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## Economic Sciences

### Экономические науки

#### Tourist Valorization of Cultural Route “The Trail of the Roman Emperors“

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**Abstract.** Cultural routes appear as a new concept that turned to be very beneficial in terms of the revitalization and presentation of cultural heritage in its broader sense - from archaeological sites to landscapes. These trails provide a unique purview into the spirit of modern countries and their inextricable connection to contemporary time. On the territory of present day Serbia 17 Roman emperors were born, which is one fifth and largest number of Roman emperors born anywhere in the world, outside of Rome. That was a good basis for developing idea of forming cultural route and starting the project „The Trail of the Roman Emperors“ in Serbia. It can be one of the most important topics in the field of cultural tourism in Serbia, and the main goal of this paper is to give a proposal for its valorization and promotion for the tourism purposes. This will be achieved through the evaluation of all elements of tourist valorization on the basis of which general tourist assessment will be formed, while the purpose of SWOT analysis was to detect existing strengths and weaknesses, and provide real opportunities and risks for this cultural route.

**Keywords:** valorization; Serbia; cultural route; Romans.

#### Introduction

The culture has always been the main motive for traveling and one of the facts which support this statement is certainly the development of the „Grand Tour“ in the sixteenth century and the other journeys organized after that [1]. However, during the twentieth century, the culture was not anymore the main reason for tourism development, but culture became tourism instead [2]. According to reports of OECD and UNWTO in 2007, the 40% of international tourism represents cultural tourism. Moreover, cultural routes appear as a new concept that turned to be very beneficial in terms of the revitalization and presentation of cultural heritage in its broader sense - from archaeological sites to landscapes [3]. The cultural routes are defined as roads that pass through one or more regions or countries, which organization is based on the specific theme such as historical, artistic or social, and which are also associated with geographical principle, due to the significance they have [4].

Several preconditions are identified as being necessary for successful tourism routes: community participation, cooperation networks, an explicit pro-poor focus, information provision and promotion, and product development and infrastructure [5]. The fact that indicates how important are the cultural routes is that in 1998 was founded the European Institute of Cultural Routes, who worked closely with the Council of Europe. Their principle aim was to ensure the continuity and further development of the cultural routes in 51 countries who have signed The European Cultural Convention. This project, run by the Council of Europe, was named Cultural Routes. The sole purpose of this project is the protection and promotion of cultural and natural heritage, as a way of improvement of the quality of social, economic and cultural development.

If we take into account that the seventeen Roman Emperors were born in Serbia, which is 20% of the total number of Roman emperors and kings, as well as the largest number of imperators' children born outside of Italy, there are good basis for developing idea of forming

cultural route and starting the project „Itinerarium Romanum Serbiae” or „The Trail of the Roman Emperors“ in this country. The main aim of the project is to connect all places with a rich ancient heritage, creating a cultural route over 600 miles long. This cultural route should also present this heritage as a great potential that will enrich and enhance cultural tourism, especially because it represents the heritage of the global importance [6].

Once people visit sites like Romuliana, Viminacium, Mediana and other cultural assets along this route, which are still not enough valorized and discovered in the right way, they will be motivated to learn more about their history, architecture, and valuable cultural and artistic heritage. Unfortunately, most people are not aware of the importance and value of cultural heritage from the Roman period which is located in Serbia. Therefore, the idea of a cultural route „The Trail of the Roman Emperors“, became one of the most important topics in the field of cultural tourism in Serbia. Based on that fact that route will connect all of these sites and contribute to their valorization, as well as provide an authentic experience of the Roman period, the main goal of this paper is to give a proposal for its valorization and promotion for the tourism purposes.

### **Methodology and Research Methods**

All objects, phenomena or spaces formed by natural processes or human activity which possess a certain attraction for visitors can be a subject of tourist valorization. One of the most often used methods of tourist valorization is a quantitative–qualitative method, which allows a fair amount of freedom in the evaluation, and it is based on six indicators. The second, more complex method, is the Hilary du Cross method of tourist valorization, which is, due to its complexity and variety of indicators that are included in the process of cultural property evaluation, considered to be more appropriate and more reliable [7].

In the field of tourism, there is no explicitly defined method of valorization. On the other hand, it is often a sublimation of methods used in other scientific fields and adapted for tourist purposes. Mostly these are quantitative –qualitative methods, that through a numerical expression, description, and sometimes graphic, express the value of a resource, which is valorized [8]. The essence of tourist valorization is to establish the existing state of resources, and through the assessment of their value set up the objectives and realistic possibilities for tourism development, and then subsequently, the merits estimates of putting the proposals for determining the special protection of certain resources or the entire space, realizations of possible solutions for the protection, assessment of investment activities and opportunities of tourist turnover [9].

In this paper, using the above methods, we tried to determine the tourist potential of cultural route „The Trail of the Roman Emperors”. Also, based on that, we will use SWOT analysis to determine the existing strengths and weaknesses, and the real opportunities and threats for this cultural route. The research material consists of secondary data collected from literature, bibliographic studies and documents. We will also be using a descriptive approach and the inductive research method.

It should be noted that in tourist valorization difficulties arise from the imperfection of the methodology used for the quantification of indicator values for valorization by giving them numerical scores. It should also be noted that different approaches lead to results with limited reliability, bearing in mind that the assessment is based on the subjective perception and evaluation of the grader, as is the case with this assessment. For this reason this type of research must intersect and complement with contact studies of tourist clientele, because it is the only way to reliably determine how tourists experience the cultural and natural values of a given space. Visitor inclusion in the evaluation process is a good way to achieve objectivity [10].

### **Results of the Quantitative–qualitative Method of Tourist Valorization**

In theory and practice of tourism, quantitative–qualitative method consists of the so-called „complete methods“ (based on the system of factors which also include examination of cultural and geographic factors, i.e. the cultural values of space, then suprastructure and infrastructure) [11]. The quantitative evaluation in reality can not encompass all the components of space, and therefore the so called complete methods are also called „quasi-total“.

Since many domestic and foreign authors consider that the valorization process proposed by the World Tourism Organization is outdated, it is modified, and that modified procedure was used

for the purposes of this paper, so the tourist valorization is carried out by analyzing: *tourist-geographical position, artistic value, tourist value of the ambience, tourist attractiveness and recognition, construction and equipment of the space, tourist value of the surrounding tourist resources.*

Based on that analysis, cultural good (in this case the locality) is evaluated with grades from 1 to 5 to determine the overall value of the tourist route:

- 1) unsatisfactory quality (inability for tourist presentation),
- 2) satisfactory quality (local tourist importance),
- 3) good quality (regional tourist importance),
- 4) very good quality (national tourist importance),
- 5) excellent quality (international tourist importance) [11].

### 1.1. Tourist-geographical position

Tourist and geographical location is evaluated as a ratio of contractive zone of archaeological sites and the dispersion zone of the originating region in the near surrounding. When evaluating this element, it is important to determine the existence of the major roads, railways, airports and navigable rivers in the near surrounding [11]. The geographical position of cultural and historical route is relatively good because the route passes near the Corridor E-75, but on the other hand, due to the very wide territory of the route it is badly connected with cross-linked junctions [12].

The *Sirmium* is located only 75 km from the country's capital, Belgrade, and the road E-70 of international importance connects it with this city, as well as and the only double track railway in the country. From the provincial capital Novi Sad is 50 km away. The current grade is 4. *Singidunum* is located on the territory of today's Belgrade which represents an important transport hub. Belgrade is a place through which are passing two roads of international importance: E75 - as North and South part of Corridor 10, and E 70 - as the Western part of Corridor 10 and the road leading to Romania. In addition, the important Ibar highway E 763 starts from Belgrade too [13]. Here is also located the largest airport of Serbia „Nikola Tesla“. Moreover, Belgrade developed other forms of transport, such as railway, and it runs by the railroad Belgrade-Bar, Belgrade-Nis etc. The current grade is 5.

*Viminacium* is located 100 km from Belgrade and those two cities are connected by north-south direction of E-75 road. Highway M-25 is very important for transit traffic, especially traffic directed to Djerdap and Negotinska, and Timočka area [14]. This traffic position is beneficial for connecting Viminacium to other tourist centers along the route. The current grade is 5.

*Tabula Traiana* (Roman memorial plaque), *Pontes and Diana* are located in Djerdap in the east part of Serbia. Danube is certainly the most important traffic artery here, but however, Djerdaps highway has the greatest significance in terms of traffic. The current grade of the location of all three sites is the 4. *Felix Romuliana* is located in the eastern Serbia near Zaječar. Main roads M-5 and Timočka highway, as well as regional and local roads are making great connection to other places. The current grade is 4.

The *Mediana* is located near Nis, the third largest city in Serbia, which is located on the river Nišava. Nišava is very close to E-75 road of international importance, which makes this location extremely accessible. The current grade is 5. *Caričin grad* was once known as Justiniana Prima, one of the largest and most important Byzantine cities in the Balkans. It lies on the gentle slopes that descend from the mountain Radan to Leskovac, at the place without any significant roads [15]. This place is neither on the Morava-Vardar-axis nor on the west road which connected Naisus and Skopje, or any important transversal. It is located about 30 km from Leskovac, which is the closest major city, and the capital city Belgrade is located over 300 km. The current grade is 3.

### 3.2 Artistic value

The evaluation of this element relates to the assessment of all factors that attract tourists. All specific places located along this cultural and historical route have significant artistic value, which is reflected in the numerous villas, ruins of palaces, preserved mosaics, frescoes and sculptures.

When it comes to *Sirmium*, besides numerous bathrooms, cemeteries, and the Imperial Palace, frescoes and sculptures of exceptional value were discovered on more than 74 localities of this site. The current grade is 5. In terms of artistic value, *Singidunum* is long behind other site

along the route; however, there can be found some valuable traces of classical art, which are reflected in the altar, the marble torso women without heads and other sculptures. Unfortunately, over the surface of this place have not been preserved any trace from the Roman period. Belgrade was many times destroyed to the ground, and rebuilt so there is not much left from the Roman Singidunum [16]. The current grade is 2.

On contrary, *Viminacium* has a very high artistic value, which is reflected in the valuable frescoes preserved in tombs, remains of pottery, coins, glass and worthy pieces of jewelry. *Viminacium* is also a potential place of mammoth graveyard due to a recent discovered of a new fossil of mammoth in the mines of the Old Kostolac [6]. The current grade is 5.

The bridge and plaque of *Trajan, Diana and Pontes* are also reputed to be sites with considerable artistic value. Diana stands out because this is the place where worthy remains such as marble and bronze figures, tools, weapons, money were found, especially in the interior of the palace. Unfortunately, the rich and valuable relief decoration of Trajan's plaque is devastated and little is preserved [11]. Trajan's bridge and board and Pontes were evaluated by the grade 4, while Diana was rated as 5. The fact that in 1979 *Felix Romuliana* was categorized as a cultural heritage of great importance, since 2007 is has been under the protection of UNESCO as a cultural heritage of great importance in Serbia, and that the priceless artwork found here is exhibited throughout Europe, are some of the evidences that confirm its extraordinary artistic value [17]. The current grade is 5.

*Mediana* has a number of discovered mosaics, which are still not very well investigated. Nevertheless, they represent significant outstanding examples of art. Here were also found very old sculptures from marble and Egyptian porphyry. In addition, the money and ceramic objects discovered here are witnesses are of great artistic value. The current grade is 5. The artistic value of *Caričin grad* represents iron objects, the remains of ports and mosaics found in the ruins of the church, and all of this creates a valuable picture of paleovizantian civilization [15]. Interestingly, the remains of glass are a valuable material, because they indicate that here, at this time, this was the only glass workshops on the Balkan peninsula. The current grade is 5.

### 3.3 The Ambience

Ambiance is the complexity of natural and man-made resources of space, and it has a profound effect on the value and the quality of the overall experience [11]. In the wider environment in which Sirmium is located, there are the attractive natural resources such as the Sava river, and National Park Fruška Gora which is very close to this place. We should also mention the rich forests around Sremska Mitrovica and the real natural gem - Special Nature Reserve Zasavica, which increases the value of the environment. The current grade is 4.

The ambience of *Singidunum* is predominantly urban and on the surface there are not any traces from Roman period. Nevertheless, some valuable discoveries have been found beneath the city streets and buildings. The value of the urban environment complements the natural value of two major rivers Sava and Danube, as well as Avala mountain. The current grade is 3. The wider environment of *Viminacium* represents a fertile plain named Stig and the mouth of the Danube and Mlava. The closer ambience of *Viminacium* consists of all-natural space, covered with clover, corn and wheat, which is recognize by investors as extremely valuable in terms of future construction, accommodation facilities that will all together provide an experience of exceptional natural landscapes. The current grade is 4. *Trajan's plaque and the bridge, Diana and Pontes* are placed in a beautiful natural setting of Djerdap gorge, one of the most beautiful and the largest in Europe, and meander of the river Danube. In the surroundings there are many natural elements such as natural reserves and natural monuments, view points and rare natural phenomenon, but in addition also a number of cultural values from different epochs as well known archaeological site Lepenski vir. The current grade is 5.

*Romuliana* is surrounded by forests, meadows and pastures, and what makes it environment special is certainly the Black Timok River. *Romuliana* is located near Gamzigrad spa, with beautiful surroundings and hot springs. Forest vegetation is unfortunately mostly degraded, except the small fragments of preserved vegetation resources, attractive elevations and squeezed meanders of Black Timok [17]. Unplanned construction of individual buildings in the place where *Romuliana* is located violates the original value of this site. The current values 5.

*Mediana* is placed in the area which consists of loess plateau of the river Nišava. The potential of this ambience is not used enough which indicates the need for creation of parks, flower fields or other natural elements. The current grade is 3. The ambience of *Carčcin grad* consists of preserved nature and greenery, without disturbing noises which creates opportunity for quality vacation. It is situated on the gentle slopes between Radan and Leskovac valley. The current grade is 3.

#### 3.4. Construction and equipment of the space

The center of this cultural and historical route *Viminacium* is reputed to have the most developed infrastructure and tourist facilities. With a main aim to protect and provide presentation of this site there were built the permanent protective structures of laminated wood. At the site there are additional objects such as ticket office with a souvenir shop, a cafe-restaurant and a sanitary toilets [18]. Moreover, it contains accommodation facilities for researchers and students as well as working facilities (offices, computer lab and professional library), a museum space for the presentation of cultural heritage and the Center for original items found at this the site, lecture halls and other rooms. From the thermal power plant „Kostolac B“ to this site leads a country road covered by sand, so this site can be reached by car, as well as by buses. In all significant areas of the site, there are set the tables whose purpose is to inform about major characteristics of the object and explain its status (that this object is protected by the state and legally protected). All exposed and researched parts of *Viminacium* are marked with yellow, clearly visible bands which inform potential visitors in the circle of hundreds of meters that in that area is an ancient city [16]. At the entrance to the site are placed banners on which is printed in large letters the name of the site which contributes to visibility of location and orientation in the space. The current grade is 5.

The area around *sites which are located in the Djerdap gorge* is characterized by very low levels of development. The nearest accommodation facilities and restaurants are located in Kladovo. The road from Kostol is the soil road and is recommendable to go to the site by foot, because there are still just plans to start work on the access road and parking area. The Pontes is invisible from the road because it is overgrown with bushes and weeds. In addition on the way from Kladovo there is a signpost with the inscription „Trajan's road“, but without indications of the Pontes on that road [19]. More attention is now given to reconstructions of Diana site, which is one of the best preserved. It important to emphasize that all items found in this region can be seen only in the Archaeological Museum of the Djerdap gorge. There are plans in the long run to combine remains of Trajan's bridge by laser technique, but this is still little bit far-fetched. The current grade for all three locations is 2.

When it comes to construction of space and tourist infrastructure it should be noted that the transport infrastructure along the route is mostly of poor quality. Also, the roads are almost without rest stops with appropriate supporting infrastructure. This can be a significant aggravating factor, which prevents a large number of tourists on this route. The existing tourist offer related to the experience of the Roman route, is extremely underdeveloped. The restaurant offer is modest, and in terms of offer of food and specialties is generally uniform. In addition, most of our restaurants with some exceptions, mostly decorated without imagination [12]. This suggests that in the future, particular attention should be paid to the development and investment in tourism infrastructure and substructures along the thematic route, in order to achieve significant tourist traffic.

#### 3.5 Tourist appeal

Tourist appeal of sites that are located along this cultural and historical route is high, but it still didn't reach it peak. A large number of people, not only from abroad but also from Serbia, have not visited these sites, and have not even heard of some of them. Majority of people is not familiar with their value and importance for the history and culture, and are not sufficiently aware of the tourism potential, we can conclude that the recognition and appeal of site is still on unenviable level, and there should be a lot of effort to change it in the future.

First and foremost all sites are supposed to get Visitors Center, which currently exists only in Sirmium, *Viminacium* and *Caričin grad*. Also, in order to present these sites to tourists, it should be should arranged an interpretive center, and provide a 3D projection of these sites. This will certainly emphasize and present the importance of this object, which will encourage them to visit



those sites, and contribute to the protection and preservation an important goal which must be considered during tourism development. This also points out the importance of digitization of cultural heritage in their protection and preservation, but also for the research, science, education and dissemination of knowledge. The sites which are more recognizable and have bigger tourist appeal are Viminacium as the center of the route, as well as Romuliana, as a site that is part of the World Heritage by protected UNESCO, which is the fact that contributed significantly to the attractiveness and increased the chances for a significant development of tourism in this area. The realization of cultural and historical route „The Trail of the Roman Emperors“ is also a great opportunity for all of the sites that are involved in it, to increase their attractiveness and tourist visits, and adequately valorize its unique value.

### 3.6 Tourist value of the surrounding tourist resources

Fitting in with other tourism assets in vicinity of certain locations along the route is quite different. More or less all are surrounded by numerous natural and cultural values, some of them less, some of them more tourist valorized which increases the overall attractiveness and offer the possibility of forming a complex product.

From natural resources stands out Special Nature Reservate Zasavica, the Sava and Danube rivers, and mountains Fruška gora, mountain Avala, caves, gorges, spas, lakes, etc.. From cultural values there are the numerous monuments and Orthodox monasteries, medieval fortress, archaeological sites such as Vinča, Skull Tower and similar assets.

Table 1: Results of tourist valorization of cultural route „The Trail of the Roman Emperors“ by quantitative-qualitative method

Heritage site	Elements of tourist valorization						
	Tourist-geographical position	Artistic value	Ambience	Construction and equipment of the space	Tourist appeal	Tourist value of surrounding tourist resources	Average tourist value
Sirmium	4	5	4	4	4	4	4.16
Singidunum	5	2	3	3	3	3	3.16
Viminacium	5	5	4	5	5	4	4.7
Traian's plaque (Tabula Traiana)	4	4	5	2	4	5	4.00
Pontes	4	4	5	2	3	5	3.83
Diana	4	5	5	2	4	5	4.16
Felix Romuliana	4	5	5	4	5	4	4.50
Mediana	5	5	3	3	5	4	4.16
Caričin grad (Justiniana Prima)	3	5	3	4	4	2	3.58
-	-	-	-	-	-	-	4.03

Judging from results of an analysis of all relevant elements of tourist valorization, with purpose of presenting the overall tourist value of this cultural route, it can be concluded that they vary from those from good quality (3.16, Singidunum) to the excellent quality (4.7, Viminacium 4.5, Romuliana). The overall rating was 4.03 (very good quality and the importance of the national

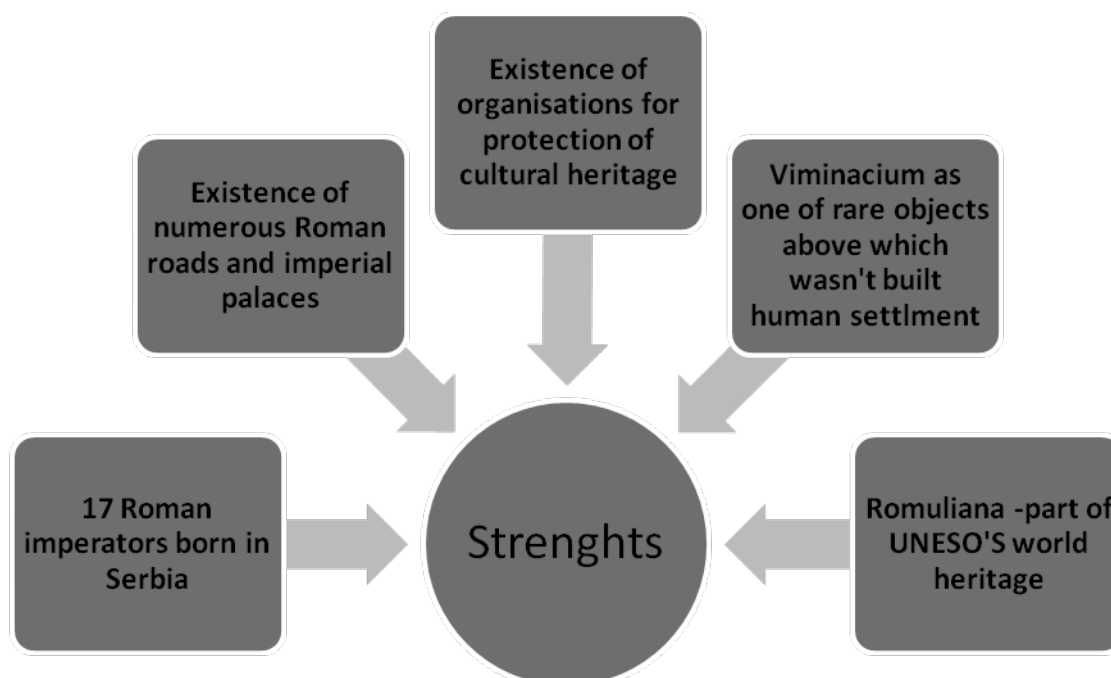
significance), but there is a space for improvement in the coming years in order to achieve the excellent quality and international tourist significance.

Besides Viminacium and Romuliana as sites of international importance, which attract more and more tourists, other sites analyzed in the table are generally of wider regional importance and need immense investment in building their infrastructure, facilities, admission requirements for visitors, promotion, etc.

### Results of the SWOT analysis

In the process of tourism planning in some area, SWOT analysis plays a major role. This method is wide-ranging because it concerns internal factors (the organization as such), and external factors (the closer environment – the competitive environment, and the more remote environment– the macro-environment). The combination of external and internal factors leads to four categories: internal positive – *Strengths*, internal negative – Weaknesses, external positive– Opportunities, and external negative – Threats [20]. For every tourist product, in this case cultural route, it is necessary, on the one hand, to determine its strengths and weaknesses, i.e. internal capabilities and internal weaknesses, and on the other hand, it is necessary to analyze the opportunities and threats in the environment, i.e. external opportunities and threats. In SWOT analysis, there is no need to specify all the factors. Instead, those which are of prime importance and may determine the future should be in focus [20].

If the factor „STRENGTHS“ is analysed, we can conclude the following:



Picture 1. SWOT analysis „Strengths”

- On the territory of present day Serbia were born 17 Roman emperors, which is one fifth and largest number of Roman emperors born anywhere in the world, outside of Rome. This fact, enriched with legends and stories about their life, linked to our history, it is of great importance for the development of tourism and attracting visitors [16].

- The existence of the remains of the ancient Roman roads in Serbia, such as Trajan's trail through the Iron Gate (Via Militaris), which was discovered close to Dimitrovgrad, near the Corridor 10, as well as the royal palaces and residences of some of the most famous Roman emperors, which testify to their stay on the ground of modern Serbia, provided a strong basis for the development of cultural route [16].

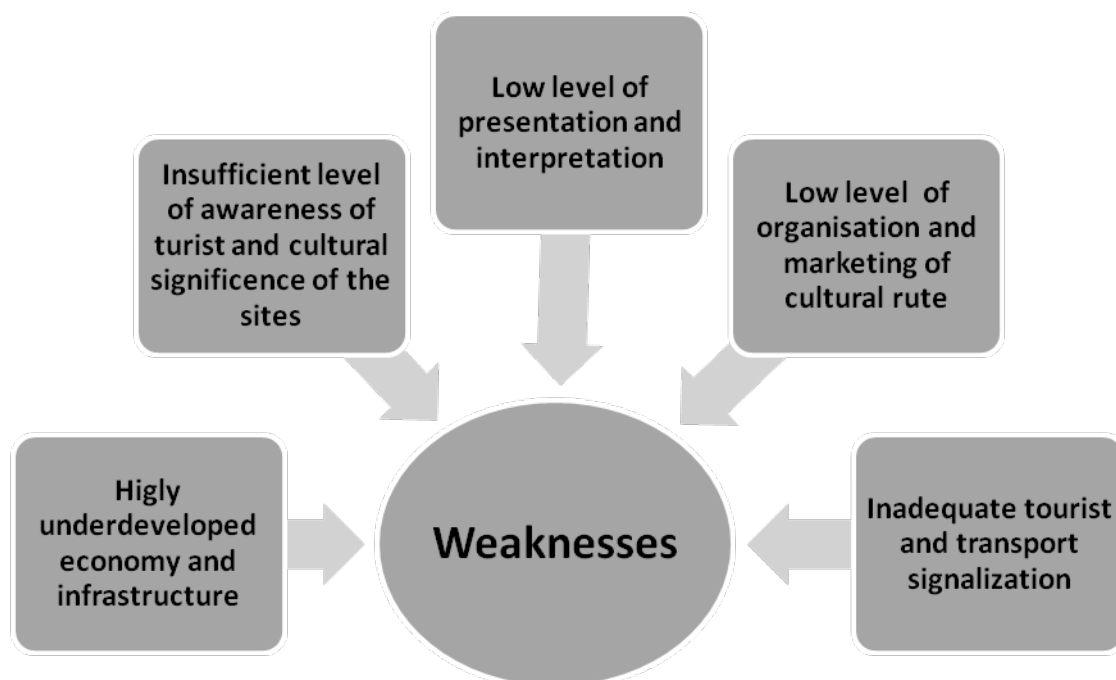
- The existence of individual organizations that protect cultural heritage, which includes this cultural route, such as the Institute for Protection of Cultural Heritage is very important, because

besides the development of tourism special attention should be given to the sustainability and preservation of this cultural heritage, in order to stay in unchanged form for future generations.

- The fact that the Romuliana since 2007 is part of the UNESCO world cultural heritage significantly increases its attractiveness and contributes to its image, which can provide good results in terms of attracting foreign tourists.

- Within the route is Viminacijum site, one of the few without a settlement constructed over it, which is a great value. Also, new discoveries related to Viminacijum intrigued the public, which should have a very positive effect on the development of tourism.

„The Trail of the Roman Emperors“ surely has a certain flaws that can be presented through the „WEAKNESSES“ of the cultural route:



Picture 2. SWOT analysis „Weaknesses“

- Tourism and the overall economy is mostly underdeveloped. Largely there is no adequate infrastructure to meet the needs of this route and that would be suitable for the mass tourist visits. Hotels and other accommodation facilities need renovation, and it is noted the absence of high categorized objects. Restaurants with its appearance and food offer do not fit properly in the theme of his route [16].

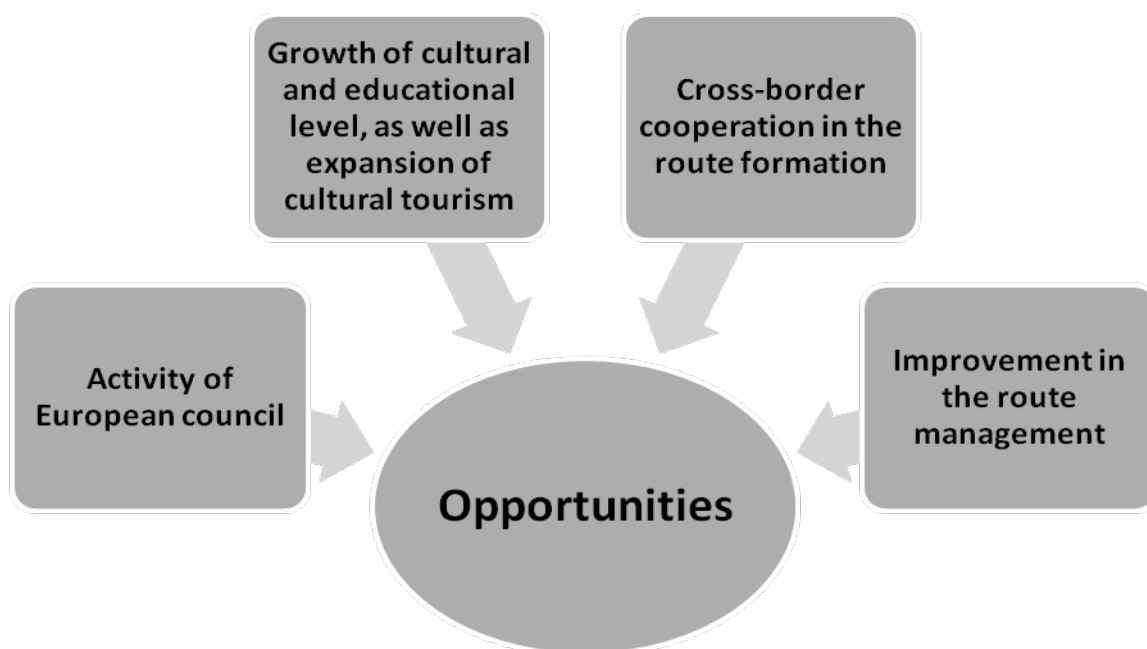
- Lack of understanding for cultural and tourist significance of the sites and route itself, and insufficient use of its tourist potential is significant weakness. Level of tourist arrivals is still at a low level compared to the great importance of the cultural, historical and artistic value of all these heritage. In addition, the local population is poorly aware of value and importance of these sites, and their participation and support is crucial in the development of tourism within the route [16].

- Lack of adequate presentation and interpretation of the sites along this route, as well as low presence of modern means in their presentation, which could bring them (as well as the originate period) closer to the tourist audience. The most important aspect of the project is the electronic coordination and marketing of routes via the Internet [21].

- Lack of good organization regarding the realization of this route and unadequate promotion and marketing. Route does not have an official website, which would provide potential visitors necessary information about all the sites, which is the great weakness in the internet era.

- Unadequate tourism and traffic signalisation, making it difficult for orientation and accessibility, which can leave a negative impression, especially to foreign visitors.

Through the factor „OPPORTUNITIES“ we analyzed the options for improving the sites:



Picture 3. SWOT analysis „Opportunities”

- The engagement of the Council of Europe in terms of the idea of cultural routes and corridors in Europe. Cultural Routes have become the subject of great interest among scientists, as well as tourists. The Council of Europe is quite engaged in establishing these routes, as a significant relationship that unites different cultures and regions.

- Continued increase in cultural and educational level of tourists, and their growing interest in cultural tourism, which is in expansion, as well as visiting cultural and historical sites, and archaeological sites. All this is a great opportunity for the development of this route in the future, and its increased visitation, from both domestic and foreign tourists.

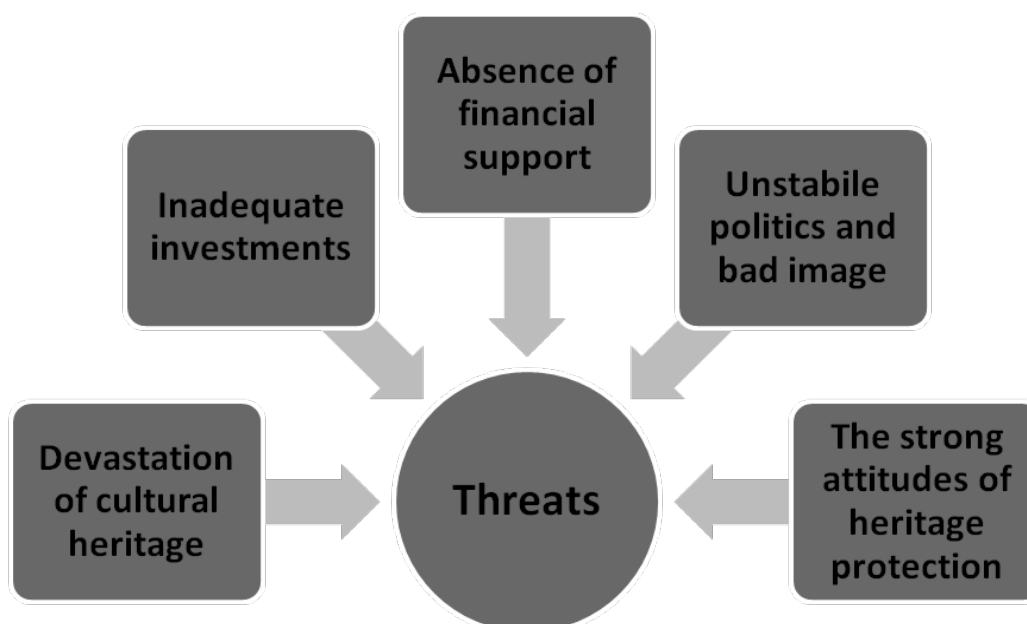
- The possibility of cross-border cooperation regarding this route, including the important places related to the Roman Empire in other countries. This would allow the formation of a complete tourist product, as well as adoption of new best practices in terms of tourist activation of these heritage [16].

- Development of regional DMO, which would solve the problem of the management and organization of the route.

- The fact that there are many natural attractions along the route, and that could be successfully linked with cultural into a single product that offers a complete experience.

- Existence of plans for construction of 100 Roman boarding houses, in a completely natural setting (clover, wheat, maize) where tourists will be able to stay, which would certainly represent a truly authentic experience.

The factor „THREATS“ can be a serious obstacle in future development and it can be found in the following forms and can have the following consequences:



Picture 4. SWOT analysis „Threats”

- The mass tourist visits in the future could contribute to the devastation and damage to these important sites, which requires a compelling need for sustainable development of cultural tourism, so that the fundamental value these objects could be preserved. Route tourism planning is also not always well executed if cultural resources are exploited for the sake of economic benefits [22].

- Lack of interest of hotel and restaurant owners to invest in renovation and reconstruction of these objects, as well as absence of foreign investments, which could be an important incentive for the development route.

- Lacking and insufficient allocation of financial resources from the state to fund such projects, which can be a brake on further development, which requires a great investment.

- The existence of the opinion that cultural heritage should rather be the question of protection issues rather than involvement in tourism and interpretation. These two objectives should be balanced, since great insistence on the one or the other would give bad results.

- The unstable political situation in the country and potentially negative image of Serbia, which could affect a smaller number of visitors coming from foreign countries.

Implementation of SWOT analysis can help entities responsible for the management of local or regional tourist policies in the destinations, to position tourism in their strategic plans [20]. Individual segments of presented SWOT analysis can serve as a framework for further action for the presentation of „The Trail of the Roman Emperors“ as a European cultural heritage, within the capabilities and limitations that come from internal and external social, economic and cultural forces. Analysis of this kind should be repeated by time, if there is a need, to adjust the goals, change priorities, or revise the planned actions based on previous experiences.

### Conclusion

According to conducted analysis, it is shown that the tourist value of the cultural route is very good, and that it is heritage of national importance (grade 4.03 based on the quantitative-qualitative method). It can be noticed that the numerical value is in the second half of the mean value with the increasing trend towards high value, so that this cultural good can be ranked among the most attractive heritage of Serbia.

The development of tourism has been identified as an effective way to revitalize the economy of a destination, whether it is rural or urban. Heritage, and in particular cultural heritage, is considered as an important tourist resource for tourism development throughout the world [23]. The cultural heritage of the Roman period in Serbia is of great importance and value, and a small number of countries, in addition to Serbia, could boast with a such valuable amount of cultural treasures from Roman times, on a relatively small area. The cultural route itself, is an ideal way for

reconstruction of the period when Romans ruled this territory, the turbulent historical events, as well as the lives of many Roman emperors.

Today's tourism demand trends indicate increasing desire for authentic experiences and adventures, something completely different from what has already been seen, a product that will provide simultaneous raising of the cultural level, education, and entertainment and leisure. Precisely these trends on the demand side as well as the increasing interest in cultural tourism, create favorable currents for the realization of this cultural route and branding Serbia as a significant cultural tourism destination in the world.

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### Туристическая валоризация культурного маршрута «След Римских Императоров»

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**Аннотация.** Культурный туризм является новой концепцией, оказавшейся очень полезной с точки зрения возрождения и представления культурного наследия в широком смысле – от археологических раскопок до ландшафтов. Все это открывает широкие горизонты для осознания характера и духа современных государств и демонстрации их неразрывной связи с текущей эпохой. На территории сегодняшней Сербии родились 17 Римских императоров, что является самым большим количеством (одной пятой) всех Римских императоров, рожденных где-либо за пределами Рима. Это явилось хорошим основанием для развития идеи формирования культурных направлений и запуска проекта „След Римских Императоров“ в Сербии. Эта тема может стать одним из самых важных аспектов культурного туризма в Сербии; а главная цель этой работы заключается в том, чтобы внести предложения по ее эффективному применению и продвижению в сфере туризма. Это будет достигнуто за счет оценки всех составляющих валоризации туризма в целом, на основании чего будет сформирована картина общего мнения туристов. Тем временем, целью данного SWOT-анализа было определение существующих сильных и слабых сторон проекта и демонстрация реальных возможностей и рисков в этой области.

**Ключевые слова:** валоризация; Сербия; культурный маршрут; Римляне.

## Comparison of the Outdoor Activities Level in Selected Countries

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**Abstract.** This paper considers the dynamics of recreation development in modern conditions. Present research displays the differences in approach to learning and developing activities between the two countries in the European Union (for example, the Kingdom of Spain and the Czech Republic), as well as between these countries and Russia

**Keywords:** outdoor activities; entertainment; education systems; the European Union.

### Introduction

For Adults nature and open air appear as perfect place for relax and active leisure and as a natural playground for children. We came from nature to the houses and towns, but now we feel like returning back to nature to feel the air, freedom and enjoy the free time. Of course outdoor activities have long history, but currently one can feel the growing interest towards OA in education, leisure, therapies and commercial spheres. The commercial sphere of outdoor activities is one of the most fast-growing sectors of domestic and international tourism.

The theme choice was defined by lack of research in this field and difficulty to find some sources especially about level of outdoor activities or information about OA in educational systems.

The present research displays differences between two countries in European union (Kingdom of Spain and Czech republic) and between this countries and non-European county (Russian Federation)

### Results

#### Index

- Definition of outdoor activities (OA)
- OA influence on the state economy
- OA background in the selected counties
- Outdoor activities in educational system of selected countries
- Commercial sphere of OA in selected countries
- Leisure time and OA
- Comparison table of the OA levels in the selected countries
- Conclusion
- References

### Outdoor activities (OA)

■ **Adventure Sports** have been best defined as 'Outdoor Sports or Activities in which the participant competes in a natural environment, more against himself than against others. Although the terms are sometimes used interchangeably, Extreme Sport can be considered as a sub-category of Adventure Sport, as well as the terms 'Action Sport' and 'Adventurous Sport' are also used. <http://www.topendsports.com/sport/adventure/>

■ **Outdoor activities** are classified as leisure time activities conducted outdoors, connected with adventure or exploring and extreme factor.

Many of these sport disciplines are classified as extreme sports.

Eric Brymer, (2006) referred to 'true' extreme sports as a leisure or recreation activity where the most likely outcome of a mismanaged accident or mistake was death.

■ It may seem that research studies have considered, perhaps naïvely, that **extreme sports** are just further along the risk continuum than high-risk sports. At the surface extreme sports do have similarities with many high-risk sports, for instance they are self-initiated, typically occur in the natural environment, and have limited outcome certainty. However, extreme sports differ from high-risk sports in that an ineffectively managed accident or mistake has the almost unavoidable potential for death where as for the high-risk activity the result is usually restricted to injury (Hunt, 1996, 1995).



■ **Examples:** diving, geocaching, canyoning, snow rafting, ski touring, backpacking, Jibbing, lososing, paragliding, kiting, etc.

**OA influence on the state economy.**

Cash flow supported by OA

■ Travelling (In-out) – people are spending lots of money for travel tickets to try something new, or to do favorite activity in the world famous place, or just in better conditions, than in “backyard”

■ Visas, taxes... – and money for administrative work(passports)

■ Local facilities- higher profits for providers of accommodation, restaurants...

■ Insurance – profits for insurance companies (higher insurance payment for ex.sports)

■ Specialized and common shops- sports equipments, clothing, additional stuff (cameras etc.)

■ Culture and events –outdoor activities and active life can be lifestyle, but it is still interesting to see it from other site, amateurs interest can be much higher if they can just watch and are not obliged to participate. Film festivals on travelling and adventure are great money makers as competitions and exhibitions in some of OA disciplines perform as a “magnet” for visitors.

**Background of OA in Czech Republic**

In Slovakia there is a saying that each Czech man is waterman , it’s a way express outdoor active character of the nation. Though there are only 11 millions habitants one can to meet them in every corners of the world looking for some adventure and extreme.

There are great sportsmen in different disciplines:

Ales Valenta-acrobatic ski jumps,

Adam Ondra- climbing,

Michael Beran- BMX ,

Martin Štepanek - free diving

**OA in educational system of Czech Republic**

Elementary and High schools:

■ 2 times a year obligatory outdoor training with games, competitions first aid training and basics of civil protection for students of elementary and highs schools.

■ One time at elementary school and one time at high school obligatory ski course as a part of physical training education

■ The ski course can be replaced by water sports course or similar. (for example: kayak, canoe, windsurf)

■ There is obligatory swimming course at high school (5 days), it’s popular to held it by the sea, so it’s connected with travelling to other countries (cause Czechs don’t have see) and can be classified as outdoor activity.

**OA at Czech universities**

Czech universities pay attention to OA education

■ Optional ski course usually with credits value for all specializations

■ For students of sport department it is obligatory to take ski and water courses.

The course of skiing is held twice. First week – cross country skiing and classical skiing, second week – snowboarding and carving. Upon completion of courses the student gets the certificate of “School skiing instructor ”for non-commercial use.

■ Within specialization of Outdoor activities future instructor of outdoor activities, animator, or mountain guide are taught.

■ Universities where the OA studies are available:

Karlova University, Prag

J.E. Purkyne University, Usti nad Labem

Palacky University, Olomouc

**Leisure and commercial sphere of OA in Czech Republic**

■ Scouting non-profit organizations offering year-round programs are leading among children leisure organizations.

■ High level of OA in commercial sphere in spite of the fact that there are only 10,5 millions habitants

- experience agencies (offer short time trips and excursions focused on new exciting experience)

- adventure travel agencies (journeys to exotic countries with active programs)
- Individual guides (for example offering guiding services in high mountains)
- Rentals – of equipments and gear
- Ski instructors

### **Kingdom of Spain**

- Summer OA are much more common due to natural conditions
- The conditions for summers sports attract many foreigners
- Great sport results in rock climbing, slack lining, triathlon...

### **OA in educational system of Spain**

Elementary and high schools:

- OA are generally offered as an optional excursions, that is mostly initiative of some teachers who are glad to do something beyond the program for children leisure

- There is no obligatory outdoor training in Spanish school education system

### **OA at Spanish universities**

- There are optional outdoor courses usually organized by commercial companies of OA
- The courses have credit value at some universities so the participation is considered as benefit for studies example: Sadus University Sevilla <http://www.sadus.us.es/abonados/otros-programas/actividades-en-el-medio-natural.html>

- Students of physical training specializations are taught theoretical course “Active tourism and leisure”, though the practical part is omitted and this subject is not part of physical education studies at all Universities

- There is a specialization of outdoor studies (BA.) in higher education (no university specialization) for example Malaga

<http://www.medac.es/teco-tecnico-en-conduccion-de-actividades-en-el-medio-natural-IDC16.htm#sthash.dNDAOw64.dpuf>

### **OA in leisure and commercial sphere in Spain**

- Leading children’s organization in commercial sphere is scouting Inturjoven organizing camps for them <http://www.inturjoven.com/>

- Generally trekking, surfing, biking and rock climbing are popular in Spain
- High level of OA in commercial sphere

Widespread:

- experience agencies (offers short time trips and excursions focused on new exciting experience)

- adventure travel agencies (journeys to exotic countries with active programs)
- Individual guides (offering guiding services in high mountains, canyoning, etc.)
- Rentals – of equipments and gear
- Instructors of surfing, diving, kiting...

### **Russia**

- Unlimited nature condition create great possibilities to develop any sport of OA disciplines

- The interest to OA as a hobby is lower
- Attraction OA gained more popularity

### **OA in education system of Russia**

Schools:

- OA courses in leisure centers of tourism are available , but as in Spain, they are not obligatory and are not part of official education process

- “zbori” is basic military training conducted usually outdoors, the course is not always held outdoors and not all of the students are participating

- No obligatory outdoor training exist in schools of Russia

### **OA at Russian universities**

■ Russian Institutions used to pay more attention to OA. They had good equipment accessible for students, organized trips to mountain regions as Kavkaz or rafting on the rivers. Few years ago due to the changes in educational system the OA courses were almost eliminated.

■ There are obligatory students physical training courses (e.g. trekking)

■ Obligatory theoretical subjects on OA for tourism students and all spec. of sport departments

■ Recreational Physical Training Specialization has some aspect of outdoor activity studies

■ possibility to study type of Life long learning program after “specialization” studies, aimed to teach OA instructors

**Leisure OA in Russia**

■ Tourism clubs are dominating among leisure organizations for children. They organize treks and competitions, teach how to survive in the wild

■ year-round operation

**Commercial sphere of OA in Russia**

■ High level of OA in commercial sphere

■ Great number of little local companies offering off-road trips, excursions, etc. depending on countryside conditions. They usually offer the trips trough tour-operators

■ Big agencies like Alpindustria operate all around the country and offer expeditions to Elbrus, other high mountains in Russia, or adventure programs.

**Comparison table the OA levels in selected countries**

☐-obligatory ☐-available ☐- not included in ed. sys.

	Basic school	High school	University	OA studies	Leisure	Comercial sphere
Kingdom of Spain	✗	✗	✓	✓	✓	✓ ✓
Czech Republic	●	●	✓	✓ ✓	✓	✓ ✓
Russian Federation	✗	✓	✓	✓	✓	✓ ✓

This research displays that outdoor activities are mostly promoted commercially. Great amount of travel agencies, experience agencies and mountain guides demonstrate high demand for outdoor activities as a way of spending free time.

There is a risk that commercial factor is developing faster than Universities study programs so as a result we have a “one way” specialist working in commercial sphere. Even if they are professionals in their disciplines and safety, probably they only took theoretical courses and their knowledge is not complex.

**Conclusion**

University study programs prepare experts of different activities and this process is more complex. As for safety study, it is connected with subjects like psychology, sociology.

Most probably Czech Republic shows higher interest in outdoor activities due to school educational system and obligatory courses, which teach children and foster their interest in OA.

There is still some place for research in other spheres of OA, for example therapeutically, teambuilding and others connected with outdoor activities.

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## Сравнение уровня активного отдыха в отдельных странах

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**Аннотация.** В статье проводится оценка динамики развития активного отдыха в современных условиях. Благодаря этим исследованиям можно увидеть различия в подходах к изучению и развитию активного отдыха между двумя странами в Европейском союзе (на примере Королевства Испания и Чешской Республики), а также между этими странами и Россией

**Ключевые слова:** активный отдых; развлечения; образовательные системы; Евросоюз.

## **Green Supply Chain Management: A New Movement Towards Healthier Environment**

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**Abstract.** The objective of this paper is to establish a picture of to what extent Green Supply Chain Management is present in Bosnia and Herzegovina. Another point of interest in this paper is the measurement of administrative environment, consumer perception and the actual implementation of such a supply chain into daily operations. This study develops a survey questionnaire based on the reviewed literature about Green Supply Chain Management, and conducts the survey on the employees of companies located in one region of Bosnia and Herzegovina and compares the obtained results with the work of others in this field. The findings in this paper are conclusive and indicate a strong tendency towards complete implementation of Green Supply Chain Management into daily operations of Bosnian production companies, an existence of a supportive administrative environment and the strong willingness of people to adapt measures that are acceptable to the environment and create a smaller social cost. Finally, this paper is a testimony of good intent towards the environment supported and executed by those striving to achieve more efficient and less costly, socially acceptable and environmentally healthy solutions for conducting their business.

**Keywords:** Green Supply Chain Management; Survey; Descriptive analyses.

### **Introduction**

In today's modern world there is a soaring need for making rational and reasonable environmental choices in the evolving field of supply chain management. Considering the literature provided about Green Supply Chain Management (GSCM), it is obvious that a wide framework of reference is not properly deployed. The lack of this reference framework is evident not only for regulatory authorities who are putting in great effort to ease economical growth, but also for the whole economy which is in a struggle to meet new social and ecological standards and to fulfill a moral obligation towards the society and consumers. Not only has the industry put a deeper focus on the increased awareness about the environmental and social impacts resulted by logistics and distribution, but also researchers have been drawn in by this issue. In order to get a better understanding of the "green effects" observed in distribution networks, many studies and researches have emerged over this past decade. It is recognized that transportation of goods and supplies generates not only costs for the industry, but it also creates environmental costs for the society. While the costs for the industry are measurable, the costs for the society and the full impact of these actions are immeasurable and not included in the price consumers pay for a product. These impacts on society are called externalities (Laffont, 2008) and in this case they are negative ones such as congestion, noise, pollution, emission of toxic gases etc. Therefore, for the parties involved, a broader perspective and wider research are necessary in the field of integrated Green Supply Chain Management. Since Green Supply Chain Management has become one of the most interesting fields of research on the topic of Supply Chain Management, the attention of relevant research has found to be focused on Green issue more and more. Hence, there is also a need to see the current picture of Bosnian environment about GSCM consideration. This research therefore aims to descriptively explore the agreement levels of employees of the companies located in one of Bosnian municipalities in order to propose possible implications for research and practice. For this reason, the developed survey questionnaire about GSCM considerations are applied on those companies and analyzed descriptively.

The remaining of the paper is structured as follows: the second part reviews the relevant literature, the third part talks about the methodology. In the fourth section, the results of the analyses are presented. The last two sections discuss and conclude the research.

### **Literature review**

According to Ortolani (2008), the “Green impact” approach in Supply Chain Management can be described as the actions whose goal is to measure, evaluate and reduce the negative outcomes and effects of any economic activity projected on the environment. Ortolani (2008) assumes that the rising level of attention on the social and environmental effects that businesses create is consequences of various associated causes such as costumer concern about environmental issues. She also comments on cost indication stating that public perception is a powerful tool especially in sectors such as Corporate Social Responsibility. Stating that environmental issues are becoming part of the business strategy itself, she explains that this is caused by the increasing awareness of costumers about damaging effects and negative social behavior, which in turn affects market perception and stock valuation. In the course of discovery, she identified transparency and effective cost and effect measurements of negative externalities as crucial factors for building trust between producers and costumers, and identifying it as an important tool for better exploiting challenges and opportunities in a Supply Chain. It can be suggested that Innovative companies creates additional value to their Supply Chains by making it more profitable through the adoption of a Green Supply Chain.

Another study by Chan, He and Wang (2011) leads us to believe that the integration of environmentally sound decisions into the Supply Chain, making it thereby “Green”, is essential to manufacturers in order to be able to cope with certain environmental standards demanded by the businesses stakeholders. They also point out the importance of the relationship between Supply Chain and marketing. Therefore, it becomes important tool for decision makers in order to reveal the benefits a Green Supply Chain on marketing and profit maximization.

Another research by Chen, Shih, Shyur and Wu (2012) advocate that firms should be aware of external influences and adjust their business techniques to meet external demand and to associate their activities with the trend of “Greenness”. The authors believe that “Greenness” will both provide a firm the ability to face new environmental challenges and create a competitive advantage for themselves trough green initiatives.

Hoejmose, Brammer and Millington (2012) in their research state that trust plays a significant role in the relationship between customers and companies. They mainly believe that implementing a Green Supply Chain enhance not only environmental incentives but also profit incentives. Besides they put an accent on the differentiation of firms on business-to-business (B2B) and business-to-customer (B2C) by arguing that a firm in the B2C sector has higher incentives to adapt a Green Supply chain and thus increase the trust built with customers, hence increase their profits and social acceptance.

The increasing role of government involvement in the transition of firms from a standard Supply Chain to a Green Supply Chain is discussed by Arimura, Darnall and Katayama (2011). They describe the importance of implementing the ISO 14001 environmental management standards and managing a Supply chain of the companies which want to have a better control over their environmental and social impacts. The authors provide necessary points to implement this transition by the help of ISO 14001 and steps through a Supply Chain, implementation of ISO 14001 and its final outcomes and benefits for businesses and the environment.

In a study about electronics-based firms in Taiwan, Shang, Lu and Li (2010) investigated the companies’ performance and crucial Green Supply Chain Management capability dimensions. They divided the firms into groups and they conclude that the “green marketing” is the most influencing factor for the firms to obtain a competitive edge over the others. Furthermore they explain how implementing a Green Supply Chain develops synergy among partners allowing them to positively influence one another’s environmentally sound performance.

Bose and Pal (2012) take in question whether or not it is beneficial to firms to implement environmentally sound decision making in the process of managing a Supply Chain effectively. They try to make a correlation between adopting “green” methods in a Supply chain and identify that firms, large, medium, small, well-known or not known experience a significant response of the market usually after publicly announcing their green actions.

By having gone through an in-depth analysis about Green Supply Chain Management, we can conclusively say that the trend of implementing green initiatives in a business’s economic operations has widened its scope over the past few years and that this topic has established itself as one of the major topics in modern Supply Chain Management. Reviewing these researches made it

quite obvious that the society is demanding a high level of environmental awareness of firms, but also that when implemented the market compensates the companies more through profit incensement and stock price rise.

## **Data and Methodology**

### **1 Scale Development**

In order to narrow the scope of this paper, the variables and sub-items are extracted from the reviewed literature and further developed into questions, in Appendix, that the survey participants have answered. The variables include (1) The scope of a Green Supply Chain; (2) Reasons for adopting a Green Supply Chain; (3) Main factors enhancing Green Supply Chain Management; (4) Green Supply Chain Management strategies; (5) Internal and external barriers for adopting a Green Supply Chain; and (6) Critical success factors in implementing a Green Supply Chain. Once these variables and sub-items were formulated into questions, the data retrieved was analyzed resulting in the following section formed as a descriptive analysis of the obtained data. The questionnaire consists of six fields each having five questions. In order to measure the agreement levels of the respondents, a 5-point Likert scale is employed (1=strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree).

### **2 Data**

The developed survey has been conducted on the companies located in the territory of the Municipality of Breza, Ze-Do Kanton in Bosnia and Herzegovina. The municipality of Breza is chosen because of the presence of companies operating in production, retail, distribution, recycling and overhaul. Also, as an important factor of choosing this particular area, Breza includes small-size (2-10 workers) to large-size companies (thousands of workers).

The target population, in this research, includes the employees in all departments from management to production, retail, distribution, logistics, and recycling in order to see the organization-wide perceptions of the employees about "Green" supply chain management. The reason for selecting this particular group is the wish to obtain a realistic view on the perception of actual implementation of "Green" supply chain management.

In the period from November to December 2012 two hundred surveys were passed out and all of them were filled out completely and accurately according to the survey guidelines specified on the survey sheet (see Appendix). The surveys were distributed by hand only and filled out immediately by the participants. While conducting this survey, the companies are observed to be cooperative and the employees are instructed to provide true answers. After conducting the survey, the data was entered into a excel spreadsheet and analyzed descriptively.

## **Survey results**

### **1 Demographics**

In the demographics section of the survey participants had to answer which department they belong, their age and gender. The respondents are observed to be mainly from production and supply (93/200), management (55/200), and sales (40/200). Male respondents (122/200) are responded the questionnaire more than female respondents (78/200). This is not atypical for this kind of industry where the production workers are all male in some firms because of the physical demands of the work. Females are more present in Management and other service related departments. 147 of the respondents are found to be younger than 40 years old.

### **2 Questionnaire analysis**

#### **Supplier Selection**

According to the results obtained from the first group of questions about supplier management in the questionnaire, the respondents seem to be agreeing on the items in this section. They are involved in a green manufacturing process and they qualify their suppliers according to previously determined/defined selection criteria. They after more rank the suppliers according to the criteria and choose the best among them. They also test the suppliers' products and regularly audit their suppliers (Table 1).

Table 1: Supplier Selection

<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
We do an environmental auditing for suppliers	3.65	1.017
We require a product testing report before purchasing	4.07	.908
We are involved in the green manufacturing process	3.70	1.174
There is a formal environmental criteria set by our firm for suppliers	3.78	1.109
We buy only from suppliers that rank highest based on our criteria	4.01	1.039

### **Green Procurement and Logistics**

The companies are identified to have some guidelines prepared for green purchasing and logistics. While transporting their products, they seem to consider not being harmful to the environment. Therefore, they invest to transform their current production and production system in order to reduce the environmentally harmful impacts. They furthermore are detected to be using energy efficient systems (Table 2).

Table 2: Green Production and Supply Chain Logistics

<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
We have green purchasing and logistics guidelines that take environmental effects into consideration	3.71	1.030
We use energy efficient systems in operating our production/warehousing	3.75	1.055
We base the use of transportation on environmental decisions	3.54	1.084
We invest in transforming our current transportation and production system to reduce environmental impacts on society	3.62	1.124
We are bound by external purchasing directives	3.82	1.018

### **Company Green Strategy**

The respondents seemed to be slightly informed about ISO 14001 standards about environment and they are implementing the standards. They also seem slightly manage the recycling processes. They are quite agreed that their top management is committed to the environmental considerations. The companies are observed to be giving importance to the health and safety of their employees. Finally, they have designed their internal and external environments according to the green considerations (Table 3).

Table 3: Company Green Strategy

<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
We manage the recycling of our solid waste and are required by law to do so	3.68	1.172
We are informed about the environmental management standard ISO14001 and implement it	3.67	1.139
The CEO and management are committed to environmental improvement	4.03	.974
By using environmental practices, our firm protects the health and safety of our employees	3.87	1.058



Our organizational internal and external environment are designed according to green considerations	3.70	1.099
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### Green Production

This group of questions is found to be slightly agreed by the respondents. They slightly agree that the products are designed for easier disassembly. They slightly include their suppliers and customers in their new product design. They also seem to moderately recover their products for overhaul and remanufacturing. However, they prevent and remove the harmful results during the manufacturing process. They also seem to be considering the adoption of new techniques in their production to be in line with the environmental policies (Table 4).

Table 4: Green Production

Items	Mean	Std. Deviation
We include suppliers and customers in the design of new products	3.52	1.089
We adopt new techniques in our production process to comply with environmental policies	3.64	1.139
We recover products and/or components from customers for overhaul and remanufacturing	3.65	1.186
We design products for easier disassembly	3.48	1.215
During manufacturing process the harmful outcomes are prevented and removed	3.79	1.078

### Green Competitiveness

The respondents slightly agree that their operating costs are reduced when they employ green supply chain management (GSCM). They moreover seem to be analyzing the competitors' GSCM understanding and make enhancements where/when necessary. They seem to be considering the competitors' environment related decisions while improving their choices. They admit that they can catch the new market opportunities by applying GSCM considerations. Finally, they seem to have customer trust compared to their competitors as a result of GSCM applications (Table 5).

Table 5: Green Competitiveness

Items	Mean	Std. Deviation
We take the environmental choices of competitors into consideration for improving our own	3.76	1.020
We take advantage by analysing GSCM systems of competitors and improving it where needed	3.67	1.062
We take advantage of new market opportunities by using GSCM	3.75	.971
Implementation of GSCM reduces our operational costs relative to competitors	3.55	1.102
We enjoy more consumer trust than competitors because of implementing GSCM	3.78	1.062

### Product Recycling and End-of-life Cycle

The companies are observed to be slightly considering producing only recyclable products and offering the customers product recycling manuals and opportunities. They are identified to be quite aware all possible recycling options for their firm. They are moreover observed to be assessing the product life cycles during the design stages. Finally, the companies are detected to be very aware of their products' environmental impacts (Table 6).

Table 6: Product Recycling and End-of-life Cycle

<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
We are aware of all recycling options that are available for our firm	3.99	1.116
We produce only recyclable products	3.50	1.284
We try to assess the life cycle of our product during design stages	3.81	1.136
We offer costumers recycling manuals/guidelines/opportunities	3.62	1.271
We are aware of the environmental impacts of our products	4.19	1.003

### **Discussion**

The findings of this research about the Bosnian companies in a specific region are found to be, slightly or strongly but positively, in line with the derived assumptions from the reviewed literature. The literature states that a rising level of attention on the social and environmental effects that businesses create is a consequence of various associated causes such as customer concern about environmental issues, which is found to be true since consumers asked in this survey responded that they are interested in a more environmentally aware production process and prefer those products to others. The thesis that environmental issues are becoming part of the business strategy in the literature review is also true for this market because firms are adapting those strategies to gain a competitive advantage over others. According to the results, companies are considering Greenness well while selecting their suppliers, forming their company strategies and evaluating the recycling and life cycles of their products; they seem to be slightly behaving Green while producing and transporting their products and they slightly feel the achieved competitiveness level of their companies as a result of GSCM.

Since the cost indication states that public perception is a powerful tool, the findings of this study assert that Green consideration creates additional value to the firms' Supply Chains by making it more profitable.

The ability to face new environmental challenges while creating a competitive advantage for themselves through green initiatives is not only recognized by firms in other countries mentioned in the literature review, but also in Bosnia and Herzegovina. The surveyed companies mainly believe that implementing Green Supply Chain has not only environmental incentives but also profit incentives that has been proven to be true in our survey. Also, they put an accent on the differentiation of firms which was recognized by participants of this study.

Even though B&H is an emerging country with lots of inconsistencies and overlooking in policy making, an increasing role of government involvement as stated in the literature overview is detected to be present and the importance of implementing the ISO 14001 is acknowledged by the findings of the study.

### **Conclusion**

As stated at the beginning, this research aims to explore the current scenario about GSCM, very hot and top topic in SCM, in Bosnian environment and therefore to be able to derive some implications for relevant research and practice. The conducted survey is the descriptive picture of the state of companies located in the boundaries of Municipality of Breza. As a result of conducting this survey, it has become obvious that the current situation of "green" techniques is not ideal in companies located in this municipality, but that there are strong movements towards implementation of new "green" techniques and enhancements of existing ones.

This survey indicates that there will be a significant change, which is in progress right now, and that more and more companies are approaching toward "green" supply chain management and are in the process of adopting and executing of environmental standards, ISO 14001, energy optimizing technologies and adapting competitive strategies all based on the new "green" movement.

This research is successful based on many relevant factors. It proves that there is a social awareness and that firms are forced by the preferences of their consumers and stakeholders to act on sound environmental decisions. It also shows that the administrative framework is present and functioning in an acceptable extent. The companies are familiar with the environmental standards such as ISO 14001 and they are enforced to employ those standards by the government and demanded by stakeholders.

There were no obstacles met by this research. All information was transparent and accessible at any given point in time to the full extent without hesitation or limitations. The firms were cooperative and participants as truthful as possible. However, the generalization of the results may not be possible for all Bosnian market, because of possible specific characteristics of the companies in that region. Since the companies are governed by the canton management and for different reasons, the same study may reveal different pictures.

The government could benefit from this study because it is evident that firms, on their own, accept environmentally sound choices to operate their business. This information could be useful for decision makers to adapt even more policies in order to protect the environment. This voluntary act of firms makes it easier to monitor the compliance with the law, and to learn new opportunities for improvement by cooperating with firms and their stakeholders to create new standards for environmental preservation.

This voluntary act of adapting environmental standards indicate enough of how firms profit through adapting a Green Supply Chain, not only materially but also by building a trust with stakeholders that differentiates their product and hence provides them with a stable market to place the product in.

Public perception is a useful managerial tool, and in this case managers can benefit from this study by simply recognizing the need to change their company structure to a new one that buyers demand and that they prefer. Managers can see that it is evident that consumers want to know that the product they bought was harmless to the environment. By providing consumer satisfaction, the profits will inevitably increase and a long lasting relationship of trust and appreciation will be developed between the firm and their consumers.

This research can give others a good insight of the picture of the companies located in a small municipality, to produce with no external cost, to consider the adaptation of new perspectives and to consider their stakeholders in making new socially beneficial choices. Further researches may employ/extend the developed survey questionnaire in some further point in time, on some other companies located in a different region, with similar/different industries as a benchmark in determining the success or failure of policies and execution of those in other municipalities.

Finally, Green Supply Chain Management is a movement dictated by consumers and who wants to remain competitive and differentiate their product while building a trustworthy relationship with their consumers will strive to adapt these strategies in their production and daily operations. Because the implementation of environmentally sound decisions bring significant response of the market, by usually driving company stock price up, "Green marketing" has the most impact for firms in order to obtain a competitive edge over others.

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**Appendix**

**Supply Chain Management Survey Questionnaire**

Please answer all questions

For each numeric question, circle the number that best reflects your opinion of the factor judged

**1=strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree**

Circle only one number for each scale

<b>Demographics</b>	
<b>a</b>	Your department/unit:
<b>b</b>	Your current position/role in dept/unit:
<b>c</b>	How long have you been in current position/role?:
<b>d</b>	Your highest education level: Doctorate    Master    Undergraduate    Other_____
<b>e</b>	Gender:    Male            Female
<b>f</b>	Age:            ≤30    31-40    41-50    51-60    ≥61

<b>1.Supplier management</b>		<b>Disagree</b>	<b>Agree</b>
<b>a</b>	We do an environmental auditing for suppliers	1	2 3 4 5
<b>b</b>	We require a product testing report before purchasing	1	2 3 4 5
<b>c</b>	We are involved in the green manufacturing process	1	2 3 4 5
<b>d</b>	There is a formal environmental criteria set by our firm for suppliers	1	2 3 4 5
<b>e</b>	We buy only from suppliers that rank highest based on our criteria	1	2 3 4 5

<b>2.Green procurement and logistics</b>		<b>Disagree</b>	<b>Agree</b>
<b>a</b>	We have green purchasing and logistics guidelines that take environmental effects into consideration	1	2 3 4 5
<b>b</b>	We use energy efficient systems in operating our production/warehousing	1	2 3 4 5
<b>c</b>	We base the use of transportation on environmental decisions	1	2 3 4 5
<b>d</b>	We invest in transforming our current transportation and production system to reduce environmental impacts on society	1	2 3 4 5
<b>e</b>	We are bound by external purchasing directives	1	2 3 4 5

<b>3.Internal environmental management practices</b>		<b>Disagree</b>	<b>Agree</b>		
<b>a</b>	We manage the recycling of our solid waste and are required by law to do so	1	2	3	4 5
<b>b</b>	We are informed about the environmental management standard ISO14001 and implement it	1	2	3	4 5
<b>c</b>	The CEO and management are committed to environmental improvement	1	2	3	4 5
<b>d</b>	By using environmental practices our firm protects the health and safety of our employees	1	2	3	4 5
<b>e</b>	Our organizational internal and external environment are designed according to green considerations	1	2	3	4 5

<b>4."Green" manufacturing process</b>		<b>Disagree</b>	<b>Agree</b>		
<b>a</b>	We include suppliers and customers in the design of new products	1	2	3	4 5
<b>b</b>	We adopt new techniques in our production process to comply with environmental policies	1	2	3	4 5
<b>c</b>	We recover products and/or components from customers for overhaul and remanufacturing	1	2	3	4 5
<b>d</b>	We design products for easier disassembly	1	2	3	4 5
<b>e</b>	During manufacturing process the harmful outcomes are prevented and removed	1	2	3	4 5

<b>5.Competitiveness</b>		<b>Disagree</b>	<b>Agree</b>		
<b>a</b>	We take the environmental choices of competitors into consideration for improving our own	1	2	3	4 5
<b>b</b>	We take advantage by analysing GSCM systems of competitors and improving it where needed	1	2	3	4 5
<b>c</b>	We take advantage of new market opportunities by using GSCM	1	2	3	4 5
<b>d</b>	Implementation of GSCM reduces our operational costs relative to competitors	1	2	3	4 5
<b>e</b>	We enjoy more consumer trust than competitors because of implementing GSCM	1	2	3	4 5

<b>6.Product recycling and end-of-life cycle</b>		<b>Disagree</b>	<b>Agree</b>		
<b>a</b>	We are aware of all recycling options that are available for our firm	1	2	3	4 5
<b>b</b>	We produce only recyclable products	1	2	3	4 5
<b>c</b>	We try to assess the life cycle of our product during design stages	1	2	3	4 5
<b>d</b>	We offer costumers recycling manuals/guidelines/opportunities	1	2	3	4 5
<b>e</b>	We are aware of the environmental impacts of our products	1	2	3	4 5

*Part II: Please add here any positive /negative comments regarding the issue*

**Экологические аспекты управления цепями поставок:  
новый шаг к здоровой экологии**

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**Аннотация.** Цель данной работы – представить до какой степени экологические аспекты управления цепями поставок актуальны для Боснии и Герцоговине. Еще одна задача – измерить административную среду, представление потребителей и реальное внедрение такой сети в ежедневную работу. В данном исследовании, на основе рассмотренной литературы о экологических аспектах управления цепями поставок, разработан опросник и проведен опрос среди служащих компаний, расположенных в одном регионе Боснии и Герцоговины. Проведен сравнительный анализ полученных результатов с

другими работами в данной сфере. Полученные данные – информативны и отражают тенденцию в пользу полного внедрения экологических аспектов управления цепями поставок в ежедневную работу производственных компаний Боснии, существование поддерживающей административной среды и сильного желания людей принять меры, допустимые для окружающей среды и назначить меньшую социальную цену. В конечном итоге, данная статья является свидетельством доброй воли по отношению к окружающей среде, поддерживаемой и выполнимой данным стремлением, целью которой является достижение более эффективных и менее затратных, социально приемлемых и экологически безвредных решений ведения бизнеса.

**Ключевые слова:** экологические аспекты управления цепями поставок; опрос; описательный анализ.

## Pedagogical Sciences

### Педагогические науки

#### Attitudes of 2<sup>nd</sup> Stage Primary School Pupils Towards Games and Physical Activities Performed in Sport and Physical Education Classes

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**Abstract.** This study is concerned with implementing games as one of the methods used in sport and physical education classes at the 2<sup>nd</sup> level stage of primary schools (grades 5<sup>th</sup>– 9<sup>th</sup>). Results of the study pointed to the fact that pupils are still very interested in playful activities. These activities are applied in the main part of the sport and physical education classes. Pupils themselves are of the opinion that playing games provides them with a better opportunity to make contact with their classmates more than any other activity, which creates positive conditions for making interpersonal relationships within a group or a class.

**Keywords:** attitudes of pupils; motor games; schools physical education and sport.

#### Introduction.

Holding games is one of the methods that should be applied in sport and physical education classes at both stages of primary education. In fact, it is included in all syllabus topics. John Amos Comenius used games in the upbringing and education process as a means to help one understand and manage everyday tasks and assignments, as well as a way to spend one's free time. He considered games to be a method of learning not perceived by children as boring. In this sense, games represent one of the most important methods of upbringing and education.

Games play a crucial role in the course of sport and physical education classes because they can be applied in a wide range of activities (Vladovicova, 2001). By playing games, children learn to solve unexpected situations in various conditions. As claimed by Argaj (2011), new and unfamiliar games provide players with excitement, a feeling of change and mostly the opportunity to demonstrate their abilities. Several sources (Vladovicova, 2001; Kozanaková, 2011; Argaj, 2011) indicate that games can be included in any part of sport and physical education classes. Furthermore, teachers themselves may have a negative or positive effect on pupils while demonstrating the game.

The aim of our work was to determine the status and attitudes of 2<sup>nd</sup> stage primary schools pupils towards games and activities performed in sport and physical education classes.

#### Materials and Methods.

Our study sample consisted of 446 pupils from selected schools in Slovakia (Figure 1).

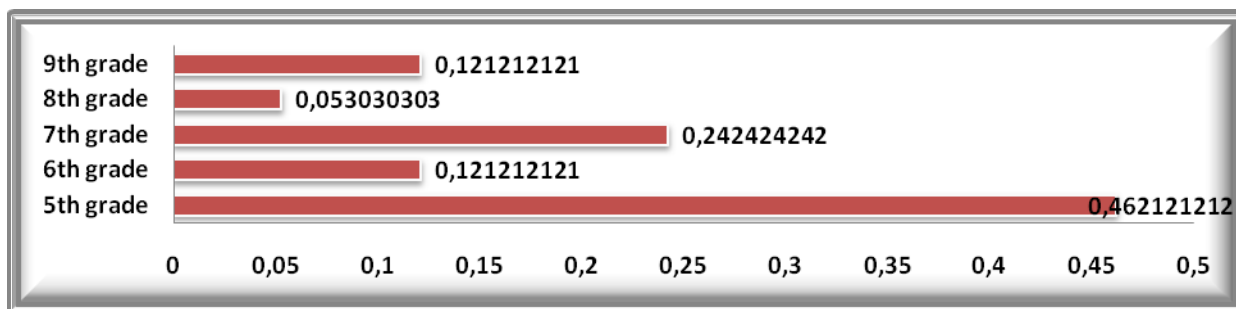


Figure 1. Percentage of pupils from the study sample

The questionnaire for 2<sup>nd</sup> stage primary school pupils was distributed during the 2<sup>nd</sup> term of the school year 2011/2012. In order to determine the differences among the answers to particular questions, we analysed the results of individual grades. The statistical significance was calculated by performing a chi-square test on the answers given by fifth, sixth and seventh-graders (thereinafter “younger pupils”) which were compared to those provided by eighth and ninth-graders (“older pupils”). We also calculated the statistical significance in relation to the popularity of sport and physical education classes among these pupils.

**Discussion.**

The first issue included in the questionnaire was aimed at the children's evaluation of their physical activities (Figure 2).

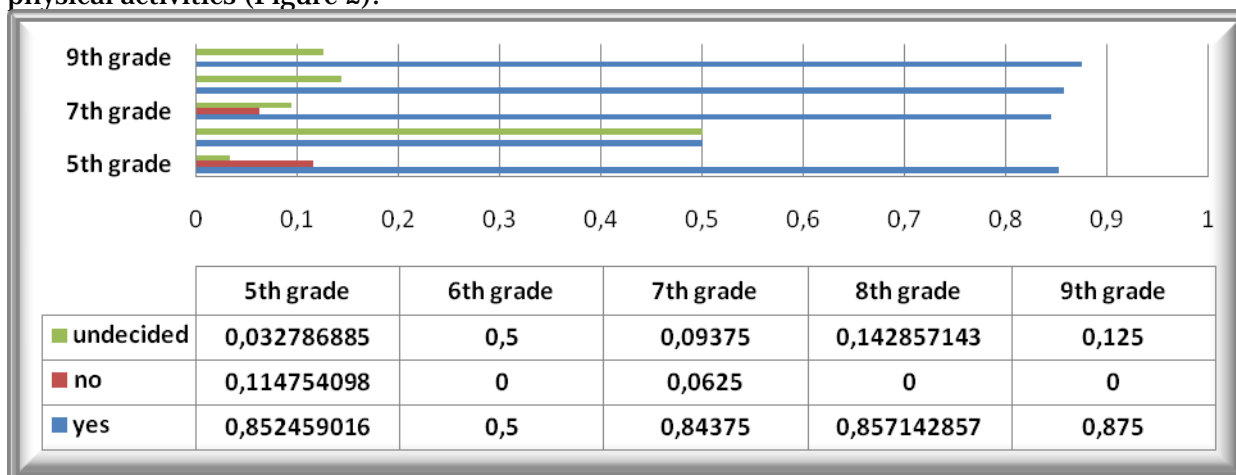


Figure 2. Pupils’ evaluation of their physical activities

The vast majority of pupils believe that they spend a sufficient amount of time doing physical activities (Figure 2) – more than 50%. Considering this question, it was quite surprising that some of the older pupils, i.e. eighth and ninth-graders, could not evaluate their physical activities (“undecided”). Many experts (Verstraete et al., 2006; Babinska – Vitariusova, et al., 2008) point to the fact that adults should be careful when choosing the way they spend their free time because they represent role models for children. Parents influence children’s evaluation of their own physical activities. Statistical evaluation of the first question is presented in Table 1.

Table 1: Statistical evaluation of pupils' evaluation of their physical activities

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	♣♣	N

**Key:**♣♣ = statistical significance level p < 0.01 ♣ = statistical significance level p < 0.05 N= statistically non-significant

The next question was related to how much time pupils spend on physical activities during weekdays. As shown in Figure 3, eighth and fifth-graders spend the most amount of time on



physical activities. The most passive group proved to be the sixth-graders, i.e. as many as 43.75% of them devotes less than an hour a week to physical activities. Nadera (2008) claims that children at the age of 9 spend more than 3 hours doing physical activities every day of the week and weekend. As they get older the time spent on activities decreases and at the age of 15 it represents only 49 minutes a day during the week and 35 minutes a day during weekends. When comparing the answers provided by younger and older pupils we did not observe any statistically significant differences, however, taking the popularity of sport and physical education classes into account, a level of statistical significance  $p < 0.01$  was recognized.

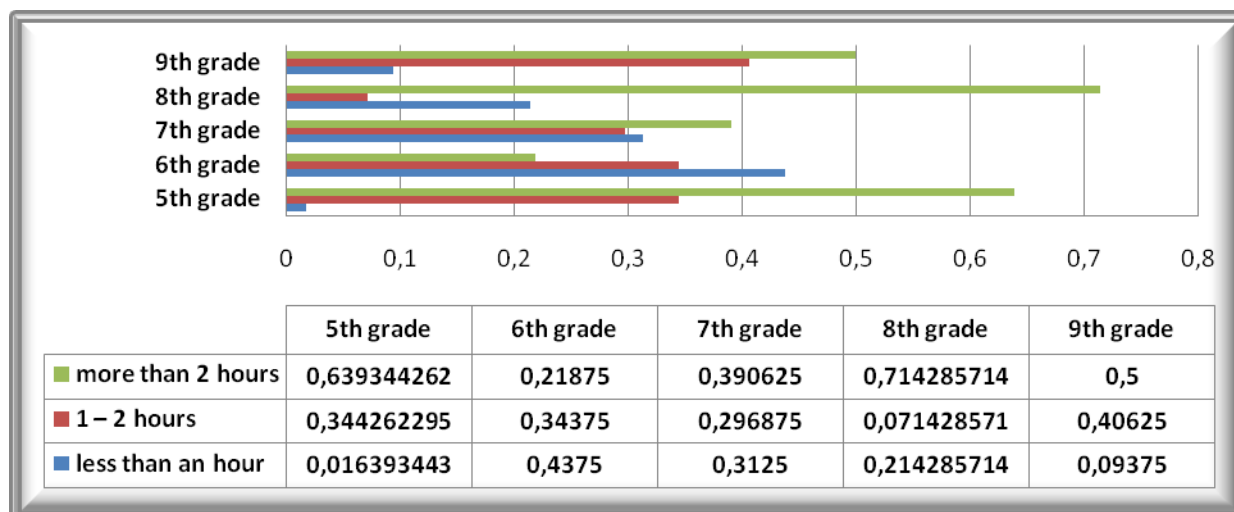


Figure 3. Physical activities performed on a daily basis during weekdays

Our research showed that the time spent daily on physical activities during weekends to a certain extent copied the results of the weekdays. The fifth-graders appeared to be the most active (67.21% of them actively spend more than 2 hours a day doing such activities). On the contrary, the most passive group proved to be the sixth-graders (46.88% of them spend less than an hour a day doing physical activities). Taking this into account, we can ascertain the statistical significance of the differences between younger and older pupils at the level  $p < 0.05$ . Considering the popularity of sport and physical education classes, a  $p < 0.01$  level of statistical significance was recognized.

Yet Smith (2008) recommends at least an hour of physical activities of moderate intensity on a daily basis. By the age of 10 – 11 these activities should be of versatile character (ball games, water sports, playground games, walking and hiking under adult supervision). According to Hajkova (2007), when performing physical activities the child's safety is of the greatest importance.

The most popular physical activities for all grades are sport games (more than 50%). The fifth and sixth-graders also find swimming very popular. More than 26% of seventh, eighth and ninth-graders chose the option "other (please specify)". These pupils listed cycling and inline skating as their favourite activities.

The statistical evaluation of pupils' answers is presented in Table 2.

Table 2: Statistical evaluation of the activities performed by pupils

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	♣♣	♣♣

**Key:** ♣♣ = statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N = statistically non-significant

As shown in Figure 4, the popularity of sport and physical education classes is relatively high. As indicated in previous results, the lowest interest in physical education was observed in the 6<sup>th</sup> grade in which up to 43.75% of pupils stated that sport and physical education does not belong among their favourite subjects.

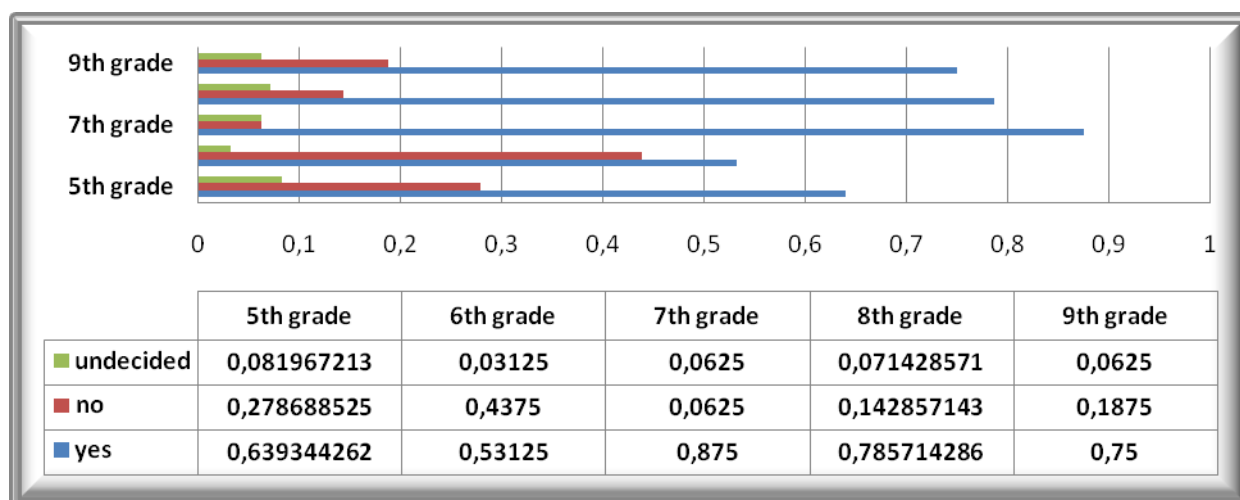


Figure 4. Popularity of sport and physical education classes

A study published by the AHA (American Heart Association) Council on Nutrition, Physical Activity and Metabolism in 2003 ascertained that the number of pupils participating in physical education classes had dropped in 11 years of research from 42% to less than 30%. There were no statistically significant differences recorded in the answers of younger and older pupils.

Among all the pupils, the most popular physical activities performed in sport and physical education classes, as well as outside school, include playful sport games. On the other hand, more than 75% of the sixth-graders prefer physical games. Considering the popularity aspect and the answers provided by both younger and older pupils, we observed a statistical significance level  $p < 0.01$ .

These findings are in accordance with the results of other specialists, for example Palovicova (2010), Adamcak&Nemec (2010), who studied pupils' interests in regard to the popularity of physical activities performed in sport and physical education classes or in their free time. However, the study of Novotna et al. (2009) which was based on the study sample of 354 fourth-graders from the Banska Bystrica region, observed a low interest in sport games. This may be explained by the fact that physical education classes in primary schools mainly include games like basketball, soccer and handball, while pupils are interested in other activities.

Classes that comprise playful activities are once again popular with the vast majority of pupils, i.e. more than 73%. Again, the sixth-graders were the exception since only 50% of them like playful activities. The remaining 50% of the pupils do not like these kind of activities. This is a striking fact, since more than 90% of older pupils (seventh, eighth and ninth-graders) like physical education classes. The statistical evaluation of answers is presented in Table 3.

**Table 3: Statistical evaluation of the pupils' attitudes towards playful activities comprised in sport and physical education classes**

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	♣♣	♣♣

**Key:** ♣♣= statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N= statistically non-significant

This fact can be explained by poor class organization and inappropriate selection of playful activities for the sixth-graders. Undoubtedly, this fact is also related to the PE teacher's personality. It is important to realize that inappropriate expectations placed on children, as well as underestimating or overestimating their abilities have a negative impact on them. If a game is too difficult, pupils cannot cope with it which leads to violations of the game's rules. At the same time, pupils find low requirements unsatisfying.

The answers to the question "Do you enjoy playful activities in the form of physical activities (tag games, hopscotch, climbing games, hitting goals, etc.) more than those in the form of sport

games (football, volleyball, basketball, etc.)?” can be seen in Figure 5. Older pupils clearly prefer sport games. According to Argaj (2011), pupils gradually start to enjoy games which are more demanding and difficult since they also play these sport games in their free time. Considering the popularity of sport and physical education classes, we did not detect any statistically significant differences in the pupils' answers. Significance of differences between answers provided by younger and older pupils reached a level of statistical significance  $p < 0.05$ .

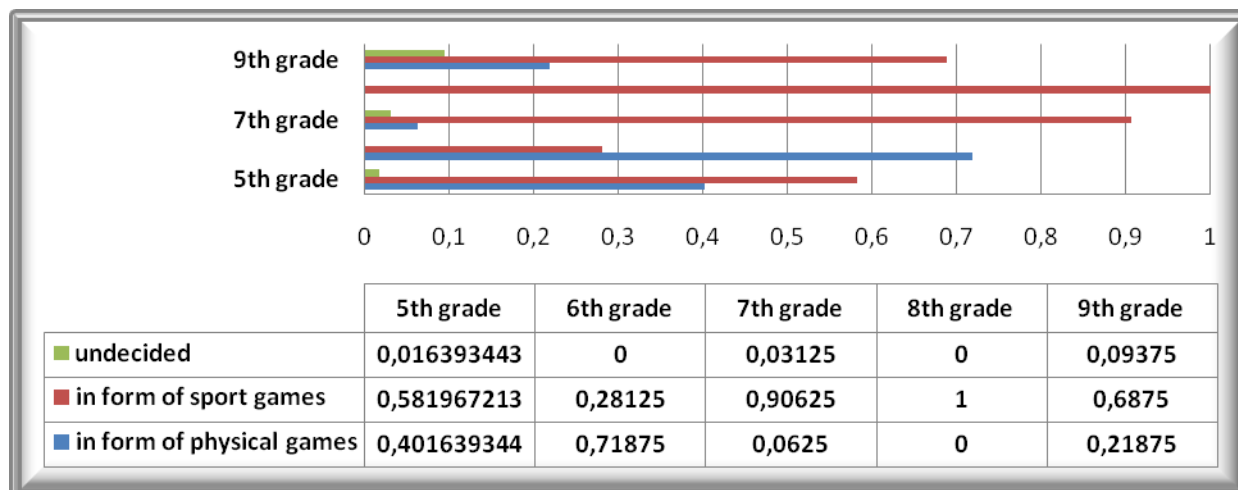


Figure 5. Popularity of playful activities in the form of physical and sport games

Subsequently, we were interested in the reason why pupils prefer physical games. As shown in Figure 6, pupils are more attracted to these kind of games mostly because they require a lot of moving. This was the case in 50% of the answers provided by fifth, seventh and eighth-graders.

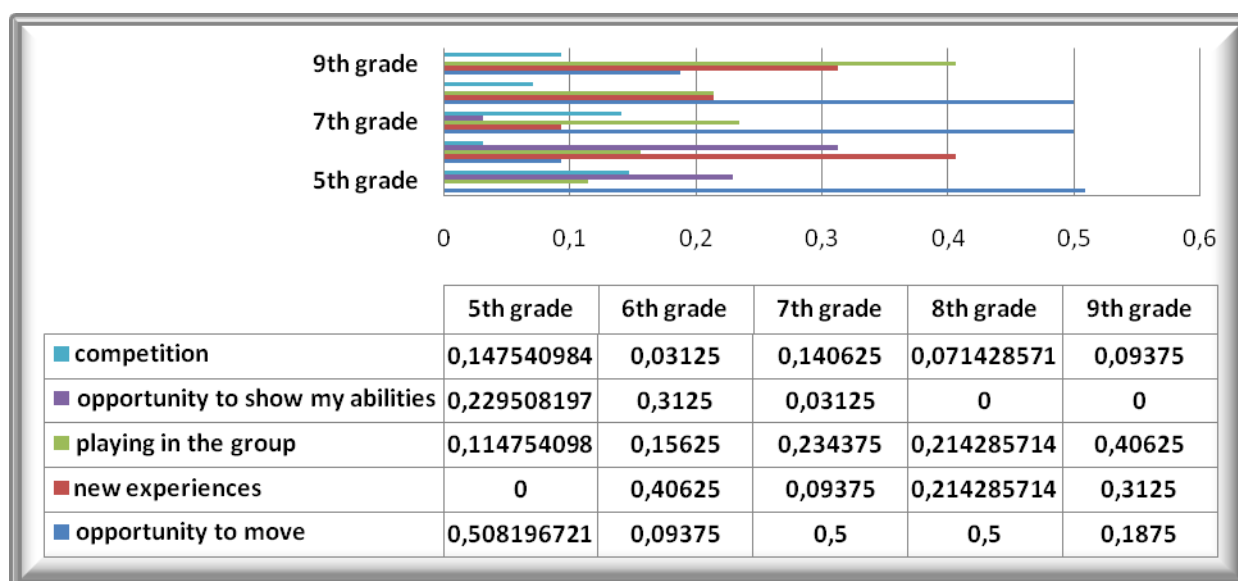


Figure 6. Reasons why pupils prefer physical games

In 40.63% of the answers provided by sixth-graders, the reason given was that physical games offer new experiences. Regarding the ninth-graders, 40.63% of them like these kind of games because they are played in groups. Most of the fifth and sixth-graders answered that playing games provides them the opportunity to show their abilities (Figure 6). This fact was also reflected in the identification of statistical differences in the pupils' answers at a level of  $p < 0.01$ , considering both the popularity of sport and physical education classes and the differences between younger and older pupils.

Physical games are most commonly played in a gym during physical education classes (more than 57% of the answers). The eighth-graders were the exception because they stated they usually play games outside during summer. Evaluation of this question gives a pleasing result, because of the fact that pupils play games outside as well, i.e. in school playgrounds (more than 12%) and outside during summer and winter. Statistical evaluation of the answers is presented in Table 4.

Table 4: Statistical evaluation of pupils' attitudes towards the environment in which the games are played

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	N	♣♣

**Key:** ♣♣ = statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N = statistically non-significant

Therefore, we would like to emphasize the importance of safe and responsible game organization. Injuries have a negative impact on pupils and unpleasant experiences like these consequently discourage them from playing games during which they can get hurt easily.

The fifth and ninth-graders claimed that they play games as a part of their sport and physical education classes at least once every two weeks. Seventh and eighth-graders stated that in their sport and physical education classes they play games at least once a week. A statistical evaluation is presented in Table 5.

Table 5: Statistical evaluation of frequency of games put into the teaching process

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	♣♣	N

**Key:** ♣♣ = statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N = statistically non-significant

The answers provided by sixth-graders confirmed that their interest in playful activities is partly aroused by the low frequency of games being held in physical education classes - which are played only once a month. This state is unacceptable since, according to Argaj (2011), games are the most appropriate form of physical activity for pupils even at the 2<sup>nd</sup> stage of primary schools. They can be played, for example, at the beginning of the class as the most convenient form of warm-up exercise.

We were also interested in game timing. We learned that games are usually played during the main part of the class (Figure 7).

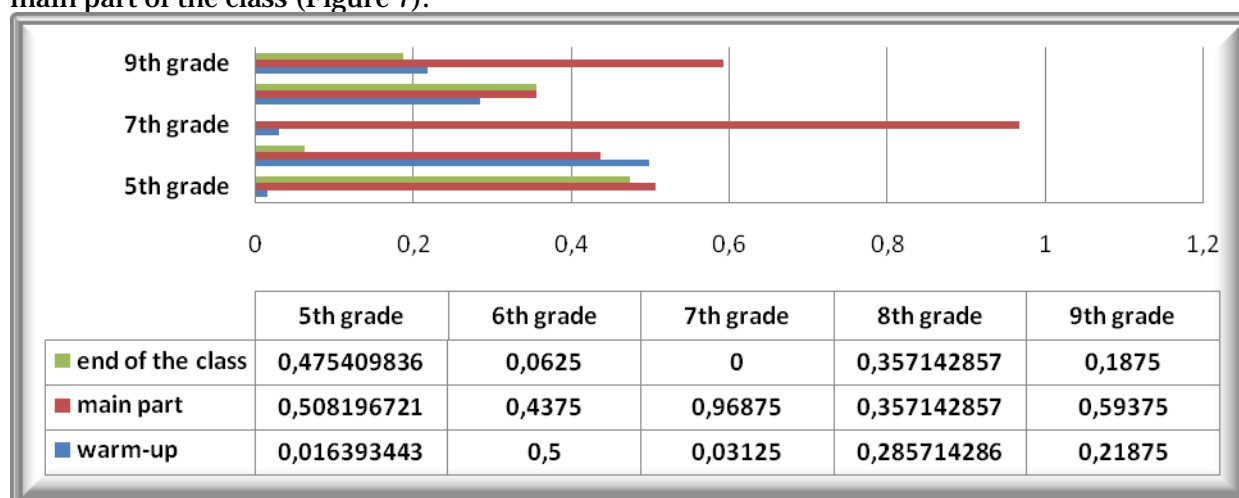


Figure 7 Frequency of games played in sport and physical education classes and game timing

Game timing probably depends on the topic of the particular sport and physical education class (sports, gymnastics, athletics, etc.). Pupils' answers concerning the popularity of sport and physical education classes were statistically significant at a level of  $p < 0.01$ . The differences between younger and older pupils reached a level of statistical significance  $p < 0.05$ .

All the pupils from all the grades questioned would like to play more games in their physical education classes – more than 81% of pupils in each grade answered “yes”. Sport and physical education teachers at the 2<sup>nd</sup> stage of primary schools should definitely take this into consideration because the results of Vladovicova-Novotna (2005) research point to the fact that it is getting increasingly harder to arouse pupils' interest in regular physical activity and in physical education itself. We did not reveal any statistically significant differences when evaluating the answers provided by younger and older pupils, however, their opinions on the popularity of sport and physical education classes were statistically significant at a level of  $p < 0.01$ .

Regarding the quality of the game, most of the pupils think that it depends on who they play with and also that the more players participate in the game, the more fun it is (more than 50% of pupils chose “yes” as the answer). In regard to this issue, the sixth-graders were an exception because 59.38% of them chose “no” as the answer. Table 6 presents the statistical significance of the pupils' answers.

Table 6: Statistical evaluation of the importance of selection of players

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	♣♣	N

**Key:** ♣♣ = statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N = statistically non-significant

The pupils (fifth, seventh, eighth and ninth-graders) who regularly play games in sport and physical education classes also realize that they make friends faster during a game than during any other activity (answer “yes” in more than 42.86% of cases). It confirmed statement, according to which playful activities develop pupils' personality in the most acceptable way and at the same time they improve interpersonal relationships within a group. Considering younger and older pupils, we did not observe any statistically significant differences in the answers, however, results regarding the popularity of sport and physical education classes reached a level of  $p < 0.01$  of statistical significance.

More than 56% of the pupils consider physical activity to be an important part of everyday life. In this sense, older pupils were the most conscious, since 96% of them designated physical activity as important. This fact was also reflected in the determination of statistical significance, as shown in Table 7.

Table 7: Statistical evaluation of the importance of physical activities

item	boys like PE/do not like PE	boys 5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> grades/8 <sup>th</sup> , 9 <sup>th</sup> grades
chi	□□	□

**Key:** ♣♣ = statistical significance level  $p < 0.01$  ♣ = statistical significance level  $p < 0.05$  N = statistically non-significant

**Conclusion.** Results of our study pointed to the fact that playful activities performed both in sport and physical education classes and in free time are the most popular activities among primary school pupils. What pupils mostly like about games is the opportunity to move. Games are usually performed during the main part of the class in a gym, in the playground as well as outdoors/in the countryside (during summer and winter). The results also showed that in spite of the children's positive attitudes towards playing games in sport and physical education classes, these kinds of activities are not appreciated enough by some teachers. This can be seen in the answers provided by sixth-graders (only 50% of pupils enjoy playful activities and games since they are performed only once a month). Moreover, playful activities should be integrated into the educational process while paying attention to the pupils' age and their attitudes towards the

subject. This was proved by the determination of statistic significance when evaluating several questions of our questionnaire.

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### Мнения учащихся II степени начальной школы о подвижных играх реализованных на уроках физической культуры и спорта

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**Аннотация.** Статья посвящена проблематике подвижных игр как одному из методов обучения на уроках физической культуры и спорта учащихся 5–9 классов начальной школы. Подчеркивается тот факт, что игровые деятельности с точки зрения школьников по-

прежнему пользуются большим интересом. Они используются в основном в главной части урока физического воспитания и спорта, а учащиеся сами считают, что, при игре они быстрее установят связь со одноклассниками, в отличие от любой другой деятельности, и это создает благоприятные условия в развитии межличностных отношений внутри группы или класса.

**Ключевые слова:** мнения учащихся; подвижные игры; школьная физическая культура и спорт.

## **Comparison of Male and Female Differences in Emotional Intelligence Among Trained Universities Athletes of Lusaka Province, Zambia**

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**Abstract.** (Palmer and Stough 2001) defined as Emotional intelligence as 'the capacity to deal effectively with one's own and others' emotions 'Previous empirical studies in this area have indicated that the construct of emotional intelligence provides an athlete with an understanding of their specific emotional competencies, and therefore a better understanding and awareness of how to use emotions in sport. The comparison of the study is to attempt and examine the differences between female and male athletes of Lusaka Province with respect to their emotional intelligence in the selected variables such as Self-awareness, Self-regulation, Motivation, Empathy, Social skills.

It was assumed that female athletes would have high emotional intelligence as compared to the male athletes. "Emotional Intelligence Test" developed by Dr. N. K. Chadha (1998) was applied on all of the participants of the study (i.e. 30 female and 40 male athletes). Were selected random for this study Statistical analysis by computation of "t-test" revealed a significant difference in the emotional intelligence of female and male athletes of Lusaka Province. The results confirmed the hypothesis differences in relation to emotional intelligence, findings of the current study indicate that females are more emotionally intelligent than male athletes. The higher level of emotional intelligence of female than male in Lusaka Province are explained in terms of traditional trends, pattern of society and social roles assigned to male and female with respect to African culture in Zambia.

**Keywords:** Emotional; Intelligence; Athletes; Male; Female.

### **Introduction.**

Until recently, the role of emotional intelligence in performance had primarily been studied within the corporate environment or the workplace. Such research has indicated that individuals with better emotional intelligence typically perform with greater success than individuals who have less effective ways of dealing with emotions. As most people would agree, the 'workplace' of the elite athlete is both the competitive and training environment, yet it is during competition that an athlete's performance is ultimately evaluated.

Like IQ or heart rate, emotional intelligence is a measurable concept. Recent research at South Australian Sports Institute has found that emotional intelligence is best assessed within the competitive sporting environment using a General Sporting version of the Swinburne University Emotional Intelligence Test. A self-report measure, the General Sporting version of the Swinburne University Emotional Intelligence Test, consists of 64 statements related to how the individual recognises, expresses and understands their emotions during athletic performance.

In a recent study, we looked at emotional states associated with success and failure in sport competition and academic examinations (3). The expansion of sport science as an academic study means that growing numbers of students experience the dual stresses of taking examinations and participating in competition. The results of this study are depicted in figure 1 which shows that a) emotions are strongly associated with success, and b) emotional profiles linked with success are somewhat different between sports competition and an examination.

Compared to exams, success in sport was associated with vigour and anger. Importantly, emotionally intelligent people can get themselves into the appropriate emotional states for the demands of the situation. If the situation requires high arousal, as in the case of athletes in our study, emotionally intelligent people are good at getting themselves psyched up. Equally, if the situation requires calmness, emotionally intelligent people are good at relaxing themselves.

Our research group has conducted a number of studies looking at the nature of emotional intelligence (4). We have found that emotionally intelligent people use psychological skills such as imagery, goal setting and positive self-talk more often than their less emotionally intelligent



counterparts. We have found that emotionally intelligent people are mentally tough and also that they find exercise enjoyable. Importantly, it seems that emotional intelligence can be enhanced through suitably developed intervention packages. What follows is a six-stage approach to assessing and implementing strategies that people can use to enhance their emotional intelligence:

The capability to change emotional states and learning how to change emotions in relation to performance requires self-awareness. We need to be able to identify when our emotions are influencing our performance and how our emotions change over time. We need also to be able to assess the emotional states that other people are feeling, picking up on their body language, verbal and non-verbal gestures.

There are many possible ways in which to assess emotions, including standard psychometric tests; however, athletes often find repeated completions of standardised scales to be a tiresome task. An alternative approach is to use an open-ended diary type approach such as a video or an audio diary. Assessment of emotions should start by asking the athlete to think carefully about a situation in which performance was very important. It helps if the athlete spends some time rehearsing this situation in their mind, and tries to remember how they felt. The athlete then writes down all of the emotions they experienced. They should also rate how they performed in the situation to allow comparisons between successful and unsuccessful performance.

A Cockerill (2002) state that sports today places considerable demands on performers and requires the support for specialists to facilitate the integration of mind and body, especially to achieve success as a professional athlete. In this regard, sport psychology is available to athletes for useful advices and support. Psychological factors are recognized as having an important part to play in the attainment of success in sport. It is also recognized that sport psychologists can help to make the difference between winning and losing. Thus, the demand for psychological services in sport is increasing.

Emotions such as anxiety can be positive and negative. It is the combination of emotions, and the thoughts that are linked with these combinations that determines whether these emotions are motivational or de motivational could be useful among the athletes to enhance the performance.

#### **Statement of the Problem:**

A sport psychologist, Lawther (1972) discovered that most studies of male athletes report them to rank high in such traits as self-confidence, extroversion, leadership, dominance, emotional maturity, social poise, having high level of aspiration and consideration for others. Whereas, female athletes seem to differ from male athletes only in concern for their self-image (in this case, a desirable feminine image); and in their sensitivity to male social attitudes toward female's athletic participation female athletes are more concerned with appearance and aesthetic aspects in sports.

In light of the sport psychologists views as mentioned above it can be believed that professional athletes belonging to both sexes have few differences in respect of their personality traits and qualities and hence, their level of EI may be different. Thus, keeping in mind all the above considerations the present study is aimed to evaluate differences in EI of males and females athletes in various universities athletes of Lusaka Province. Thus the purpose of the study is the comparison of male and female differences in emotional intelligence among trained universities athletes of Lusaka province, Zambia

#### **OBJECTIVES OF THE STUDY:**

The objective of the study is to understand the differences between the male and female universities athletes and their emotional intelligence; therefore the following objectives are framed to investigate the study.

1. To find out the level of emotional intelligence of a sample male and female universities athletes in Zambia
2. To find out the of level of emotional intelligence with respect to the component Self-awareness, Self-regulation, Motivation, Empathy, Social skill
3. To find out whether there is gender difference in emotional intelligence.
4. To find out gender difference, if any, in the components of Emotional Intelligence: Self-awareness, Self-regulation, Motivation, Empathy, Social skill

#### **HYPOTHESIS OF THE STUDY:**

- There is no significance difference in the EI mean scores between the males and the females athletes in the Lusaka province universities

- There is no significance difference in the mean scores on components of EI sub-skills between the males and the female athletes in the Lusaka province universities

#### **DELIMITATION:**

- The study is limited among the universities situated in Lusaka province
- The study is investigated in an athletic competition on republic day celebration of Zambia
- The subject were selected randomly 40 male and 30 female Universities athletes under the age group of 20 to 35

#### **REVIEWS OF RELATED LITERATURE**

Zamanian et al. (2011) comparison of emotional intelligence in elite athletes in several sports and non-athletes. For that matter, 160 women including 90 handball, futsal, and basketball players participating in 2009-2010 premier league (30 women in each group) and 70 non-athletes filled out the BarOn Emotional Quotient Inventory (EQ-i). This questionnaire consists of 15 subscales for an overall assessment of emotional intelligence. The results of statistical analysis showed that the subscales of problem solving, happiness, independence, stress tolerance, self-actualization, emotional self-awareness, interpersonal relationship, optimism, self-regard, impulse control, and empathy were significantly higher in athletes than non-athletes.

Bal et al. (2011) investigation was to determine if there are cognitive psychological factors used in competition and training which differentiate athletes participating in an open and closed skill sport. A total of 40 inter-varsity athletes (n =20; footballers) from open-skill and (n = 20; gymnasts) from closed-skill sports completed the emotional intelligence questionnaire (EIQ16). The EIQ16 measures 16 emotional competencies covering the ability to accurately perceive emotions in one-self and others, use emotions to facilitate thinking, understand emotional meanings, and manage emotions. Student's t-test for independent data was used to assess the between-group differences. Accordingly, interest in emotional intelligence has increased specifically in the realm of athletics (Zizzi et al., 2003). Proponents have claimed that emotional intelligence can enhance leadership performance, team cohesion, and coping with pressure.

Palmer et al. (2007) Since Salovey and Mayer's (1990) seminal article on emotional intelligence (EI), a number of alternative models have been developed (e.g., Bar-On, 1997; Cooper & Sawaf, 1997; Goleman, 1995; 1998; 2001a; Mayer & Salovey, 1997; Petrides & Furnham, 2001). This work has provided different approaches to the conceptualization and measurement of EI. However, it has also caused some confusion concerning the nature and boundaries of the concept. Variables ranging from emotional abilities and competencies, to so-called 'noncognitive' capabilities and skills have been placed under the banner of EI.

Shinde (2011) The main purpose of the study is to investigate difference between Emotional Intelligence, Self-confidence of students in terms of type of education i.e. professional and non-professional. For this investigation two groups were selected for professional students (N=50) and non-professional students (N=50) from Aurangabad city. The research tools are Emotional Intelligence scale (Hyde, Pethe, and Dhar), Self-confidence Inventory. (Basavanna) were used, and 't' test was applied to check the difference between two groups. The result obtained through the study do showed significant difference between Emotional Intelligence, but shows significant difference on Self-confidence of students in terms of type of education i.e. professional and non-professional.

Dev et al (2012) As we all know the benefits of physical activity (PA) on physical and mental health are well established. However, inactivity among adults in Malaysia is still prevalent. This study examined whether emotional intelligence (EI) was one of the possible underlying psychological mechanisms that may be associated with the current low levels of PA adherence. Therefore, the purpose of the study was to examine whether EI plays a role as the potential underlying mechanism of PA behaviour among Malaysian adults. A total of 172 supporting staffs were recruited at a local Malaysian university. It was found that supporting staffs with higher physical activity in a week had better total EI scores and composite subscale scores. The findings of this study provide further support on the claims that there is a positive relationship between increased levels of EI and physical activity. Thus, the importance of higher emotional intelligence is critical in helping to bombard the sedentary lifestyle and inactivity among Malaysian adults.

Antonakis et al. (2009) Interest in emotional intelligence has bloomed over the last few Years. That it has become a popularity standard concept in general and applied psychology as well as in applied business settings is indubitable. Is this popularity warranted? Casting a shadow over the concept of emotional intelligence is concern about its meaning fullness and the construct and predictive validity of its various measures. The following series of letters explores various issues surroundings emotional intelligence and leadership including whether emotional intelligence is theoretically needed for leadership, the types of emotional intelligence test that may hold the most promise, methodological standards for testing whether emotional intelligence matters, evidence from the neuroscience literature on emotion and intelligence, and evidence regarding the links between leader emotional intelligence and follower out come.

Dominikus et al. (2009) this research was carried out to exile the relationship between mental skills and anxiety interpretation in secondary school hockey athletes. There are 108 participants (54 males, 54 females)aged between 14 and 17. These participants are athletes from three secondary schools. The average age of the participant is 15.17 (SD=1.18) The results indicated that the direction of anxiety interpretation between the male and female athletes are the same but different in terms of intensity (cognitive anxiety interpretation direction, somatic anxiety and self confidence)

Nawi (2011) studied the main objective of this cross-sectional study is to determine the differences characteristic between volunteers and non-volunteers in terms of emotional intelligence, self-esteem and personality based on four dimension aspects of personality such as psychoticism, neuroticism, extraversion and lie. Three sets of questionnaire to measure Emotional Intelligence, Self-Esteem and Personality were administered to 276 subjects. One hundred and sixty eight of them were volunteers and one hundred and eight were nonvolunteers. Findings showed that there was no significant difference between volunteers and non-volunteers in term of emotional intelligence ( $t=0.13$ ,  $p>0.05$ )

#### **RESEARCH DESIGN:**

#### **METHOD:**

The subjects were selected from different athletes participated in the catholic students association athletic competitions from various universities in Lusaka, Zambia. A total of 70 athletes (40 male and 30 female athletes aged 21 to 37 years were selected from the competition all the athletes were selected through random sampling.

#### **TOOL**

The Emotional Intelligence (EI) Test developed by Dr. N.K. Chadha (a psychologist at the university of Delhi, India) was used. The test consists of fifteen emotional contexts with four near emotionally intelligent responses. The fifteen situations categorized into five emotional sub skills such as 'self awareness', 'self regulation', 'motivation', 'empathy' and 'social skill' are listed in Appendix-I. The highly emotional intelligent subject would get a score of 20 and the lower brackets are scores of 10, 5 and 0. The situations are designed to assess one's ability to succeed in coping with environmental demands and pressures. The sum of the scores on the responses to the entire range of fifteen situations will be interpreted as 'extremely high' (285 and above), 'high' (from 250 to 284), 'average' (from 176 to 249), 'below average' (from 141 to 175).

#### **Analysis of Data and Interpretation:**

The collected data were analyzed and interrupted in below indicated tables

Table 1: Level wise Distribution of Emotional Intelligence

<b>Level</b>	<b>Male athletes</b>	<b>Female athletes</b>	<b>Total</b>
Extremely High	0	0	0
High	4	2	6
Average	24	16	40
Below Average	12	12	24
Total No. of subjects	40	30	70

Table 1 indicates that tightfisted four male and two female in the High level (0.8%) subject all the subjects in this sample fall Under average 40 subjects (56%) with the split up of 24 male (34%)

and 16 female (22%) the subjects in this sample fall average and 24 subjects (34%) with the breakup of 12 male (17%) and 12 female (17%) subjects fall in the 'below average' category.

Table 2: Gender-Wise Distribution of Emotional Intelligence

Gender	No. of subjects	Mean EI Score	SD	SE	"t"	"t" critical value two tail at 5% level
1	2	3	4	5	6	7
Male	40	90.69	12.09	2.02	-2.34	1.96
Female	30	112.47	9.20	3.45		
Total	70	99.79	12.49	1.98		-

The mean EI score of this sample (99.79) indicates that it falls in the category of 'average' (as per the norm given by Dr. N.K. Chada). The gender based EI scores also describe both the male and female in this sample as "emotionally average". The coefficient of variation discloses higher consistency in the response of the female (22%) than in the male (34%) in this sample. However, the difference of 9.43 in the mean score between males and females is found to be statistically significant. The calculated 't' value -2.34 is greater than the critical value 1.99 at 5 % level of significance. It is inferred that the females evince higher emotional competency compared to the males.

Table 3: Gender-Wise Distribution of the Scores on the Components of ei

Gender	Male		Female		Total	
Self-awareness	26.12	5.12	32.47	2.20	23.12	2.76
Self-regulation	12.15	3.14	28.10	1.38	22.36	2.02
Motivation	30.10	2.16	23.60	2.25	30.46	4.06
Empathy	16.20.	1.36	20.20	2.76	13.20	1.70
Social skill	24.12	1.41	18.10	2.81	11.30	1.95
Total	98.69	12.09	112.47	9.20	99.79	12.49

Table 3 reveals that in all the five components the universities athletes fall under "average" category. The component 'motivation' ranks first with a mean score of 30.46 and 'Social skills' ranks last with a mean score of 11.30. The females in this sample show lead over the males in all the three components.

## Findings, Conclusion & Recommendation

### Findings

The mean score of the sample as a whole falls under 'average' EI category as per Chadha's norms: 56% fall under 'average' emotional intelligence category, 34% in the 'below average' and just two female and two male student in the 'high' emotional intelligence category. Among males and females 34% and 22%, respectively come under 'average' and males 17% and female 17% comes under 'below average' emotional intelligence category

The females in this sample evince higher emotional competency (with the mean score, 112.47) compared to the males (with the mean score 90.69), when faced with emotionally challenging situations.

The mean scores on all the five components indicate a lead in the females over the males.

The mean difference between male and female is statistically significant with respect to

'motivation' and 'social skill'. The mean score on 'Motivation' is the highest and the mean score on 'social skill' is the lowest.

### **Conclusion**

The highest level of emotional intelligence among the universities athletes in the Lusaka province of Zambia. The 'average' level of emotional competency indicates that these students lack emotional competency essential for performing in the sports competition which includes their career personally successful and socially meaningful.

It also includes the training of emotional intelligence in the curriculum and also in coaching the athletes that can help the athletes to gain emotional competency.

### **Recommendations**

Further research can be done in the same topic with different samples and different game situations. It could be useful to the coaches and athletic trainers of both gender in identifying the areas in which more efforts needed in developing the athletes.

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### **Сравнение различий между мужчинами и женщинами в области эмоционального восприятия среди университетских спортсменов провинции Лусака, Замбия**

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**Аннотация.** (Палмер и Стафф 2001) определили эмоциональное восприятие как «способность эффективно управлять своими и чужими эмоциями». Предыдущие эмпирические исследования в данной области определили, что развитие эмоционального восприятия дает спортсмену понимание собственных эмоциональных возможностей, и, как следствие, лучшее понимание и осознание как использовать эмоции в спорте. Сопоставительный анализ исследования состоит в попытке проанализировать различия между спортсменами и спортсменками провинции Лусака относительно эмоционального

восприятия в выбранных показателях, таких как самосознание, самонастройка, мотивация, эмпатия, социальные умения.

Автор считает, что спортсменки обладают более высоким уровнем эмоционального восприятия, чем спортсмены. «Тест на эмоциональное восприятие», разработанный доктором Н.К. Чадха (1998) применялся по отношению ко всем участникам исследования (30 спортсменкам и 40 спортсменам). Для данного исследования был применен выбор в случайном порядке. Статистический анализ вычисления с помощью «t-критерия» показал значительную разницу в эмоциональном восприятии спортсменов и спортсменок провинции Лусака. Результаты подтвердили гипотетическую разницу в отношении эмоционального восприятия. Данные, полученные в ходе данного исследования, определили, что спортсменки более эмоционально восприимчивы, чем спортсмены. Более высокий уровень эмоционального восприятия спортсменок по сравнению со спортсменами в провинции Лусака объясняется традициями, примером общества и социальными ролями мужчин и женщин в африканской культуре Замбии.

**Ключевые слова:** эмоциональное; восприятие; спортсмены; женщины; мужчины.

## Psychological Sciences

### Психологические науки

#### Addiction as a Disease

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**Abstract.** Addiction – is a mental and physical condition of times resulting from the interaction between a living organism and substance, characterized by changes in behavior and other reactions, which include the necessity of taking the substance continuously or periodically, in order to experience its influence on the psyche, and sometimes to avoid unpleasant symptoms associated with a lack of substance.

**Keywords:** Alcoholism-Alcohol is a regular drink to experiencing the mental activity; and sometimes to avoid the discomfort resulting from its withdrawal.

#### 1.1 Definition and classification

Jellinek believed that alcoholics are only people with alcoholism type Gamma, Delta and Epsilon. However distinguished the following types of alcoholism:

- Alpha – a psychological (mental) dependence on alcohol, occurring in people who can not cope with stress and other difficult life situations. The current is too severe symptoms of impaired control over drinking alcohol. This type of alcohol can turn into a type of Gamma, but it can also stay largely unchanged for decades.

- Beta – lack of psychological and physical symptoms of alcohol dependence. The problems relate mainly to somatic consequences of excessive drinking and symptoms of impaired control over drinking are not very visible.

- Gamma – are present mental and physical symptoms of addiction, impaired (loss) of control over drinking, withdrawal symptoms and tolerance to alcohol change at the helm,

- Delta - has to control the amount of alcohol consumed by a co inability to refrain from drinking. This type of alcoholism characterized by people who for weeks, months or years drink alcohol regularly low-interest to maintain a constant concentration in the blood and does not exhibit obvious symptoms of intoxication.

- Epsilon – is characterized by the periodic occurrence of "strings" drinking interspersed with periods of complete abstinence. This type is also known as alcoholism dypsomanią [1].

Some researchers add more to the classification of alcoholism Zeta type, diagnosed in individuals who under the influence of alcohol demonstrate antisocial behavior, including violence.

Among other things, thanks to research Jellinek American Medical Association in 1956 adopted a decision on the qualification of alcoholism as a disease and not as a phenomenon of the circle of moral disorder. Also considered whether alcoholism is not called "Jellinek disease." In 1962, Jellinek has published comprehensive results of his research and thoughts in The Disease of Alcoholism Conspect (Concepts of Alcoholism as a disease).

The World Health Organization has concluded in 1951 that alcoholism is a problem meycznym. Subcommittee on the Committee of Experts on alcoholism Mental Health World Health Organization has proposed the division of alcoholism in four stages:

1. Recently purchased Alcoholism and without a clear etiology of neurotic
2. Alcohol and alcoholism average grade of primary neurotic symptoms;
3. Chronic alcoholism and alcohol abuse with psychotic symptoms;
4. Alcoholism seemingly irreversible degradation.

It has been suggested that the first two stages can be treated on an outpatient basis, and the other two - rather in a hospital setting. At the same time attempted the classification of alcoholism:

- drinking excessively, symptomatically, irregularly.
- drinking excessively, symptomatically, regularly;
- drinkers (alcoholics) toksykonomy.

The first classification of the World Health Organization includes issues related to the use of psychoactive substances was published in 1967. In the eighth version of the International Classification of Diseases, Injuries and Causes of Death (ICD - 8), as in the American DSM-I and DSM-II, called the disorder to alcoholism include personality disorders and neuroses. In ICD-8, alcoholism was a separate category that included episodic excessive drinking, excessive drinking habit and alcohol addiction is characterized by forced drinking and withdrawal symptoms when drinking stops. In this version, alcoholism (alcohol addiction) is defined as a state of psychological and physical dependence, and the increase in tolerance, withdrawal, loss of control of drinking, such as the inability to refrain from drinking, and addiction on offset - reduction of tolerance

According to Scale (1966), there are four phases of development of alcoholism:

1. **Initial.** Drinking is a social custom. The future sees an alcoholic, however, that can bring relief and oblivion. Increasingly, so goes the alcohol and drink more regularly.

2. **Warning.** Alcoholic beverages are no longer different types of liquor, and become the means (or rather, medicine), which is needed. Drinking alcohol is no longer a factor that binds a person drinking from a specified company. Much more often than those who drink moderately are the states of intoxication memory gap, the so-called. palimpsests spirits. In the final stage of this phase is reduced more and more control over drinking.

3. **Critical.** A loss of control over drinking manifested manifested by the fact that even the smallest amount of alcohol triggers the need to continue to drink, which is perceived as a physical necessity. Gradually, criticism and a loss of the system begins to form false beliefs about the causes and circumstances that allegedly tend to drink. The whole focus is to get around the problem of alcohol. There is the need to drink in the morning to be capable of stirred for work.

4. **Final.** There is always a need for enhancing drinking alcohol, which increases gradually from early morning to late evening. Drinking takes sometimes several days in a row, until there is complete physical exhaustion. Tolerance of alcohol is reduced. Mental degradation occurs. As long as alcohol is not drunk, there is an inability to perform even the simplest activities, such as a cigarette or eat soup. In 10% of alcoholics in this period produced alcoholic psychosis.

According to Portnov and Piatnitsky (1973) Chronic alcoholism is a disease characterized by the team narkomanicznego alcohol addiction, in the course of which there are specific neuromuscular disorders and mental internist and social conflicts arise. The symptoms include symptoms narkomanicznego dependence syndrome (desire for the drug, loss of control and withdrawal) and symptoms of modified reactivity. (change of tolerance, change the form of eating, changing the image of intoxication and loss of gag reflex).

Even in 1951, Subcommittee of Experts for Research on Alcoholism d by the World Health Organization evaluated abstinence syndrome (withdrawal) in alcoholism as a problem at issue. However, already in 1954, given a detailed description of the clinical and diagnostic included as a symptom.

In 1957, the American National Council for Alcoholism has defined alcoholism as "a disorder of chronic, progressive and potentially life-threatening, characterized by increased tolerance, physical dependence and / or pathological changes in other organs, which are directly or indirectly the result of drinking alcohol" [2].

Despite the growing number of people treating alcoholism in terms of illness, he was still subject to a number of phenomena of moral evaluation, which is perceived as a sign of social pathology (alcoholic was a victim of this pathology) as a learned behavior as a sin, etc. The approaches to alcoholism and proposed definitions were not based on uniform criteria often include only a portion of the symptoms or based on a fragmentary picture of the disease.

Follow-up experts, the World Health Organization were targeted to standardize diagnostic criteria for alcoholism and clearly separate it from the group of phenomena associated with the use of alcohol at all. Shortly proposed to cancel the use of the term "alcoholism" is not clear and may include both alcoholism and drinking outside the cultural norms. This term can also mean social



pathology associated with drinking alcohol. It was also decided to withdraw from the use of the term "abuse" alcohol because he did not identify either the quantity or frequency of alcohol consumption.

The effect of diversity of views on the etiology and treatment of people with problems caused by alcohol was a departure from the medical concept of disease (disease called) to the concept of conditional multifactorial disorders (called disorder). In 1976, Edwards and Gross proposed seven criteria "alcohol dependence syndrome" ("alcohol dependence syndrome"), and in 1978 introduced the term to the International Classification of Diseases, Injuries and Causes of Death (ICD-9) in place of the previously used terms such habitual alcoholism or chronic alcoholism. Edwards and Gross believed that the most important elements of addiction are: narrow repertoire of drinking behavior, behavior focused on the acquisition of alcohol withdrawal, drinking to avoid withdrawal symptoms, awareness of compulsion to drink and return to drinking after periods of abstinence. In 1983, Harvard professor George Vaillant published a book called *The Natural History of Alcoholism*, which can be seen as a continuation and update of the work begun by Jellinek. Word book was the result of forty years conducted research on two groups of men, from the age of puberty to reach fifty years. Based on these studies, the author came to the conclusion that alcoholism is a progressive, and its symptoms are, however, in a different order than presented to Jellinek. Vaillant came to the conclusion that there are two possible courses of alcoholism: either the person so affected shall take abstinence or waiting for them to die. Taz Studies have shown that a very small group was able to return periodically to drink niepatologicznego or halt the process of addiction. During the continuation of the study group, however, has steadily decreased.

Experts suggested the World Health Organization in the late 70th dependence on alcohol to be considered in the same terms as other addictions and to the wider concept of "alcoholism" replaced by "drinking problem" or "states reduced due to alcohol."

At about the same time in the United States, both researchers and clinicians who use the DSM diagnostic categories usually joined disorders related to alcohol consumption behavior disorders. A special event was the publication in 1980 of DSM-III. In this version abandoned the use of the term "alcoholism" and created two distinct categories referred to as "alcohol abuse" and "alcohol dependence". At the same time, "abuse" and alcohol dependence" included in the category of disorders associated with substance use, and not, as in previous editions - personality disorders.

Last ie 10th version of the International Statistical Classification of Diseases and Related Health Problems no longer includes the terms "alcohol problems" or "states reduced due to alcohol." In the event of damage health (mental or somatic) without the presence of symptoms of addiction is said about the harmful use of alcohol. This pattern of drinking that is unfortunately all too often underestimated and overlooked in practice. Drinkers in this way is likely to be 2-3 times more than alcohol dependence, and studies show that in 10-20% of these people develop an addiction. It is estimated that the problem of alcohol dependence can affect 5-10% of the male population and 3-5% of the population of women [3]. According to Anderson and Baumberg about 5% of men and 1% of women in Europe are people addicted to alcohol. In Poland, about 16% of adults drink alcohol as eligible for the so-called. risk (drinking stirred for year over 10 liters of pure alcohol for men and 7.5 years for women) [4].

The distinction between harmful drinking or entertainment and addiction affects the choice of action. In the first two cases, brief interventions often enough, but addiction requires long-term, specialized therapeutic intervention.

According to the World Health Organization (proposed in 1969) alcohol dependence is a state of mental and physical, resulting from the interaction of a living organism and alcohol. This condition is characterized by changes in behavior and other consequences, including always forced (hard to resist desire) continuous or intermittent use of alcohol in order to experience its psychic effects the action. Or to avoid symptoms resulting from the lack of it, such as malaise (psychological discomfort). Changing the tolerance may or may not be accompanied by this phenomenon. Man can make at the same time on alcohol, as well as other psychotropic drugs.

Psychological dependence is the need for frequent or continuous alcohol intake to repeat the previous phenomena associated with drinking.

Physical dependence is a state of the body's biological adaptation to alcohol, without which the body can not function properly. Stopping or reducing alcohol administration entails the occurrence of renal system known as abstinence (withdrawal syndrome).

Tolerance is a condition in which the repetition of the same dose of alcohol and gives a weaker response of the organism, and to achieve the same effect of action is necessary to increase the dose.

Recognition of alcohol dependence should therefore be based on the analysis of related and recurrent symptoms. They are manifested by the presence of alcohol-related changes in behavior, changes, and revised subjectively felt psychobiologicznym state. At the same time it is necessary to take into account the impact of internal and external factors, severity of symptoms and their frequency. Properly a diagnosis of alcohol dependence syndrome so it must be the result of somatic symptoms, psychological and social, occurring within a specific culture.

In the 80s could see significant progress in the ordering of diagnostic standards and classification of mental disorders, including issues relating to substance abuse. The effect of this was to include formation already mentioned two psychiatric skills on an international scale, such as DSM-IV and ICD -10.

These classifications have a new methodological assumptions and practical solutions.

DSM-IV is the most recent American Psychiatric Association, which was published in 1994 and is an extension of the previous version (DSM - III and DSM-III - R). ICD - 10, which is 10 version of the International Statistical Classification of Diseases and Related Health Problems was published by the World Health Organization in 1992, and in force in Poland since 1997.

ICD - 10 is the official international classification and trying to reconcile different traditions diagnostic and practical tasks carried out by health institutions in different parts of the world and in different organizational structures.

## **1.2 Why alcoholism is a disease?**

Alcohol dependence is a disease because it meets three basic criteria of the disease, ie affect the balance between health and pathology, is characterized by a specific etiology and pathology of the causes of the current physical is also a factor. Alcohol affects the central nervous system (mainly on the brain), and this, in turn, react to any changes in blood chemistry (pathophysiological aspect) is the anatomic substrate of mental (psychological aspect), and allows for contact with other people, is influenced by the social (aspect sociological).

Psychotropic substances (including alcohol), work on the brain through its chemical properties and compete with chemical compounds produced by the nervous system to communicate within the system neurons. At the same time, these substances damage the structure of the brain. Neuropathological studies have shown that, compared with the control group 30% of alcoholics frontal neurons are destroyed. It is very important that it is these lobes are responsible for higher brain functions (such as anticipation, planning) and for the inhibition of other structures that are responsible for maintaining a more instinctive (eg, aggression). It turned out that the human brain is dependent functional deficits, even if they are not present structural changes.

These facts allow therefore be concluded that the dependence on alcohol is also a disease (renal) of the brain, which is active regardless of whether it is capable of alcoholic intoxication, or to maintain abstinence. The period of abstinence in fact, the brain just "asleep". According to many researchers, the changes in the brain may be responsible for the fact that the memory of addiction (not just alcohol) is eternal. In animal studies, in fact manage to erase the specific context of the behaviors associated with addiction, and other accompanying conditions are created permanently.

## **1.3 Types of alcoholism**

Attempts to diversify and establish his alcoholism typologies were taken in the mid-nineteenth century. Then proposed to distinguish three types of ojnomanii, ie regular, acute and chronic. A little later "intoxicated condition" (disease of inebriety) attempted to divide the batch that is caused by such an opportunity, and the habitual, which is caused by the desire to "do the pleasure"[5]. Other researchers distinguish between three types: still drinking, drinking regularly and paroxysmal drunk or sick alcoholics morally weak-willed alcoholics and alcoholics dipsomanów. Robert Knight in the 30s Alcoholics divided on real, reactive and symptomatic, and the creator of constitutional typology, a German psychiatrist Ernst Kretschmer (1888 – 1964) suggested that chronic drinkers divided into two types: cyklotymików who drink out of a desire to adapt to the environment, and schizotymików who drink in to reduce tensions. You can also, for

Oldenbergiem, make a distinction between alcoholism "out of poverty" (Notalkoholismus) and alcoholism, "the well-being" (Behaglichkeitalkoholismus) [6].

In the mid-twentieth century Jellinek alcoholism proposed five types: alpha, beta, gamma, delta and epsilon. It was the first typology, which was the scientific basis and was the beginning of a new era in the classification of alcoholism. Subsequent attempts to develop alcoholism emerged in later years, including Cloninger, Lesh, Babor, Zucker, and most recently the U.S. National Institute on Alcohol Abuse and Alcoholism (National Institute on Alcohol Abuse and Alcoholism – NIAAA).

### ***Typology by Cloninger***

In the mid-80s quite gained great popularity Cloninger's views, which published the results of their comparative study conducted on two groups of people. The criterion for selection to the group was the lack or possession of close relatives of people with alcohol dependence.

Type I, environmentally conditioned - addiction manifests itself usually after 25 years, its development is faster, usually develops in women and people with a tendency to neurotic depression. Among the relatives of those rare addicted to alcohol addiction. It is characterized by the presence of sequences interspersed with long periods of abstinence. More common in the criticism of the addiction. Presumably, this is related to the noradrenergic system.

Type II, which is mainly the male sex - addiction is characterized by the occurrence of early (before 25 years of age), a high degree of genetic transmission from parent to child and minor environmental impacts. Much more often observed in the anti-social behavior. Criticism is superficial or completely missing. The development of addiction takes longer than in type I. Less frequently and later than in type I are somatic and psychiatric complications. Suspected here the dysfunction of the serotonergic system.

It was also found that the two types of addiction also differ among themselves in the three personality traits, such as a tendency to seek novelty, avoid stress and dependence on environmental approvals. These features are more clearly marked in the type II.

It seems, however, that such a division is not sufficient, and presented a typology made manifest only two opposite ends of a wide range of features that indicate the different intensity in individuals with alcohol dependence [7].

### ***Typology by Lesh***

Lesh and colleagues, based on biochemical transformations on the analysis of alcohol and psychiatric disorders and personality disorders in drug addicts and their loved ones, identified four types of alcoholism.

Type I, the "right" ("original") - includes addicts without predisposing factors described below, drinking occasionally goes drinking with them in "habitual".

Type II, "neurotic" ("anxiety") - applies to people who have seen the original to the addictive personality disorders, early alcohol use resulted from a desire to experience relief and alcohol was treated as a sedative.

Type III, "psychotic" ("mental") - is seen in these families of addicts, where the occurrence of a variety of mental disorders (from depression to underdevelopment), clearly alcohol is used as a mood enhancer and to compensate for symptoms of other mental disorders.

Type IV, "originally organic" - refers to persons with primary damage to the central nervous system during development or wczesnodziecięcymi emotional disorders and the negative consequences of drinking are in the very severe [8].

### ***Typology by Babor***

Babor and colleagues, using the method of cluster analysis, have identified two types of people with alcohol dependence (1992).

Type A – those who come later addiction, dependence symptoms are less severe and less frequent co-morbid psychiatric disorders.

Type B – those who are frequent cases of addiction in the family, self-reliance begins early, has a greater intensity and greater frequency of co-occurrence of mental disorders.

### ***Typology by Zucker***

Zucker development model identifies four types of alcoholism: antisocial, developmentally cumulative, due to negative moods and development.

Anti-social type - is determined genetically, characterized by the early occurrence of alcohol-related problems and anti-social disorders.

Type accumulated developmentally – Is associated with cultural influences and is characterized by systematic drinking alcohol, which is a result of addiction.

Type due to negative sentiment – especially concerns women and people drinking to improve mood and changes in social relationships.

Type D - characterized drinkers often and intensely during adolescence, which later, ie in adulthood can drink in a socially acceptable.

### ***Typology by NIAAA***

More recently, the U.S. National Institute on Alcohol Abuse and Alcoholism proposed award five different subtypes of alcohol dependence. This award, among others help to those skilled in the proper selection of treatments for drug addicts and answer the question of why some people respond positively to treatment and others do not. These subtypes are "young adult", "young antisocial", "functional", "medium - severe" and "chronic".

1. Subtype "young adult" is characterized by a relatively low rate of addiction to other drugs, the lack of other mental health problems, in rare cases the presence of addiction in the family. Such people usually do not seek help.

2. Subtype "young antisocial" includes most of the twenties, who at a fairly young age started drinking. Their families often meets addicts. Addiction to alcohol is combined in the case of various types of mental health problems, and they are often addicted to nicotine and drug use.

3. Subtype "functional" includes mostly middle-aged people, well-educated, with stable employment and family situation. In their families meets cases of addiction.

4. Subtype "medium - pronounced" includes people who usually have in their families, those addicted to alcohol, often suffer from mental health problems, most of them are people who smoke cigarettes and relatively widely using a variety of psychoactive substances. One in four of them have already sought help.

5. Subtype "chronic" consists mainly of middle-aged people who drink started relatively early, these people have a high incidence of criminal behavior. Frequently they come from families of alcoholics. Two-thirds of people in this group were treated anymore because of addiction.

## **Chapter 2. Alcoholism in the workplace**

One of the first descriptions of alcohol problems in the workplace comes from China. More than 2000 years BC two imperial astronomers were sentenced to death, because being drunk, neglected his duties and did not anticipate having to come solar eclipse. Around 2000 BC, after losing as a result of drunkenness soldiers battle, was introduced in Egypt ban on drinking alcohol in the army during the war.

In the not so distant past, alcohol was more often associated with the workplace. In southern Africa. In the early seventeenth century, farm workers and receive regular wine vineyards, often instead of payment. In the British Royal Navy in the seventeenth century, each sailor receives a portion of rum a day, that pint (about 0.5 l) and gallon (about 4l) of beer. Ration of rum before the battle was doubled. In many armies of soldiers getting vodka every day and put up with this custom began in the second half of the nineteenth century (1833 - United States, 1880 - France, 1863 - Germany, 1870 - Sweden, 1875 - England). In the nineteenth century the London baggage porter deign to be to "increase their strength," morning cup of alcohol and Spanish workers prepared to work hard day. Norm was the distillery and brewery workers received special allocations of alcohol, and in 1886 in Germany, brewery workers unions demanding improved working conditions and wages were also the allocation of free beer.

When the industry started to use more and more machines alcohol use s at work has become a factor that increases the risk of hazards and injuries. Over time, the increased liability of employers for workers' safety resulted in the perception of alcohol in the workplace and forced action to minimize alcohol-related problems. In fact, in almost every workplace there are, in varying degrees, problems with alcohol and taking other drugs. This has a negative impact on

efficiency. Worse efficiency results, among others of greater than at least 30% of absenteeism, two, or even three times more accidents, loss of capacity by 30 - 70%, poor quality of products made in the UK study showed that on "hangover" productivity falls by 27%, which implies Any loss of 1.8 billion pounds. The research conducted in the Nordic countries have shown that 3 – 6 % of all men and 1 - 4% of all women at least once a year, do not come to work due to drinking alcohol. This phenomenon is most commonly observed in the age group 19 to 34 years. According to the report "Alcohol in Europe '(Anderson, Bamberg 2007) the loss of productivity due to alcohol use in 2003 was estimated to be in the European Union on 9–15 billion due to absenteeism and 6 - 23 billion due to unemployment [9].

Appreciating the importance of the problem, already in early 40s some companies in the United States (the first was the Du Pont and Kodak) have developed programs that would reduce the introduction of the negative consequences of alcohol consumption. Gradually, in the larger factories were established cells, so-called. Employee Welfare Service (Employee Assistance Services). They were located mostly in the not too conspicuous place on the premises in order to increase the sense of security of people using their work. Led by the service programs are most often relate to education and early detection of problems associated with harmful alcohol use, motivating employees to take medical treatment and counseling. Initially, programs were set off to solve the problems caused by alcohol and drugs, but over time also included the other (eg, emotional, family, legal, financial).

The conducted research in the United States shows that every dollar invested in these programs bring 3 to 16 dollars in profits, and improve the efficiency and decrease accidents at work can be as high as 60–70%. In the mid-80s existed in the U.S. for over 8 thousand. Programs for people with alcohol problems, and access to them was about 12% of total employment. The mere fact of interest in the programs and investment in the company focused mainly on profit reflects well on their effectiveness.

In recent years, Polish reaches more and more information about this topic, and individual workplaces have already started to show interest in the introduction of home care worker programs. Most are subsidiaries of large companies, which are already long programs to support employees. Provide employees with access to the support staff (employee care program), as it is in the United States and countries of the old European Union, is beneficial not only to reduce the problems caused by alcohol and other psychoactive substances, but also to improve the mental and physical health of these workers. The result of this is reduction in the incidence / absence, decrease accidents, increase productivity, improve quality, and more personal involvement of workers in the affairs of the company.

### **2.1 Identification of employees with alcohol problems**

A careful observation allowed to identify people with alcohol problems, because they demonstrate a fairly typical behavior. It is therefore necessary to pay attention to some of them.

#### **1) Absence**

- Excessive sick leave (usually due to diarrhea, stomach rhinitis, colds, flu injuries). Reporting by the worker unreliable reasons for absence or lateness.
- Previously unreported cases of frequent short absences from work (regardless of the explanation for the cause).
  - Frequent absences on Mondays and / or Fridays.
  - A large number of delays to work, for example, on Monday morning or leave work early.
  - Repeated incidents of leaving the job without the permission of superiors

#### **2) Performance of job**

- Problems with remembering of instructions, details, etc.
- Increasing difficulty in meeting the professional responsibilities, including the need to devote more effort to the tasks and devote more time to perform a specific task
  - Problems with remembering about mistakes made at work
  - Variable results of the work - interspersed periods of high and low productivity
  - Reduction of the sense of responsibility and ability to predict.

- Repeated absences due to having to leave work for business (too often from the point of view of the work).

- Often leaving the job (for example, using the toilet).
- Prolonged cigarette break, coffee or tea break.
- Performance of work under the influence of alcohol or drugs.

### **3) Behavior at work**

- Coming to work intoxicated
- Smell of alcohol.
- Frequent use of the various kinds of mouth fresheners (liquids, tablets, chewing gum) in order to mask the true flavor.
- Shaking hands.
- Progressive neglect their appearance and personal hygiene

### **4) Decrease in labor productivity**

- The lack of punctuality tasks.
- Errors caused by inattention or uncorrect judgment.
- Waste of materials, goods, etc
- Making bad decisions.
- Unreliable justify worse quality of work.
- Lower productivity.

### **5) Relationships with colleagues**

- Excessive nervousness.
- Unjustified falling into anger (offended).
- Excessive sensitivity to criticism, both real and imaginary.
- Complaints from colleagues.
- Borrowing among colleagues.
- Avoid contact with superiors.

### **6) Accidents**

- Frequent succumbing to accidents at work, at home, on the way to work.

Identification of individuals with alcohol problems is therefore relatively simple. The next step should be to contact motivational interviewing with a specialist who will assess the severity of the problem and propose a specific procedure. In an interview motivating to get in touch with a specialist employee should be made aware that his drinking or taking is noticed and it is not allowed. If such notice is not enough, then the next call should be subject to remain at work from taking certain actions that would help eliminate the problem.

An employee who still do not take seriously the suggestion, it should be on leave or fired, with the assurance that it will be able to return to work, but only after the completion of treatment.

Sensible employers prefer to raise a good employee to refuse treatment and to monitor the course of treatment, instead of dismissing him from work, and in its place adopt someone who can make even more trouble. Obstacle to the effective resolution of alcohol problems in the workplace is often misunderstood solidarity among workers. Very often hide drinking fellow colleagues or friends. It also happens in the workplace that make up a sub-group of colleagues who shared drink alcohol during working hours, and each hide this fact from my superiors and the negative consequences of drinking. If such a subgroup will be one of leadership, then they have provided a sense of security and impunity.

## **Chapter 3. Alcohol dependence among police officers**

In recent years, the treatment of alcoholics by police with the money of the Ministry of Internal Affairs and Administration, issued about a million dollars per year. Each year, because of the habit about two hundred law enforcement officers are losing their jobs, and in their place you

need to train new officers. The number of crimes is growing committed by drunken policemen (by 37.5 percent in 2000. Compared to 1999). Official statistics, however, do not tell the truth. In 2000, for example, 85 reported road accidents caused by drunken officers. In command of the capital learned that such accidents are at least five times as much, but they are covered up, if there are no casualties and major damage to cars.

### **3.3 The essence of addiction**

The problem of addiction among police officers is a serious problem and occurs widely throughout the world. Addiction is a pathological pattern of psychoactive substances that cause impairment of the cognitive, social and physical, which in turn leads to a worsening of being a person. In practice, to diagnose addiction, you should see the presence of at least three of the following symptoms, which he manifested in the last year [10]:

Tolerance determined on the one hand a considerable weakening effect previously associated with drug use amount of the substance, on the other hand - the need to increase the dosage of the substance to achieve intoxication or desired effect.

The presence of various substances typical withdrawal symptoms or taking substances to avoid or alleviate the symptoms of withdrawal.

Acceptance of psychoactive substances in doses greater than intended or for longer than originally planned person.

Persistent desire to use the substance or failed attempts to restrict and control the use of the substance.

Sacrifice a considerable amount of time and focus all their energy on activities associated with obtaining and using the substance.

Resignation of making social roles and professional activities, family or relaxation due to the adoption of a given substance.

Continue to adopt measures despite the loss of health, physical and psychological problems caused by addiction.

Important signals that may indicate the existence of addiction are disorders in the family, social and psychological, such as the crisis in marriage, work, health problems, financial, frequent job changes, arrests, anxiety, depression, insomnia. Addiction is a chronic disease characterized by periods of remission and relapse. Currently, there is no clear explanation of the difficulties to maintain abstinence and relapse causes.

### **3.2 Psychological aspects of alcohol abuse by police**

Personality can be defined as "the amount of ways to respond to other people (and objects) and how to enter them in interactions that are characteristic of the individual." In the study of personality we have been explaining both the similarities and differences between individuals. Characterize other on the basis of the stability of their behavior and we are inclined to perceive in their behavior more stable than what actually occurs.

According to Freud, personality is composed of three parts:

- id (primary storage drives);
- ego (the arbitrator assessing the reality);
- superego (conscience).

The structure of the ego functions through frequent use of defense mechanisms [11].

Personality disorders with alcohol dependence is known as alcoholism degeneration which include: primitive moral, ethical fading slowly, brutality to each other and the environment.

Changes in alcoholic degeneration manifest themselves in the following areas of human life:

- in the sphere of life activity;
- in the intellectual sphere;
- in emotional and volitional sphere;
- in the field of personality;
- disturbances in shaping the right attitude to religious values.

Alcohol causes the degeneration of the human nature breaks, undercut the moral and social values, reduces human creativity.

Alcohol has a negative effect on the efficiency of mental and spiritual. The course and severity of alcohol degradation and its specific properties are different in different people. Great importance because here are the original personality traits, developed in the period prior to heavy drinking [12].

However, there are certain personality traits common to most alcoholics, although not every alcoholic has all these features and they are not limited only to alcoholics. These are:

- excessive dependence;
- emotional immaturity;
- low resistance to frustration;
- inability to express emotions;
- a high level of anxiety in interpersonal relations;
- low self-esteem;
- sense of size;
- perfectionism;
- ambivalent attitude to authority;
- constant feeling of being guilty [13].

Depends on the person as a result of their addiction to alcohol is experiencing a number of situations, which is linked to strong emotional stress, guilt, etc. Therefore, the analysis of the functioning addict is to understand the mechanisms of addiction. J. Mellibruda assumes that defense mechanisms play a fundamental role in the development and course of the disease and the maintenance of alcoholism.

The internal sources of activating the mechanisms of addiction factors are:

- damage to the body and somatic and mental diseases;
- practical life skills deficit;
- destructive life orientation.

To external sources of situational factors include:

- High risk situation
- permanent damage to important social relationships;
- negative social consequences of drinking.

The mechanisms of addiction include:

**Mechanisms regulating compulsive emotions** – Is the primary mechanism for creating addiction. Pathological drinking leads to profound emotional disorders. Emotional reactions begin to control the habitual stereotypes.

Here are some of them:

1. Alcohol is the primary source of pleasure, reduces the attractiveness and availability of other sources of satisfaction.
2. Pleasure come more often from relieving pain, a basic type of pain are associated with survival effects of drinking.
3. Alcohol is the primary means of relieving painful conditions, it becomes so necessary because it allows less suffering and creates hope for a pleasant momentary states.
4. The prospect of abstinence is not supported in the field of feelings and increasingly become a subjective belief: "Drinking is necessary" and "Break the drinking has to stop."
5. An increasing number of emotional states is closed between poles pain – relief, anxiety - sedation, depression - agitation.
6. Perpetuates the focus on the direct and deliberate manipulation of their own emotional states [14].



**Mechanisms of illusion and denial** - cognitive orientation in the addict begins to dominate wishful thinking magic-based on the belief that operations on the thoughts and ideas create change in the real world. The main tasks of this system are: defense against threatening content to continue drinking and alcohol-building and sustaining vision of life.

Its basic functions are:

- Time manipulate, or the subordination of both the memory and vision of the future requirements of the current emotional state;
- manipulation of causality, that magical wishes-determination of the causes of events and his own actions;
- manipulation of meanings, that is biased to define the characteristics of priority phenomena in isolation from reality.

Typical methods of operation of the illusion and denial:

- correcting biased past (forgetting and distortion of memories, denying the past facts);
- immersion in fantasies of power, sex, violence;
- recourse in the future (planning a safe and controlled drinking, prediction of falls, crashes, creating unrealistic vision of future events);
- avoiding of responsibility, interpersonal manipulation (cheating to be insulting, provocative, biased interpretations of their participation in past events, "it was not me", "I am a victim of circumstances", "they are against me").

**Mechanisms of scatering I** - This mechanism arises due to repeated experiences of depersonalization alcohol - so called. departures, get high alcohol, etc. The basic functions of the system:

- disintegration of the structure, damaging the ability to carry out the provisions of abstinence;
- sustaining the hope of unlimited availability of power and control of their own mental states;
- defense against impotence and the collapse of self-esteem.

Let turn us now to the overall impact may alcoholic substances to changes in human behavior. Most of us are very well known subjective feeling after drinking alcohol for thousands of years people have used it for pleasure, relaxation, to calm anxieties and worries, as well as increased self-confidence and a sense of power. From the point of view psychofarmakologicznego Effect of alcohol on human behavior and its mode of action is complex and depends on many factors such as the size of the dose and prior experience with alcohol. In moderate doses, most people experience a sense of relaxation and mild euphoria. Although alcohol has been classified calming measures – hypnotics, due to the obvious depressant properties in small amounts may act as a stimulant. People become more talkative, open and less restricted social rules. This is largely due to disinhibition. Regarding the behavior of the term "disinhibition" refers to a condition in which people do what they normally would not do for fear of unpleasant consequences. Behavior without inhibitions depend on the past and the personality of the individual. For example, someone bold and self-contained may no longer abstain from the company, but the person usually has become aggressive and ready to fight. As some of us, unfortunately, know from experience that people under the influence of alcohol, or say they do it, what would never have gone if they were sober. There is a close relationship between the concentration of alcohol in the blood and the essence of its impact on behavior. Colorful description of this relationship switched Bogen [15]:

- less than 0.03% of the body is blunt and serious,
- At 0.05% confident and charming,
- at 0.1% can be dangerous and wicked,
- 0.2% is often dizzy and quarrelsome,
- the 0.25% may be disgusting and rozchłestana (disheveled),
- The 0.3% fall into delirium, is confused and certainly drunk,

- At 0.35% flooded "the corpse",
- at 0.6% death can occur.

Higher doses of alcohol cause depression and significantly impair the functions of the senses and motor activity. There is a decrease in visual acuity and Hardness of taste and smell. Reflexes are delayed and slowed movements and speech [16]. Response time has been extended, the concentration of alcohol in the blood ranges from 0.08 to 0.1 percent: complex reaction time measurements that require the test to take account of information from multiple sources, show that even at low doses of both speed and accuracy reactions are reduced. Also memory processes are disrupted as a result of alcohol consumption. Reactivity, the ability to decode new information and short-term memory are impaired. For people who drink a lot during periods of high consumption of light-headedness can occur ("snap movie"). As the name implies, these are the periods when the memories are not any, related to the situation in which alcohol was consumed [17].

Alcohol may in various ways to affect brain function. Unlike most psychoactive substances, which cause relatively fairly well defined due to the synaptic space, alcohol affects many neurotransmitter systems, and in many aspects of the neuron. It has long been known that alcohol affects the membranes of nerve cells. Its direct effect on the proteins contained in the cell membranes triggers a chain of metabolic activity within cells that produce the effect of inhibiting the activity of neurons by reducing the storage capacity of the action potential, which limits its functionality [18]. Weakening the effect of high doses of alcohol on the functioning of sensory and motor function to a large extent from its general depressant effects. However, the alcohol acts as the relay system, particularly for biogenic amines (norepinephrine, dopamine and serotonin) and gamma - aminomasłowy (GABA). His impact on this system may be associated with the effect of changes in mood, enhance or reduce the level of anxiety. Alcohol enhances the inhibitory effects of GABA example, which is the most important inhibitory transmitter in the brain. Alcohol acts on the same receptor complex as GABA benzodiazepine antidepressants, and it is that this action is responsible for its anxiolytic property [19]. Dopamine may also be part of the effect of rewards and stimulating effects of small doses of alcohol. Its level in the nucleus accumbens increased in animals orally, you voluntarily consume alcohol, what is more, in rats genetically matched for propensity to alcohol, this increase is much larger than those of alcohol is not.

As is apparent from the description of the conditioning of both mechanisms and the description of all the alcohol has on the behavior of the individual consuming the substance, it is decidedly disadvantageous. Working as a police officer is a stressful job, but also responsible. Stress is one of the main factors influencing the dependence on alcohol, but it interferes greatly exemplary and responsible functioning of the profession.

### **3.3 The causes of alcoholism by police officers**

Causes of alcoholism by officers may be, as in the case of any other person, both biological, psychological, and social benefits.

When we have in mind the conditions of formation of addiction among police officers, in the foreground stand out issues related to occupational stress and personality determinants. Although every person can experience events with high stress loads, it is surely there are people including practicing a particular profession, in which the probability of such an event is greater than the average [20]. To this group belong police stress risk. It is widely accepted view that the police profession is highly stressful. After conducting research on stresogennością in nearly 50 events, it turned out that the police took the first place in terms of stress levels assessed by experts on the basis of subjective evaluation of the police themselves. When the unit is experiencing threat, goes through different changes in somatic and emotional reactions which together form the fear. Fear reaction consists of four types of components: a cognitive component - expectations regarding the threatening injury; somatic components - body alarm response to imminent danger and changes in physical appearance, emotional components - strong feelings of fear, terror, panic, behavioral components - flight or fight [21].

The reaction of fear can take many forms and can be a composition of various ingredients. Two people do not have to show the same signs of fear. There is also a component that is always

present in the reaction of fear. Please note: not all components of fear must appear in every emergency situation configuration fear factors may vary. Specific components of fear are waiting for a particular injury, which often threatens in the near future. When the body experiences emotions of fear, immediately appear somatic reactions. Distinguishes two types of bodily changes: external and internal. In addition to changes in the external appearance, there is also a change in the body [22]. Within a few seconds from the time of observation there is a risk of developing an alarm response of the human body which consists in the fact that resources are mobilized body. Internal bodily changes are physiological components of fear. In response to fear, there are also a strong emotional component. These are the feelings of fear, terror, squeamishness, engulfing feeling cold, chills running through the body, a feeling of weight in the stomach. They are well known because they often say, when the individual attempts to describe their feelings and sensations associated with fear. People are most aware of their emotions related to fear reaction to a lesser extent, aware of their own thoughts and ideas. In addition to awareness of physiological processes are triggered by the fear inside your body.

There are two types of behaviors related to fear: the reactions of a classic, which are involuntary reactions and instrumental responses that are volitional attempts to deal with the object of inducing fear. In the situation of human potential threat may raise some thoughts or cognitive representations of what is going to happen. It can embrace terror and other emotions. Can escape or attack the assailant. May start to gasp, his muscles can stretch and it may be many other somatic changes. Somatic changes occur within a few seconds after you see the danger alarm response form by which the body mobilizes to increase their chances of survival. These internal changes are caused directly by the action of the autonomic nervous system, and adrenal gland, which in turn are controlled by the central nervous system.

Reduce the occurrence of problems associated with alcohol addiction in this particular occupational group that are police officers, requires a strategy of prevention and intervention strategy. Prevention strategy focuses on people who do not drink yet, but are at risk for developing alcohol problems. Intervention strategies aimed at encouraging the treatment or change in the lives of those who drink heavily often or under conditions that endanger health, life or property. The prevention program includes awareness and communication aimed at increasing public awareness of the problem of alcohol and legislation associated with the consumption of alcohol. Intervention refers to those who have touched alcohol problem, and includes activities such as training programs on alcoholism for the people involved in health care and programs that help a person at risk of addiction.

The results show that the campaigns in the mass media did not alter health behaviors, but they can create a context that increases the effectiveness of other strategies affecting behavior change. They can be effective when combined with other prevention strategies, such as more stringent compliance laws for driving while intoxicated. Evaluating the work of many of these problems are weak in terms of methodology and no conclusion can be drawn from the results described in them. Analysis of educational programs about alcohol in higher education is more encouraging. These programs are often subject to additional evaluation and uses them to control groups and treatment groups. Generally, the longer program (20 - 36 hours) induce lasting changes in behavior on alcohol than do shorter (2 to 20 hours). This positive picture of the effectiveness of programs for higher education, however, was shown in doubt because of the way the selection of students, and specifically on the basis that the participants were volunteers with high motivation for lifestyle changes, it is therefore not controlled.

There is evidence that measures to raise the price of alcoholic beverages, such as increasing taxes, they reduce consumption. Written on this subject in the United States and in other countries. Other studies have shown that reducing the availability of alcohol is a way to reduce both alcohol consumption per capita and mortality associated with alcohol consumption. Some studies note that if there is a high probability of detection and increase the penalties for driving while intoxicated, the number of accidents, injuries and their consequences are reduced. Public awareness about the probability turns out to be a very important factor. When society notes that the criminal system does not work quite as smoothly and surely, the number of cases of driving while intoxicated and the related accidents increases significantly [23].

The problems of alcohol addiction and alcoholism are recognized as an important element in training programs and many professional organizations actively supports education about

addictive substances. Although there are indications that expanding medical knowledge changes the approach to alcoholics, does not necessarily lead to changes in clinical practice. There is a great need to assess clinical practice in the development of training for professionals. It leads to serious research to develop a simple and accurate classification procedure for early identification of alcohol problems. Two main areas of research are biochemical markers, and psychosocial factors. However, biochemical markers distinguishing features were too weak to be able to use them to classify the population, and some researchers believe that you can not find a single reliable biochemical marker of alcohol abuse on the basis of the current standard clinical tests. Effective means of early identification and intervention turned out to be a combination of biochemical markers of interviews and questionnaires classification [24].

The impact of programs aimed at helping people who work hard to assess the independent researchers due to methodological problems, such as lack of free access to the data. However, the people running these programs show the effectiveness of high and constant financial support for these programs on the part of superiors can not be ignored as a kind of indirect assessment. Some researchers, however, question the effectiveness of the programs, when it comes to changes in drinking habits and productivity among people who take part in them

In the pharmacotherapy of alcoholism in recent years, there have been no significant changes. There is a great interest in the use of disulfiram as an aid in the broader treatment of some alcoholics. Lithium carbonate can be effective in the treatment of some alcoholics, particularly those that simultaneously suffer from affective disorders, such as depression. Recent studies indicate that many alcoholics does not require hospital treatment.

It should also be noted that the problem of substance abuse among police officers is not only alcohol, but also drugs. Range of drug addiction is indeed much smaller than from alcohol, but nevertheless it is a phenomenon that can not be underestimated [25]. It should be noted that the problem of substance abuse among police officers never goes away, it never disappears stress of the job. Studies cited above clearly show that the police are a professional group most vulnerable to alcohol dependence. However, you can and should control the scope of this extremely dangerous phenomenon and create mechanisms for effective intervention when it comes to addiction. It would be easier to fight the problem of substance abuse among police officers, if not hidden cases of addiction and no cover-up offenses of drunken officers [26].

### **3.4 Alcohol abuse by police**

The problem of addiction among police officers primarily associated with alcohol abuse, to a lesser extent, drugs or medicines. This problem is largely remains poorly understood. In Poland, the police or the Ministry of Internal Affairs does not keep statistics on alcoholism among police officers. At the end of the nineties of the twentieth century, Metropolitan Police conducted an anonymous survey of police officers. Almost three quarters of respondents said they regularly drink alcohol after work, and 12% identified themselves as addicted to alcohol. In the years 1993 -1997 due to addiction fired 776 officers from the Ministry [27].

In surveys conducted in Australia, attended by more than 4,000 police officers. The results showed that the police consume alcohol in much larger quantities in the one-time consumption than the statistical average [28]. Both men and women reported frequent binge drinking combined with the blackout. A quarter of the officers admitted to drinking at the time of their official duties. One third of the respondents were included in the category of persons at risk of addiction, and about 5% to the category of addicts. The frequency and volume of alcohol consumption was highest in the age group from 18 to 25 years of age. Analysis of other demographic variables showed that the risk of excessive alcohol consumption remained due to factors such as: divorce, remain separated, seniority between the fourth and tenth year of service [29]. In a study conducted in Australia in New South Wales for more than 800 police officers, it was found that excessive alcohol consumption affects almost 50% of men and 40% women. As excessive alcohol consumption was adopted more than 8 drinks per week, no less twice per month or 28 drinks per month for men and more than 6 drinks per week, not less than twice a month or 14 drinks a month for women. Studies have also shown that alcohol is widely used and accepted at social gatherings and activities in this occupational group. Similar results were also obtained in studies conducted in other countries g [30].

In the light of knowledge about the dangers of alcohol for physical and mental health of police officers should be considered as a profession with a high degree of risk. Substance abuse affecting the change in mood or consciousness can result from ongoing human aspirations traditionally seeking pleasure and pain relief. Sometimes it may be the case, however, the substrate having more social than psychological [31]. Abuse of drugs, alcohol, depression and other problems of our time can have its source in the alienation of the individual from society, destroys human individuality, uniqueness and innate nonconformity. It is therefore possible that the addictions. It is therefore possible that the addictions are largely caused by adaptation to ever new threats with which today do not know how to handle people in a rapidly changing environment. This pattern also applies to police officers, but the primary determinant of alcohol consumption in this group seems to be a professional occupational stress. The prevalence of alcohol abuse is also related, at least in part, the prevailing problems in the sphere of values, attitudes and norms of behavior related to drinking.

If we took about drug use, a system of values and attitudes are much better defined and there is about them a better match than in cases of alcohol. In Poland, the divergence of standards particularly striking, for example, with respect to such matters as the purpose of drinking, acceptance, tolerance, and even the favor of the people who drink themselves into a stupor, as opposed to suspicion and distrust of abstainers.

Until recently, research on alcohol abuse and alcoholism were limited view that alcoholism is a field in which moral imperatives are more important than scientific research. Currently, research on alcohol have been incorporated into the mainstream of scientific research and our knowledge of the biological and psychosocial consequences of alcohol consumption is widening. In addition, while eliminating the problems associated with alcohol is still hope for the future, we are witnessing the beginning of changes in the understanding and awareness of the public about the risks of alcohol consumption [32].

Special Report on Alcohol and Health gives us a unique opportunity to assess how much needs to be done to prevent and eliminate problems associated with alcohol. The fact that it is still making progress, founded on the basis of the results of research published in these reports for many years. Also shows that alcohol abuse and alcoholism are still important social health problems. We have witnessed great progress in the study of alcohol consumption, the empirical research to theoretical - from observing what happens to the research to understand why this is happening. Gain new information about areas such as inheritance of predisposition to alcoholism and the effect of various environmental factors on these abilities, a variety of factors relating to individual susceptibility to alcohol abuse and alcohol dependence, various forms of manifestation of alcohol-related problems and neurochemical basis of addiction process it. Are also improved research methods in order to obtain reliable information about the nature and extent of alcohol-related problems in a variety of populations, including those in the so-specific professional group, they are police officers [33].

Although public interest in alcohol-related problems has not yet reached the point where concern for discovering the causes and developing effective methods of prevention and treatment of alcoholism overtake concerns about other issues, such as cancer or heart disease, it sees a growing awareness of the relationship between alcohol and health. In recent years, there was also a moderate decline in some indicators of alcohol-related problems, including the decline in the number of road accidents as a result of alcohol, reducing the consumption of alcoholic beverages, the number of deaths due to liver disease associated with alcohol and consumption of alcohol by young people.

It is always easier to give good news. More difficult task is to admit that what has been achieved so far is only the beginning. Reply to this central question where does the pathological desire for alcohol, it is still unknown, still do not know why millions of people can not stop drinking, even though they know that they kill each other.

Looking at the normal findings in genetics, neuroscience, and other areas, it can be assumed that the need now only preventive and curative. It would be a wrong approach. As long as we do not answer the fundamental question about the pathological appetite for alcohol, and until we can better assess the effectiveness of prevention and treatment, we will do only limited progress in the development of better treatments, and reducing alcohol-related problems. There are no answers to

these and other questions, we can be sure that with the extremely talented people who work in research centers, preventive and curative, fail to meet this challenge.

Dependence on alcohol or other drugs is a process which takes place in a time in which a person uses a substance selected to achieve a temporary effect, which can be different forms of pleasure or personal or social benefits. Carried out in different countries, studies show that people have in common is their dependent emotional immaturity. These people are mostly from the early years of life worse than others to cope with stress and frustration, and their emotional life occurs in discordant ways. At some point reveal that alcohol, drug, drug or other chemical substances relieves stress, gives life to them, allows to overcome the usual timidity or fear, or causes some other emotional benefits. Then they can become a kind of "drug," and so begins the process of addiction.

In addition to the positive short-term use of the substance, and especially abuse, involves delayed and long-lasting effects, having an almost exclusively negative consequences. The first of these, the earliest, but usually invisible until the recovery period, is to stop emotional development. For people addicted to replace chemical self-control and ability to cope with dolegliwymi feelings, so that such persons using the "medicine" in the form of the chemical, it must evolve, or learn adult ways of solving problems. And at the same addiction as new "drug" loses its original power and they become less and less able to cope with their own emotions, even with his help. Other long-term negative consequences of alcohol abuse is a deterioration of physical and mental health, the severity of affective disorders, conflicts with the environment, the gradual disappearance of the higher feelings and values, a sense of isolation, meaninglessness of life, the degradation of moral, material and social, and often conflict with the law. All of these effects are the result of a gradual loss of control over the amount of alcohol you drink. Loss of control is not only the fact that an alcoholic reaching for a glass, despite promises of abstinence, but above all in the fact that after taking the first dose of alcohol dependent person loses control and drinking more than intended.

Loss of control over the amount of drugs, and not "objective" number, is the essence of addiction and not the mere fact of drinking. But despite the painful consequences of drinking it causes, is the basis for the diagnosis of addiction. It should be noted that loss of control is irreversible and can not be restored, even as a result of therapy. This is why alcoholism is a chronic disease, namely, which can not be cured, but you have to learn to live with. This may indeed be related to the genetic background of alcoholism, they point to a growing number of scientific studies conducted around the world. Heavy drinking leads to a loss of power to govern their own lives. Not managing your life is just an expression of the negative effects of alcohol lifestyle. Unfinished study, broken families, suicide attempts, thrown out of work, court orders - these typical symptoms niekierowania own life by people suffering from addiction. By creating a system of explanations, an abuser of alcohol theoretically may never see the negative effects. S defense system is therefore a denial of the main feature of chronic addiction. He is the biggest obstacle in the diagnosis of addiction, both for the alcoholic, as well as an environment that can easily give a convincing argument to suggest seemingly abuser [34].

Damage to health caused by alcohol consumption can be measured in different ways: impact on mortality, disease incidence and prevalence, hospitalization sizes. An increase in mortality among men in the age group with the highest consumption of alcohol. Mortality from various causes related to alcohol consumption showed a similar trend as total mortality, but the association of alcohol consumption with the size he was much more pronounced. This is illustrated in mortality from cirrhosis of the liver, which is one of the main causes of death in women between the 25th and 65 years of age in many countries. In Poland, due to cirrhosis of the liver die each year about 4 thousand. persons. The death rate from cirrhosis die every year about 4 thousand. persons. The mortality rate due to cirrhosis of the liver, especially in men increases with the increase of the consumption of alcohol. A significant advantage of mortality occurs in men between 30-50 years and this is the age range for liver cirrhosis deaths are most strongly associated with the intensive use of alcohol.

It is also a clear association of alcohol use with suicide. Data to the conclusion that alcohol abuse among suicides occur ten times more frequently than in the general population. Studies show a clear link with the increase in alcohol consumption in suicide rates. Studies have also linked the incidence of alcohol use. It is now believed that it is the direct cause of, or a significant number of concomitant diseases or exacerbation of existing conditions. Drinking is associated with an

increased risk of cancer, especially of the mouth, larynx, pharynx, esophagus, stomach, liver, lung, pancreas and colon. These forms of cancer are causally associated with the consumption of alcoholic beverages, wherein the risk of cancer increases with the size of the dose. The risk increases significantly when accompanied by smoking, drinking, but he also is a carcinogen. Alcohol use is responsible for the deaths of some cancers, which are in Poland, the second cause of death.

It was also associated with heavy drinking prevalence of cardiovascular disease. Cardiovascular diseases are the first cause of death in Poland. This problem tends to increase, especially in the field of hypertension, which affects around 3 million people in Poland, which, as the consensus is significantly associated with the amount of alcohol consumed. It is also important role in complications of hypertension such as stroke. Patients who suffer from cardiomyopathy caused by unrecognized cause (such a situation applies to 2-3% of people hospitalized for heart disease), often because even in 50% of cases - are diagnosed as excessive drinkers. As for heart attacks, many studies have shown a lower incidence of coronary heart disease and a lower incidence of myocardial infarction in moderate drinkers compared with total abstainers. This phenomenon is not well understood, in particular, it is noted that the groups are not good abstainers controls. So I do not know whether it actually small doses of alcohol consumption plays a protective role [35].

Alcohol may significantly affect the structure and function of the central nervous system, particularly at the neuronal membrane, where the effect is substantially selective. One of the primary purposes of the impact of alcohol on the brain is to link the neurochemical and anatomical changes of behavioral and physiological responses to alcohol. The use of positron emission tomography and other new non-invasive imaging technique offers hope of progress in the study of functional infirmities central nervous system associated with brain damage caused by alcohol. Alcohol tolerance, physical dependence and alcohol withdrawal syndrome appear to result from changes in the membranes of neurons, which are caused by chronic alcohol consumption [36]. Most organic brain damage related to the effects of alcohol have been identified in the areas of the brain, such as the hippocampus, cerebellum, place bluish. Memory research suggests that memory system that allows people to search for information that was encoded and fixed, is interrupted during alcohol intoxication. Although there is still evidence that moderate alcohol consumption causes permanent damage to the structure of the brain, some arguments suggest that moderate drinking during social occasion may impair cognitive function. Reversibility of mechanical damage to the brain caused by alcohol consumption and impaired neuropsychological function remains one of the most controversial issues in the study of the structures of alcohol.

Alcohol consumption causes in the entire body side effects of long-range and complexity. Virtually every system of the human body is disturbed by alcohol, either directly or indirectly. Research expands our knowledge on the consequences of alcohol consumption. For a long time it was thought that virtually all of the alcohol is absorbed from the gastro - intestinal tract and metabolized primarily in the liver. New evidence shows that alcohol metabolism also occurs in the lining of the stomach. Transformation of alcohol in the stomach may protect against food poisoning from eating moderate amounts of alcohol. However, consumption of alcohol may cause gastric lesions, especially when accompanied by other stomach irritants such as aspirin. Alcohol may also act on the small intestine by modifying the motility, metabolism, blood circulation and cell structure, can also cause malabsorption [37].

Although most research indicates that the appearance of chronic cirrhosis of the liver requires the consumption of large amounts of alcohol, some data suggest an increased risk of the disease in men who drank only three glasses a day, and women who drink only one glass a day and a half . Alcohol-related heart muscle disease only occurs in 1-2% of alcohol abusers, but the prognosis for those in whom the disease develops very bad if they did not give up alcohol. Research also indicates that the alcohol has a negative effect on myocardial tissue even in patients at an early age, and that the consumption of alcohol is associated with hypertension and blood clotting disorders [38].

Alcohol has a huge impact on the endocrine system and the reproductive system in both men and women. Effects of alcohol on adrenal cortical hormones may play a role in the development of alcohol tolerance and physical dependence. Chronic alcohol in large quantities reduces the blood circulation in male testosterone levels, apparently by direct action on the cells which produce the

hormone. One result is the emergence of a female body hair, and breast enlargement in some male alcoholics. Although the amount of the female hormone estradiol does not decrease under the influence of alcohol in some alcoholiczек appears menstrual disorder, infertility and hormonal imbalance. Some of the changes caused by chronic adrenal hormones, alcohol consumption may be irreversible. Has also been shown that alcohol has a huge impact on the level of thyroid hormones and there are arguments that such changes may be associated with the development of certain types of liver necrosis in patients with chronic alcohol abuse [39].

Chronic alcohol consumption is associated with increased susceptibility to infectious diseases and some types of cancer. This is most likely because the alcohol has the capacity to harm to the human immune system. Although our understanding of the health consequences of alcohol consumption continues to grow, many questions still remain unanswered. Most basic research is needed cellular mechanisms that help explain the enormous impact of alcohol on the human body [40].

There is increasing evidence that there is a genetic predisposition to alcoholism, and researchers in the field say that alcoholism may be the result of interaction hereditary and environmental factors. Detected characteristics of bioelectrical activity of the brain in people who are not alcoholics, but are at risk because alcoholism was present in first-degree relatives of these people, which is probably neurophysiological markers of predisposition to alcoholism. Studies of people whose one of the biological parents was an alcoholic, but was not involved in raising the child, because it was adopted as a child, made it possible to assess the relative impact of genetic and environmental factors to the emergence of alcoholism. These studies have distinguished two types of genetic predisposition to alcoholism:

- abilities associated with male sex,
- environmental predisposition.

Abilities associated with male sex on males only, are highly heritable, leading to acute forms of alcoholism at an early age often require intensive treatment and are associated with serious violations of the law.

Environmental predispositions while shedding in individuals of both sexes and are probably the cause of most cases of alcoholism. This type of hereditary alcoholism occurs at a later age, usually it is not as sharp as alcoholism due to the predisposition of the male gender, and does not involve breaking the law. Environmental predispositions develop into alcoholism only when there is surrounded by a factor provoking, but never alcoholism adoptive parents is not a factor. The only significant factor on parents, which was found in connection with this type of alcoholism in adoptees, a low position of economic - social adoptive father.

This typology based on the analysis of official data, was confirmed and expanded on the basis of clinically treated alcoholics. Molecular genetic alterations in metabolic enzymes alcohol are the main field of research into the inheritance of alcoholism, for mutations resulting in a small change in the molecular structure of these enzymes could have a significant impact on the ability to remove the alcohol from the body. Many researchers believe that such studies can provide explanation of the basic mechanisms of alcoholism and define the genetic markers of susceptibility to alcoholism. There is significant evidence that, among oriental origin exists Widespread occurrence form aldehyde dehydrogenase, which are characterized by impaired removal of acetaldehyde, a toxic, which is the first product of alcohol metabolism. Rapid accumulation of acetaldehyde causes after a few glasses of red skin, rapid pulse, and other unpleasant symptoms that may discourage further drinking. The frequent occurrence of this form of the gene encoding the enzyme among the oriental origin can help explain the low incidence of alcoholism in this population.

That's how much a person drinks, how often does it and what will be the reaction to contact with alcohol is dependent on a complex interplay of demographic factors, social, economic and biological. Effective prevention and treatment of alcohol abuse and alcoholism must be based on knowledge and understanding of these factors. Are also important determinants of age, gender and ethnicity. Women drink much less than men and have fewer problems resulting from alcohol consumption. Recently there has been an increase in alcohol consumption among women aged 35 to 64 years. Higher incidence of gynecological and obstetrical disorders, including stillbirths and neonatal defects are associated with increased alcohol consumption. People over 65 years of age



drink less alcohol than adults over 65 years, perhaps due to the fact that the aging of reduced tolerance to alcohol. Among those of alcohol abuse is less prevalent. In older people who abuse alcohol for years, there is a high risk of harmful side effects [41].

Drinking patterns in the United States are different in different ethnic and racial groups. They are also different in the groups in terms of sex. Abstinence is more common among blacks than among whites. And black men are less likely than whites consume it in excessive amounts. Black women who drink alcohol are in fact more prone to excessive drinking than white women. The occurrence of health problems associated with alcohol, especially cirrhosis of the liver and esophageal cancer is very common among the black population. Mortality due to cirrhosis of the liver is twice as high among blacks than among whites. Hispanic Americans, and consume more alcohol abuse than the general population. The first generation Hispanics who were born in America, drinking much more than Hispanics who were born abroad. Almost half of Hispanic women are abstinent, but among men – only less than a quarter of the abstainers. Among Latin Americans, there is a high mortality caused by cirrhosis of the liver. Among American Indians and Alaska Natives frequent alcohol abuse and alcoholism, although many strains almost completely consumed alcohol. Disease and injury associated with alcohol three times more common among the Indians of the American Indians than in the general population. Cirrhosis of the liver is the fourth leading cause of death among American Indians. Among Asian Americans, regardless of nationality, alcohol abuse and alcoholism is very rare. There is in them a high degree of abstinence, especially among Koreans, Chinese, and women from all Asian groups.

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## **Пагубная привычка как заболевание**

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**Аннотация.** Пагубная привычка – это умственное и физическое состояние, возникающее из взаимодействия живого организма и вещества, характеризующаяся изменениями поведения и других реакций, включая необходимость принимать вещество постоянно или периодически, чтобы испытать его действие на психику, а иногда, чтобы избежать неприятных симптомов, связанных с отсутствием вещества.

**Ключевые слова:** Алкоголизм – алкоголь – это регулярное пьянство с целью испытать умственную активность; а иногда избежать дискомфорта; вызванного прекращением приема.

## Cultural Studies

## Культурология

### Moscow Media Education Centers for Non-professionals in the Media Fields

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**Abstract.** The analysis of the basic media education models used in Moscow media education centers has shown that nowadays the synthetic media education models are most typical; they are based on the synthesis of the sociocultural, educational and informational, practical and utilitarian models. And they lean towards the maximum usage of media education potential depending on the aims and objectives; they are characterized by variability, and the capacity to entirely or partially integrate into the education process. The suggested media education technology is based as a rule on blocks or modules of creative and role play/gaming assignments for the teachers to use both in school and out-of-school activities. An important peculiarity of the analyzed models is that they have a wide field of application: schools, universities, institutions of additional education and leisure activity. Media studies may be organized in the form of lessons, optional classes, and special courses integrated into different school subjects, or used in school societies.

**Keywords:** Russia; Moscow; media education literacy; media culture; media competence.

**Introduction.** The comparative analysis of Russian media education centers is closely connected not only with their goals and objectives but also with the typology problem of media education theories. In this connection Irina Fateeva suggests using a generalized term “action / activity theory” instead of the traditional pool of such theories (cultural studies theory, semiotic, socio-cultural, aesthetic, practical and other theories). This dominant practical approach is aimed at:

- adequate appreciation of media texts as human production, understanding of their origin and circulation, their critical assessment and well-grounded judgment of them;
- participant observation of mass media social functioning (both on the system and component levels), the audiences' media participation as conscious media consumers;
- dialogue-oriented media participation based on modern technologies;
- media creation based on the audience's participation in media education projects of a varied scale” [Fateeva, 2007, p. 34; Fateeva, 2008, p. 140-147].

Having analyzed the media education theories developed by media educators from different countries Irina Fateeva concluded that “to derive a media education theory from communication theories is not only unreasonable but also destructive since that initially causes conceptual disunity of teachers and their pupils intensified by moral and ethical problems: after failing to reach a consensus in the dispute the teachers are apt to impose their arguable views on the audience” [Fateeva, 2007, p. 25-26].

Such obvious rejection of conceptual approaches to media education is far from being undoubted. And the categoricity of the assertion also sounds bewildering: why are teachers sure “to impose their views”? Can the mutual process of correct comparative analysis of different theories and/or conceptions together with the audience fail to be fruitful?

Moreover, a thorough examination of each theoretical media education conception shows that all of them include media activity/action in a way, as a practical component of education.

On the one hand, we could deny with Irina Fateeva the theoretical peculiarities of this or that media education centre and confine ourselves to mentioning the unified “theory of media action” which is indeed characterized by a wide degree of generalization (and, neither Yury Usov nor Lev Pressman would object to its definition/formulation). But on the other hand, one cannot avoid in this case the loss of “creative individuality” of this or that media education centre, e.g. the

aesthetically/artistically oriented media education conception of Yury Usov.

The total number of Russian most significant media education centers is more than ten. In this article we analyze the activities of Moscow media education centers. Besides we took into consideration chiefly the media education centers whose activities (in a varying degree) are aimed at **mass media education**. That is why we describe the activities of numerous Moscow faculties of journalism, film and advertisement which train exclusively media professionals.

At the same time, we analyze the work of the Moscow State University media education centre exactly because during the last 7-8 years its leaders have attempted to extend the traditional scope of professional media education by arranging systematic (especially during the last two years) activities and events aimed at mass media education of school students and teachers.

#### **Brief characteristics of Moscow media education centers**

Thus, we single out five leading Moscow media education centers:

- Screen Arts Lab of Artistic Education Institute of the Russian Education Academy;
- Media Education and Technical Teaching Means Lab of the Educational Methods and Contents Institute of the Russian Academy;
- The Moscow City experimental platform "Media Education Technologies and New Teaching Forms in the Modern Educational Institution";
- Labs of experimental research coordination of the General Secondary Education Problems Centre of the Educational Methods and Contents Institute of the Russian Academy;
- Faculty of Journalism, MSU;
- Public organization – League of Young Journalists of Russia (YUNPRESS).

It should be also mentioned that the majority of the Moscow media education centers' staff are members of the Russian Association for Film & Media Education (<http://edu.of.ru/mediaeducation>) which unites hundreds of school teachers, university teachers, additional education institutions' workers, culture and non-profit public organizations' workers from different Russian cities.

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**1. Name of the Media Education Centre:** Screen Arts Lab of Artistic Education Institute of the Russian Education Academy (<http://www.art-education.ru/otd-dop-ekran.htm>).

**2. Year of establishment, location:** 1974, Moscow.

**3. Financing sources:** state funding (till 1992), state funding and grants of different funds (since 1992).

**4. Direction:** Professor Dr. Yury Usov (1974-2000); Dr. Larisa Bazhenova (since 2000).

#### **Yury Usov (28 July, 1936 – 27 April, 2000): Brief Biography**

During many years Prof. Dr. Yury Usov was an undisputed leader of Russian media education movement, a board member of the Russian Association for Film & Media Education.

Two years after graduating from the Cinematography Faculty of the All-Union State Institute of Cinematography (1972) he successfully defended a Ph.D. thesis and became Head of the Film and Television Lab (the Artistic Education Institute of the Education Academy). He initiated a number of wide-scale experiments in film education in many schools of the Russian capital in the first half of the 1980s. It was he who gave a thorough and detailed description of the **aesthetic/artistic theory of media education**.

Prof. Dr. Yury Usov actively promoted media education in schools, Moscow Cinema Lyceum, teachers' training courses in film education; he supervised PhD. students' research, wrote a number of books on the theory and methodology of film and media education in schools.

His first articles were published in the 1970s in Russian collections of scientific works and journals (*Soviet Screen, Pedagogika, Public Education, Television and Radio Broadcasting, Specialist, Arts and Education, Art in School*, and others). He took part in several international conferences on film education and artistic education; was one of the organizers of the Russian-British seminars on media education in the middle of the 1990s.

#### **Bibliography (Yury Usov's books in Russian):**

Usov, Y. (1980). *Methodology of Using Film Art for Aesthetic Development of Senior School Students (Grades 8-10)*. Tallinn.

Usov, Y. & Rudalev, V. (1983). *Methodology of Using Film Art in Educational Process*. Moscow.

Usov, Y. (1986). *Program of the Optional Course "Basics of Cinema Art" (Grades 9-11)*. Moscow.

Usov, Y. (1987). *Film Art in the Aesthetic Development of School Students (Grades 7-10)*. Tallinn.

Usov, Y., Bazhenova, L. et al. (1991). *The Basics of Audiovisual Culture*. Moscow.

Usov, Y. (1993). *The Basics of Screen Culture*. Moscow.

Usov, Y. (1994). *In the World of Screen Arts*. Moscow.

<http://edu.of.ru/mediaeducation>

<http://edu.of.ru/medialibrary>

**Books, articles about Y. Usov (in Russian):**

Fedorov, A. (2003). Media Pedagogy of Y. Usov. In: *Art and Education*. № 3, p. 65-74; № 4, p. 78-95.

Fedorov, A., Tchelysheva, I., Muryukina, E., et al. (2007). *The Aesthetic Conception in Russian Media Education and Creative Heritage of Y. Usov*. Taganrog.

**Larisa Bazhenova: Brief Biography**

Ph.D., member of the Russian Association for Film & Media Education. Worked as senior scientific associate for the Screen Arts Lab of the Artistic Education Institute of the Russian Education Academy. After Y. Usov's decease (2000) she became head of the laboratory in the present-day Artistic Education Institute of the Russian Education Academy. Under the supervision of Prof. Usov she repeatedly took part in practical experiments in film education of school students. Used to teach in the Moscow Cinema Lyceum for some years. Now teaches in different educational institutions of Moscow. Participated in many Russian and international conferences.

Larisa Bazhenova is the author of numerous articles on film education published in Russian journals: *Primary School, Art and Education, Art in School, Specialist, Family and School, Media Education et al.*

**Bibliography (Larisa Bazhenova's books in Russian):**

Bazhenova, L. (1992). *In the World of Screen Arts*. Moscow.

Bazhenova, L. (1995). *Our Friend, the Screen. Issue 1 and 2*. Moscow.

Bazhenova, L. (2004). *Media Education of the School Student (Grades 1-4)*. Moscow.

<http://www.art-education.ru/otd-dop-ekran.htm>

<http://edu.of.ru/mediaeducation>

<http://edu.of.ru/medialibrary>

**5. Target Audience:** school students of different age-groups, school teachers.

**6. Chief aim:** research of screen arts' potential (film, TV, video) in students' artistic education and media education, personality development on art media texts.

**7. Objectives:**

- research and analysis of media education experience;
- experimental, aesthetic, ethical, audio-visual, emotional and intellectual media education of school students developing: various types of active thinking (imaginative, associative, logical and creative thinking); perception, interpretation, analysis, and aesthetic appreciation of media texts; need for media language acquisition in communicating with both screen and traditional arts products and mass media; need for verbal communication to exchange views on the acquired information, and in artistic and creative activities; abilities to impart the knowledge gained at media education lessons; skills to represent the results of their personal perception of different arts, the surrounding world via communication technologies in the form of multimedia and audio-visual (video creation, computer-generated imagery) and written texts;
- holding of conferences and seminars on media education;
- arranging of optional and compulsory media education courses for schools students, teachers' extension courses;
- post-graduate media education research.

**8. Working definition of media education:**

Y. Usov defines *media education* as "a system of using mass communication and information media (press, radio, film, TV, video, computers, and photography) in a student's individual development. The system itself, unlike the traditional school subjects aimed at knowledge acquisition, suggests in the first place introducing the artistic and creative activities shaping the student's emotional and intellectual development" [Usov, 1998, p. 55]. He also introduced the concept of "audio-visual culture as a definite system of the student's levels of aesthetic

development on the screen arts material: needs level, education level and audio-visual thinking level” [Usov, 1989, p. 21].

**9. Key media education theories:** aesthetic and cultural studies media education theories.

**10. Media education model units:** ascertaining experiments aimed at detecting the initial levels of students’ of different ages aesthetic development in screen arts; “forming” experiments aimed at school students’ aesthetic film/media education; final ascertaining experiments aimed at detecting the changes occurred in the course of the “forming” experiments. In general, Y. Usov’s model integrates the study of screen, traditional arts and communication technologies. The model contents are defined by “the concept of the aesthetic culture as a system of the students’ emotional and intellectual development levels of imaginative, associative and logical thinking, perception of fiction and fact, interpretation skills, media evaluation skills, need for artistic and creative activities on the material of the traditional arts and various mass media (film, TV, video, press, radio, computer and multimedia technologies)” [Usov, 1998, p. 56].

According to Y. Usov, this model can be realized in the form of specialized and integrated media education. Moreover, the model can be applied in different variations and correlations, and that is by itself, in our opinion, very essential namely for Russia (due to different living conditions in big cities and remote regions, financial instability of education).

Usov’s model is directed at the effective development of such important aspects of basic *personal culture* as: active thinking (including imaginative, creative, logical, critical, and associative thinking); perception, interpretation, assessment and analysis of media texts; need for media language acquisition and qualified usage; need for verbal communication in the course of media information perception; knowledge communication skills and perception/reflection sharing skills via media [Usov, 1998, p. 56].

Yury Usov [Usov, 2000a] is also the author of the educational model of virtual thinking development based on the unity of video production and reflection on its results. The perception and analysis of the art/screen media text is achieved by video production of a picturesque scene; video material editing/montage; detecting of semantic, emotional interrelations between discrete elements; conception development of the watched episode; opinion development and verbal communication; a coherent analysis of the screen version and so on [Usov, 2000a, p. 3-6].

The concept of virtual reality has greatly changed of late. It used to be considered as something similar to artistic reality but due to the intensive development of computer technologies the virtual reality does actually appear on the inner screen of the person’s mind, linking him/her with any media text, either his/her own or somebody else’s.

That prompted the idea of the so-called virtual thinking which, according to Y. Usov, is able to resolve the contradictions between the level of achievements in the field of the art’s aesthetic impact and the present day man’s readiness to actively use these possibilities: both at specialized lessons and personally when perceiving and interpreting multivariate space-and-time reality.

The virtual thinking is closely connected with the history of the screen arts development, and with all types of studying the space-and-time reality (montage, audio-visual, space-and-time, screen). Undoubtedly, the development of the virtual thinking is one of the progressive fields of media education in the modern information society.

An important feature of Y. Usov’s model is the integration of screen, electronic and new ICT in the systems of basic and additional education, and in out-of-school students’ activities.

**11. Organizational forms:** media education integration into school students’ academic, out-of-school and leisure activities. Here four types of activities are distinguished: 1) learning about media arts and their functioning in the society; 2) looking for a media text message communicated through the space-and-time form of narration; 3) interpreting the results of perception, aesthetic evaluation of a media text; 4) artistic and creative activity in screen arts [Usov, 1989, p. 7-8].

**12. Teaching methods:**

According to the knowledge sources: *verbal methods* (lecture, description, debate, explanation, discussion); *visual methods* (illustration, demonstration of media texts); *practical methods* (practical assignments on media material). According to the level of cognitive activity: *explanatory and illustrative methods* (the teacher gives some information about the media, media culture, and the audience assimilate the information); *reproductive methods* (the teacher works out a system of various exercises and tasks on media texts for the students to master the methods

of solving them); *problem-solving methods* (problem analysis of some situations or media texts aimed at developing the audience's critical thinking); *heuristic, research methods* (the teacher creates conditions for the students' research and creative learning). Preference is given to students' media texts perception and analysis, to the system of role-play/creative lessons, practical lessons in video filming, etc.

**13. Media education program contents** (based on the key concepts of media education: *media agency, media category, media technology, media language, media representation, media audience*):

- introduction to media education (the definition of media education, media text, the main criteria for its evaluation, media creation, etc.);
- media reality in school media education (means of the visual image, media culture and the model of its development, etc.);
- man and environment, the possibilities for its study, comprehension and identification (correlation between the perceptive units, different means of establishing these interconnections; information space, its interpretation through word, music, image, etc.);
- technologies improving the human environment and modeling the human mind (media technology development, modeling of the world and the human mind, etc.)
- philosophic, aesthetic, and cultural evaluation of mass media; the peculiarities of the digital society, the narration and impact of modern media, modern ICT potential, etc.

**14. Application fields:** Compulsory and optional subjects (in specialized educational institutions (lyceums, vocational schools); teachers' extension courses), society classes (clubs, studios, institutions of additional education and leisure). The film/media education programs can be applied within the framework of artistic and aesthetic subjects (*World Artistic Culture, Basics of Media Culture, etc.*), literature, history, foreign language studies, etc. For instance, the subject *Media Studies* can be part of different school subjects, or can be taught as an independent special course. Since the problem of training professional media teachers in Russia has not been solved yet, such a varied approach is logical for Russian media education.

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1. **Name of the Media Education Centre:** Media Education and Technical Teaching Means Lab of the Educational Methods and Contents Institute of the Russian Academy (<http://www.mediaeducation.ru>).

2. **Year of establishment, location:** 1965, Moscow.

3. **Financing sources:** state funding (till 1992), state funding and grants from different funds (since 1992).

4. **Direction:** Prof. Dr. Lev Pressman (1965-1993), Prof. Dr. Ludmila Zaznobina (1993-2000), Prof. Dr. Alexey Zhurin (2000-2004), Dr. Elena Bondarenko (2004 – now).

**Lev Pressman (1924 – 1996): Brief Biography**

One of the founders of the 'practical branch' of media education in Russia, Doctor of Education (1981), Professor (1982), Member of the Russian Union of Filmmakers. He graduated from Kuibyshev Pedagogical Institute (1948). Used to work as a school teacher (in the 1940s-1950s). Since 1960 began working at the Academy of Pedagogical Sciences of RSFSR (later – the Russian Academy of Education) where he headed the Lab of Technical Teaching Means from 1965 to 1993. In his old age he was chief research officer of the Russian Academy of Education.

For many years Lev Pressman initiated and headed numerous media education projects. He is the author of many books on the problem of using media in school. In the course of several decades he succeeded in developing an effective system of using ICT in school teaching literature and Russian, and an extensive film reader for literature classes. Lev Pressman composed scripts for more than 150 educational films, TV programs, diapositive films; had several teaching aids on media education published. He had his articles published in Russian journals: *Pedagogika, Cinema Art, Soviet Screen, Literature in School, Russian in School, Public Education, Family and School* and others, and also in scientific collections of articles. Frequently participated in different scientific conferences.

**Bibliography (Lev Pressman's books in Russian):**

Pressman, L. (1965). *Film and Television Education for Developing Students' Speech*. Moscow.

Pressman, L. & Kisenkov, V. (1972). *ICT in School*. Moscow.

- Pressman, L. & Poltorak, D. (1972). *The Blue Screen Educates. ICT in School*. Moscow.
- Pressman, L. & Solovjeva, E. (1972). *School Film Amateur Club*. Moscow.
- Pressman, L. (1972). *School Radio Centre*. Moscow.
- Pressman, L. (1975). *Literature Room in School*. Moscow: Prosveschenie.
- Pressman, L. (1976). *ICT at Literature Lessons*. Moscow.
- Pressman, L. (1979). *Basics of Using ICT in School Teaching*. Moscow.
- Pressman, L. (1988). *Teaching Methods of Using ICT: Screen and Sound ICT*. Moscow.
- Pressman, L. (1993). *Video Recording in School*. Moscow.

**Ludmila Zaznobina (1939-2000): Brief Biography**

Doctor of Education, Professor, Ludmila Zaznobina headed the Lab for ICT Education and Media Education in the Russian Academy of Education from 1993 to 2000. For many years she supervised the experiment of media education and using ICT in Russian schools. She was one of the leading authors and the editor of the collective monograph 'Media Education Integrated into Compulsory Education', the author of the project 'Media Education Standard' (1998) for Russian secondary schools.

Ludmila Zaznobina is the author of many books on media education integrated into compulsory secondary school subjects, and teaching methods of chemistry. Her books were published in such Russian journals as *Public Education*, *Chemistry in School*, *Pedagogika*, *Educational ICT* and others.

**Bibliography (Ludmila Zaznobina's books in Russian):**

- Zaznobina, L. (1981). *Screen Aids in Teaching Chemistry*. Moscow.
- Zaznobina, L. (Ed.) (1996). *Media Education*. Moscow.
- Zaznobina, L. (Ed.) (1999). *Media Education Integrated into Compulsory Education*. Moscow.
- Zaznobina, L. (Ed.) (2000). *School ICT Equipment in Modern Conditions*.  
<http://edu.of.ru/mediaeducation>  
<http://edu.of.ru/medialibrary>  
<http://www.mediaeducation.ru>

**Alexey Zhurin (born September 30, 1955): Brief Biography**

Doctor of Education (2005), member of the Russian Association for Film & Media Education. A. Zhurin graduated from Moscow State Pedagogical Institute (1977), worked as a teacher, deputy headmaster, research assistant (since 1998 – as a senior research fellow) of the Media Education and Technical Teaching Means Lab of the Educational Methods and Contents Institute of the Russian Academy. From the second part of 2000 to 2004 he headed this laboratory. Since 2004 he has been deputy director of research in the Educational Methods and Contents Institute of the Russian Academy. The main field of his research is developing the theory of making and using ICT methods in teaching chemistry and media education. He is the author of a number of articles on media education published in such Russian journals as *Pedagogika*, *Chemistry in School*, *Media Education* and others. He has also a number of published books on ICT; often took part in conferences and workshops.

**Bibliography (Alexey Zhurin's books in Russian):**

- Zhurin, A. (1999). *Self-Tuition Manual for Computer Users in Questions and Answers*. Moscow.
- Zhurin, A. & Milutina, I. (1999). *Computer Basics*. Moscow.
- Zhurin, A. (1998; 1999). *Windows 95 for School Students and Computer Novices. Microsoft Office 2000 for School Students and Novice Computer Users*. Moscow.
- Zhurin, A. (2002). *Lesson of Inorganic Chemistry from Cyril and Mephody: Software Multimedia Teaching Tool*. Moscow.
- Zhurin, A. (2003). *Computer Literacy: Practical Guide for School Teachers*. Moscow.
- Zhurin, A., Bondarenko, E. & Milutina, I. (2004). *ICT in Modern School Teaching*. Moscow.
- Zhurin, A. (2004). *Computer in the Chemistry Schoolroom*. Moscow.
- Zhurin, A. (2004). *Media Education of School Students at Chemistry Lessons*. Moscow.
- Zhurin, A. (2009). *Integrated Media Education in the Secondary School (Natural Sciences)*. Moscow.



<http://www.mediaeducation.ru>  
<http://edu.of.ru/mediaeducation>  
<http://edu.of.ru/medialibrary>

***Elena Bondarenko (born June 10, 1962): Brief Biography***

Candidate of Education (1997), member of the Russian Association for Film & Media Education. After graduating from the Film Critic Faculty of All-Union State Institute of Cinematography (1985) worked as a scientific assistant in the Lab of Screen Arts in the Artistic Education Research Institute of the Russian Academy of Education. Since 2004 she has been head of the Media Education and Technical Teaching Means Lab of the Russian Academy of Education. She is the winner of scientific grants of the Russian Humanitarian Scientific Fund (2000-2002, 2004-2006) and the program 'Renovation of the Humanitarian Education in Russia' of the 'The Open Society' Institute (1994). She was an organizer and leader of the training group at the workshops 'Media-95' (Russia - UK) and 'Media Education and the Problems of Educational Television' (Krasnaya Pachra, 1996), an expert of the All-Russian Scientific School 'Media Education and Media Competency' (2009). Participated in scientific conferences of the Russian Association for Film & Media Education and six media education festivals. Her research is focused on the development of teenage media culture. She is the author of numerous articles, teaching aids and programs on film and media education, has publications in such Russian journals as *Specialist*, *Pedagogika*, *Standards and Monitoring in Education* and others.

***Bibliography (Elena Bondarenko's books in Russian):***

Bondarenko, E. (1994). *Dialogue with the Screen*. Moscow.

Bondarenko, E. (1994). *Excursion into the Screen World*. Moscow.

Bondarenko, E. (2000). *Theory and Methods of Social and Creative Rehabilitation by Audiovisual Culture Means*. Omsk.

Bondarenko, E. (2001). *Creative Rehabilitation by Media Culture Means*. Omsk.

Bondarenko, E. (2003). *In the World of Cinema*. Moscow.

<http://edu.of.ru/mediaeducation>

<http://edu.of.ru/medialibrary>

<http://www.mediaeducation.ru>

5. **Target Audience:** school students of different age-groups, school teachers.

6. **Chief aim:** preparing school students for living in the information society (information competency and competent usage of data flows) through media education integrated into the system of compulsory education.

**7. Objectives:**

- research and analysis of media education experience;

- holding of conferences and workshops on media education problems;

- developing of media education courses for school students, teachers' extension courses;

- post-graduate media education and ICT education research supervision;

- teaching the audience (school students, teachers) to accept and process media information (in wide sense);

- developing the audience's (school students', teachers') critical thinking, understanding of the implied meanings of media texts, conscious resistance to mass-media manipulations;

- out-of-school information inclusion in the context of general compulsory education, in the system of the knowledge and skills formed within school subjects;

- developing students' skills to find, prepare, hand over and accept the required information, also using ICT (computers, modems, faxes, multimedia, etc.) [Zaznobina, 1996, p. 73; Zaznobina, 1998].

8. **Working definition of media education:** the former amorphous definition of media education offered by E. Zaznobina (media education is the preparation of 'students for the life in the information environment by the intensification of media educational aspects while teaching different school subjects' [Zaznobina, 1998]) was replaced in the 2000s by a more systematized and strict definition offered by A. Zhurin. 'Media education is a pedagogical science which studies the mass media impact on children and teenagers and deals with theoretical aspects of preparing students for meeting with the media world; practical cooperative activity of the teacher and

*students preparing children and teenagers to use the media and to understand the role of mass media in culture and perception of the world; an educational sphere consisting in the knowledge of the mass media role in culture and perception of the world, and skills of effective interaction with media content'* [Zhurin, 2005, p. 51].

9. **Key media education theories:** practical theory, theory of developing critical thinking, and semiotic theory of media education.

10. **Media education model units:**

To a great extent L. Zaznobina's media education theory coincides with the media education approach of V. Polevoy who proved in his research that students' thinking on the audio-visual level of perception will be considerably activated only on condition that they are given an opportunity to independently (to a certain or full extent) estimate and make out the essential and the inessential, the required and the accidental on the screen; to analyze, synthesize and generalize what has been seen [Polevoy, 1975, p. 8]. The traditions of the media education model offered by L. Zaznobina are being developed now in the Media Education and Technical Teaching Means Lab of the Russian Academy of Education. Thus, the model of media education integrated with the system of compulsory education suggests the following components: objective, contents, activity, technology and regulation [Zhurin, 2005, p. 30].

11. **Organizational forms:** media education integration into compulsory school subjects.

12. **Teaching methods:** According to the knowledge sources: *verbal methods, visual methods, practical methods*; according to the level of cognitive activity: *explanatory and illustrative methods, reproductive methods, problem-solving methods, heuristic, research methods*. The methods if integrated media education depend on the used educational means and their aims, organizational forms of the educational process. The alterations caused by integration on the level of these components lead to alterations in teaching methods. Moreover, alongside with the organizational forms that prompts the modification of the inner contents of teaching methods. The principal modification consists in the practical realization of the informational equality between the teacher and the students against the background of the participants' free choice of bifunctional educational means of the didactic process consisting in using bilateral analysis of the educational material presented by the chosen educational aids. The result is that the methods well-known to *the teacher* get enriched with the new techniques which ensure a peculiar interpenetration of different methods [Zhurin, 2005, p.37]. Preference is given to the synthesis of theoretical and practical assignments: information search and systematization, information conversion from visual into verbal forms and vice versa; information transformation, information search for errors, media texts review, information search for the message, ICT literacy, etc.

13. **Media education program contents** (based on the key concepts of media education: *media agency, media category, media technology, media language, media representation, media audience*):

- media education assignments integrated into compulsory primary school subjects;
- media education assignments integrated into compulsory subjects of the general secondary school.

As a result, according to the media education standard offered by L. Zaznobina, school leavers are supposed to be able:

- to understand tasks in different wordings and contexts;
- to find the required information in different sources;
- to systematize the offered information or the self-obtained information on the given characteristics;
- to collect and systematize subject information during a long period of time (term, school year or any other time cell);
- to convert visual information into verbal system;
- to transform information, modify its content, form, sign system, data carrier and so on, depending on the communication purpose and the intended audience;
- to apprehend communication purposes, directivity of the information flow;
- to give argued opinions;
- to find errors in the obtained information and correct it;
- to tolerate alternative view points and to give sound arguments (for and against the opinion);

- to review and announce media texts;
- to ascertain associative and practically expedient relations between media texts/messages;
- to distinguish the message in the media text and to dejoin it from "white noise";
- to make an outline of the media text, to suggest the form of its presentation in accordance with its contents;
- to extract data from the offered information and to present them list-form or in any other form;
- to operate (even on the primitive level) these tools of data preparation, transmission and accessing [Zaznobina, 1996, pp. 75-76; Zaznobina, 1998].

**14. Application fields:** secondary education institutions. The following objectives of media education (integrated into humanitarian subjects and natural sciences of the school curriculum) are emphasized: educational information on this or that field of knowledge (irrespective of the information source or carrier); information transmitted through different communication channels available to school students; ICT of information creation, transformation, reservation, transmission and operation [Zaznobina, 1996, pp. 74-75].

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**1. Name of the Media Education Centre:** Moscow City Experimental Platform "Media Education Technologies and New Teaching Forms in the Modern Educational Institution" of the Experimental Research Coordination Lab in the General Secondary Education Centre of the Contents and Teaching Methods Institute (Russian Academy of Education) (<http://art.ioso.ru>).

**2. Year of establishment, location:** 2001, Moscow.

**3. Financing sources:** state, municipal funding, grants.

**4. Direction:** Dr. Svetlana Gudilina.

***Svetlana Gudilina: Brief Biography***

Head of the Experimental Research Coordination Lab in the General Secondary Education Centre of the Contents and Teaching Methods Institute (Russian Academy of Education), Ph.D., member of the Russian Association for Film & Media Education. Svetlana Gudilina is the research supervisor of the Moscow city experimental platform "Media Education Technologies and New Teaching Forms in the Modern Educational Institution". She teaches a university course 'Using ICT in Education' in Moscow State Pedagogical University.

Svetlana Gudilina has a number of publications (including teachers' guides, programs) on the problems of integrated media education, media education and arts in school. Frequently took part in scientific conferences. Designer of the web-site: <http://www.art.ioso.ru>, <http://www.art.ioso.ru>, <http://edu.of.ru/mediaeducation>, <http://edu.of.ru/medialibrary>

**5. Target Audience:** school students of different age-groups, students, teachers, kindergartens' educators (basic platforms: School № 858, School № 1173, Kindergarten № 2435, innovation web: Schools №№ 511, 515, 574, and 1405).

**6. Chief aim:** to train pupils, students, teachers to sensibly interact with audio-visual media texts as well as with printed texts, to develop communicative and analytical skills working with different text forms, to form creativity through positive media within media education integrated into compulsory school subjects and in the process of self-education as well.

**7. Objectives:**

- research and analysis of media education experience;
- holding of conferences and workshops (including remote videoconferences) on media education problems;
- creating media education courses for school students, pedagogical university students, teachers, kindergartens' educators;
- helping students to obtain actual independence of mass media manipulations;
- making students active participants of communication in the modern society as well as in the future society;
- developing students' media competency, i.e. their abilities to expert information search and interpretation; abilities to analyze, critically interpret and create media texts; use media for self-education, in creative projects and intellectual potential enhancement.

**8. Working definition of media education:** the definition given in the UNESCO papers.

**9. Key media education theories:** practical theory, theory of developing critical

thinking, and semiotic theory of media education.

**10. Media education model units:** administrative, cultural, teaching and methodical, educational and scientific components.

**11. Organizational forms:**

- city, regional seminars run by teachers-experimentalists; workshops on media education for educators and school administration with the framework of teachers' extension program;
- Internet-seminars for pupils and teachers;
- annual scientific practical conference 'Educational Technologies of the 21<sup>st</sup> Century';
- annual school students' teleconference 'World's Culture in the Internet';
- regional educational project 'Media Festival';
- teachers-experimentalists' participation in the system 'President's Prize', 'Moscow Grant';
- creation of Media Education Technologies Bank;
- master-classes including media education elements, discussions of video recorded lessons for the channel 'Stolitsa Plus';
- master-classes at All-Russian Exhibition Centre;
- realization of the program for pedagogical university students 'ICT in Teaching';
- experimental site support: <http://art.ioso.ru>.

For instance, there were organized seminars on different topics for primary school: *Media Education Technologies in Primary School, Audio/Video Recording in Primary School, How to Work with Children's Journals*, etc. For general and secondary school the following topics were chosen: *ICT and Media Education, Media Education Integrated into Compulsory Education, Teaching with Media* (chats, Internet-seminars, teleconferences, presentations, round work tables, etc.), *Didactic and Teaching Requirements to Smart Board Usage, Cinema Art Through Creation, Using Internet Resources in the Classroom, How to Become a Journalist, Educational Environment of School and Mediatheque, The Principle of Visualization in Media Education Technologies, Development of Media Education Competences*. For pre-school institutions: *Media Education in the Kindergarten, Information and Communication Environment in the Media Educational Aspect, Development of Communicative Skills in the Media Educational Aspect, Game in the Media Educational Aspect* and others [Gudilina, 2009 <http://art.ioso.ru/index.php>].

**12. Teaching methods:**

According to the knowledge sources: *verbal methods, visual methods, practical methods*; according to the level of cognitive activity: *explanatory and illustrative methods, reproductive methods, problem-solving methods, heuristic, research methods*. Preference is given to research methods and the methods developing the audience's critical thinking (reflective methods of assessment, comparison and identification of information and media texts), practical methods (ICT literacy development which helps to understand mass media messages and objectives from inside).

**13. Media education program contents:** (deals with the key concepts of media education: *media agency, media category, media technology, media language, media representation, media audience*):

- School № 511: *Communicative Competency Development in the Aspect of Media Education*;
- School № 515: *The Role of ICT and Mass Media in the Media Educational and Communicative Competence of School Students*;
- School № 574: *The Realization of the Socialization Principle in Educating with Media Technologies*;
- School № 858: *Media Education Integration into Basic School Subjects*;
- School № 1173: *Modern Means of Education in the System of Media Education and Communicative Didactics* (Primary School) and *Media Education and Internet Technologies Integration for the Development of School Students' Communicative Competence*;
- School № 1405 (*Inspiration*): *The Role of Media Education in Teaching the Arts* [Gudilina, 2007, p. 11].

So, each school involved in the experiment works on a definite theme of the general program of the media education centre.

In the city kindergarten № 2435 another experiment is being carried out on the topic: *The Development of Communicative Culture in the Media Educational Aspect in the Preschool*

*Institution.*

**14. Application fields:** schools, kindergartens, universities.

After several years of the experimental work in schools the experiment organizers raised a question: *What has changed in your school since the media education experiment was started?* 62 teachers and local education authority officials took part in the questionnaire. The majority of the interviewees noted the positive changes in teaching methods, intellectual and scientific growth of school teachers; in understanding how to organize students' media education, the work with e-books, etc. [Gudilina, 2009 <http://art.ioso.ru/index.php>].

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**1. Name of the Media Education Centre:** Faculty of Journalism, Moscow State University (<http://www.journ.msu.ru>).

**2. Year of establishment, location:** the Faculty of Journalism (MSU) has been training media specialists since the date of its opening (1947, Moscow) but it took up mass media education only in 2009 when the direction of the faculty won a UNESCO Bureau grant in Moscow for arranging media education courses for Moscow school teachers; they presented their project for the discussion in the Moscow City Parliament which was approved of in May, 2009 and recommended the introduction of media education courses in the city in Moscow schools.

**3. Financing sources:** state funding, grants.

**4. Direction:** Prof. Dr. Elena Vartanova.

***Elena Vartanova (born December 28, 1959): Brief Biography***

Doctor of Philology (1999), Professor, dean of the Faculty of Journalism (MSU) Elena Vartanova graduated from the Faculty of Journalism (MSU) (1981). She is a member of the *European Media Management Education Association*, ECCR (The European Consortium for Communication Research), IAMCR (International Association for Media and Communication Research) and the Russian Association for Film & Media Education, director of the Finnish-Russian Research Centre of journalism, mass communications and culture, editor of the Russian journals *Media@almanach* and *Meida@scop*. In 1995-2000 she was an expert of the Council of Europe. She is a laureate of scientific grants of a number of international funds and the Russian Humanitarian Scientific Fund (2006-2008). Has more than 100 articles published in Russian and foreign academic journals. Presently she researches modern media economics in the information society, supervises a media education project supported by a UNESCO Bureau grant in Moscow. She reads lectures on media economics, history of business journalism, foreign mass media.

***Bibliography (Elena Vartanova's books in Russian):***

Vartanova, E. (1997). *The Northern Model at the End of the Century. Press, TV and Radio of Northern Europe Countries between State and Market Regulation*. Moscow.

Vartanova, E. (1999). *The Finnish Model at the Turn of the Century: Information Society and Mass Media of Finland in the European Perspective*. Moscow.

Vartanova, E. (2006). *Encyclopedia of the World Media Industry*. Moscow.

Vartanova, E. (2009). *The Theory of Mass Media*. Moscow.

<http://www.journ.msu.ru>

**5. Target Audience:** students of the journalism faculty, media specialists, teachers, school students.

**6. Chief aim:** developing the audience's creative and critical attitude to mass media, the audience's transformation into a lifelong creative media user [Vartanova, Zasursky, 2003, p. 5].

**7. Objectives:**

- holding of conferences and workshops on media education problems;
- creating programs of media education courses for school / university students, and teachers;
- familiarizing the audience with the key concepts and laws of the communication theory, developing initial operational skills of media work;
- developing the audience's comprehension of media and media texts, of conscious contact with the media;
- developing media creation.

**8. Working definition of media education:** "Media education = protection against the media + preparation for media analysis + comprehension of media functions + conscious

participation in media culture” [Vartanova, Zasursky, 2003, p. 6].

**9. Key media education theories:** elements of the theory of developing critical thinking, sociocultural theory, semiotic theory, cultural studies theory, practical and protectionist theories of media education.

**10. Media education model units:** administrative, educational and teaching, and scientific units.

**11. Organizational forms:** different media education courses depending on the education institution (university, school) which take into account the interconnection of different modules/stages in the education system.

**12. Teaching methods:** according to the knowledge sources: *verbal methods, visual methods, practical methods*; according to the level of cognitive activity: *explanatory and illustrative methods, reproductive methods, problem-solving methods, heuristic, research methods*. There dominate theoretical and practical blocks including creative assignments, role play of different types.

**13. Media education program contents** (deals with the key concepts of media education: *media agency, media category, media technology, media language, media representation, media audience*):

- media categories;
- mass communication (the concept of mass communication , media language, etc.);
- media technologies;
- media reflection of reality;
- Internet as mass media [Vartanova, Zasursky, 2003, p. 9-10].

Besides they offered some rough media education programs: 1) knowledge of mass media and developing initial media user's skills; 2) developing media comprehension and constant media user's skills training; 3) conscious media participation; 4) media creation development (including the ability to create media texts) [Vartanova, Zasursky, 2003, p.7-8], and a series of media education programs for school students (2009-2010) of an apparently practical character. In the authors' opinion they can be grouped or altered depending on the target audience.

**14. Application fields:** the media education courses can be used in institutions of different types for: 1) continuous education, 2) school education; 3) higher education, 4) disadvantaged groups education, 5) teachers' training [Vartanova, Zasursky, 2003, p. 7].

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**1. Name of the Media Education Centre:** public organization – League of Young Journalists of Russia (YUNPRESS) (<http://www.ynpress.com>, <http://www.mediashkola.ru>)

**2. Year of establishment, location:** 1996, Moscow.

**3. Financing sources:** private financing, grants.

**4. Direction:** Dr. Sergey Tsymbalenko.

**Sergey Tsymbalenko (born October 14, 1949): Brief Biography**

President of the regional public organization – YUNPRESS, executive director of the League of Young Journalists of Russia, Ph.D., Sergey Tsymbalenko graduated from the Philosophy Faculty of the Urals State University; worked as a staff correspondent of the newspaper *Pionerskaya Pravda* in the Urals, an instructor of the Central Council for the pioneers' organization. In 1992 was one of the founders of the first in the country children's information/news agency YUNPRESS.

**Bibliography (Sergey Tsymbalenko's books in Russian):**

Tsymbalenko, S., Sharikov, A., Scheglova, S. (1999). *Russian Teenagers in the Information World (Sociology Surveys)*. Moscow: Yunpress.

Tsymbalenko, S., Sharikov, A., Scheglova, S. (2006). *The Information Environment of the Russian Teenager in the Post-Soviet Period (Sociological Analysis)*. Moscow: Research Institute of School Technologies. 128 p.

<http://www.ynpress.com>

<http://www.mediashkola.ru>

**5. Target Audience:** school students.

**6. Chief aim:** developing school students' media activity (generally on the press material).

**7. Objectives:**

- teaching the basics of media culture to school students;

- developing school students' media creation (generally on the press material);
- organizing different festivals and competitions of school press;
- sociological research on the topic 'Children and Media'.

**8. Working definition of media education:** the definition given in the UNESCO papers.

**9. Key media education theories:** the theory of media activity resembling the practical theory of media education.

**10. Media education model units:** objective block (school students' involvement in media text creation), 'media activity' block (collaboration of media specialists, teachers and students aimed primarily at developing school press), result block (forming a net of school editions meant for the audience of different ages).

**11. Organizational forms:**

- media production (e.g. children and teenage press, Internet sites);
- educational programs (courses, seminars, master classes, workshops) on media education on the press material;
- holding of media festivals, competitions;
- publishing books on media education of school students on the press material.

**12. Teaching methods** - according to the knowledge sources: *verbal methods, visual methods, practical methods*; according to the level of cognitive activity: *explanatory and illustrative methods, reproductive methods, problem-solving methods, heuristic, research methods*. But practical methods dominate.

**13. Media education program contents** (deals with the key concepts of media education: *media agency, media category, media technology, media language, media representation, media audience*): mass communication, media technologies; developing school students' media creation.

**14. Application fields:** in educational institutions of different types, culture centers, media agencies.

**Conclusions.** My analysis has shown that the majority of media education centers tend to the synthesis of theoretical concepts and pay with every year more attention to practical methods of media education. It is characteristic of the media education conceptions of E. Bondarenko, S. Gudilina, L. Zaznobina, E. Vartanova and Y. zasursky, S. Tsybmalenko and other Russian media educationalists.

At the same time, the synthesis of the aesthetic and sociocultural media education models suggested by Y. Usov [Usov, 1989, 1998], for example, is now supported by such Russian media educationalists as L. Bazhenova.

Thereby, Moscow media education centers have developed a number of perspective media education models used in education of people of different social strata, especially – of school students and young people.

The analysis of the basic media education models used in Moscow media education centers has shown that nowadays the synthetic media education models are most typical; they are based on the synthesis of the sociocultural, educational and informational, practical and utilitarian models. And they lean towards the maximum usage of media education potential depending on the aims and objectives; they are characterized by variability, and the capacity to entirely or partially integrate into the education process.

The suggested media education technology is based as a rule on blocks or modules of creative and role play/gaming assignments for the teachers to use both in school and out-of-school activities. An important peculiarity of the analyzed models is that they have a wide field of application: schools, universities, institutions of additional education and leisure activity. Media studies may be organized in the form of lessons, optional classes, and special courses integrated into different school subjects, or used in school societies.

And here one should consider S. Pensin's opinion who justly warns against such typical mistakes unfortunately characteristic of some media education models: vulgar sociology, imposition of ready stereotyped schemes, retreat from ethical problems of media texts [Pensin, 1987, p. 64].

Taking into consideration the above-examined models one can build a rough model of developing a person's media competence depending not only on the general didactic principles of

education (upbringing and all-round personality development, scientific character, intelligibility, systematic character, unity of theory and practice, visualization, life-long learning, practical value, sound knowledge, positive emotional background, consideration of students' individual peculiarities, etc.) but also on some specific principles connected with media content.

Among such principles one can mention the observance of unity of the emotional and intellectual aspects in the personality development, creative abilities, and individual thinking in teaching targeted at the maximum usage of media culture potential, and based on using hedonistic, compensatory, therapeutic, cognitive and heuristic, creative and gaming potential of media texts enabling the teacher to involve the audience both in perceptive and interpretive activity; analysis of space-and-time, audio-visual media text structure, and also in media creation (creating one's own media texts of different types and genres). Plus correlation with the current media situation which alongside with its shortcomings (stranglehold of low-grade mass media production, etc.) offers teachers the challenge connected primarily with using video recording, computers, Internet, interactive media potentialities.

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### **Центры медиаобразования в Москве, не ориентированные на подготовку медийных профессионалов**

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**Аннотация.** Анализ основных образовательных моделей, используемых в московских медиаобразовательных центрах показал, что в настоящее время синтетические модели медиаобразования наиболее типичны, данные модели основаны на синтез социокультурных, образовательных и информационных, практических и утилитарных моделей. Для них характерно максимальное использование медиаобразовательного потенциала в зависимости от целей и задач; они характеризуются изменчивостью и способностью полностью или частично интегрировать в образовательный процесс. Медиаобразовательные технологии основаны, как правило, на блоках или модулях, творческих и ролевых играх. Важной особенностью анализируемых моделей является то, что они имеют широкую область применения: в школах, университетах, учреждениях дополнительного образования и досуга. Медиаобразование может быть организовано в виде уроков, факультативов, спецкурсов и интегрировано в различные школьные предметы.

**Ключевые слова:** Россия; Москва; медиаобразование; центр; медиаграмотность; школа; вуз.

## Geosciences

### Науки о Земле

#### Interpolation and Extrapolation of Precipitation Quantities in Serbia

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**Abstract.** The aim of this paper is to indicate the problems with filling the missing data in precipitation database using interpolation and extrapolation methods. Investigated periods were from 1981 to 2010 for Northern (Autonomous Province of Vojvodina) and Proper Serbia and from 1971 to 2000 for Southern Serbia (Autonomous Province of Kosovo and Metohia). Database included time series from 78 meteorological stations that had less than 20% of missing data. Interpolation was performed if station had missing data for five consecutive months or less. If station had missing data for six consecutive months or more, extrapolation was performed. For every station with missing data correlation with at least three surrounding stations was performed. The lowest acceptable value of correlation coefficient for precipitation was set at 0,300.

**Keywords:** precipitation quantities; interpolation; extrapolation; correlation coefficient; Serbia.

#### Introduction

Serbia is a country on Balkan peninsula in southeastern Europe with a surface area of 88.361 km<sup>2</sup>. It has two provinces: Vojvodina in the north and Kosovo and Metohia in the south (Picture 1). In the middle is so-called Proper Serbia. Official measurements of meteorological parameters in Serbia started in the last decade of XIX century, but available data are for the period 1949-2011 and they are provided by the Republic Hydrometeorological Service of Serbia (1). The global standard normal period for the research of climate change is at least 30 years long (2), (3).

The frequency of extreme climate events, among them certainly the occurrence of fluctuations in air temperature, activated climatologists and meteorologists, globally, on focusing their research on the detection and definition of the causes and consequences of climate change. In the last twenty years, several leading international research institutions devoted their attention to the analysis of climate change (3), (4), (5), (6), (7). They based their investigation on the results of meteorological elements and phenomena observation conducted in the last 100 to 150 years, trying to predict the possible scenarios of climate change in the twenty-first century on global and regional level (8).

#### LOCATIONS OF METEOROLOGICAL STATIONS, DATABASE AND METHODS

The data used in this paper was provided by the Republic Hydrometeorological Service of Serbia for 78 meteorological stations: 11 from Vojvodina, 9 from Kosovo and Metohia and 58 from Proper Serbia (Picture 2). In this paper, two investigation periods were used. Period 1981-2010 was used for the stations located on the territory of Vojvodina and Proper Serbia, but at the stations located on the territory of Kosovo and Metohia it could not be done. This is because after the bombing of Serbia in 1999, stations in Kosovo and Metohija stopped working or continued to work under the rule of local Albanians who stopped sending data in the Republic Hydrometeorological Service of Serbia. Because of this, the research period for stations located on the territory of Kosovo and Metohia was moved 10 years earlier (1971-2000).

Precipitation quantities were obtained on a monthly level for a period of 30 years so every station had 360 parameters. Stations taken into consideration were those that had less than 20% of missing data (Table 1).



Picture 1. Geographical locations of investigated meteorological stations in Serbia (made by S.Savić)

Picture 2. Proper Serbia with its provinces Vojvodina and Kosovo and Metohia (9) [www.newworldencyclopedia.org/entry/serbia](http://www.newworldencyclopedia.org/entry/serbia)

Two methods were used for the filling of missing data. First method is interpolation which was conducted if a station had missing data for five consecutive months or less. Second method was extrapolation and it was performed if a station had missing data for six consecutive months or more. (9) For the first method, used method was arithmetic mean, while for the second method in first step was performed Person product moment correlation coefficient and then arithmetic mean.

Table 1: Missing data of investigated meteorological stations

Meteorological station	Years with missing data	Meteorological station	Years with missing data	Meteorological station	Years with missing data
Smederevo	1980-2011	Petrovac	1972-1978, 1985-1990	Bački Petrovac	1985-1987, 1990, 1999
Loznica	1985-1989	Bela Palanka	1962-1990	Blaževo	1961-1989
Zlatibor	1985-1989	Sokobanja	1985-1990	Bosiljgrad	1985-1989, 1993, 1996-2004
Požega	1985-1989	Žagubica	1960, 1985-1989	Vladimirci	1957-1958, 1985-1990, 2008-2010
Kraljevo	1985-1989	Blace	1960-1989	Debeli Lug	1949-1951, 1960, 1963, 1975-1980, 1985-1990, 1993-2009
Kuršumlja	1985-1991	Bujanovac	1985-1990	Kaona	1949-1957, 1964-1990

Čuprija	1985-1990	Preševo	1964-1990	Kučevo	1949-1989, 1993-2009
Bečej	1990	Brus	1961-1990	Ljubovija	1985-1989, 1991
Šabac	1985-1989, 2008-2010	Ivanjica	1985-1990	Pačarađa	1976-1991
Bač	1956-1987- 1990	Babušnica	1970, 1985- 1989	Kukavica	1985-1990
Bela Crkva	1986-1987, 1990	Novi Pazar	1985-1990	Užice	1985-1990
Bagrdan	1969-1991	Jošanička banja	1965-1990	S.Mitrovica	-
Jagodina	1985-1989	Jastrebac	1949-1961, 1964-1990	Čumić	1964-1989
Aleksinac	1964-1990	Trgovište	1969- 1989,1993	K.Kamenica	1958-1992
Leskovac	1970, 1985- 1989	Bukulja	1972-1990, 1999-2007	K.Mitrovica	1985-1991
Vrnjačka Banja	1985-1989	Rudnik	1956-1962, 1985-1990	Podujevo	1964-1991
Knjaževac	1985-1989, 2004-2005	Goč	1964-1990, 1993-1996	Prizren	1985-1991
Rekovac	1985-1990	Crni Vrh	1966-1989	Suva reka	1962, 1964- 1991
Prokuplje	1985-1989	Dragaš	1960-1961, 1970-1971, 1982-1983, 1985-1991	Priština	1985-1991
Bajina Bašta	1958,1964- 1990	Vlasina	1985-1989, 1995, 1998- 2002, 2004- 2007	Pirot	1962, 1985- 1989
Vlasotince	1963, 1958- 1989	Kopaonik	1949, 1960- 1971, 1973- 1989	Peć	1985-1991
Krupanj	1964-1989	Aleksandrovac	1985-1989, 1996	Uroševac	1985-1991

Source: (1), (made by D. Milošević)

### Results and discussion

In practice, extrapolation is subject to a greater uncertainty and a higher risk of producing suspicious results (12) (13) compared to the interpolation. This problem was encountered in the analysis performed in this paper (Table 2).

Table 2: Values of correlation before and after extrapolation on investigated stations

Name of the station	Name of correlated stations	Correlation values before extrapolation	Correlation values after extrapolation	Difference between correlation values
Jastrebac	Brus	0.517	0.513	-0.004
	Blace	0.584	0.558	-0.026
	Prokuplje	0.584	0.549	-0.035
Trgovište	Preševo	0.525	0.513	-0.012
	Vranje	0.663	0.641	-0.022

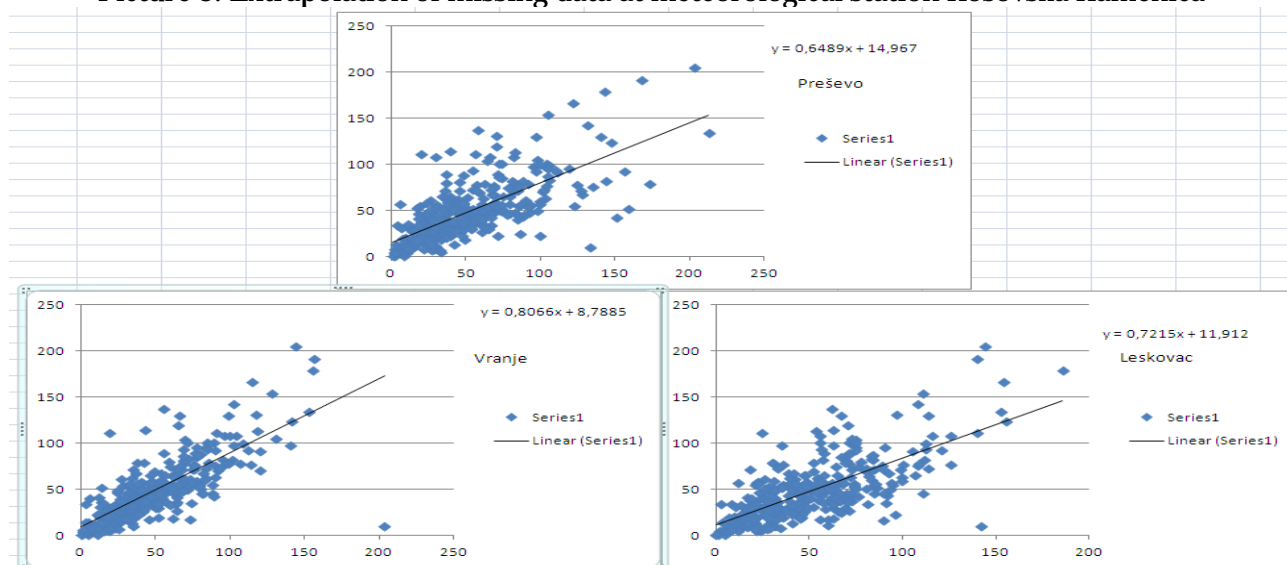
	Kukavica	0.546	0.533	-0.013
Kukavica	Vlasotince	0.467	0.382	-0.085
	Leskovac	0.592	0.481	-1.101
	Vranje	0.530	0.446	-0.084
Užice	Sjenica	0.510	0.496	-0.016
	Blaževo	0.513	0.508	-0.005
	Jošanička banja	0.408	0.413	-0.005
Kosovska Kamenica	Preševo	0.579	0.444	-1.033
	Vranje	0.639	0.537	-1.002
	Leskovac	0.519	0.479	-0.040
Kosovska Mitrovica	Kosovska Kamenica	0.447	0.505	-0.058
	Kuršumljija	0.491	0.452	-0.039
	Novi Pazar	0.523	0.498	-0.025
Podujevo	Kosovska Mitrovica	0.589	0.607	+0.018
	Kosovska Kamenica	0.467	0.523	+0.056
	Kuršumljija	0.610	0.595	-0.015
Prizren	Suva Reka	0.621	0.632	+0.011
	Uroševac	0.526	0.541	+0.015
	Peć	0.502	0.521	+0.019
Suva Reka	Uroševac	0.510	0.542	+0.032
	Priština	0.569	0.577	+0.008
	Peć	0.398	0.384	-0.014
Priština	Kosovska Mitrovica	0.648	0.683	+0.037
	Podujevo	0.657	0.638	-0.019
	Kosovska Kamenica	0.612	0.598	-0.014
Peć	Kosovska Mitrovica	0.410	0.373	-0.037
	Priština	0.420	0.436	+0.016
	Uroševac	0.310	0.328	+0.018
Uroševac	Priština	0.585	0.567	-0.018
	Kosovska Kamenica	0.537	0.477	-0.060
	Preševo	0.503	0.494	-0.009

(made by I. Leščešen)

As table 2 shows, extrapolation is made in 12 meteorological stations. In 8 stations we can see reducing the value of correlation after extrapolation. The highest reducing had station Kosovska Kamenica (0.692) and the lowest station Užice (0.008). The highest increase of correlation had Prizren (0.015).

**Example 1.** Performing extrapolation to get missing data for meteorological station Kosovska Kamenica. Selected stations for correlation analysis were: Preševo (value of correlation coefficient before extrapolation was 0,575), Vranje (value of correlation coefficient before extrapolation was 0,639) and Leskovac (value of correlation coefficient before extrapolation was 0,519).

Picture 3. Extrapolation of missing data at meteorological station Kosovska Kamenica

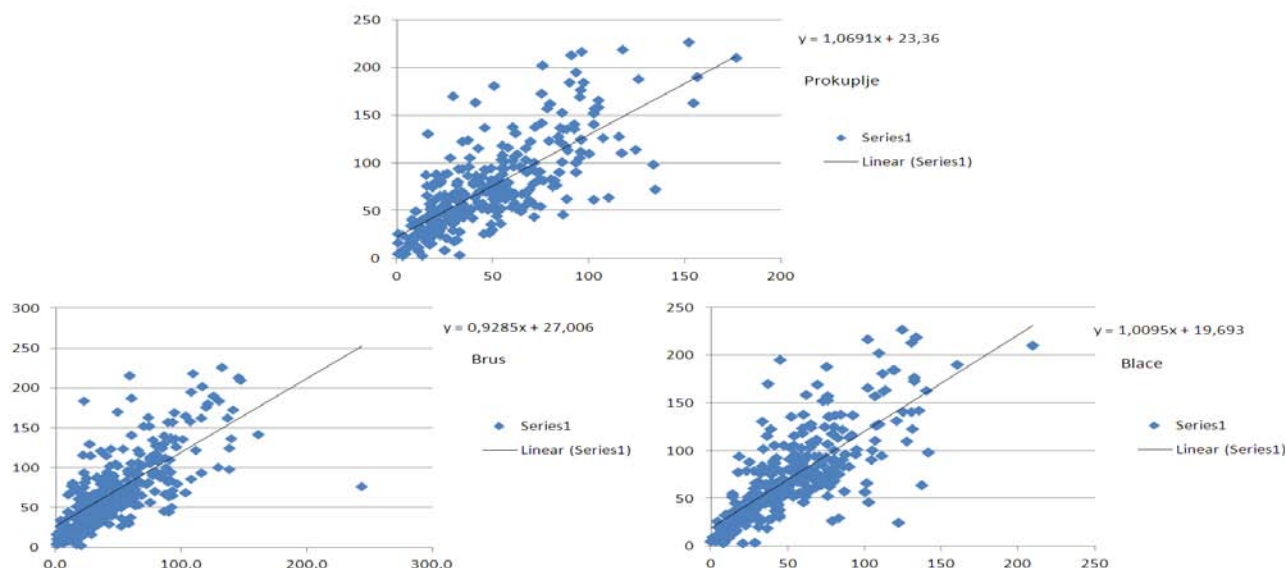


(made by R. Stojisavljević)

After extrapolation value of correlation coefficient decreased for 0,049 on average. Correlations between Kosovska Kamenica and Preševo changed to 0,444, between Kosovska Kamenica and Vranje to 0,537 and between Kosovska Kamenica and Leskovac to 0,479.

**Example 2.** Performing extrapolation to get missing data for meteorological station Jastrebac. Selected stations for correlation analysis were: Brus (value of correlation coefficient before extrapolation was 0,517), Blace (value of correlation coefficient before extrapolation was 0,584) and Prokuplje (value of correlation coefficient before extrapolation was 0,584).

Picture 4. Extrapolation of missing data at meteorological station Jastrebac

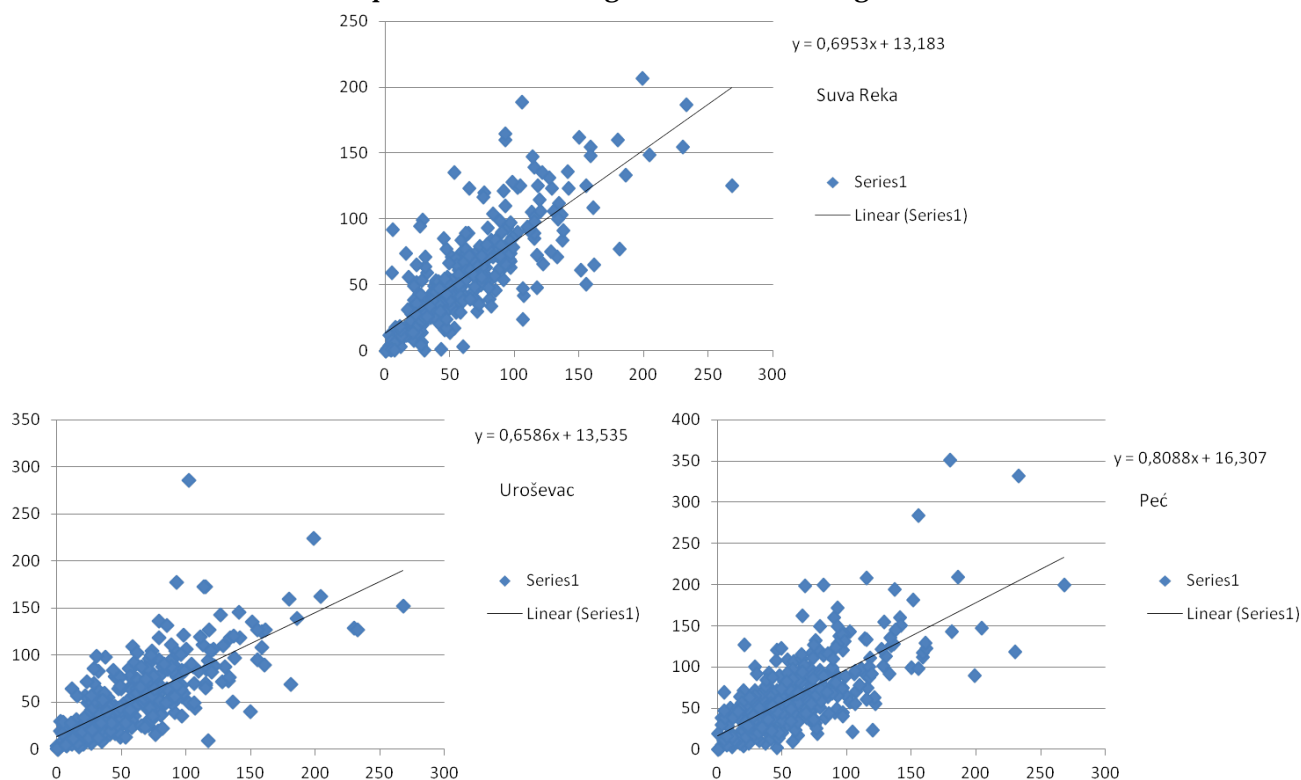


(made by S. Stojanov)

After extrapolation value of correlation coefficient decreased for 0,022 on average. Correlations between Jastrebac and Brus changed to 0,513, between Jastrebac and Blace 0,558 and between Kosovska Kamenica and Prokuplje 0,549.

**Example 3.** Performing extrapolation to get missing data for meteorological station Prizren. Selected stations for correlation analysis were: Suva Reka (value of correlation coefficient before extrapolation was 0,621), Uroševac (value of correlation coefficient before extrapolation was 0,526) and Peć (value of correlation coefficient before extrapolation was 0,502).

Picture 5. Extrapolation of missing data at meteorological station Prizren



(made by V. Majstorović)

After extrapolation value of correlation coefficient changed, but in this case level of correlation has increased for 0,015 on average. Correlations between Prizren and Suva Reka changed to 0,632, between Prizren and Uroševac 0,541 and between Prizren and Peć 0,521.

Extrapolation was used for filling missing data in the time series and it was expected that this method would give a higher values of correlation coefficient between the correlated stations as a result. In this paper it was shown that using this method for the purpose of filling missing data in the database of precipitation quantities has its drawbacks (correlation coefficient decreased after extrapolation) and that other methods should be considered for use.

### Conclusion

Many problems were encountered with completing the database of precipitation quantities in Serbia: a number of stations could not be included in the research because their missing data exceeded 20% of all data, investigation period for the stations located at Kosovo and Metohia was moved to earlier period and problems with extrapolation. In many cases the values of correlation coefficient decreased after the usage of extrapolation method. This showed that using extrapolation method for filling missing data in precipitation quantities database has its drawbacks. Values of correlation coefficient did not increase or decrease significantly and this is one of the good outcomes. In any case, other methods should be used for the purpose of missing data filling in the future and a comparative analysis of their results and the results obtained in this paper should be conducted.

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**Интерполяция и экстраполяция условий выпадения осадков в Сербии**<sup>1</sup> Rastislav Stojsavljević<sup>2</sup> Stevan Savić<sup>3</sup> Dragan Milošević<sup>4</sup> Sanja Stojanov<sup>5</sup> Igor Leščešen<sup>6</sup> Vukica Majstorović<sup>1-6</sup> University in Novi Sad, Serbia

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**Аннотация.** Цель данной работы заключается в указании проблем с заполнением недостающих данных в базу данных с помощью осадков интерполяции и экстраполяции методов. Исследованные периоды были с 1981 по 2010 год для Северного (автономного края Воеводина) и правильная Сербии и с 1971 по 2000 для Южной Сербии (Автономный край Косово и Метохия). База данных включены временные ряды с 78 метеорологических станций, которые были меньше, чем 20% отсутствующих данных. Интерполяция выполняется, если станция была недостающих данных в течение пяти месяцев подряд или меньше. Если станция была недостающие данные в течение шести месяцев подряд или более, экстраполяция была выполнена. Для каждой станции с missing корреляции данных, по крайней мере, три окружающих станций было выполнено. Самое низкое допустимое значение коэффициента корреляции осадков была установлена на уровне 0,300.

**Ключевые слова:** количества осадков; интерполяция; экстраполяция; коэффициент корреляции; Сербия.