have
met with the bullying at their school and 2 of them have been bullied by another student.
13. Endnotes

1. Metodický portál RVP.CZ. Tereziánská reforma v českém školství [online].

2. Vývoj českého výchovně vzdělávacího systému. Odpovídající úroveň v českém školském systému [online]. p. 3 - 4

3. Vývoj školství na našem území a současný školní systém. Vývoj školství na našem území [online]. p. 2 - 6

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ÚPLNÉ ZNĚNÍ ZÁKONA Č. 111/1998 SB., O VYSOKÝCH
ŠKOLÁCH A O ZMĚNĚ A DOPLNĚNÍ DALŠÍCH ZÁKONŮ: § 47


15. Abstract

This bachelor thesis is called *Comparative analysis of Czech and American educational system: Analysis done by means of survey of students*. As the title indicates this bachelor thesis deals with comparison and development of Czech and American educational system. The main purpose of the thesis is to provide general view of Czech and American education.

The thesis is divided into theoretical and practical part. The theoretical part includes international researches comparing Czech and American students in fields of numeracy, literacy and knowledge of natural science. This part also incorporates detailed description of both Czech and American educational system with their development. The next chapters deal with the most prestigious universities in the Czech Republic and in the United States of America and with the main differences between Czech and American educational arrangement.

The practical part is divided into two sections. The first section incorporates the test of essential general knowledge from the field of geography, history and arts. The second section contain the questionnaire inquiring into information about the length of a school day, school subjects, food habits of students and after school activities.
16. Resumé

Tato bakalářská práce se nazývá Komparativní analýza českého a amerického vzdělávacího systému: Analýza provedená prostřednictvím průzkumu studentů. Jak naznačuje název, tato bakalářská práce se zabývá srovnáním a vývojem českého a amerického vzdělávacího systému. Hlavní záměr práce je nabídnout všeobecný přehled českého a amerického vzdělávání.

Práce se dělí na teoretickou a praktickou část. Teoretická část zahrnuje mezinárodní výzkumy porovnávající české a americké studenty v oblastech matematické gramotnosti, gramotnosti a ve znalostech z oblastí přírodních věd. Tato část také zahrnuje detailní popis obou systémů, českého a amerického, a jejich vývoje. Následující kapitoly se zabývají nejvíce prestižními univerzitami v České republice a Spojených Státech amerických a hlavními rozdíly mezi českým a americkým vzdělávacím uspořádáním.

Praktická část se dělí na dvě části. První část zahrnuje test základních všeobecných znalostí z oblasti geografie, historie a umění. Druhá část obsahuje dotazník zabývající se informacemi o délce školního dne, školními předměty, stravovacími návyky a mimoškolními aktivitami.
17. Appendices

Appendix I: Population with tertiary education
Appendix II: The result of states in Pisa 2006
Appendix III: The result of states in Pisa 2009 in a field of literacy
Appendix IV: The result of the OECD states in Pisa 2012
Appendix I: Population with tertiary education

The graph shows and compares the population aged 25 to 34 and 55 to 64 with tertiary education, in 2008. The light blue triangle represents the population aged 25 up to 34. However, the dark blue square represents the population aged 55 up to 64. The results are stated in percentage.
Appendix II: The result of states in Pisa 2006

The graph shows the results of 15 years students of participating states in a field of literacy, numeracy and natural science, in 2006. The squares demonstrate states whose results were not statistically different from the results of Czech Republic. The black arrows oriented upwards shows states whose results were statistically significantly better than Czech Republic. On the other hand, the black arrows oriented downwards demonstrate states whose results were substantially worse than the final scores of Czech Republic.
Appendix III: The result of states in Pisa 2009 in a field of literacy

<table>
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<th>State</th>
<th>Result</th>
</tr>
</thead>
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<td>Portugalsko</td>
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<td>Itálie</td>
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<tr>
<td>Lucembursko</td>
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</table>

The chart shows the results of 15 years students of participating states in a field of literacy, in 2009. The black circle represents the states whose results were not statistically different from the results of Czech Republic. The black arrows oriented upwards shows states whose results were statistically significantly better than Czech Republic.
Appendix IV: The result of the OECD states in Pisa 2012

The chart shows the results of 15 years students of participating states in a field of numeracy, in 2012. The black circle represents the states whose results were not statistically different from the results of Czech Republic.
The black arrows oriented upwards shows states whose results were statistically significantly better than Czech Republic. On the other hand, the black arrows oriented downwards demonstrate states whose results were substantially worse than the final scores of Czech Republic.

The chart shows the results of students in participating states in 2007, 1999 and 1995. The orange color indicates the difference from 1995 until 1999, the blue color the contrast from 1995 until 2007. The Czech students were always below-average according to given graph, contrary to American students who were better-than-average in all tested years.

<table>
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<th>Země</th>
<th>Průměrný výsledek</th>
<th>2007</th>
<th>1999</th>
<th>1995</th>
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<td>Lívia</td>
<td></td>
<td>519</td>
<td>488</td>
<td>464</td>
</tr>
</tbody>
</table>

The chart shows the results of eight grade students in participating states in 2007, 1999 and 1995, in a field of natural science. The graph shows the Czech students deteriorated from 1995 (final score 555) up to 2007 (final score 539). The American students improved from 1995 (final result 513) up to 2007 (final result 520).

The chart shows the results of fourth grade students in participating states in 2007 and 1995, in a field of natural science. The chart also shows the difference in results between the years 1995 and 2007. The squares demonstrate states whose results were not statistically different from the results of Czech Republic. The black arrows oriented upwards shows states whose results were statistically significantly better than Czech Republic. On the other hand, the black arrows oriented downwards demonstrate states whose results were substantially worse than the final scores of Czech Republic. The Czech students deteriorated from 1995 (the final score 532) to 2007 (the final score 515) as well as the American students who achieved the final score 542 in the year 1995 and the final result 539 in the year 2007.