



MAKING IT TO THE SCHOOL: EDUCATION AND TRANSPORT POLICIES FOR CHILDREN IN SOUTH EAST EUROPE



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**MAKING IT TO THE SCHOOL—
IMPROVING ACCESS TO LEARNING
THROUGH EDUCATIONAL AND
TRANSPORTATION POLICIES
FOR CHILDREN IN
SOUTH EAST EUROPE**

GUIDELINE

Belgrade,
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The Transport Research Support program is a joint World Bank/ DFID initiative focusing on emerging issues in the transport sector. Its goal is to generate knowledge in high priority areas of the transport sector and to disseminate to practitioners and decision-makers in developing countries.

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PREFACE

Providing at least basic education to all children - especially those coming from poor/disadvantaged families - is an important factor for increasing their chances to improve their lives in the future. Education improves the lives of people by ensuring that their individual potential is maximized. Better educated people across the world work in jobs that are better paid, their overall health status is typically better, they pay more taxes and rely less on social assistance (housing, food, welfare)¹.

The ever increasing pace of economic, political, social and cultural change has made the right to (quality) education for *all* children to be seen no longer as a duty of the State, but rather as a prerequisite for greater competitiveness of an economy based on knowledge. It is also the best approach to social inclusion, breaking the cycle of poverty, as well as fighting a(nti)social forms of behavior. Therefore, an important task of each society is to find proper ways of ensuring that all children get educated.

Many countries recognize the need to better educate their populations and do so by trying to improve the equity and quality while taking care of efficiency. It is especially important that South East Europe (SEE) countries pay attention to the fine balance between equity, quality and efficiency because, with their % GDP set aside for education being relatively small (the OECD average in 2010 was 6.2%, and in the SEE countries it does not exceed 4.5%²). For that reason, SEE governments have been paying attention to increasing the efficiency of their education systems by considering:

- What resources are being designated for and in what proportion (salaries, facilities, equipment and learning aids, teacher professional advancement, various programs that schools apply for, etc.);
- What is financial planning based on (the student, teacher, school facility, etc.);
- Who participates, and in which domains, in the decision-making about the distribution of funds (the Ministry in charge of education, regional/local authorities, the school board, the school principal, etc);
- What are the returns on the money invested (how many children are covered by the education system, how many children are outside the education system and who are they, to what extent and which skills do they acquire at school, etc).

*UN Convention on the Rights of the Child
Adopted and opened for signature, ratification
and accession
by General Assembly
resolution 44/25 of 20 November 1989*

Article 28

1. States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular:
 - (a) Make primary education compulsory and available free to all;
 - (b) Encourage the development of different forms of secondary education, including general and vocational education, make them available and accessible to every child, and take appropriate measures such as the introduction of free education and offering financial assistance in case of need;
 - (c) Make higher education accessible to all on the basis of capacity by every appropriate means;
 - (d) Make educational and vocational information and guidance available and accessible to all children;
 - (e) Take measures to encourage regular attendance at schools and the reduction of drop-out rates.

*World Declaration on Education for All,
WCEFA, 1990, Article 4, clause 4*

An active commitment must be made to removing educational disparities. Underserved groups—the poor; street and working children; rural and remote populations; nomads and migrant workers; indigenous peoples; ethnic, racial and linguistic minorities; refugees; those displaced by war; and people under occupation —should not suffer any discrimination in access to learning opportunities.

¹ Waldfogel, Garfinkel, and Kelly, 2007, in „Dropout prevention“, IES practice guide, 2008

² *Education at a Glance 2010*, OECD

The provision of equal educational opportunities is a challenge for every society, where specific solutions typically depend on a number of factors. Since there are no universal solutions or systematized literature reviews, local education authorities often face the challenge of finding the most suitable and sustainable solution for their communities in a given budgetary, strategic and legal framework.

The intention of this document is to raise awareness and provide support to decision makers in planning the measures that will secure access to quality education for all children, above all to those who are under higher risk of dropping out of the education system, through a set of transportation and education policy measures. These primarily include children from rural areas, physically and developmentally challenged children, language and ethnic minorities, and children from poverty stricken families.

The document aims to equip municipal authorities, as well as transport and education stakeholders, with a systemized approach for assessing the access and accessibility of education services, and tools for the selection of the most appropriate options for improvements. Therefore, this document represents a set of guidelines that will support local governments and stakeholders in improving access to schools by providing:

- The most important key criteria for assessing different factors influencing accessibility of educational services and schools;
- A list of options for improvements, based on successful examples from the SEE region and the world; and
- A framework within which local authorities will be able to assess their local situation and choose the option that is the most feasible in their context.

The proposed Guidelines - created with support of the World Bank Transport Research Support Program - are expected to be used by local authorities and their respective communities, transport professionals and the ministries of infrastructure or transport, educational professionals and the ministries of education in the SEE region with the goal of increasing coverage and ensuring access to schools for children, with an emphasis on children coming from poor/ disadvantaged families. Furthermore, the guidelines shall provide the needed know-how for improving the situation on the ground by offering different options for improvements. The document is organized as follows:

Chapter I provides a short introductory review of the demographic changes in SEE countries, changes that are similar to other developing countries, and their tendencies in the upcoming decades. These changes, in addition to efficiency and quality of education, are often taken as the principal parameters in decision-making regarding school networks. Special attention is given to the issue of inclusion of children from marginalized groups and their increased dropout risk, which needs to be taken into account when creating policies and measures that affect education.

Chapter II is a valuable source of information on the experiences of countries, in the SEE region and worldwide, in increasing the accessibility of education, both through transportation measures as well as education policy measures. Various solutions are considered regarding funding sources and criteria, the

*The Council of the European Union
Conclusions of 12 May 2009 on a strategic
framework for European cooperation in education
and training ('ET 2020'), (2009/C 119/02)*

Strategic objective 3: Promoting equity, social cohesion and active citizenship

Education and training policy should enable all citizens, irrespective of their personal, social or economic circumstances, to acquire, update and develop over a lifetime both job-specific skills and the key competences needed for their employability and to foster further learning, active citizenship and intercultural dialogue. Educational disadvantage should be addressed by providing high quality early childhood education and targeted support, and by promoting inclusive education. Education and training systems should aim to ensure that all learners — including those from disadvantaged backgrounds, those with special needs and migrants — complete their education, including, where appropriate, through second-chance education and the provision of more personalised learning. Education should promote intercultural competences, democratic values and respect for fundamental rights and the environment, as well as combat all forms of discrimination, equipping all young people to interact.

most common mode of transportation used by students, and how transportation is contracted, planned and scheduled (readers will be provided with concrete tools for this in Chapter IV). This section will describe a number of education policies that strengthen the fragile transportation bond between the child and his/her school so that the child will enroll and remain in school, in spite of the physical obstacle of his/her school being far away. For the purpose of clarity, they are clustered into two sets: *Locally oriented, proximal short-term policies* (targeting hidden costs to education, drop out rates, parents' engagement, bonds between schools and local communities) and *Long-Term, distal policies involving multiple stakeholders* (considering issues of preschool education and high-quality teacher recruitment).

Chapter III and related Annexes were developed to serve as a framework and tools for criteria-based decision-making. It discusses a set of transportation related criteria: (1) Coverage (maximum allowed walking distance relating to age and terrain), (2) Uniform Accessibility, (3) Quality criteria, (4) Safety and (5) Financial criteria, as well as a series of sensible principles to which local authorities can turn when choosing education policies: (a) Appropriateness (time, location), (b) Political feasibility, (c) Implementability, (d) Effectiveness and (e) Cost-effectiveness. The proposed criteria and concrete measures mentioned in the text should be taken as guiding principles only - as a starting point in the decision-making process which should be accommodated according to the actual legal and strategic framework and a variety of local circumstances. It also describes in detail the Action Plan (AP) – a document that should be developed by the local authorities in charge of transportation and education through a consultative process between schools, local authorities, parents and students. These guidelines should serve as a resource in the process of selection and implementation of transportation and education policy options aimed towards improving accessibility to education. This Chapter also introduces the AP creation methodology in consecutive steps: starting with needs assessment, continuing with the analysis of available options and their selection based on the criteria, and ending with budgeting and planning for monitoring and evaluation.

Chapter IV provides a summary and a set of recommendations for local- and national-level authorities on the most effective ways of fulfilling legal obligations and ensuring a basic children's right – access to education. A final consideration on main transportation options - school buses, contracted and public transport - can be found in this chapter as well as diverse recommendations on many educational measures such as: establishment of an advisory resource center at the Ministry responsible for education; networking of local authorities; capacity building of local authorities to create and implement the AAP; establishment of a variety of mechanisms for informing local authorities and schools about local, national and global programs and funding sources, local NGOs, community organizations and support services.

Closing *Chapters - V and VI* are setting paths for making chosen policy options sustainable and for future developments based on innovative transport and education approaches and proven practices.

1. CIRCUMSTANCES INFLUENCING ACCESSIBILITY TO EDUCATION IN THE SEE REGION

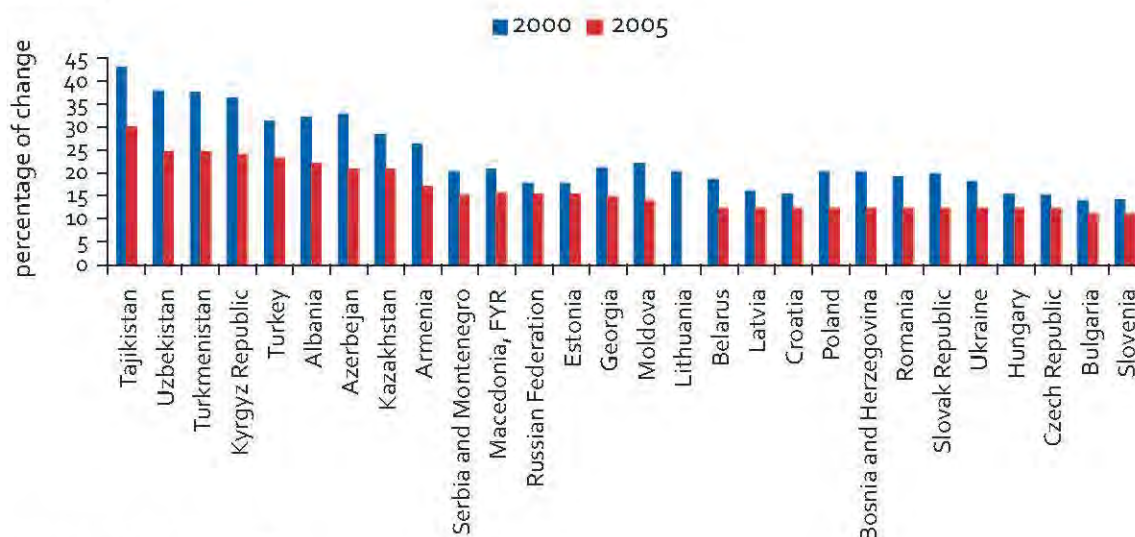
1.1. The Impact of Demographic Changes

Current demographic movements and projected demographic trends, followed by various social, economic changes as well as changes within the education system itself, especially in developing countries, require certain changes to be made in the school network in both rural and urban areas.

Countries in the SEE region are facing a trend of population decrease. Projections of populations for the coming decades, based on assumptions about future changes in fertility, mortality and migrations rates, indicate that this negative trend will continue. This is the case in the countries of the former Yugoslavia, as well as in Romania and Bulgaria, new EU member countries. The reasons for this are the following: population decrease, later average age of birth of the first child, smaller number of children per woman of reproductive age, increasing average age of the population, negative migration balance (with the exception of Slovenia), and the high rate of migration of fertile populations.

The projected change in the age structure in countries in the region indicates that by the middle of this century there will be approximately twice as many people over 65 than children under 15. In the mid-20th century, the number of children ages 0-14 was approximately four times higher than the number of people over 65; at the beginning of the 21st century these two age groups were equally numerous, while estimates for the middle of this century predict rapid aging of the population. Figure 1 illustrates negative trends within the age group of primary interest for the issue of access to education – 0-14 (Figure 1).

Figure 1 – Projected Change in the Population Share 0-14 Years in Eastern Europe and the Former Soviet Union, 2000-2025

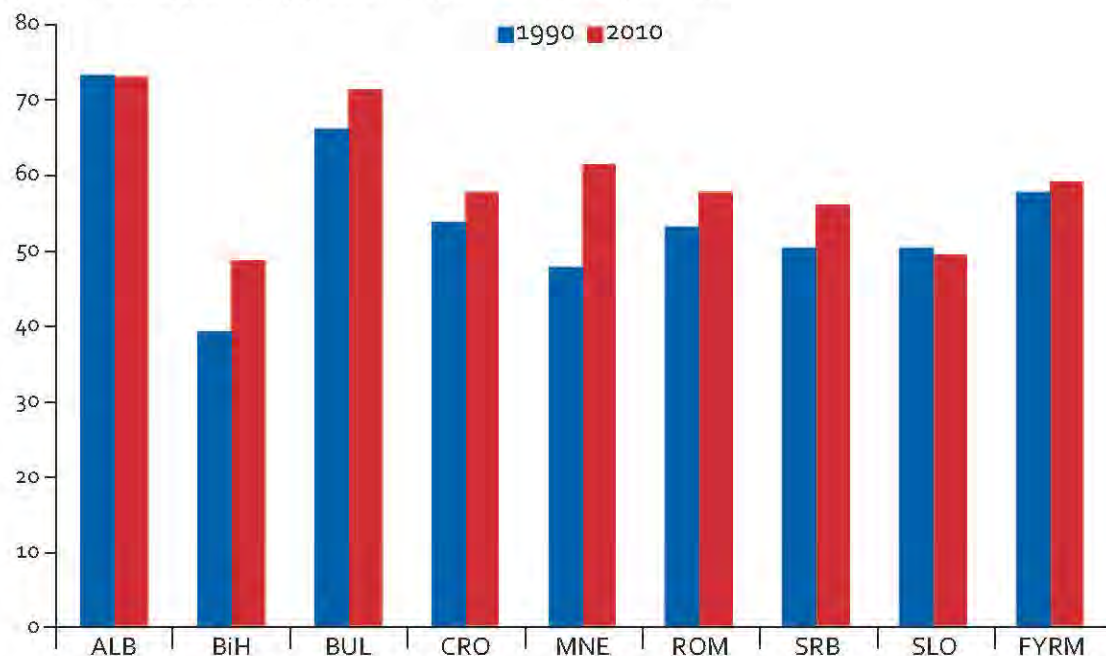


Source: United Nations 2005³

³ From Red to Gray – The “Third Transition” of Aging Populations in Eastern Europe and the Former Soviet Union, The World Bank, 2007.

Pronounced internal migrations are a characteristic of all the SEE countries, especially those from rural to urban areas⁴. Greater employment opportunities, especially for the highly educated, are the main drivers of population migrations from rural to urban areas. However, in developing countries one also finds reverse migrations, namely a return to rural areas. These processes are a consequence of the economic crisis and the shutting down of large industrial complexes. Figure 2 illustrates the trend of migratory movements from rural to urban areas recorded between 1990 and 2010.

Figure 2 – Percentage of total population living in urban areas (1990-2010)



Source: UNDP, Human Development Report, 2010.

1.2. Optimization of the School Network in the SEE Region

In addition to demographic decline and internal migration, the positive financial effects of optimization and better learning outcomes are often cited as reasons for optimization of school networks, but that they have been debated in research and policy communities.

WB experiences in the SEE region⁵ show that a non-optimized school network is characterized by decreased financial efficiency and insufficient rationality (higher administrative costs, higher maintenance, decreasing number of teachers per student): and questionable quality of teaching, especially in small, satellite classrooms (inadequate physical conditions of school facilities, difficulties with employing qualified teachers, too few children to allow adequate social and educational interaction, etc.). On the other hand, recent research⁶ suggests that impoverished regions in particular often benefit from smaller schools, and they can suffer irreversible damage if consolidation occurs. Though state-level consolidation proposals may serve a public relations purpose in times of crisis, they are unlikely to be a reliable way to obtain substantive fiscal or educational improvement. For these reasons, it is clear that there is no one-fit-all

⁴ Human Development Report 2010, The Real Wealth of Nations: Key to Countries' Pathways to Human Development, United Nations Development Program

⁵ Reform of the Education System in Montenegro, Mid-term evaluation by the World Bank, 2007

⁶ Howley, C., Johnson, J., & Petrie, J. (2011). *Consolidation of Schools and Districts: What the Research Says and What It Means*. Boulder, CO: National Education Policy Center. Retrieved 23/02/2011 from <http://nepc.colorado.edu/publication/consolidation-schools-districts>

solution and that decisions should be made on a case-by-case basis, ideally by following a clear approach for situation assessment and deciding among available options, the things that were attempted to be systematized in the form of the guidelines given in this document.

The central authorities of countries in the SEE region are taking various steps in order to provide guidelines to local authorities for deciding about the number and spatial arrangement of schools on their territories.

Bulgaria was the first to start and make the most progress with implementing the optimization of its network of schools. During the summer of 2007 around 100 elementary schools were closed or transformed, and a year later another 300 schools were as well, which represents 15% of the total number of elementary schools in Bulgaria. Optimization of the school network, being one of the priorities of the educational reform, has been supported with funds from the central budget through the special program of transportation support to local authorities and schools, by providing school buses and other “non-transport” measures (school canteens, extended school hours for commuter-students, etc.).

Serbia is currently creating the prerequisites for implementing school network optimization. The Government has passed a Decision on the criteria for school optimization so that local authorities can develop and pass an Act on the pre-school and school networks. Efforts are being made towards improving an education management and information system (EMIS) that will enable the creation of informed policies and monitoring their implementation, as well as the establishment of closer partnerships between the Ministry of Education and local authorities.

By optimization we mean: reconstruction of the network of schools in Serbia in a mid- and long-term perspective in order to attain a network that will maximally guarantee educational quality and relevance for all children irrespective of their geographical, social, ethnical, or cultural background, or of their gender, while at the same time taking cognizance of economic rationalization and the county's economic means.

*„Optimization of the network of schools in Serbia“,
Education Forum, 2002*

The Croatian Prime Minister identified school network optimization as one of the priorities of the education sector in 2010. However, no major developments have taken place so far.

Montenegro's central authorities formed a Commission for the rationalization of the school network “that should investigate the situation on-the-ground, before passing a final decision by which schools will change their status in the following school year and be organized as regional classrooms of larger schools, in accordance with the rationalization criteria adopted by the Ministry”. The change in status of a school will mean that smaller schools will continue to organize classes for children in the lower grades, while the Ministry will secure adequate transportation for older pupils to larger base-schools.

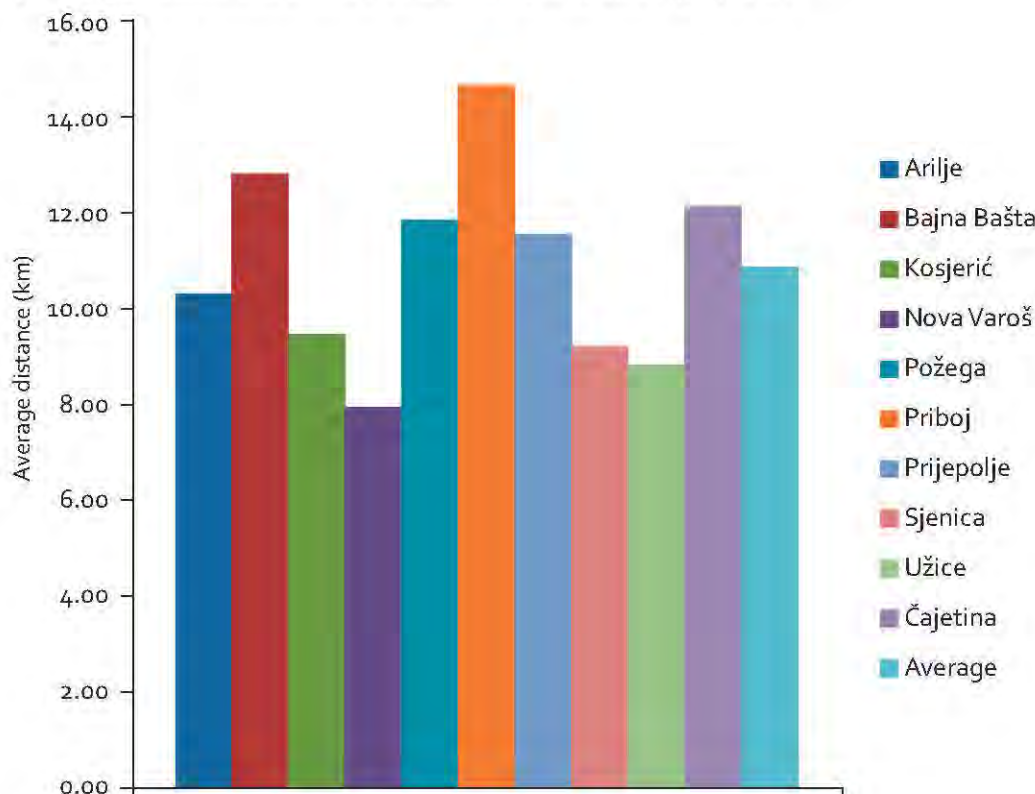
School network optimization plays a significant role in increasing the relevance and necessity of the implementation of measures aimed at assuring the accessibility of educational services. Thus, due to the differences in approaches adopted by SEE countries, the guidelines treat the changes yielded by school network optimization locally, through AAP which are supposed to be legislated annually by local governance authorities.

1.3. Students from Marginalized Groups and Remote Areas

Rural and remote mountainous areas, as well as bordering areas across the SEE region, are populated by the poorest and least mobile populations. Typically, those areas also have the least developed school- and road-infrastructure, and are usually characterized by long distances between homes and local centers (as a proxy indicator see Figure 3), a lack of well-organized public transportation and/or school bus services. As a result, children walk great distances to get to schools and spend a significant amount of

time commuting. In some cases, parents opt for not sending children to school or simply have no means to finance their travel. As previously mentioned, one of the challenges of the rationalization of the existing school network is that these children may face even longer distances to their schools in the future.

Figure 3 – Average distance between central and satellite schools, Užice region, Serbia



Source: Regional School Authority, Užice, Serbia

In most of the SEE countries local authorities bear the responsibility of providing school-related transport services. However, many of them lack a steady source of funding for these purposes. Sometimes funding is missing for the acquisition, maintenance and operation of school buses, and sometimes for financing the missing basic road infrastructure to make possible the operation of a school bus system.

Despite a comprehensive national program of support for the optimization of the school network, within the first two years of the implementation of the optimization program in Bulgaria the number of elementary-school age children who dropped out of the education system has doubled, especially those children that were under an increased risk of dropping out (children in rural areas, Roma)⁷.

The closing of schools and transformation of the school network mostly involved the closing of schools that had few students, schools with a low student-to-teacher ratio, as well as schools located in rural areas, mostly in municipalities with a high poverty rate and low population density. Thanks to a functional information system and the updated information in it, an impact analysis was conducted on the implemented measures and it describes and explains the risks that the countries in the region should pay special attention to in the process of optimizing their school networks. Among other things, *it is recommended to apply measures for securing accessibility to education and at the same time to implement a set of measures that would encourage poor children to remain in the education system as long as possible, as well as to support their highest possible school achievement.*

⁷ Bulgaria: The impact of school closures on dropout rates, Government of Bulgaria's Impact Evaluation Task Force and the World Bank, 2009.

2. PRACTICES FOR IMPROVING ACCESSIBILITY TO EDUCATION

This chapter reviews the experiences of other countries in the field of education accessibility improvement. The systematization that has been carried out separates the transport and education policies, that are unified, however, in efforts towards improving education accessibility.

In developed western countries the main issues arising are those in connection with students/populations of rural areas whose public passenger transport has not yet reached an adequate level of development. In that sense, according to a survey conducted in Great Britain, the major problems regarding transport are in connection with social integration of the children. Also, there is the problem of financing transport of those students who live in distant villages, since the additional expenditures for their transport would consequently affect the transport of students with special education needs (see the Box below).

The Challenges in Transport of the Poor Rural Children (UK)

The Association of Teachers and Lecturers (ATL) interviewed 475 teachers employed in public schools and six in colleges in the UK in 2008. The research showed that in 73% of cases, students from rural areas face specific problems that are directly related to the fact that they are attending schools in rural areas.

The problem for students attending schools in rural areas is usually transportation to and from the school (72%), as well as the general access to public transport (69% of the students have that kind of problem). There is also an inability to participate in extracurricular activities (77%), followed by the parents' problems to travel to the school for meetings (53%). Also, the main problems that teachers in the UK are facing when working with poor students in rural areas are, above all, their absence (58%), and a lack of funds (43%).

Source: The Lack of Transportation Destroys the Lives of Poor Children In the Country!, The Association of Teachers and lecturers (ATL), 2008, www.atl.org.uk

As for the SEE region, no relevant data on problems of students from rural areas in connection with transport were available. According to surveys conducted in a number of schools in Serbia (for more details see Item 8.1) the following student transport issues were identified: discrepancy between the timetable and students' needs, long walk from house to bus stop, poor operators' offer when negotiating transport service contracting.

Transportation volume may be quite significant and differ at the municipal level in SEE region countries. Also, the high-school student transport volume may be higher than primary school student transport volume (see the Box). However, with rationalization of the school network, which will mostly include primary schools, an increase in primary school student transport volume may be expected. Bulgaria, where this type of rationalization has already taken place, is a clear indicator of this.

Table 1 – Data on student transport volume along house - school - house route

Type of School / Name / Place and Municipality	Total Number of Students	Number of Shifts	Students using Transport Service		Transport Mode
			Number	%	
PS „Svetozar Markovic“ / Brodarevo, Prijepolje community	527	1	251	47,63	Contracted
PS „Dusan Tomasevic“ / Velika Zupa, Prijepolje community	202	2	-		Regular PT under contract
PS „Emilija Ostojic“ / Pozega community	1.000	2	94	9,40	Regular PT
PS „Petar Lekovic“ / Pozega community	1.262	2	197	15,61	Regular PT
SC „Technical“ / Pozega community	603	2	391	64,84	Regular PT and contracted
SC „Sveti Sava“ / Pozega community	448	2	-		Regular PT and contracted
SC Agricultural „Ljubo Micic“ / Pozega community	400	2	300	75,00	Regular PT under contract
Average	635		247	42,50	

Source: Survey conducted in schools of District of Uziče in 2010 (for further details see Appendix 8.1)

The following text reviews the major issues in connection with student transport.

2.1. Transportation Policies and Practice

Generalizations given in this chapter are based on literature review, case studies performed in Serbia and Bulgaria and surveys conducted in a certain number of schools in Serbia. The Appendix 8.1 gives a detailed review of practices, as well as of the case studies and solutions carried out in practice. Also, the identified common transport policy factors will be presented.

The review exhibited herewith shows that although there is no “universal solution” nor “systematized review of available options”, some common denominators of the transport related policies used for improvement of education accessibility can be identified and as such will be presented here. These are related to (i) responsibility for provision of transportation services and used modes of transport, (ii) definition of the children that will need transport services (coverage) and accessibility, (iii) financial aspects (entitlement to free transport, service financing and subvention responsibility, contracting, maintenance), (iv) transportation planning and programming, and (vi) other issues related to transport policies (better use of available transport capacities, rolling stock maintenance, etc.).

2.1.1. Available Modes of Transport in Practice

Almost all available modes of transport are used for student transport (urban and suburban transportation, railway, including water transportation in certain areas). However, the most common form of transport is by buses, whether they form a part of the public passenger transport system (public enterprises or private sector) or they are contracted under special agreements.

Transportation of students from/to school is carried out by regular public transportation (PT), contracted services (outsourcing), special bus services organized with the use of either school- or community-owned buses, minibuses, taxis, and transportation organized by parents. For a brief description of the above-mentioned definitions, in terms of their use in this Guide, see Figure 4.

Figure 4 – Definition of student transport modes

PUBLIC TRANSPORT	<ul style="list-style-type: none">• is a shared passenger transportation service which is available for use by the general public• in European countries PT is most commonly used for home-to school transport
CONTRACTED TRANSPORTATION SERVICE	<ul style="list-style-type: none">• the transportation service contracting private/public bus operator• operates along certain routes under the contracted conditions (e.g. for student's home-to-school transportation)
SCHOOL BUSSING	<ul style="list-style-type: none">• the students' home-to-school bus transportation which may be in the ownership of the school/municipality/higher level of authority• transportation service can be carried out by the companies specialized in such kind of transport; generally, they are in possession of their own, purpose-designed school buses (in that case the service remains the same as the one provided by contracted transportation)
TRANSPORTATION ORGANIZED BY PARENTS	<ul style="list-style-type: none">• "parental/carpool transportation" and "school run" are the terms used in literature• represents home-to-school transportation by parental vehicle (when commuting or going shopping, etc.)

In the SEE region the most common mode of student transportation is by PT buses, if PT exists. Some countries of the Region also contract student transportation services and use school bussing. In some cases, vehicles owned by local governments are used for transportation of students. There are other modes of student transport, but they are not widely used⁸. Judging from the examples of several cities in Central Serbia (See boxes on next page), it is obvious that *the bus is the most important mode of student transportation*.

In the following sections the considerations will be limited to PT by buses, contracted transport, also by buses, school buses and transport organized by parents.

⁸ As for student transport by other means of transportation (railway and water traffic), their use is limited to the municipalities where those means of transport are available (there is a possibility of using marine transport in shoreline municipalities of Croatia and Montenegro). The Authors didn't have at their disposal detailed information on the extent to which these means of transport were used.

Table 2 – Review of student transportation modes (used by of all ages) for home-to-school trips on the municipality settlements - municipality center circuits, Central Serbia Region

City/Municipality Center (year of survey)	Modes of home-to-school transport	
	BUS PT	Train
Beograd (2005)	82,35	17,65
Arandelovac (2004)	100,00	
Topola (2004)	100,00	
Gornji Milanovac (2004)	100,00	
Leskovac (2009)	100,00	

Table 3 – Share of student (all ages) transportation mode usage for home-to-school trips within municipality centers, Central Serbia Region

City/Municipality Center (year of survey)	Modes of home-to-school transport				
	Walk	Passenger Car	PT BUS	PT other (trolleybus, tram, suburban rail)	Other (taxi, bikes)
Beograd (2005)	33,70%	5,23%	48,36%	11,82%	0,97%
Arandelovac (2004)	82,82%	6,06%	8,20%	0,00%	2,93%
Topola (2004)	70,89%	8,88%	15,58%	0,00%	4,65%
Gornji Milanovac (2004)	91,48%	4,57%	3,29%	0,00%	0,66%
Leskovac (2009)	66,74%	5,38%	15,90%	0,00%	11,98%

2.1.2. Responsibility for Service Provision

The responsibility for transportation service provision is mainly divided between the central, regional and local levels of authority.

In European countries the central level of authority is responsible for setting up the overall regulatory framework and standards, while local governments and/or schools are responsible for organizing and funding the activities, either from only local, or from local and central budget resources. The central government is usually in charge of the following regulatory issues:

- Specification of the children entitled to transport (coverage criterion),
- Conditions of free transport entitlement acquisition,
- Competence for service provision and financing thereof,
- Specification of technical issues related to the vehicles and drivers (transportation safety criterion).

The regional/local level of authority is commonly responsible for the organization, and often for service funding. Furthermore, the definition and implementation of the policies on student transport subsidizing are also the responsibility of regional/local levels of authority.

In the SEE region the ways of defining the responsibilities and financing schemes for student transport can vary, reflecting variations in responsibilities for education. They are defined by various laws and by-laws, such as the Law on Education, Law on Local Self-Government, etc. Typically, local authorities are responsible for the provision of student transport.

2.1.3. Entitlement to Transportation Service and Accessibility

The issue of entitlement to transportation service is resolved pursuant to the central legislation considering age, as well as the acceptable walking distance most commonly expressed in kilometers from/to the nearest suitable school.

The issue of transportation accessibility is generally in connection with the quality of the PT service.

Entitlement to Transportation service is regulated pursuant to the Education Law. The basic criterion is the home-to-school distance, which usually limits the walking distance from/to school (see box on the next page).

In a certain number of countries (e.g. UK, USA, Australia) the classification is based on age and acceptable walking distance criteria.

The terrain conditions are rarely taken into account. Moreover, other effects, such as the issue of walking safety, are not often taken into consideration.

Local (education) authorities are in charge of the database on transportation demand, whereas the schools collect the data themselves.

The time distance as a criterion for eligibility and accessibility is used only rarely (UK, Holland, Croatia). For example, the prescriptions in Croatia limit the travel time to 2 hours per day, whereas in Holland it is 1.5 hours by PT for elementary-school-age children of 4-year curriculum.

The quality of PT transportation accessibility raises the issue of harmonization of the PT with school timetables. Although this issue refers mainly to the SEE Region, developed countries can be affected by it too, especially if the PT is highly deregulated (UK) and the impact of the Government on transport timetables is kept to a minimum.

2.1.4. Service Financing and Contracting

The issue of student transport financing is generally governed by the state-level legislation regulating the fields of education and state budget.

The practice relating to transportation cost coverage varies between countries. Generally, **free transportation entitlement goes to students coming from beneficiary families receiving social aid⁹**, as well as to children with special education needs (SEN).

As for transport service tariffs, the students not entitled to free transport pay the full price for the service, or the price subsidized by the state/central or local authority.

⁹ Low-income families are those that are receiving their maximum level of Working Tax Credit, or are entitled to free school meals. In Serbia, Montenegro, Bosnia and Herzegovina, and Croatia, the prescriptions governing the field of education engage municipalities to provide free student transportation for socially vulnerable families (in Bosnia and Herzegovina this entitlement is widely enjoyed).

Table 4 – Transport Entitlement Criteria, International Experience

Country	School level/age	Minimal residence/school distance
USA - New York (according to prescriptions of the New York City Department of Education)	2 level	L > 0,8 km
	3 - 6 level	L > 1,6 km
	7 - 12 level	Students do not belong to category provided with transport
Canada – urban areas	pre-school age to 6th grade	L on foot > 1,6 km
	7 - 12 grade	L to the nearest PT bus stop > 1,6 km
	pre-school age to 12th grade	if they use school buses and the distance between their homes and the place where they take the bus exceeds 1,6 km
Canada – rural area	all ages	the distance between their homes and the place where they take the bus exceeds 1,6 km
Australija – New South Wales	2 level	distance is not relevant
	3 - 6 level	L > 1,6 km (Radius of area of influence); L > 2,3 km (measured by the shortest route)
	high school	L > 2,0 km (Radius of area of influence); L > 2,9 km (measured by the shortest route)
Finland	not specified	L > 5 km
Holland	SEN students	L > 2,0 km
	other	L > 6,0 km
SEE Region		
Croatia	not specified	L > 4,0 km
Montenegro	students of all educational level including undergraduates	L > 5,0 km
Bosnia and Herzegovina		
Federation	not specified	L > 2,0 km in 2 of 11 districts
		L > 3,0 km in 1 of 11 districts
		L > 4,0 km in 6 of 11 districts
		L > 5,0 km in 2 of 11 districts
Republic of Srpska	not specified	L > 4,0 km
Serbia	not specified	L > 4,0 km
Macedonia	data not available	
Albania		

There are different ways of handling transportation cost financing within the SEE region. At the primary school level, local authorities subsidy the transportation service in the range of 50% to 100% of the service price, depending on the economic possibilities. For secondary school students there are also subventions, however they range from 20% to 60% of the service price. In some cases, subventions are granted by the central authority level and then transferred to the local level. For more detailed information concerning the subsidy policy see Appendix 8.1.

Concerning low-income families/students and SEN students, free transportation is guaranteed without any exceptions. However, there are no uniform criteria determining the conditions for awarding such support. In some cases, there are subventions that encourage students to attend certain educational programs.

In Western European countries the contracting service is carried out according to services procurement rules. Local (education) authorities are responsible for the specification of minimum service quality standards in the procurement process. Local authorities are also responsible for quality standards connected to special bus services.

However, there are some countries (UK) where issues relating to vehicle age are raised, i.e. upon entering into an agreement, the carrier most commonly performs transportation by old, but technically adequate vehicles (the main reason for this are the User's insufficiently defined requirements).

In some countries, municipalities cooperate when contracting transport, usually awarding the contracts through competitive biddings (Holland).

When contracting services in the SEE Region, public procurement rules are applied, but the technical aspect of tender dossiers could be assessed as a weak point of the procedure. There are certain problems in connection with the contracts. Upon contracting transport, the operator may start breaching the contract rules¹⁰.

For other modes of student transportation (parental/carpooling), in European countries there are mileage-based reimbursements paid out to parents/guardians, but the level of usage of such services is not clear from available sources. In the SEE Region such reimbursements can be either mileage-based or in the form of lump-sum reimbursements.

2.1.5. Student Transport Planning and Programming

The practice of the SEE region has shown that managing the student transport issue is mainly solved through the implementation of *ad hoc* methods.

In Western European countries student transport planning and programming is being performed according to law/by-law resolutions and positive practice. In any case, rules leading to consistent solutions are being implemented. One example of positive practice is *Traveling to School: an action plan*¹¹. This document regulates, in a comprehensive manner, the planning and programming of all important issues relating to students' travel from their residences to schools and back, starting from safe walking, through bicycle use, to transportation from distant places. By setting up this document, the Local Education Authority (LEA) has enabled the forming of Action Plans according to their own needs.

The SEE region's existing practice relies on legislative solutions that define the issues of Eligibility, Accessibility and Financing, and points out the necessity of setting up a clear procedure for managing student transport demand relying on the best existing practice.

¹⁰ The problems connected to the execution of contracts, about which the authors were informed during interviews in the municipalities of Serbia and Bulgaria, are usually connected to the adjustment of the timetable to other passengers, transportation of other passengers, and the use of buses with poorer technical requirements than contracted, etc. (Appendix 8.1)

¹¹ School Transport, Eighth Report of Session 2003-04, House of Commons – Transportation Committee, 7 April 2004, The Stationary Office Ltd, UK

2.1.6. Effects of PT Services Market Deregulation in the SEE Region on Student Transport

In the early '90s of the 20th century, the market for PT services was deregulated in a certain number of SEE Region countries. However, deregulation primarily affected transportation service quality, also influencing student transport.

The main issues triggered by the deregulation were the following: inadequate definition of jurisdictions and inappropriate management of the transportation services market in the setting up of the private sector. The public/state companies, that had dominated the market to that point, disappeared in the majority of municipalities. The private sector didn't develop sufficiently, whereas management of the services market practically didn't exist. This situation led directly to a drop in PT services volume and quality.¹²

The late '90s of the 20th century brought certain improvements in terms of market management by setting up regulatory bodies. However, local financial capacities shrank due to the economical disadvantages faced by many municipalities. It also affected the possibility of additional PT financing (subsidies). Following the economical criterion, the private sector predominantly harmonized the transportation services volume and capacity under the given conditions, forcing the authorities of some countries to seek out other student transportation solutions (contracted transportation, school bussing, etc.)

2.1.7. Other Issues of Importance

The issue of bus capacity usage is one of the important school transportation issues (capacities are often underused, thus directly affecting the economy). Other issues refer to transportation management and school bus rolling stock maintenance, as well as the impact of public road conditions on public transport quality.

In some countries, contracted/school buses operate below capacity (the number of offered places exceeds the number of students), and in those cases local authorities consider the possibility of using the excess transportation capacity for other purposes (travel to shopping centers, hospitals, etc.), thus, trying to improve living conditions for the populations of rural and sparsely populated areas.

The advantages of the school bus service in Bulgaria are unquestionable regarding regularity, adaptability to students' needs, safety, etc. However, there are questions which could be analyzed in a deeper way: the rationality of offered capacity use, cost coverage, especially depreciation cost, rationality of staff employment, etc. Special attention should be paid to depreciation, because, this is a pre-requisite for purchasing a new rolling stock, after the existing one goes out of use. There are also issues connected to rolling stock management – in some municipalities, local authorities take care of the rolling stock, but in other municipalities buses are the responsibility of schools. The first solution is more convenient (all procurements connected to maintenance, spare parts etc. are organized in a more rational way).

The general condition of public roads is an important element of accessibility. The maintenance thereof falls under the responsibility of the central or local level of authority, which is defined differently in various SEE region countries.¹³

¹² Depolo V, *Belgrade's Public Transport System on the way towards Economic and Institutional Changes – Is a spontaneous transition possible?*, Proceedings, SETREF, Budapest 2001.

¹³ In Serbia, principal roads (highways and regional roads) fall under the responsibility of the central level of authority, while local authorities maintain local Serbian roads.

In the majority of cases, passenger transport carried out at inter-city levels is being performed along main public roads. *On the other hand, passenger transport within a municipal area is also being carried out along these same roads, but its major part burdens local roads.*

Due to this fact, *the condition of these roads is of crucial importance for accessibility quality of road passenger transport* (see Box on the following page). Local roads with carriageways in poor condition, especially those whose width is below the prescribed width, represent a serious obstacle in the way of road passenger transport flow. Roads in such condition appear to be quite time-consuming, thus affecting exploitation costs and safety.

The so-called uncategorized roads (the responsibility of municipal authorities) are of special relevance for accessibility within the municipality area. They branch out from the main and local roads towards the most distant places of the municipal territory/settlement, providing immediate access to houses/groups of houses. They do not form a part of central-level statistics, but municipal institutions have at their disposal certain data thereof (usually routes and lengths). Their overall condition can affect accessibility quality.

Statistics on road conditions in terms of carriageways, are tracked regularly in SEE region countries. This data, however, does not reflect the real situation in the best possible way (even a road with a very modern carriageway can be quite damaged). The Table below illustrates national road conditions in selected municipalities of the Republic of Serbia (2008).

Table 5 – Overview of Roads Conditions in Selected Municipalities in the Republic of Serbia in 2008

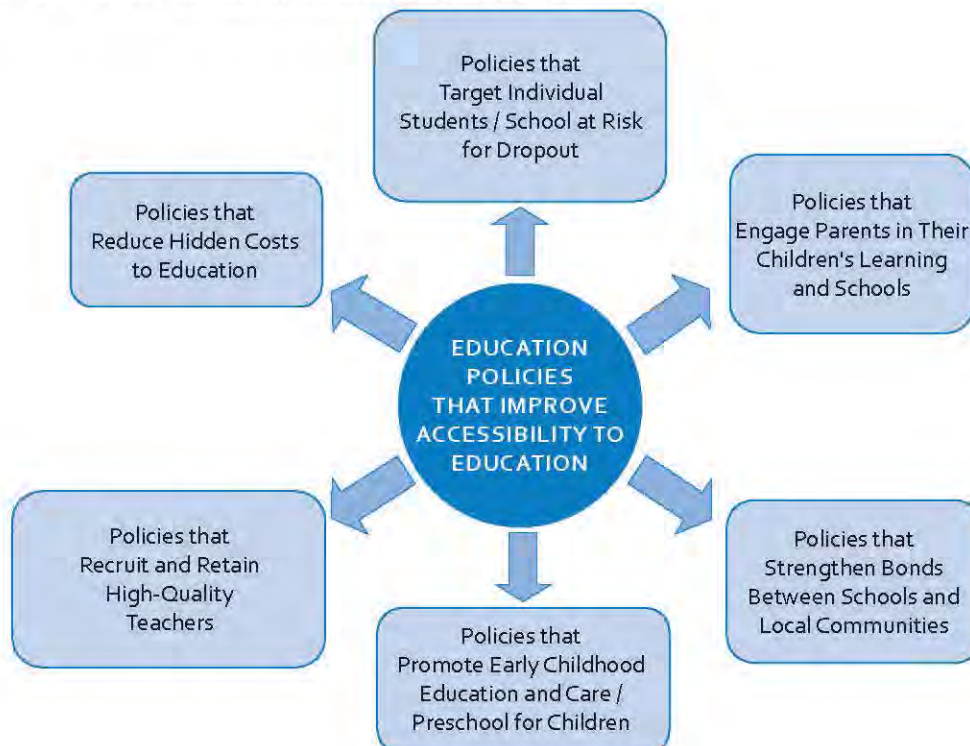
MINICIPALITY / DISTRICT	% OF MODERN PAVEMENT	
	ROAD CATEGORY	
	STATE/ MAIN	LOCAL / STATE
Vojvodina Region		
Novi Becej / Srednjobacki District	100	100
Apatin / Zapadnjobacki District	86,20	73,50
Zrenjanin / Srednjobanatski District	90,00	82,90
Nova Crnja / Srednjobanatski District	100	100
Secanj	100	100
Zitiste / Srednjobanatski District		
Kovín / Juznjobanatski District	100	100
Central Serbia		
Pozega / Zlatibor District	85,50	77,40
Kosjeric / Zlatibor District	83,20	78,90
Prijepolje/ Zlatiborski District	52,30	46,20
Gornji Milanovac / Moravicki District	82,20	68,80
Lucani / Moravicki District	78,00	75,00
Ivanjica / Moravicki District	62,10	42,40
Cacak / Moravicki District	78,50	69,20

2.2. Education Policies

The first and foremost condition for each child to exercise his or her right to education is to provide the child with an accessible educational facility. The previous section underlined transportation policies that are employed throughout the world in cases when a child's school is located farther away than ideally. This section will describe a number of education policies that strengthen the fragile transportation bond between the child and his/her school so that the child will enroll and remain in school, learn and progress through various grades, and graduate and continue on to higher educational levels, in spite of the physical obstacle of his/her school being far away. The six sets of policies, shown in Figure 5, are drawn from a wide body of research identifying the positive effects of parents, teachers, schools and communities, as well as social inclusion, on a variety of educational outcomes. Last, but not least, it is important to stress that all the presented education policies are also effective in reinforcing the student-school relationship even when schools are close to students' homes.

While local authorities can take considerable charge of each of the education policies presented in this section, many policies will likely require significant input from central authorities or efforts at the school level. In different countries, different education policies require the involvement of different stakeholders to various degrees. Often times, cooperation and synergy are needed between the central authorities, local authorities and schools. Therefore, it is the goal of this handbook to present to local authorities an overview of available accessibility-related education policies where they can have a role, rather than just attempt to pick and choose parts that may solely be under their purview. This will give an insight to local authorities into the majority of possibilities that can improve accessibility to education, accommodate variability in responsibilities between the central-, local- and school-levels in different countries, inspire more able municipalities to take on more challenging policies that are usually reserved for central authorities, and give local authorities knowledge about the necessary changes that they need to request to be provided by the central level or at the school level. It will be emphasized in this handbook which policies are usually more under the charge of local authorities, and which are usually more the responsibility of other levels.

Figure 5 – Education policies that improve accessibility to education



2.2.1. Policies that Reduce the Hidden Costs of Education

Policies that lower hidden educational costs to parents improve student attendance and achievement.

Hidden costs of education – real, opportunity or social – reduce the likelihood of children’s adequate school attendance and high achievement, especially in poor areas [19]. Parents face expenses for tuition, books, school supplies, transportation and clothing. They may also keep children out of school because their children supplement the household income by working, do household chores, or care for the sick or young family members. Parents may not be sufficiently informed about the return on an investment in their children’s education or may be unaware of the existing opportunities, especially if they are uneducated themselves [19]. Finally, for traveling students and their parents, costs may also involve feelings of being isolated, unwelcome and insecure in a school that is not in their community, with serious consequences for student attendance and achievement [20].

Policy 1 (mostly central-level; also local-level): A very effective way for reducing hidden costs to parents, thus improving children’s attendance, is to provide school meals for all children [9]. Providing nutritional and well-balanced school meals is especially important for traveling children, as free meals will ensure that children are nutritionally prepared for the longer school day and that their parents’ concerns are appeased. In more developed countries, provision of school meals to students is commonplace, and it is usually regulated and financed by the central authorities. In the United States, for example, the National School Lunch Program (NSLP) is a federally assisted program, which, during the 2008-2009 school year, provided 17.5 million children daily with a nutritionally balanced, free or reduced-price lunch [11]. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals, while those with incomes between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals¹⁴. The situation in the SEE region varies. In Bulgaria, for example, free school meals are offered to children, and schools have canteens¹⁵. They are financed by the Ministry of Education. In Serbia, provision of meals in schools varies, from an almost regular occurrence to complete absence of school meals¹⁶. For example, the Serbian municipality of Indjija supplies free snacks for all students, while the municipality of Apatin subsidizes meals for disadvantaged students, charging other students an affordable sum [5]. Schools that provide school meals either have canteens or have food brought to them from remote catering facilities.

Policy 2 (mostly central-level; also local-level): Free access to learning materials and the removal or reduction of school fees also reduce hidden costs to parents and improve school attendance. According to UNESCO (2007), from 1999 to 2004 primary school enrolment increased by 27% in Sub-Saharan Africa and 19% in South and West Asia [1]. In the SEE region, Bulgaria has provided free books to its student population since 2006/7, and Serbia has started to provide free schoolbooks beginning with the class that started school in 2009. There is no tuition in either country, but there are costs associated with transportation, educational trips, school security, school supplies and clothing. Transportation costs are partially covered by parents and local governments. Extracurricular activities offered by the schools are free of charge. In Serbia, costs of educational trips are waived by the travel agency for one student for every 15 or 20 paying students and the waiver is usually applied toward a low-SES student at the teachers’ discretion. Occasionally, school supplies are offered to first graders by the municipality or through partnerships with local businesses.

Policy 3 (mostly central-level; also local-level): Direct fund transfers to families also demonstrated high returns, like in the Bolsa Familia program in Brazil [52]. Brazil’s Bolsa Familia Program is a national

¹⁴ For the period from July 1st, 2008 through June 30th, 2009, 130 percent of the poverty level is \$27,560 for a family of four; 185 percent is \$39,220 for a family of four [11].

¹⁵ Communication with MoE of Bulgaria.

¹⁶ Communication with local authorities from Gornji Milanovac, Ivanjica, Cacak and Lucani, Serbia.

conditional cash transfer program, where families in poverty or extreme poverty receive money in return for ensuring their child's regular attendance of school. Students up to 15 years of age need to attend 85% of the total school days, and older students need to attend 75% of the total school days. More than 12 million Brazilian families participate in the program and receive transfers directly to their bank accounts. The amount of money varies, depending on a family's income, number of children and their age. Responsibility for the management and monitoring of the Bolsa Familia program lies with the central, state and local authorities [52]. In France, premiums are given for completion, for progress and for good performance [10]. A grant or a loan for upper secondary students is given in Spain on the basis of family income and academic performance (for example, grants are not given to repeaters) [10]. In the Slovak Republic, social and child benefits for parents are based on their children's school attendance [39]. In Romania, school attendance is a condition for receiving a monthly student allowance, and dropping out of school involves losing this benefit [40]. However, it should be noted that these conditional grants have the potential to actually penalize those students whose commitment to school is most questionable, but who are still in dire need of financial aid [10]. Due to its high cost, this policy is usually instituted by the central authorities.

2.2.2. Policies that Target Individual Students / Schools at Risk of Dropout

Policies that monitor and engage individual students / schools with high risk of dropout are important in improving student attendance.

Dropping out of school is very costly for both the individual and society. Dropouts are more likely to be in prison, have worse health perspectives and shorter life spans [28][29]. In the United States, they earn, on average, \$9,000 a year less than graduates [41][49], and pay about half the taxes paid by high school graduates [41]. They also use more social assistance (housing, food, welfare) [51]. When schools are far away from students' homes, drop out is more likely, as was evident in Bulgaria: School dropout rates increased 2-3 times when schools were being closed down in the effort to rationalize the school network [46].

Policy 1 (central-, local- and school-level): Utilizing data systems to allow realistic assessment of the students who drop out or those who are at risk of dropping out is indispensable for dropout reduction [22]. Examination of effective dropout prevention programs in the United States has determined that using longitudinal, student-level data to identify students with past academic problems, truancy, behavioral problems, and then continuously monitoring their academic achievement, behavior, sense of engagement and belonging in school are necessary to prevent and reduce dropout rates [22]. In the SEE region, data on individual student achievement, absences and behavior are collected in schools, mostly in paper form or electronic school files, and, less frequently, through poorly functioning Education Management Information Systems (EMIS). The difficulty of identifying students at risk of dropout in the SEE region thus lies not in the absence of data in schools, but in the absence or inaccessibility of data in electronic form on a continual basis at levels higher than the school level.

Policy 2 (mostly school- and central-levels; also local-level): Intensively intervening in the academic, social, and personal lives of students who are at risk of dropping out comprises the next step in the fight against dropout [22]. A review of effective dropout prevention programs in the United States identified three complementary components of this strategy. Firstly, schools train and purposefully assign adult advocates – adults who are willing to invest in students' personal and academic success – to students so they could regularly meet and communicate about students' concerns and obstacles. Secondly, schools provide academic support to improve student achievement by teaching students in small groups about test-taking skills, study skills, or targeted subject areas, as well as providing extra study time or opportunities to complete classes through after school, weekend or summer programs. Thirdly, schools implement programs to improve students' classroom behavior and social skills by benchmarking student progress towards set academic and behavioral goals, recognizing student accomplishments, teaching strategies to address problem solving and decision-making skills, as well as establishing partnerships

with social services, mental health, and law enforcement [22]. These three components offer a variety of relevant, evidence-based options for the reduction of dropout, but would need to be elaborated in more detail to be fully applicable to the SEE region. However, there are already some elements in place that can be improved to accommodate the above-mentioned measures. For example, in Serbia, homeroom teachers, as well as psychologists and pedagogues employed in schools, are in a position to identify, mentor and counsel students who struggle academically and behaviorally, but they may be burdened with other school duties. Struggling students are usually provided additional after school classes in certain subjects, but their attendance is voluntary and the effectiveness of such classes is unknown. On the other hand, opportunities for students to complete subjects through weekend or summer programs do not exist. Furthermore, students who fail three or more subjects need to repeat the entire school year.

Policy 3 (central-, local- and school-level): Comprehensive, schoolwide reform strategies aiming to increase the engagement of all students in school are effective for schools with high dropout rates, where the school is also a part of the problem [22]. This is a final finding that emerged from the review of effective dropout prevention programs in the United States. Firstly, strategies for personalizing the learning environment – creating smaller learning groups and extended time for work, and encouraging teamwork and student participation in extracurricular activities – provide students with a sense of belonging. Secondly, schools provide rigorous and relevant instruction to engage students in learning and equip them with the skills needed to graduate and live meaningful lives. This is effective for secondary school students and encompasses integrating academic and vocational content, offering opportunities for internships and long-term employment and informing students about post-secondary opportunities [22]. It is certain that in the SEE region there are primary and secondary schools that aim to increase engagement of all students in school, but it is unlikely that they are conceptually and practically linked to the systematic identification and concerted prevention of dropout.

Policy 4 (central-, local- and school-level): Especially important for the SEE region are effective strategies for improving the attendance and academic progression of Roma students. Students from low-SES backgrounds – but particularly Roma minority students – are especially at risk of poor achievement and leaving school early [38]. When those students live far away from schools, those risks are amplified, as was previously identified in Bulgaria [46]. A myriad of programs targeting Roma participation in education have been initiated by the governments and NGOs in the SEE region during the past decade. A set of effective practices for Roma participation in education has emerged from the review of these programs and is detailed in Appendix 8.4: Especially effective are programs that integrate several strategies, such as providing training and support to teachers while involving parents in the classroom, as was done in the Open Society Institute's „Step-by-Step“ program, or bussing students to a mainstream school, employing Roma monitors, and providing shoes and school meals to students, as was done in the Open Society Institute's Vidin model (see box below) [38].

Desegregation of Roma Schools in Bulgaria: The Vidin Model

In Vidin, Bulgaria, the Open Society Institute and the Roma NGO with the acronym DROM have developed an innovative program that integrates Roma students into the mainstream school system. Under the project, students are bussed from the settlement to school and back; Roma monitors interact with parents and the school to encourage attendance; low-SES students receive shoes and school lunches, and students are given their lunch on the bus to reduce the stigma of receiving it at school.

Preparation of the program was meticulous and well planned: DROM went door-to-door in the Roma settlement explaining the project; sought the support of the schools, the mayor, and the media; and helped parents select a mainstream school for their children by organizing a TV presentation of six mainstream schools in Vidin. This lessened parental concerns and marked the first time that their views had been solicited by the authorities.

At the end of the first semester, the project resulted in 100 percent attendance, grade averages identical to those of non-Roma pupils, parental and teacher satisfaction and the absence of reported incidents of anti-Roma discrimination. In addition, 35 Roma parents of the bussed children themselves returned to school in adult education programs, and three teenagers who had dropped out asked to join the program. On the negative side, 24 pupils received failing grades in one or more subjects, and three left the program.

The program's success to date is due to three key factors. First, parents feel that their children are shielded from discrimination by being bussed and monitored throughout the day by adult Roma, as well as that their children can perform at higher academic standards. Second, the schools have accepted adult Roma monitors who ensure that the children are treated well, follow parental engagement and student participation in extracurricular activities, as well as help the teachers and ease cultural differences. Third, the children are happy to be in schools where real learning takes place [38].

2.2.3. Policies that Engage Parents in Their Children's Learning and Schools

Policies that engage parents in their children's education improve attendance, achievement and progression through education.

Numerous studies have found that students with engaged parents, regardless of their income or background, were more likely to: regularly attend school; have higher grades and test scores; be promoted and pass their classes; have better social skills and show improved behavior; and graduate and continue onto postsecondary education [18]. For example, in Serbia, higher academic achievement was significantly correlated with various forms of parental engagement: talking to children frequently, asking about their school day, helping out with problems, checking whether a child finished its homework, and praising children for good grades, among other things [45]. Therefore, if schools could entice parents to be active in their children's education, parents will ensure that their children remain and learn in school. This becomes especially important if schools are more distant from students' homes, when students' attendance becomes more precarious. When schools reach out to the parents of traveling children, they feel welcome, worry less and become allies with schools in ensuring that their children attend faraway schools.

Policy 1 (local- and school-level): Developing trusting and respectful relationships with parents is a key strategy to engaging parents in their children's learning and schools [18]. A review of 51 studies on the impact of school, family and community connections on student achievement identified the following policies as effective in increasing parental engagement: 1) establishing routine, frequent and concerted communication; 2) creating a trusting and enticing atmosphere; 3) supporting parental involvement in decision making; and 4) providing smooth and successful transitions to the next schooling levels [18]. These activities are presented in more detail in Appendix 8.4. Some of these practices are also found in the SEE region, although more rarely. For example, educators in the Peshtera municipality in Bulgaria spent a couple of years talking to a group of parents dissatisfied with school closure in their Roma community and the need for their children to travel. Parents' concerns were heard and respectfully addressed by the

municipality by organizing discussions, visits of the parents to the more distant schools, and providing an adult escort to students on a school bus²⁷. The municipality is also able to hear the voice of the Roma parents by having a Roma leader in the municipal council. Finally, teachers from Peshtera also visit their students at their homes the summer before school starts.

Policy 2 (mostly school-level; also local-level): Developing parental engagement activities and programs that are specifically linked to student learning is a very effective strategy for improving educational outcomes [18]. The same review of 51 studies pertaining to parents and communities identified the following effective practices: 1) providing libraries with games and learning materials to develop skills at home; 2) sending home learning packets in various subjects, as well as training in how to use them; 3) assigning interactive homework that involves parents; and 4) organizing discussion groups and workshops on how to stimulate their children's mental, physical, and emotional development, or on topics that the parents suggested, like developing positive discipline strategies. Additional activities identified as successful were: 1) stressing the importance of academic parental involvement through exhibits of student work or by organizing math and reading games at family nights; and 2) working with local after school programs to link their content to classroom teaching to reinforce student learning [18]. In the SEE region, there are certainly schools that employ some of these practices, but there is a lack of a more systematic, school-level, local-level and central-level recognition of the links between parental engagement and student educational outcomes.

Policy 3 (central-, local- and school-level): Developing the capacity of school staff to work with parents facilitates parental engagement [18]. The review of effective studies and programs established that successful pre-service and in-service educational opportunities: 1) help all staff recognize the advantages of school, family, and community connections; 2) explore how to achieve trusting and respectful relationships with families and communities; 3) enhance the school staff's ability to work with diverse families; and 4) help staff utilize community resources [18]. In the SEE region, both pre-service and in-service training appear to fail to fully draw out the potential of parental engagement. In Serbia, for example, there are very few in-service seminars targeting parental engagement [54]. At the Teacher education faculty at the University of Belgrade, for example, only two out of more than forty courses – family pedagogy and family sociology – refer to parents and their role in their children's lives [31]. Importantly, the courses fail to significantly address the potential of parental and school synergy to improve a variety of student educational outcomes [31].

²⁷ Personal communication with local authorities from Peshtera, Bulgaria.

2.2.4. Policies that Strengthen Bonds Between Schools and Local Communities

Policies that make schools serve and utilize local communities increase educational access and the relevance of education for students.

Catering to the needs of the community and adapting the educational process to local conditions increase educational access and relevance [8]. When communities and schools are partners: 1) parents and students perceive learning and schools as useful and relevant, which, in turn, likely increases student enrollment, engagement, attendance, motivation, learning and academic progression; and 2) communities that recognize the value of their schools, in turn, expand the resources available to schools. Students who live farther away from schools will more likely value and attend them if they offer meaningful education and functional opportunities to them and their families.

Policy 1 (local- and school-level): Searching for, seizing and developing a variety of opportunities and concrete services make schools useful and indispensable resources for their communities. Such schools provide: 1) pre-school activities and/or a family resource center; 2) targeted academic assistance to low-performing students; 3) functional adult literacy, alternative basic education programs and high school equivalency programs; 4) career counseling, job training, and other vocational services; 5) arts, recreation, and social activities; and/or 6) certain health care and mental health services [18]. These activities can be organized in the evenings, on weekends, and during the summer, independently or jointly with community organizations [18]. It is especially worthwhile stressing the importance of mobilization of local resources in rural areas [8], as they usually have fewer labor, cultural, educational and social venues and opportunities than urban areas. The box below highlights successful school-community efforts worldwide that helped increase the relevance of education for children.

Innovative school-community projects

In Balmorhea, Texas, the school and community started a school-based rural health clinic jointly with Texas Tech University Medical School, set up a community weather station at the school to be used for science classes as well and remodeled the school library to double as a tornado shelter. In Nebraska, schools cleaned up a lake and developed a recreation area, conducted studies of a nature preserve, built affordable housing and ran a community history center. North Carolina provided entrepreneurial training for young people and adults, which produced 342 business startups and expansions and \$5.2 million of new revenue. Most of these efforts obtained funds and advice from universities or organizations [44].

In the SEE region, there are also examples of schools being an invaluable resource in the local community. The elementary school "Ivo Andric" in the village of Pranjani, municipality Gornji Milanovac, Serbia, has one central school and eight satellite schools covering a large mountainous area. The school organizes concerts of their folklore dance groups, two brass orchestras, and piano and accordion school; offers poetry nights and theater shows; cooperates with schools in Poland and Slovakia on creating recreational camps in its most remote satellite schools; participates in the municipality's sustainable ethno-tourism project whereby students make souvenirs and offer cultural events to tourists in the area; and organizes lectures and training on ethno-tourism and organic food production.

Policy 2 (central-, local- and school-level): Incorporating local content and conditions into curricula, learning materials and teaching practices aims to increase the relevance, attractiveness and usefulness of education. Learning that is put into context allows students to acquire life skills and solve real-life problems [3]. The community can be a focus of study, where students apply theoretical principles to real-life situations. Community members can supplement classroom teaching using the community setting. Combining national curricular standards with some local content allows for local variability and therefore educational relevance. In Thailand, for example, as much as 40% of the curriculum is permitted to be based on community and local needs [8]. In China, a curriculum reform was introduced in 2002, one of the goals of which was to allow local educators to adjust curricula to the local context [36]. In Colombia and Guatemala,

a successful integration of local content and conditions into schooling was achieved in Escuela Nueva schools (see box below). Similarly, in the Gandhi school in Pecs, Hungary, Romani studies are integrated into the curriculum [38]. In some SEE countries, such as Serbia and Bulgaria, the curriculum is nationally prescribed and local variation is not allowed. However, it is possible to partially achieve variability through individual lessons and extracurricular activities that focus on the local environment, culture or language.

Successful integration of local content and conditions into schooling: Escuela Nueva

One of the most widespread, successful and researched innovations that incorporated local conditions and content into curricula was the Escuela Nueva project in Colombia, followed by the similar Nueva Escuela Unitaria project in Guatemala [25]. In both countries, the programs generally show positive outcomes in comparison to other one-teacher schools: higher enrollment and promotion to the next grade, lower repetition rates, higher Spanish language and mathematics test scores (except for boys in mathematics), higher egalitarian beliefs and leadership, as well as higher parental satisfaction.

Both programs focused on one-teacher, multi-grade rural schools and evolved incrementally, fueled by interest from teachers and administrators. The key characteristics of the programs were their rurally oriented curriculum, flexible student promotion system, and large quantities of instructional materials designed for individual, peer and small group learning. Also helpful were a system for evaluating learning progress and forms of internal class and school organization that established routines for students independently of the teacher. An especially important strategy in the program was teacher training undertaken at the local level [27]. Teachers met to identify needs and problems, and planned solutions and administration of the schools. They helped create the curriculum, teacher guides, and student learning guides / self-instructional workbooks. They also established teachers' micro-centers / circles in which teachers gathered to share experiences and information, review new teaching materials, and participate in in-service training.

2.2.5. Policies that Promote Early Childhood Education and Care / Preschool for Children

Improving the early childhood education and care / preschool of all students, but especially of disadvantaged students, is a long-term, but highly effective strategy to improve all educational outcomes.

Investing in early childhood education and care (ECEC) / preschool of all students, but especially of disadvantaged students, obtains the highest value for money in relation to interventions at later ages [17]. Investing in disadvantaged young children is a public policy where there is no equity – efficiency tradeoff, as it reduces the inequality associated with birth and, on the other hand, it raises the productivity of society at large [17]. Early childhood education and care of children from low-SES families raises their achievement test scores; decreases their grade retention and repetition; reduces the time they spend in remedial education; increases high school graduation and four-year college participation; increases their likelihood of employment and earning more; decreases their dependency on welfare, crime and delinquency; lowers the incidence of teenage pregnancy; increases their marriage rates; and decreases their likelihood of smoking and child abuse [4][17][43].

Policy 1 (central- and local-level): Expanding access and improving the quality of early childhood education and care / preschool provide the most effective, albeit long-term, solution to improving educational outcomes of all, but especially of disadvantaged students. Intense, high-quality early interventions for disadvantaged children, such as the Perry preschool, Abecedarian program and Chicago child-parent centers in the United States, have been shown to be both effective and cost-effective in improving children's educational outcomes. A review of the American Title I program, and the English,

Dutch, Flemish and French educational policies targeting disadvantaged children found that well-designed early childhood education and care / preschool programs that are closely monitored are considerably more effective than large-scale programs with vague content and varied implementation [24]. Home-based and center-based programs have been shown to be better than home-based only, and coaching of parents has proven influential [24]. In the SEE region, there has recently been a push for increased participation in preschool programs (comprising only one year before the official first grade): in 2002, the Bulgarian government announced its intention to make preschool free and compulsory. The Slovak government has supported the Zero Grade Program, which expands preschool attendance for Roma children [38]. In Serbia, attending preschool for the 5.5 – 6.5 yr old age group became mandatory for all children in 2006, for a duration of 6 months, the length of which was increased to 9 months in 2009. Expanding preschool opportunities means enlarging the network of preschool institutions, likely through a combination of new building projects and conversions of other, unused buildings into preschools. While increasing preschool participation is a worthwhile endeavor, the SEE region has yet to expand educational access to children younger than the preschool mandatory age and also improve the quality of early childhood education and care / preschool.

2.2.6. Policies that Recruit and Retain High-Quality Teachers

Policies that aim to recruit and retain high-quality teachers improve student educational outcomes.

Placing a high-quality teacher in every classroom is the most important thing schools can do for student education [30][42][50][53]. This is especially important for the most disadvantaged populations, in high-poverty communities and in remote areas, where, not surprisingly, teacher shortages can be felt most severely. While teacher training institutions are in charge of preparing high quality teachers, schools, local and central authorities can do their part in providing their students with high quality teachers.

Policy 1 (central- and local-level): Providing financial incentives and opportunities to teachers is a major strategy for recruiting teachers to hard-to-staff schools [2][8][15]. Many options are available: offering financial incentives to teachers, such as bonuses, higher salaries or provision of subsidized housing; attracting and nurturing local talent by offering tuition and other support to out-of-field teachers, substitute teachers and second-career adults; and retraining current staff by financially supporting good teachers in surplus subjects to acquire qualifications in shortage subjects. In the SEE countries, there are currently teacher surpluses, but this varies across subjects. While this means that schools are not hard-pressed to recruit teachers at the moment, recruitment strategies can nonetheless be used wisely to attract better quality teachers, especially at a time when they are in high supply.

Policy 2 (central-, local- and school-level): Collaborating with teacher education programs is another promising recruitment strategy [2][15]. This encompasses: placing student teachers in rural areas; developing specific courses for teaching in hard-to-staff areas; creating cost-effective distance-learning courses and professional networks; organizing employment fairs and other events; recruiting teachers through phone calls, e-mail, and flyers directed to university deans, department chairs, and student service offices; and obtaining assistance and incentives from policymakers for creating alliances between the school districts and the nearest university. A long-term strategy that may more smoothly absorb changes in the availability of teachers of certain subjects is to have teacher education institutions start offering dual majors, such as mathematics / physics, biology / chemistry, history / geography.

Policy 3 (local- and school-level): Requiring greater responsibility of communities in teacher recruitment may help teacher recruitment [2][6]. This policy entails: organizing school-community orientation for teachers; promoting living and teaching in a specific community; and providing more interactions with teachers and principals during the hiring process, especially in more isolated rural areas and in areas with distinct cultural environments.

Policy 4 (mostly central-level; also local- and school-level): A highly effective retention strategy is mandating and financing teacher induction programs, with mentoring and professional development being their most critical components. This reduces the likelihood of new teachers quitting in the first years of teaching [2][32], when teachers face many challenges [26]. Mandating induction programs appears to be necessary [16], with their greatest effect being felt in rural and small districts [16]. Training, compensating and providing release time for mentors are important aspects of these programs [15]. In hard-to-staff areas, such as rural or low-income communities, recruited retired teachers can act as mentors to novice teachers [12][35]. In Michigan, new teachers are formally required to undergo “intensive” professional development or additional training, with 15 days of such training being provided during the first three years of teaching [15]. In Serbia, the induction program with the mentoring component has been developed to be implemented at the national level.

Policy 5 (local- and school-level): Fostering collaborative professional development and involving teachers in decision-making is another effective retention strategy. Collaborative professional development – such as joint planning, team teaching, and regularly scheduled cooperation with other teachers and administrators – is more effective than other strategies [26], and, as a significant additional advantage, it can improve teaching in schools. Involving teachers in decision-making can also result in fewer teachers leaving [26]. It also improves the relationships between administrators and teachers as well as the quality of decisions that are made, and increases the probability that the decisions made will be realistic and well implemented [15]. The success of Shanghai, China on the PISA tests is partly attributed to interventions by local authorities in failing schools that involve intense collaboration between teachers from failing and teachers from successful schools [34].

3. A DECISION-MAKING FRAMEWORK FOR LOCAL AUTHORITIES

This chapter will outline the framework that local authorities can use for making decisions on transportation and education policies regarding accessibility to education. This framework will be contained in the Action Plan for Improving Accessibility to Education, a document that will detail steps and criteria for selecting the most adequate transportation and education policies targeting accessibility to education.

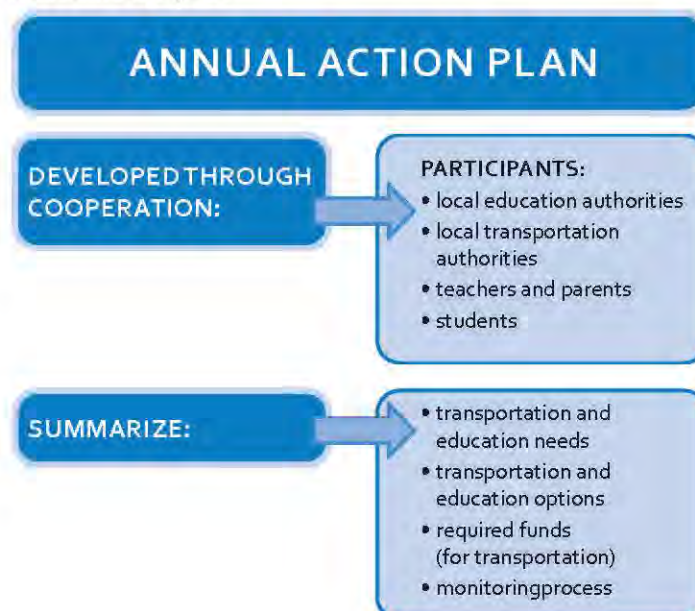
3.1. Action Plan for Improving Accessibility to Education

An Action Plan (AP) is an essential document that should be developed by each municipality to select and implement transportation and education policies that are most needed to improve accessibility to education, taking into consideration local conditions.

Its aim is to summarize transportation and education needs related to accessibility to education, specify transportation and education policy options, allocate necessary budgets, and plan monitoring and evaluation activities.

The AP is drawn up and enacted by the local authorities, but it is developed through a consultative process between schools, local authorities in charge of transportation and education, parents and students (Figure 6). For transportation options, the AP will mostly be prepared by the local authorities in charge of education and transportation, the police (for safety issues) and local authorities in charge of financing. Parents and students will be able to participate in the process through public consultation. For education policies, however, parents, teachers and schools need to be heavily included in discussions and the selection of policies. This is so because they are most familiar with concrete educational problems in schools and/or will be most responsible for the implementation of selected policies. Therefore, they need to genuinely subscribe to the policies for the sake of sustainability. *Due to these reasons, the Action Plan for Transportation needs to be drawn up and updated annually, while the Action Plan for Education needs to be drawn up every 3-5 years, but should be rigorously monitored and evaluated on a shorter-term basis.*

Figure 6 – Action Plan: Goals and Participants



3.1.1. Transportation Annual Action Plan (TAAP)

3.1.1.1. Criteria for Assessment of Options

The purpose of this section is to establish a clear procedure for programming accessibility/ transportation of students with the aim of *providing conditions of uniform accessibility to education for everyone, especially for students from poor families*, through corresponding criteria implementation. In parallel, by establishing a clear procedure for student transport, the procedure for rationalization of the educational institutions network will be facilitated, as it will be based on a unique accessibility criterion, among others.

In the countries of the SEE region, a lack of a clearly defined procedure for programming student transport demand (defined pursuant to relevant prescriptions) is noticeable. In practice, *ad hoc* solutions are being implemented. The accessibility to education is solved on a case-by-case basis and in different ways (referring also to those students pertaining to poor populations).

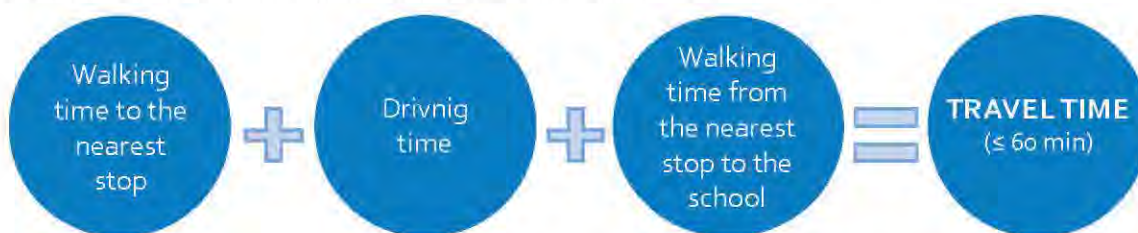
The criteria relating to transportation issues define the following: (1) accessibility, which defines the terms of uniform transportation accessibility to both students who walk and travel from/to school, (2) quality (Quality criterion), specifying the acceptable walking distance from the place of residence (school) to the nearest bus stop, the issue of timetable harmonization and requirements in terms of vehicle comfort, (3) safety (Safety criterion) specifying the walking conditions from the place of residence to the nearest stop and vehicle safety, and (4) the financial aspect (Financial criterion), specifying its affordability and subsidy conditions.

3.1.1.1.1. Uniform Accessibility Criterion

Creating conditions of uniform accessibility to educational institutions for all students is a fundamental principle and the starting point. This principle can only be accomplished if the *overall travel time* (i.e. time of walking to the nearest bus stop (t_{p1}), plus riding time (t_v), plus walking time from the stop to school (t_{p2})) does not exceed the value defined as acceptable walking time in cases when students go on foot. *Only under such circumstances is the established principle of uniform accessibility to educational institutions for all students provided.*

In other words, only if we equalize the maximum allowed walking time distance along the home-to-school route with the maximum allowed duration of the trip along the home-to-school route, will the principle of unique accessibility for all students be accomplished, regardless of whether students live within the walking time zone of 60 minutes, or they travel to school within the travel time zone of 60 minutes¹⁸ (Figure 7).

Figure 7 – Total travel time components along the home-to-school route



¹⁸ The maximum acceptable home-to-school walking time (time distance) can be calculated based on the criterion of the maximum prescribed walking home-to-school distance (the definition of which varies in different SEE Region countries). If we assume that the walking speed of an average student is 4km/h, the maximum allowed walking time is 60 min.

3.1.1.1.2. Quality Criterion

The Quality Criterion should be of use to an analyst when evaluating the quality of the route along which a student travels to school and back, as well as the quality of used transportation means (Figure 8).

The Quality Criterion includes the following elements:

- *Bus stop approach time* (Access time) (from/to the place of residence; from/to the educational center within the stipulated distance/walking time). In other words, if a student needs more time to reach a bus stop than to travel to school, then the quality of the route should be improved (by reorganization of the layout of bus stops and other similar measures).
- As for children's transportation by PT, *harmonization of the timetable* with the beginning/end of classes represents a key characteristic of satisfactory service. In that context, any timetable changes implying the prolongation of the overall time spent on the road in comparison with the time defined by the criterion of Uniform accessibility would undermine the quality of the service.
- Convenience depends on the *vehicle comfort level* (i.e. in public transport, on the vehicle fullness level – the higher the level, the lower the comfort), but other factors could be included as well: proper seat conditions, air conditioning, ventilation and vehicle cleanliness, etc.

Figure 8 – Quality Criterion



3.1.1.1.3. Safety Criterion

The **Safety Criterion** (Figure 9) refers to:

- *Walking conditions* from the place of residence/educational center to the nearest bus stop, i.e.:

In a settlement:

- Is the path separated from motor traffic?
- Is the path crossing railway tracks and are such crossings properly secured?
- Is the path illuminated?

In rural areas:

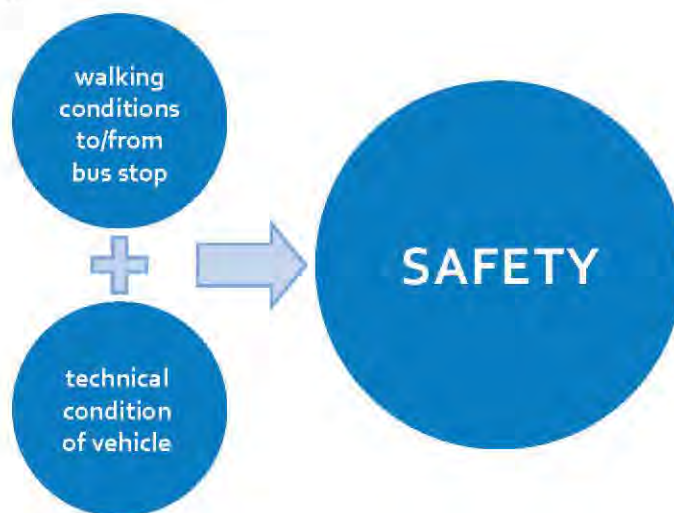
- Is the road width sufficient for children's safe walking?
- Is the road crossing railway tracks and are such crossings properly secured?
- Is the road illuminated?

- *Vehicle conditions* to be fulfilled, such as:

- Does the vehicle meet all prescribed technical standards?
- Vehicle age (older vehicles have to meet severe safety requirements, while their comfort level is generally below the prescribed one);
- Is there the possibility of seat reservation in PT vehicles for children aged 6.5-10 years?
- Is the vehicle equipped with safety belts? (New generation student transport vehicles include this element).

Children who go to school on foot should wear yellow reflective vests as a precondition of safe walking.

Figure 9 - Safety Criterion



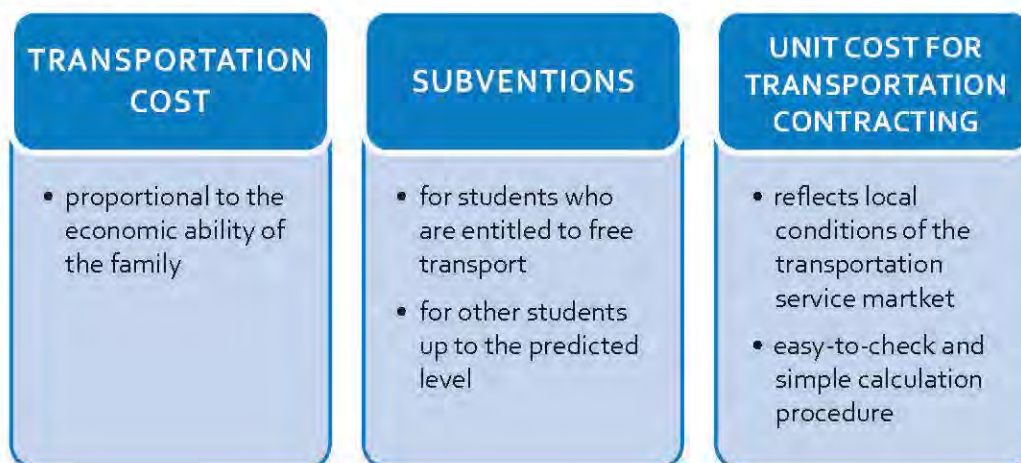
3.1.1.1.4. Financial Criterion

Following experience and aiming at a harmonized way of handling the financial issue within the SEE Region, the following financial criteria are suggested (Figure 10):

- *Cost of transportation* is proportional to the economic power of an average family (affordability). An analyst can evaluate the fulfillment of this criterion on the basis of available statistical data (e.g. statistical analysis of transportation expenditures of an average household)¹⁹.
- *Subsidy conditions*²⁰ are provided for:
 - Students entitled to free transport,
 - Other students, up to a certain decided level.
- *Calculated unit cost* reflects the local conditions on the transportation services market in terms of input structure and value, with an easy-to-check and simple calculation procedure.

In order for schools and municipalities to succeed in applying these principles and achieve selected policies, it is recommended that they create a TAAP. Details of the Plan will be presented in the following section of the Guide.

Figure 10 – Financial Criterion



¹⁹ The ratio of transportation expenditures in the overall expenditures of the average household in Bosnia and Herzegovina (Republic of Srpska) amounted to 11.5% of households' total expenditures (source: Newsletters and Bulletins: Survey on Consumption of Households, Republic Institute for Statistics of the Republic of Srpska, Bosnia and Herzegovina, 2007), whereas the ratio of the same expenditures in the overall expenditures of the average household in Serbia in 2010 fluctuated from 7.8% (Central Serbia) to 9.5% (City of Belgrade). (Source: Newsletters LP 11 - Survey on Consumption of Households in Serbia in 2010, Republic Institute for Statistics, 2011.)

²⁰ These Guidelines provide the recommended values for acquisition of free/subsidized transport entitlement in the Recommendations chapter. However, local authorities may decide to implement other values, according to the level of economic development of the municipality.

3.1.1.2. TAAP Drafting

TAAP drafting will require serious engagement of all the stakeholders taking part in the process of its initial setting up. However, in all subsequent phases, its drafting will be mostly reduced to the following crucial steps: (1) analysis of Plan implementation comprising suggestions about the noticed problems (Monitoring process), (2) updating data concerning the setting up of transportation lines, i.e. concerning the measures connected to the educational activities stimulating improved availability and (3) definition of potential measures, in both the student transportation and education areas (in the context of accessibility new improvement).

The TAAP is prepared through several consecutive steps: It begins with TAAP Implementation analysis, continues with needs assessment, followed by an analysis of available policy options and their selection based on the criteria defined in the previous chapter, and ends with budgeting and planning for monitoring and evaluation. Figure 11 describes the key steps in the preparation of a TAAP.

Figure 11 represents the envisaged feedback between the monitoring process and TAAP implementation analysis. Namely, through the monitoring process described later in the text, relevant data in terms of TAAP elements correction are provided. This refers to those elements whose use in practice has not been approved or there are certain problems that have arisen. In the same manner, potential implementation of new measures is enabled, when indicated as necessary in practice.

3.1.1.2.1. TAAP Implementation Analysis (Step 1)

The first step along the way of TAP drafting implies the analysis of the current TAAP implementation. It is carried out on the basis of the reports created during the monitoring process.

Before approaching initial TAAP drafting (after this document becomes a part of local practice), **it is necessary to have drafted the overall analysis of current practices.** Such an analysis is necessary for identifying bottlenecks and student transportation issues.

The collection of the relevant data in terms of known practices is of crucial importance and it is supported by TAAP monitoring. Based on this, all the stakeholders taking part in its drafting will give a full-scale estimate of the current practices.

The collected data should be analyzed in accordance with the criteria described in Item 3.1.1.1, *in the following suggested way:*

Table 6 – Proposed Approach for Selection and Analysis of Data Relevant for TAAP development

Uniform Accessibility Criterion	<ul style="list-style-type: none"> The routes along which the travel time exceeds the time prescribed by the criterion (for each of the existing transportation arrangements) should be identified; The reasons (issues regarding the route, road conditions, and layout of bus stops) should be identified. 	<p>Measure 1: route</p> <ul style="list-style-type: none"> PT –the possibility of rearranging the layout of the bus stops should be discussed with the operator; Contracted transport/School bus –rearrangement of the route in accordance with agreed criteria; <p>Measure 2: is defined considering the identified reasons</p> <ul style="list-style-type: none"> For all transportation modes: general road conditions should be improved in order to increase the commercial speed For PT: the adjustment of the locations/number of critical bus stops should be negotiated with the operator For contracted/School bus transport: rearrangement of the layout of bus stops
Quality Criterion	<ul style="list-style-type: none"> Bus stop positioning, with respect to settlements/houses, should be analyzed The timetable should be analyzed Vehicle comfort conditions (In PT vehicles the level of occupancy, and in other modes of transport the condition of equipment, air quality, etc.) should be analyzed 	<p>Measure 3: Bus stop approach time (Access time) improvement</p> <ul style="list-style-type: none"> The walking time from/to the bus stop should be brought down to a level that would ensure that the overall travel time remains within the limits defined by the uniform accessibility criterion. The possibility of child transportation by parents/taxi to a particular bus stop should be analyzed <p>Measure 4: Harmonization of timetables</p> <ul style="list-style-type: none"> For PT: Timetable harmonization should be negotiated with the operator (by suitable departure interpolation) <p>Measure 5: Vehicle conditions and comfort</p> <ul style="list-style-type: none"> For PT: The possibility of departure interpolation for the purpose of eliminating traffic jams should be negotiated For PT contracted transport: the possibility of vehicle interior improvement, that is, the general technical condition of the vehicles should be discussed with operators
Safety Criterion	<ul style="list-style-type: none"> Footpaths leading to bus stops/ schools and railway crossings should be analyzed Vehicle quality should be analyzed in the following terms: <ul style="list-style-type: none"> – Condition of seats – Technical accuracy of doors The possibility of students being seated in PT vehicles should be analyzed 	<p>Measure 6: Measures improving walking safety and securing railway crossings should be proposed</p> <p>Measure 7: Vehicle Quality</p> <ul style="list-style-type: none"> For PT and contracted transport: The possibility of introduction of higher quality vehicles and repair of existing ones should be negotiated with the operator <p>Measure 8: The possibility for students to sit</p> <ul style="list-style-type: none"> For PT: The introduction of reserved student seats should be negotiated
Financial Criterion	<ul style="list-style-type: none"> Current fares should be analyzed Transportation financing in terms of budget sufficiency (the issue of transfer from local to school level, insufficiency of funds, exceeding the planned budget) should be analyzed 	<p>Measure 9: Harmonization of fares with students' economic possibilities</p> <ul style="list-style-type: none"> For PT and contracted transport: The possibility of lower fares should be negotiated with operators For PT and contracted transport: the number of subsidized students should be revised <p>Measure 10: transportation financing options</p> <ul style="list-style-type: none"> For budget planners: A budget based on real demand; transfers are should be improved (discussions at the central and local levels of authority, discussions at the local and school levels of authority).

Based on the above-proposed analysis, a report to be used for drawing up the first TAAP should be drafted. For any future TAAPs, Step 1 of the proposed procedure, described by the algorithm in Figure 11, should be implemented according to the same/similar procedure described above.

3.1.1.2.2. Needs Assessment (Step 2)

Determining the demand for transportation services represents the second step of the TAAP.

The purpose of calculating demand along corridors (or along the routes of existing and planned lines) is to define transportation volume and, in the case of contracted or school transport, to provide inputs for choosing the most suitable transportation units.

The estimated transport volume can be also used when determining the volume of the necessary budget for student transport funding.

Assessment of transportation demand begins with the assumption that transportation is being provided for students satisfying the criteria of coverage and location, meaning:

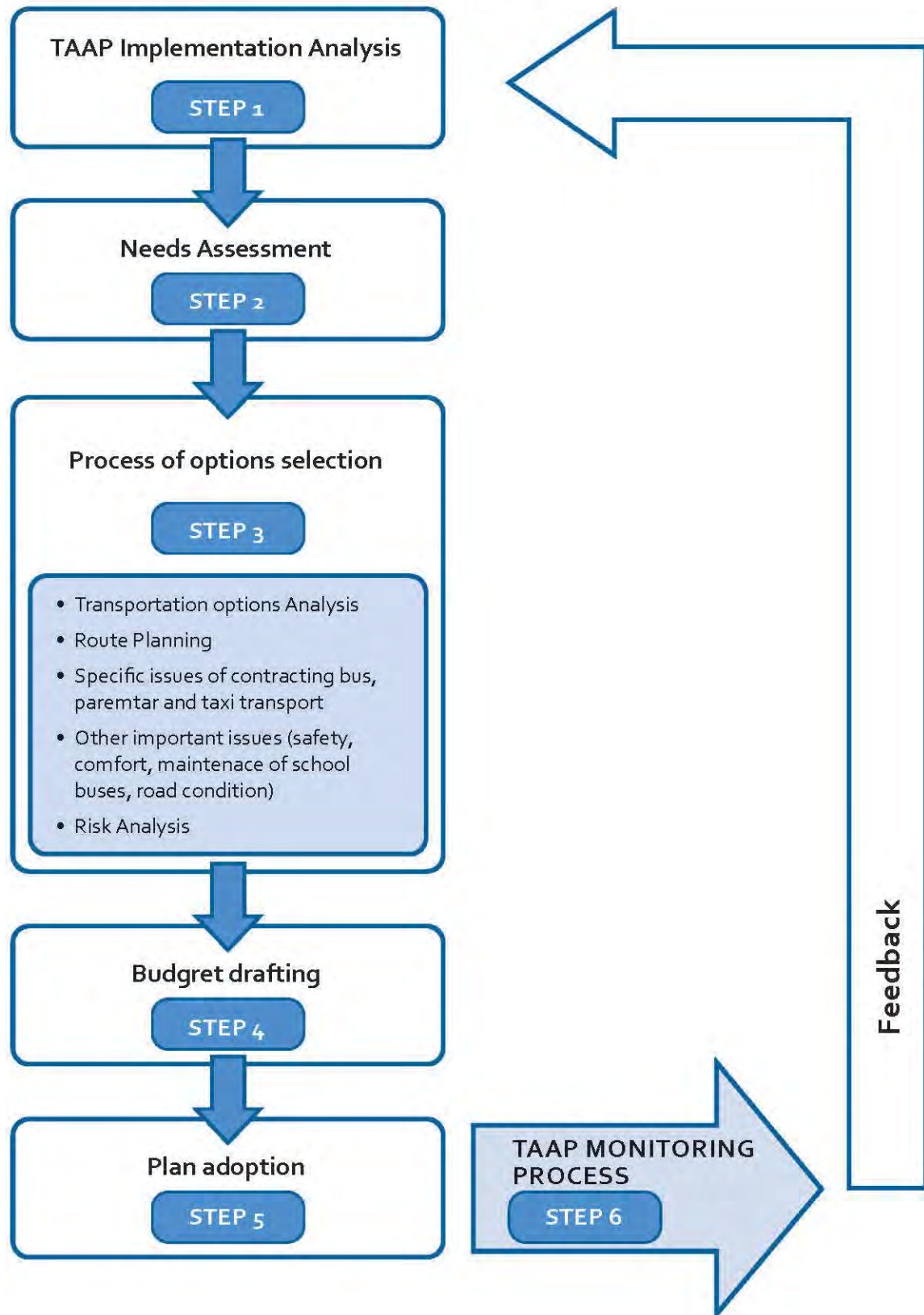
- Students are within the stipulated age range (eligibility), and that
- Students live at the prescribed distance from the educational institution entitling them to transportation service (location criterion).

The procedure of data collection is carried out by the filling in of paper forms (Paper form 1 in Appendix 8.4) by students' parents. The paper forms are to be filled in at the end of the current school year and submitted to the school attended by the student.

This general rule is followed by a certain number of specifications:

- the parents of those students who are at the very beginning of their education are to fill in the forms when enrolling the child in the school,
- the parents of those children who already attend the school are to fill in the forms during the month of May of the current school year and submit them to the Teacher/ Class Teacher,
- if, during the time between form submission and the beginning of the school year, changes occur in terms of place of residence etc., the parents are to submit to the school evidence of such changes by the middle of August of the current year, and no later than 15 days before the school year begins.

Figure 11 – Transportation Annual Action Plan: Preparation Steps

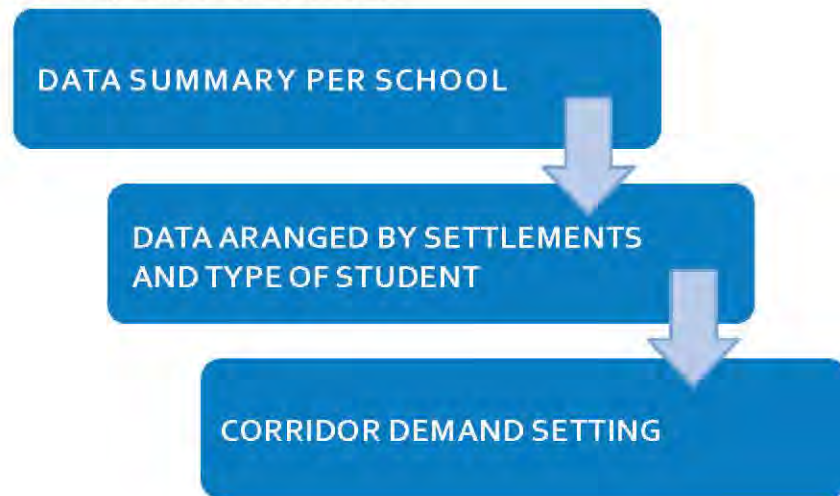


The collected paper forms are to be summed up in a special review (Paper form 2 in Appendix 8.4) certified by the School Principal and submitted to the local municipal authorities. The school authorities are then to prepare a review of student transportation needs, which becomes a starting point for further work on such programming of needs.

Annual transportation demand is defined by summarizing the school overview by using a suitable pattern (Appendix 8.4, Form 2).

A summary prepared as described above defines the *total annual transport needs* of students and provides a basis for further planning. The municipality would aggregate the annual transportation demands from each school, by settlement and by type of student. This would provide a basis for further planning (Figure 12).

Figure 12 – Definition of the corridor demand procedure



3.1.1.2.3. Process of Options Selection (Step 3)

3.1.1.2.3.1. Transportation Options Analysis

In practice, the possibility of resolving the student transport issue with only one transportation option is generally not being taken into consideration. Namely, experience has shown that transportation options need to be combined. The purpose of this Item is to help the analyst with choosing the most suitable transportation option, i.e. the combination thereof.

The analysis of options is carried out on the basis of a previously performed analysis of plan implementation in case when (Figure 13):

- a new demand corridor appears – all options are to be analyzed
- the existing option is being replaced by a new one – advantages and disadvantages of other options are to be analyzed.

Figure 13 – Analysis algorithm for the possibility of using different options for student transport along a new demand corridor

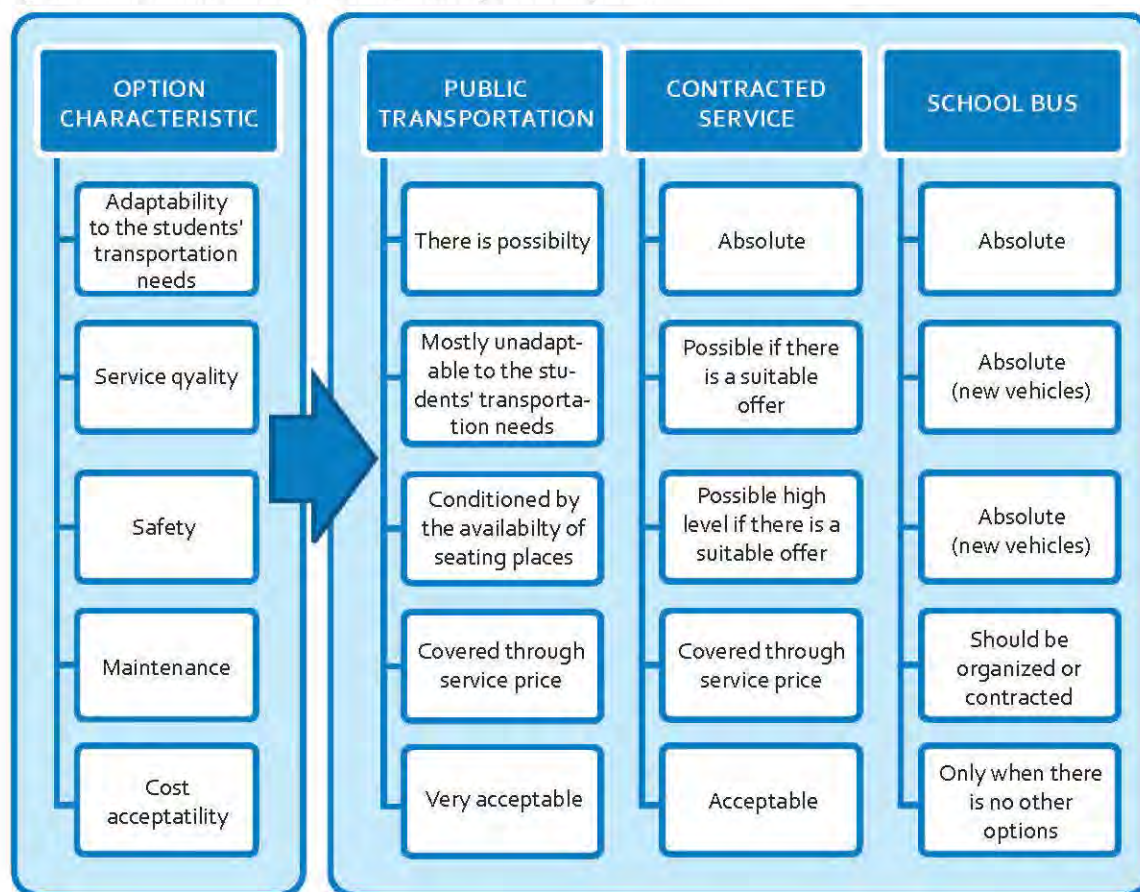


When analyzing, the following general/specific characteristics of the options are to be used (Figure 14):

- **Public transport represents a suitable solution if it fulfils the criterion of uniform accessibility.** In case a new demand corridor appears, the analysis of options also includes the PT, if it represents one of the options. PT is acceptable from the economic viewpoint, being generally based on the economy of scale.
- Its advantages especially stand out considering that in almost all countries of the SEE region, PT is the responsibility of the state/local authorities (in charge of the market, tariffs, etc.). *When subsidies are provided by state/local authorities, they can significantly influence the provision of sound and reliable student transport, even when it implies setting up non-profit lines (but these are important from the social and economic viewpoints).*
- **Contracted transportation is an option recommended in cases when** existing local PT is not able to provide adequate quality of service, or in its total absence (non-coverage of a part of the territory, etc.). This option can often be organized within the existing local PT system (by introducing departures for student transport only). This option represents a slightly more expensive way of organizing student transportation, but its advantages are reflected in the provision of service of appropriate quality.
- **Concerning this option, terms and conditions of transport are defined by the client,** in this case the competent school authority. That means that the competent school authority defines the route, the arrangement of stops and the timetable.

- **The school bus is an option classified as a special mode of student transport.** This service is most suitable for transportation of students in terms of quality. However, it also represents a relatively expensive mode of student transport.
- **Parental transportation is an option to be applied:**
 - *as independent* in cases when the volume of transportation demand is low (no more than 5 students), where choosing any of the above-mentioned solutions would be quite irrational. This option is useful for scattered homes/places of residence.
 - *as a support to some of the previously mentioned options*, aimed at collecting students from scattered locations and transporting them to bus stops.
- **Taxi transport, similarly to parental transportation, is planned in cases of low demand (less than 5 students) and in cases with scattered locations of homes, when selection of any of the basic options would be irrational.**

Figure 14 – Basic characteristics of student transportation options



For the purposes of evaluating PT lines' compliance with student transport demand, a matrix with six elements for decision-making and three levels of requirements to be fulfilled has been created. Important decision-making elements should be given different levels of relevance.

When deciding which elements of the evaluation matrix should be given more attention, decisions should be made on the basis of local conditions analysis. In some cases student safety occupies the first place regarding level of importance, whereas in others the harmonization between school and transport timetables may appear more significant (for the purpose of avoiding the waste of time), etc.

In any case, the three levels of significance of each of the six elements for evaluation of suitability of (existing) public transport should enable one to decide on the choice of a certain student public transport line in the most pragmatic way.

A layout of the analysis matrices and decision-making regarding the suitability of some public transport lines is given in Table 7. Apart from the descriptive evaluation of each element (examples are given in the matrix), it is advisable to add a numeric rating to each element, whilst paying attention to establishing a difference between the ratings and the quality level of each rating. Though numeric rating provides objectivity of the ranking, the matrix can also use textual quality description alone.

Table 7 - Decision-making matrix

DECISION - MAKING ELEMENTS		PUBLIC TRANSPORT					
		Description	Rating	Description	Rating	Description	Rating
Route position	1	Fully in compliance with the needs. Additional option inclusion not required.	Q11	Partly in compliance with the needs. The requirement for an additional option inclusion shall arise due to availability improvement.	Q21	In its biggest part the route is not in compliance with the students' transportation needs. The requirement for an additional option inclusion shall arise to the higher extent.	Q31
Bus stop network	2	Full in compliance with the needs.	Q12	Partly in compliance with the needs. At more than 40% there is a pedestrian accessibility problem ($L > 1.500m$).	Q22	Not in compliance with the students' needs. At more than 60% there is a pedestrian accessibility problem ($L > 3.000m$).	Q32
Timeable	3	Fully in compliance with the needs.	Q13	Partly in compliance with the school timeable. Students wait for a convenient departure up to 45 minutes.	Q23	Not in compliance with the school timeable. Students wait for a convenient departure more than 45 minutes. Evening departures not in compliance with the extracurricular activities.	Q33
Comfort	4	Fully in compliance with the needs. Available seats for pupils aged 6.5-10.	Q14	Not fully in compliance with the needs (poor sanitary conditions, damaged seats, etc.).	Q24	Not satisfactory (doors not closing safely, poor sanitary conditions, damaged seats, etc.).	Q34
Safety	5	Pursuant to the regulations.	Q15	Vehicle safety is in compliance with the regulations, however, by reason of the damaged seats the students' safety not at a satisfactory level.	Q25	Vehicle safety in compliance with regulations, however, by a reason of listed shortcomings students' safety not at a satisfactory level.	Q35
Transport price	6	Fully acceptable	Q16	Partly acceptable but the operator is willing to negotiate.	Q26	High and without carrier's willingness to negotiate.	Q36

Sum Q11 - Q16 maximum score (100, for example)

Sum Q21 - Q26 score between minimum and maximum (65, for example)

Sum Q31 - Q36 minimum score (40, for example)

Since there is no significant difference between contracted transport and school buses in terms of compliance of timetables with students' needs (the element of the greatest relevance), for the purposes of analyzing which transportation option should be chosen - contracted transportation or transportation by school buses - one should take into account the financial aspect, in the first place (differences are clearly shown in two examples in Appendix 8.2). However, the relevance of demand volume should not be underestimated. Namely, *if a case implies only one new corridor along which student transport is to be organized, and demand volume along this corridor is relatively low but sufficient for engaging a bus/minibus*, the solution should be searched for among the following possibilities:

- Attempting a service arrangement. However, low demand may appear as an obstacle, because it does not ensure the possibility of adequate gain for the contractor (it's only one line we are dealing with);
- Deciding in favor of the school bus option if, of course, the required conditions are fulfilled (see the text in paragraph below).

In case the first option is not feasible, a dialogue with neighboring municipalities that are also dealing with the issue of the transport along the corridor should be established. Association of their needs may lead to such demand volume that may appear attractive enough for a private operator.

Finally, if neither of these alternative solutions is possible, the only key to the problem is to engage taxi operators in such numbers and with such vehicles that would comply with demand volume.

In addition to the above-mentioned, **an important decision-making criterion is transportation reliability/solidity**. In comparison with contracted transportation, owned one is more reliable since failure is reduced to technical problems. This aspect is not meaningless when the transport services market is insufficiently developed and only one bidder competes for the contract.

In the following cases a decision should be made in favor of school bussing as an acceptable option: if local PT does not exist, local PT is not able to meet the requirements, or service contracting is not possible (there are no interested operators due to insufficient demand volume or low estimated service price, potential operators are not able to meet service standards, inability of operators to provide the vehicles of appropriate capacity which has a direct impact on the service cost-efficiency, etc.) (Figure 15).

Other transportation modes that are considered as possible options refer to transportation organized by parents and taxi services. These options can be the only solution in certain circumstances (sparsely populated territory with low transportation volume), but can be used as a supplement to some of the aforementioned options. These options can be applied independently or in combination with previously discussed options (Figure 16).

Figure 15 – Decision-making procedure for school bus option choice

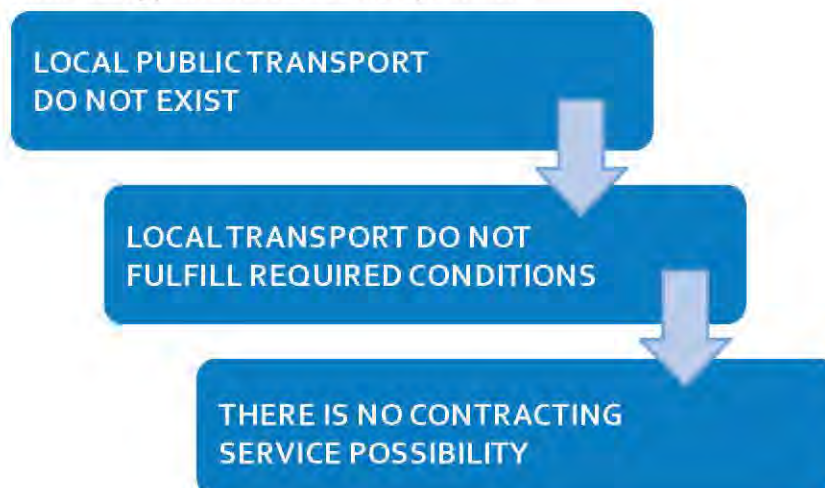
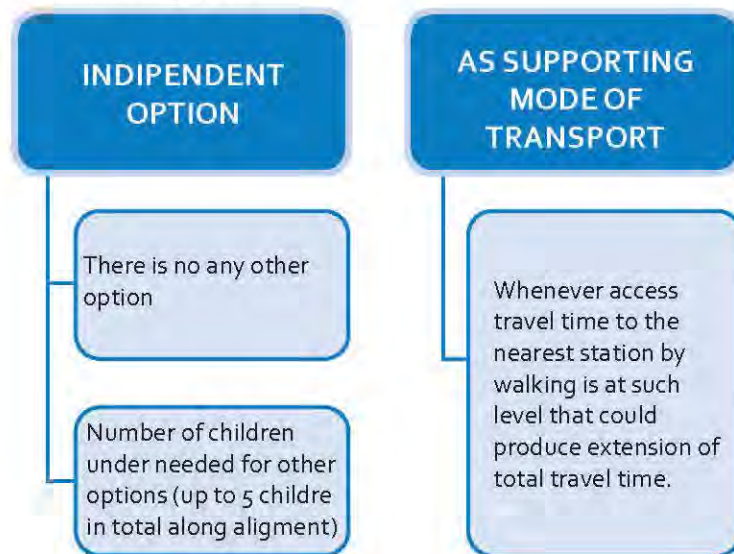


Figure 16 – Two functions of remaining options



3.1.1.2.3.2. Route Planning

Route Planning is a very important element of TAAP procedure. A soundly planned route enables minimum time consumption for student travelers along the house – school – house route. On the other hand, it has a significant impact on operators' exploitation costs, and hence the cost of student transportation.

Since these Guidelines addresses student transport in rural areas, route planning does not require implementation of complex algorithms (as would be the case, and a very specific one, in big urban areas). In that sense, the following text provides some pragmatic solutions aimed at solving the concrete problems that may arise in real life situations. The offered solutions are based on the set of criteria defined in Item 3.1.1.1, and particularly on the criteria of Uniform Accessibility and Quality.

Considering the fact that PT routes are defined in such a manner as to comply with the needs of all the passengers, their harmonization with student transport needs can actually be summed up in two elements: (1) timetable and (2) bus stop layout.

The most important disadvantage of this transport mode is reflected in the discrepancy between school and transport timetables (an issue that could be connected to the route itself).

Analysis of the overall acceptable travel time/Accessibility is based on the principle formulated under the Uniform Accessibility criterion. The timetable enabling students who live in the most distant places to travel within the acceptable travel time will be considered as a favorable one.

What should be done if the aforementioned principle cannot be accomplished? *First of all, the local authorities responsible for local PT should take into consideration the possibility of redefining the timetable in order to meet the required criterion of accessibility.*

The simplest solution for discordant timetables is negotiation with the PT operator and requiring timetable harmonization with student needs, for example by interpolation of new bus departures adjusted to student needs.

If neither of these is feasible, the existing timetable could be considered acceptable under the following conditions: the timetable should guarantee arrival at school a maximum of 45 minutes before classes begin, and departing for home within an interval not exceeding 45 minutes. During the maximum 45 min of waiting time, for the beginning of classes or for transportation back home, children need to be supervised by a teacher in the classroom or in a safe and comfortable school space. This time could be used for homework and for educational activities and games. The interval defined in such a manner is aimed at making PT an accessible option for student transportation.

There are also cases where the bus stop layout requires a longer walking time. In such cases, there are two options: (1) new bus stop interpolation decreasing overall walking time, and (2) organizing student transport from the place of residence to the nearest bus stop by parental or taxi transport.

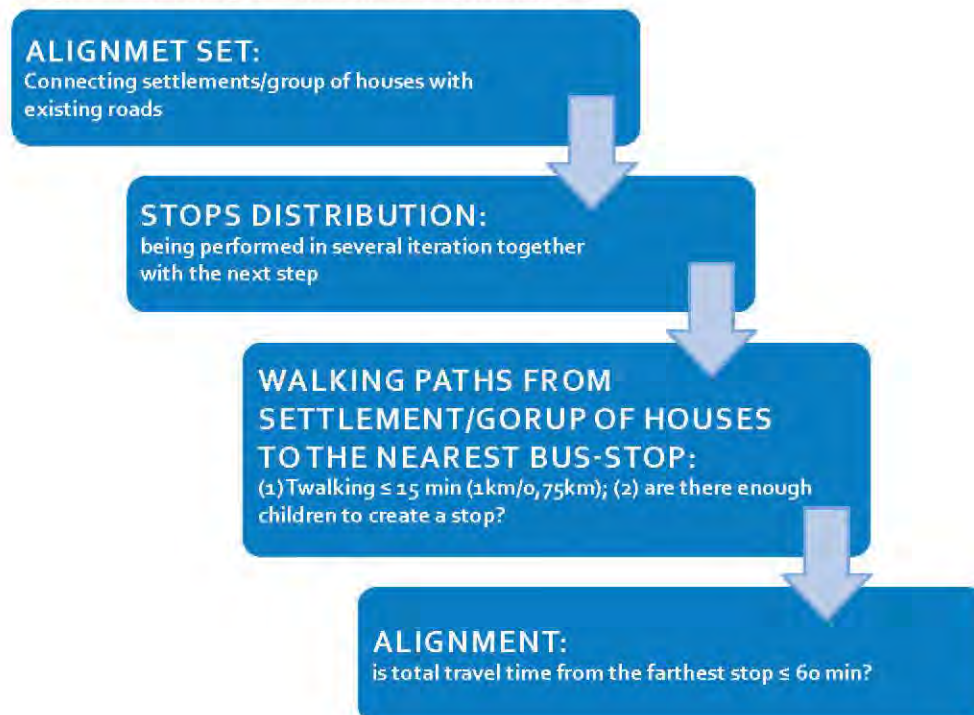
In cases of contracted transport, route planning is conducted pursuant to data on transportation needs obtained from the corridor analysis, by connecting the settlements along the corridor with the existing roads (Figure 17).

Planning the network of stops is done by using a map of appropriate scale, where the roads for walking from home to a chosen stop location are drawn in, and an assessment of walking time is made.

The location for every stop is determined in such a manner that the time of approach (on foot/or by transportation) is no longer than 15 minutes, regardless of terrain characteristics (in lowland and hilly areas this equals 1 kilometer at the average walking speed of 4 km/h, and in mountainous areas it equals 750 meters at a walking speed of 3 km/h).

The procedure is conducted in a required number of iterations until accomplishing a result where the walking time from/to the stop is obtained within the proposed criterion (15 minutes) $\pm 15\%$.

Figure 17 – Algorithm for setting up a contracted transport route line



However, *in certain parts of the countries in the SEE Region, the need for more information may arise, since analysis by settlements does not meet needs. That would be the case in sparsely populated settlements (hilly and mountainous). In that situation, the analyst must use data from the primary base – forms completed by parents (see Appendix 8.4). The approach roads connecting homes/groups of houses with bus stops are drawn into appropriate maps, and bus stop approach time is calculated according to the procedure described above.*

The second element of planning the layout of bus stops is the number of students who will be using it. This number is derived from data obtained from the review of total transportation demand/data. It is very important to avoid planning a bus stop that will be used by only 1-2 students, as it directly influences the overall travel time to the educational institution. This is in a direct function of the total perceived demand along the corridor and characteristics of settlements (number of students, jagged/concentrated settlement).

Based on the determined number of stops, estimated boarding/disembarking time (15-20 seconds), as well as the average driving speed between adjacent bus stops (state of the road and traffic conditions along it are important factors), total duration of the ride from the first to the last stop (in the vicinity of the school, if possible) are calculated.

The control criterion to finally define the route of the line for transportation contracting is fulfillment of the condition that the overall travel time between the most distant bus stop and the bus stop in the vicinity of the educational institution should not exceed 60 minutes.

Given that school bus transportation is a direct function of the available rolling stock (according to the number of units and places per unit), **transportation route planning should be approached in a serious/professional manner.**

One important planning element is the school timetable, which should be an element incorporated into route planning and school operation (this requires the joint effort of school management and local education authorities).

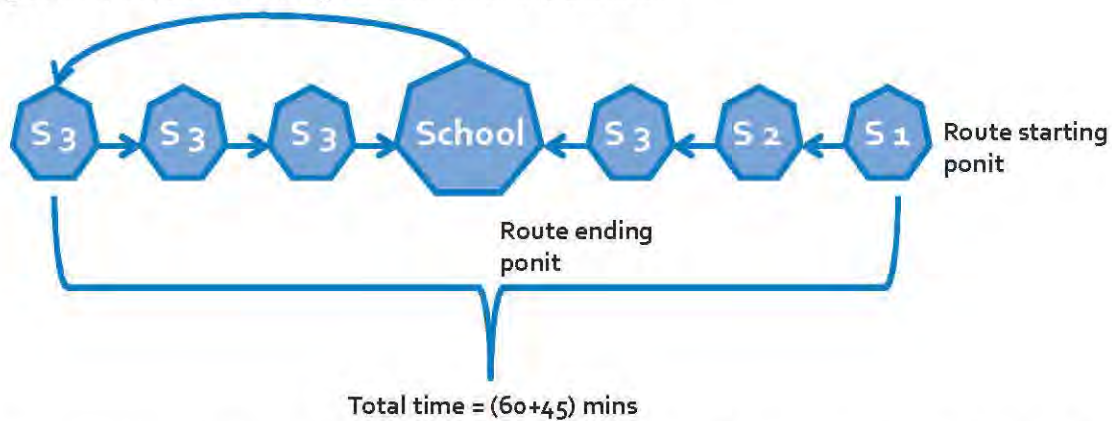
Planning can be conducted in two successive steps: route planning, according to the procedure that applies to contracted transport, and adjusting the number of routes to the available rolling stock.

If the number of buses does not comply with needs, one of the possible solutions would be to join two routes (Figure 18) merging into one at the stop in the school vicinity. In that case the vehicle would start from one end of the route, collect students at each stop, unload them and continue without stopping up to the starting point of the second route and would then return to the school. In the case of the first shift, if the travel time from one end to the other of the connected route exceeds 60 minutes, additional criteria referred to in the first paragraph on page 50 should be included.

This practically means that the students who live along the first part of the route should leave their homes earlier and wait for their classes to begin (for a maximum of 45 minutes), because the same bus has to reach the starting bus stop at the opposite end of the joint route and drive the students back before the beginning of their classes. *In order to burden the student travelers equally, it should be taken into account that those students arriving in school first, should also be transported back first.* The advantage of this solution is reflected in the fact that vehicles are better filled up during one ride (tour).

If the previous solution is also not possible, *gradual beginning of classes* may be applied in order to cover all demands within the available transportation capacities.

Figure 18 – Two-route connection procedure with one available vehicle



As for parental and taxi transportation, the planning of the route, regardless of whether it's an independent option or a support option, must aim at minimizing the length (duration) of the route.

Should the residential locations be scattered in such a way that organizing the route would be very complicated and time-consuming, its planning should be organized by determining the locations for picking students up. For example, for two or more students whose homes gravitate to the same (often uncategorized) road, the exact location where they would be picked up by parental transportation/taxi and conveyed to the school or to the first bus stop of public transport/contracted transportation/school bus should be determined. The overall travel time should not exceed 60 minutes in one direction.

Finally, **emergency routes should be planned wherever weather or road conditions dictate that it is not safe to travel along the regular route.** Should this be the case, an announcement system will be required (local radio, telephones, mobile phones, etc.).

3.1.1.2.3.3. Risk Analysis

Risk analysis is also one of the important steps in the process of option selection. Sound risk identification, evaluating the possibility of its appearance, including the intensity of the risk, enables the analyst drawing up the TAAP to anticipate certain measures that would help avoid/mitigate the consequences of the risk.

Each option carries certain risks, according to a number of risk factors. With respect to the fact that the first three (PT, contracted transportation and school bussing) are the basic options, the risk identification and description refer to them. Table 8 systematizes the potential main risks to be taken into account when evaluating a certain option, considering local conditions.

The described risks are the most common ones encountered in practice. The most efficient way of their minimization and/or their removal is to precisely set forth in the Contract the legal consequences referring to both contracting parties in case risks appear.

Furthermore, the conditions under which certain elements of the Contract can be changed must be stipulated.

It must be pointed out that it is extremely important that both contracting parties take over their part of responsibilities, i.e. to avoid at any cost the situation of a complete risk transfer to only one of the parties (the operator). Such an approach will provide equal treatment of both parties and the operator will be motivated to avoid contract liability breach.

Table 8 - Risk matrix - (possibility of appearance, risk description and suggested measures)

Risk type	OPTIONS		
	Public transport	Contracted Transportation	School bussing
Service regularity	+	+	-
		The Operator may cancel the service during a certain period of time. The Contract must protect against such a possibility.	
Harmonization of the transport timetable with educational process needs	+/-	-	-
	Appears when the local authority does not subsidize public transport, waiving therefore the power of influencing the transport timetable.		
Quality of service	+	-	-
	Possible crowding in a vehicle and impossibility to provide seats for children up to the age of 10. An additional number of departures along the route should be negotiated with the operator.		
Vehicle technical validity and possible changing of a defective vehicle	-	+/-	+/-
		When the Agreement does not stipulate the operator's responsibility to provide a standby vehicle	Due to the low level of use of the rolling stock it is economically unsustainable to have a standby vehicle
Change of terms and conditions (price, timetable, vehicle type etc.)	+/-	+	-
	Risk description given in the second row. Strict control will help protect against such a possibility.	Highly possible risk. The Contract must protect against such a possibility.	
Service cancellation	+/-	+	+/-
	Risk description given in the second row. Strict control will help protect against such a possibility.	Highly possible risk. The Contract must protect against such a possibility (contract guarantees, cash deposits, etc.).	Possible, due to technical defects. Risk elimination is enabled by a suitable agreement with the operator who provides the service during the risk threat (increases the option's costs)

Legend: + a risk exists
 +/- there is a risk of considerable probability
 - there is no risk or it is negligible

3.1.1.2.3.4. Specific Issues of Contracting Bus, Parental and Taxi Transport

Bus and taxi transport contracting, as well as the issue of compensation granted to parents when taking part in student transportation, are all issues that should be approached from different angles, keeping in mind all the specificities characterizing these transportation options. Contracts must secure a fair level of compensation as well as equitable risk sharing, without favoritism towards any of the contracting parties.

Concerning PT, there are the following specificities:

- *A public operator receives subsidies* from the national/local level of authorities, whereas the tariffs fall under the jurisdiction of the local authorities – there is no need for special student transport contract arrangements;
- *A public operator does not receive any subsidies* from national/local level of authorities, whereas the tariffs are being approved by local authorities – the conditions referring to students enjoying the right to free/subsidized transportation are negotiated over with the operator.

Concerning contracted transportation, service contracting is conducted through a tender procedure (through a public procurement procedure). An integral part of the procedure (excluding statutory elements) is a detailed description of the service including the following elements: a detailed route description including the state road number and basic data on road conditions, a list of bus stops including the distances in between them, the estimated number of students per station, and estimated service cost calculated per day (the elements of service cost shall be addressed later).

The requirement stipulating that the provider's service must exclusively cover transportation of students is conditional.

The criterion for selecting the most favorable bidder would be the lowest offered price. To avoid the situation of unrealistically low offer prices (which could result in abandonment of transportation later on), *an indicative price* should be announced within the public invitation, and it should be stated in the propositions that any deviation from that price in a range exceeding the price defined in the tender documents, would lead to elimination.

The second criterion for most favorable bidder selection has to include the requirements in terms of service quality – maximum vehicle age, vehicle quality (proper seats, heating/cooling system, etc.).

As for the specific weight of the two aforementioned criteria, it is recommended that their ratio should be at least 50:50%.

It is desirable, except for the aforementioned, to determine the period for which the service is contracted in the public invitation for proposals submission. It would be a reasonable solution to contract the service for a period of several years (provides commercial security to the potential service provider), in which case the need for annual adjustment of transportation volume should be indicated (by making an annex to the contract), provided that future transportation volume per contracted years should be at least estimated (based on available demographic data).

However, an insufficient number of interested operators may lead to a quite limited choice. Namely, in such a scenario the number of possibilities for setting higher standards for service provision are narrowed down, especially in terms of vehicle quality. Also, the risk of unperformed service, and even the risk of service cancellation may increase. It is suggested, therefore, that competition conditions, and subsequently the contract, should provide guarantees against transportation cancellation by the operator, and other contract breaches (bank guarantees, down payment and similar instruments).

Cooperation between municipalities (especially between neighboring ones) during transportation negotiation **is strongly recommended**. It implies achieving a more favorable level of bids (more bidders), competitive prices and better contract terms and conditions.

Parental and Taxi student transport are also subject to service contracting.

Both modes of transport should be subject to procurement procedures, but *taxi transport contracting is conducted through a tendering procedure* (public procurement), provided that the procedure is applied during invitation to tender.

Contract validity for parental transport may be tied to the school year. But for taxis, signing a contract for several school years (2-3 would be the optimum) is also possible.

3.1.1.2.3.5. Other Relevant Issues

Other relevant issues include: requirements in terms of student transport safety and comfort, rolling stock management in terms of school buses, requirements in terms of road maintenance (especially in winter conditions). The issue of identification documents is also explained.

Requirements in terms of student transport safety and comfort arising from the Law on Safety in Traffic. These are issues related to the technical accuracy of vehicles used in public transport, and operator and driver licensing, and they include the following:

- *in cases of PT*, the operator's responsibility is to provide the required number of seats reserved for children aged 6¹/₂ - 14. In this case, if bus seats are bench-shaped, the rule of 3 students per two seats may apply.
- *in cases of contracted transportation*, the operator's responsibility is to provide the vehicle with a sufficient number of seats for all students including the person escorting the vehicle (if one of the teachers travels by the same bus from the starting bus stop, he/she may be in charge of escorting). When entering into a contract it is very important to clearly specify that the operator is allowed to transport students exclusively. Both the issues mentioned are to be regulated by the contract.
- *in cases of transport by school buses*, by definition, the provision of a bus seat to each and every student is mandatory. Buses must meet the standards proscribed by legislation that regulates passenger PT.
- *in cases of parental or taxi transportation*, the vehicle must comply with all the legal provisions related to safety and technical accuracy. Also, the provision of a bus seat to each and every student is mandatory, regardless of his/her age. Special attention must be paid to parental vehicles. The contracted vehicle should be examined by an adequately trained person (preferably by a member of the police force). Upon examination he/she would draw up a written report reviewing vehicle conditions (such a report would make up an integral part of the contract).

The management of school bus rolling stocks is an issue that deserves special attention. In the region (Bulgaria), practice implies that the rolling stock is managed by the school itself or by local authorities. Since this issue is related to the rational use of the rolling stock, it is recommended to transfer its management to the local government - local education authorities. This solution is especially advisable if we are dealing with a large school bus fleet (more rational maintenance planning, possibility of engaging professional drivers who could receive special training, etc.).

Regardless of the fact that these buses have a dedicated use, management by local authorities opens the door to the possibility of using them for transportation of other populations, when not engaged for transportation of students (e.g. organizing special tours for citizens doing business in the municipality center, etc.). Transportation organized in this way is of great significance for those municipalities/parts of municipalities with no organized public transport, and may be a part of a municipal policy of improving general living conditions. In addition to this, one part of vehicle operating costs could be covered through transportation service charging.

Since the issue of road maintenance is ruled pursuant to legislation at the state/local level of authority, no special arrangements thereof can be organized with an operator. Quality of road maintenance directly influences the quality and reliability of the overall transportation, but it is, as a rule, limited by available funds.

Attention should also be paid to the issue of road safety. The scope of this part of the AAP depends on the results given in the first step of AAP implementation analysis, that is, on suggested measures. In case the suggested measures refer to roads under national jurisdiction, the competent ministry is then informed of such measures by the municipal competent institution/local authority.

However, if the measures refer to roads under the jurisdiction of the municipality, such measures should be formalized through the definition of concrete projects (activities) for which the budget is to be roughly defined and which is to be considered a part of the AAP budget.

Road maintenance, especially under winter conditions, is crucial for the regularity of the service. Considering national roads of higher priority, maintenance is the responsibility of the central authorities, while the local/municipal roads patency maintenance is the responsibility of the local authorities (common practice in the SEE region). Since the local roads are the ones that determine the quality of accessibility of all populated parts of the municipal territory, their quality and the quality of maintenance is crucial.

Equal importance must be given to patency of unclassified roads that, similarly to local roads, provide accessibility of practically single houses/locations of residence. Under winter conditions, provision of their accessibility is one of the conditions for undisturbed functioning of the settlement. Maintenance of their patency under winter conditions can be provided by engaging the people who live in these settlements and possess the mechanization (a tractor with a ploughshare for cleaning) with compensation of fuel costs by the local authorities.

The transportation identification documents (boarding cards) used most commonly in the practice of the SEE region are a sort of identification (including the student's photo) specifying the service type – free or charged. Payment responsibility registration of those students who are charged for the service is carried out by issuing a special card that is to be presented along with the identification card. The identification card for the current school year is issued at the very beginning of the school year.

As in the case of bus transportation, identical identification cards can be used for student transport by taxi as well.

There are some countries and/or municipalities of the SEE region where the validity of the identification card is limited to working days only. *It is recommended that the validity of the identification card should not be limited only to working days.* The motive for such a recommendation is to provide students with the possibility of transportation service use under favorable conditions and without any limitations enabling good social integration (attendance to extracurricular activities, exhibitions, theatre plays etc.).

Approval of this measure implies an increase of expenditures for both students enjoying the entitlement to subsidized or to free transport service. However, the social benefit coming out of this expenditure significantly overcomes the additional costs.

3.1.1.2.4. Budget Drafting (Step 4)

The annual budget represents a key element of TAAP setting up (TAAPB). Its drafting has to be based on real inputs and include all the activities planned for the current year.

Important note: the school year is not aligned with the calendar year – it begins in September and ends in mid-June, that is, at the end of August the following year (including activities carried out during the summer in which mostly teachers take part)²¹. On the other hand, the year for which the local budget is approved is aligned with the calendar year. In that sense, *the Annual Action Plan Budget (AAPB) should provide such an output that could satisfy both calendars – the school and budget calendars.*

The particularities of TAAP budget drafting come out of the calendar of local budget preparation (see Box).

Pursuant to regulations valid in Serbia, the following dates are relevant when drawing up the TAAP budget:

- proposals for the next budgetary year and for the two coming calendar years are to be submitted by all budget users by 15 March of the current year;
- The Memo (including economic and fiscal policies of the Government, with budget projections for the next budgetary year and two coming calendar years) is to be submitted by the Minister of Finance to all budget users/ local authorities by 1 June of the current year;
- The Minister submits the Guidelines for state budget draft preparation (which is also one of the concerns of local authorities) by 1 June of the current year;
- Local authorities submit their mid-term and financial plans to the Government (Ministry) by 1 September of the current year;
- By 15 October the Government defines the budget draft, and by 1 November it submits the draft to the assembly for discussion.

Therefore, already by 15 March of the current year local authorities have to have considered all local budget projections for the coming year, with the possibility of aligning them by 1 September according to the Guidelines for budget draft preparation. *These two dates are of crucial importance for AAP budget definition.*

Due to that fact, and the fact that student transport items and other items relating to safety measures and road maintenance issues cannot be defined on the basis of precise input data, the local authorities may go for the option of making calculations according to current available data, by the procedure proposed in the Guidelines. Furthermore, reserves should be added to the funds calculated in such a way (order of magnitude 10 – 15%) in the case of aligning the calculation based on more precise input data.

When calculating the funds, the issue of student transport costs will represent only a lesser problem, since the number of students using transportation service does not fluctuate significantly year by year.

As for the student transport costs, the utterance connected to the calendar year is quite simple. It refers also to road maintenance in winter conditions.

However, when speaking of costs of road reparation along the routes (potholes, landslides, etc.), or the issue of the safety measures (railway crossings, walking paths, etc.), the planned activities are to be allocated to two calendar years.

²¹ In SEE region countries school begins on 1 September and classes end in mid-June of the following calendar year

3.1.1.2.4.1. Budgeting of Transportation

Drafting a budget which is to be allocated to student transport has to be grounded on realistic planning so the local authorities could actually meet all the obligations arising from it.

The calculation of the volume of funds necessary for organizing student transport, included in the TAAPB, is based on the chosen option/options.

3.1.1.2.4.2. Transport Subsidies and the Role they Occupy in the Student Transport Budget

Passenger transport, as a significant municipal function, is commonly financed from the transportation service income. However, a part of the costs, especially the transport operation costs, can be funded from subsidies granted by the local authority.

Why is it so important to have passenger transport subsidized? By subsidizing, local authorities provide quality and reliable public transport the service price of which is acceptable for the majority of citizens and within the widest possible area of the local community. Also, it secures uniform treatment of citizens in terms of general accessibility of public transport. It especially refers to those without an alternative (without their own vehicles, those not able to drive vehicles such as kids and elders, etc.).

Passenger transport subsidizing at the general level does not exclude the possibility of additional subvention of student transport, in which case the volume of funds for this purpose is proportionally lower. This, however, implies generally lower fares, and hence a lower price of student transport service in cases where the parents cover such expenses.

3.1.1.2.4.3. Calculation of Total Funds Needed for Student Transport Financing

As for the student transport, the local authorities are responsible for meeting the conditions of free transport for those categories of students who are entitled to it. The volume of the subsidy is derived from the annual transportation demand and is calculated by multiplying the number of students entitled to free transport by the number of days for which the transportation is provided, and the result of this operation is further multiplied by the unit price (one ride) of the transport service.

As for the rest of the students that need transportation, the costs thereof shall be covered from the local budget implementing the tariffs and the approved subsidy level. The calculation procedure of the funds needed for covering the costs of subsidies for students enjoying that entitlement remains the same as for the above-mentioned case of free transport service. Technically, the remainder of the overall expenses should be covered by students' parents.

For determining the funds required at the municipal level, data provided by schools are to be used. These data are being summed up in special forms provided by schools to local education authorities (see form proposal in Appendix 8.4, form 2).

3.1.1.2.4.4. Specificities relating to Other Transportation Modes (contracted, school bus, taxi and parental transport)

Contracted Transport

Obim The financing volume of contracted transport is to be calculated depending on the volume of the transportation demand. The volume of financing is also affected by the contracted unit price (per kilometer, per student, and per performed transport work are possible options) and number of transport routes/lines.

Two approaches can be applied when estimating the volume of the funds required:

- *The first approach is based on data from analogous cases*, historic data for similar services regardless of whether they come from a concrete municipality or neighboring municipalities which have had such experience. Appendix 8.2 contains data on transport service price fluctuations in the municipalities as an indication of the data source;
- *The second approach is based on service price calculation by applying a simplified procedure*. The suggested procedure is based on vehicle kilometer price. Details of its calculation, as well as a corresponding example, are described in Appendix 8.2. The simplified procedure can be used by a professional²² exclusively for the purposes of adjusting the calculation to concrete local conditions. When choosing the vehicle kilometer price value, the analyst is advised to take those that correspond to higher annual vehicle mileages (>40,000 km yearly). This advice is supported by data on operators' work given in Table 6 in Appendix 8.2.

The simplified procedure has been developed as described by the algorithm in Figure 19. It is clear that this procedure is to be repeated as many times as implied by the number of routes planned for contracting.

For public procurement needs, expressing the budget in the form of an *indicative price* of the service, representing the base element of the Competition bid documents, *appears to be a more suitable solution* (offer price can be lower).

One should take into account that the calculated budget *is subject to monitoring, updating and analyzing*, hence in the following several years the rate of calculation reliability will be higher.

School Buses

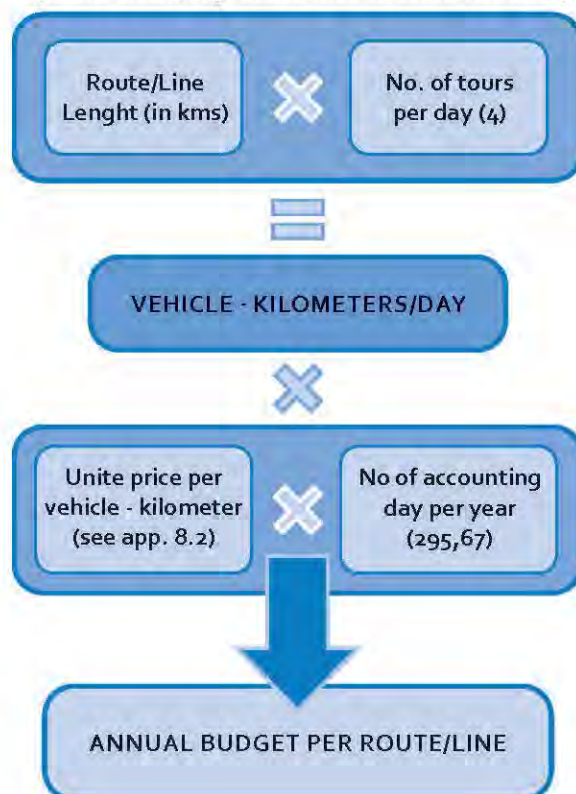
The issue of school bus purchase was not a subject of the Guidelines. The instructions given hereinafter refer to estimates of the costs of school bus operation.

The procedure for calculating the funds required for school bus operation remains the same as the procedure described in the previous Item, when the subject was contracted transport. What differs in the use of the simplified method for calculating required funds is the fact that the annual mileage of private operators (with whom contract arrangements are to be organized) is higher than the mileage of school buses. Hence, when calculating the school bus operation price, it is recommended to use vehicle kilometer values which correspond to a lower annual mileage (see diagrams in Appendix 8.2, and an example of simplified method calculation).

A given cost of school bus transportation can be used in TAAPB calculation. Knowing that they are going to be *subject to monitoring through the TAAP realization, updating them will be possible*.

²² Such professionals can be found at the Secretariat for traffic of the local administration, or a similar institution in charge of traffic issues.

Figure 19 – Algorithm of the simplified annual budget calculation for contracted transport



Other options

When calculating the budget, all planned routes for which parental transport is envisioned should be taken into account. The resulting sum is further multiplied by the number of school days in order to calculate the total annual mileage.

The parental compensation budget is determined according to the annual mileage multiplied with the unit price (in local currency per kilometer crossed). The unit price should be identical to the compensation paid for business trips when an employee uses his/her own car. These elements are constituent parts of the contract/agreement or any other document concluded between the parents and the school/local school authorities.

Calculation of parental compensation would be done once a month, provided that the parents keep daily records on the transportation performed (Monthly transportation Diary – MTD)²³. A verified MTD would be the basis for payment. Verification would be organized depending on whether it is an independent or support option. In the first case, records would be verified by the School Principal (or his authorized representative). In case of the supporting role to the main transportation options, verification is to be done by a bus driver/escort person and, at the end of the month, parents submit the MTD to the School Principal as a basis for payment.

Even though the compensation is subject to the proposal, for the purpose of cost planning it has to be calculated.

The costs for taxi usage is to be calculated in the same manner as in the case of transportation organized by parents.

²³ Parents would record daily mileage (regardless of it being a fixed value), time of departure and time of arrival at the school/station, and the list of the students transported.

3.1.1.2.5. Plan Adoption (Step 5)

The procedure of TAAP preparation and adoption should be defined in compliance with local regulations.

The calendar of TAAP drafting, consideration and adoption has to be harmonized with the school calendar. At the same time, we have to underline once again that the TAAP is connected to the school year and not the calendar year. Hence, the corresponding activities and budget have to be prepared in such a manner as to take this specificity into consideration.

This practically means that all activities involved in organizing school transport have to be carried out before the beginning of the school year that the TAAP refers to. This implies that the TAAP has to be adopted at least 3 – 4 months before the beginning of school.

3.1.1.2.6. Monitoring Plan (Step 6)

The monitoring procedure is essential for TAAP improvement. It should be defined in such a manner as to enable all the stakeholders taking part in the process of TAAP drafting and implementation to clearly recognize and accomplish the corresponding tasks.

The overall monitoring and evaluation of student transport service performance are the responsibility of local school authorities, whereas the issues relating to the transportation itself are addressed by local transportation authorities. However, in order to continually improve the TAAP, school authorities are recommended to monitor the TAAP implementation on a daily basis.

Therefore, it is advised to keep registers for each student transport mode envisioned by the TAAP. Those registers should highlight all the irregularities and deviations from the planned timetable, such as students' late arrival due to transportation irregularities, absence of transportation (referring to all transport modes), inadequate behavior of bus personnel, etc. (an example of the register is given in Annex 8.4, Form 3).

Apart from transportation irregularities, the registers should document all possible interruptions regarding the approach to transportation lines (unsafe paths, landslides, etc.) thus aiming to remove them or to envisage prevention measures against such interruptions in the subsequent Plan.

3.1.1.3. Responsibilities in TAAP Preparation

Local education authorities, accompanied by institutions in charge of traffic (or infrastructure, depending on how the duties within the local administration are assigned, that is, whether there is or not a body competent for traffic) and by the police, represent the main participants in the process of TAAP preparation.

Collection of data on transportation demand falls under school jurisdiction. For those purposes, Appendix 8.3 provides the paper forms that could be used by the schools. The education administrations should sum up data provided by the schools and further systematize them by the corridors/routes (i.e. potential routes). These data form the basis for further student transport planning.

The competent traffic department of the local authority and the police have an insight into data on the traffic infrastructure and the existing PT/contracted/school bus/other modes lines. These data form the

basis for mapping the available lines of student transport (including bus stop distribution, as well as the current timetable). The updating of these data is part of the job of the aforementioned bodies.

As for the routes not covered by PT/contracted/school bus/other modes lines, the competent traffic department, along with the competent education authority, is responsible for defining the routes (bus stop layout, timetable) along which student transport is to be organized in accordance with the procedure described in the Item – Route Planning. As long as is necessary, data on these routes are to be kept up to date, which falls under the responsibility of the authority in charge of traffic.

The negotiation over student transport, pursuant to the elements arising from the AAP, shall be performed by the local education authority and supported by the competent bodies in charge of public procurement and financing.

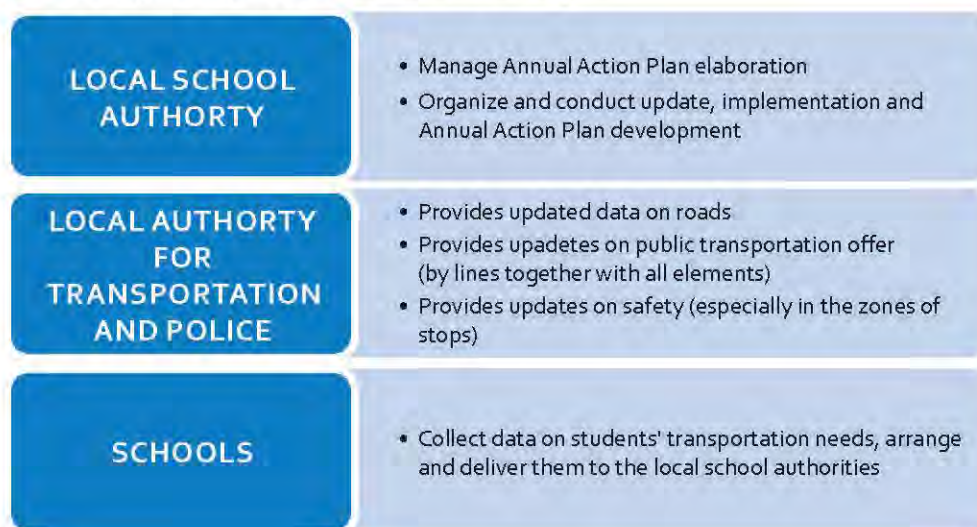
The preparation of the Budget elements (service cost, cost of other measures) is the responsibility of the local education authority, supported by the competent body in charge of financing.

As for safety issues, the competent bodies mentioned above are in charge of registering and mapping danger spots that are critical in terms of car and pedestrian accidents, especially when involving children. This significantly improves the TAAP in terms of envisaging accident prevention measures.

The pedestrian paths connecting the settlements/groups of houses and the PT bus stops are drawn into the same maps, whereas the walking time is calculated. These data are also updated in compliance with the competent departments' needs.

Assignment of responsibilities for TAAP drafting is shown in Figure 20.

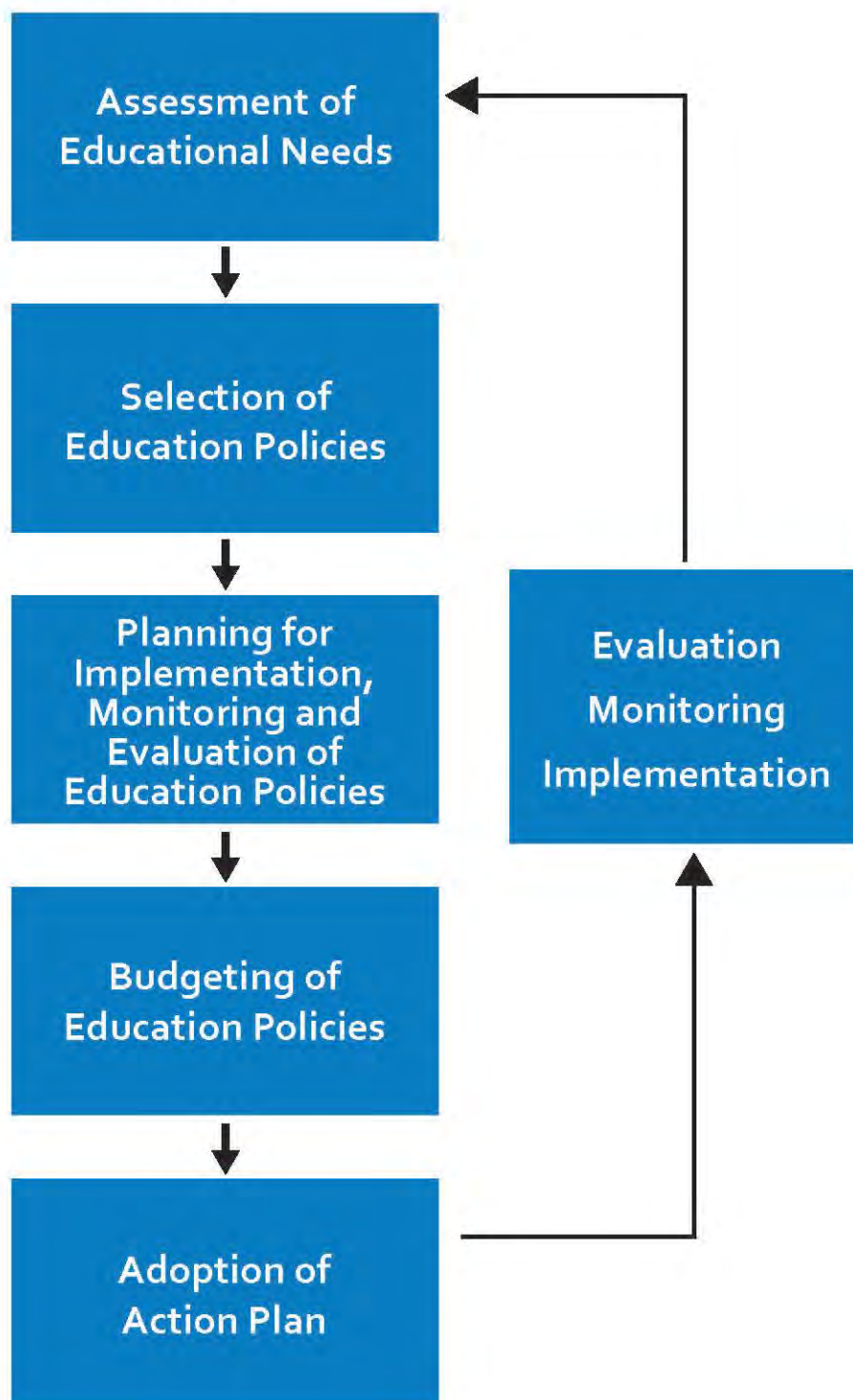
Figure 20 - Shared responsibility in AAP definition and monitoring



3.1.2. The Education Action Plan

The Education Action Plan describes the following: assessment of educational needs for school(s) in the municipality; selection of education policies; plans for implementation, monitoring and evaluation; budget proposal; plan adoption (Figure 21). After the Action Plan is adopted, it is implemented, monitored and evaluated. Evaluation results, as well as new needs assessment, instigate the creation of a new Education Action Plan. Because of the complexity of the needs assessment, diversity of stakeholders, and time needed for the effects of education policies to show, the Education Action Plan should be developed and revised every 3-5 years.

Figure 21 – The Education Action Plan



For assessment of educational needs related to accessibility to education, schools need to identify the most pressing problems in their school(s) against the list of educational policies that can improve accessibility to education, which are presented in Chapter 2. Table 9 shows the questions that each school in the municipality needs to answer in order to assess its status on each of the policies presented in Chapter 2.

Table 9 - Questions for Assessment of Educational Needs Related to Accessibility to Education

EDUCATION POLICIES		QUESTIONS FOR NEEDS ASSESSMENT
Reducing hidden costs to education	Providing school meals for all children	Are students' nutritional needs met (especially those of low-SES and traveling students), both by providing a sufficient amount of food at appropriate intervals and ensuring its nutritional adequacy? Are there problems with the financing, organization and / or quality of school meals?
	Providing free access to learning materials and removing or reducing school fees	Do students have free books? What are their school-related expenses? Are they alleviated, and if so, in what ways?
	Providing direct fund transfers to families	How many students in school receive social benefits? Are those students among the ones at risk of dropout?
Targeting individual students / schools at risk for dropout	Utilizing data systems to allow realistic assessment of the students who drop out or those who are at risk of dropping out	How many school-age children do not go to school in the school's catchment area? How high is the dropout rate from grade to grade in the school? How many students in school are vulnerable to dropout? What are their profiles (low-SES, Roma, SEN)? What affects student attendance – poverty, discrimination, cultural barriers, the teaching process, school-family relationships, something else?
	Intensely intervening in academic, social, and personal lives of students who are at risk of dropout	Which of the strategies listed in Chapter 2 are employed by the school to intervene in the lives of students at risk of dropout?
	Undertaking comprehensive, school wide reform strategies aimed at increasing the engagement of all students in school	Which of the strategies listed in Chapter 2 are employed by the school to increase engagement of all students in school?
	Employing a variety of effective strategies for improving the attendance and academic progression of Roma students	How large is the Roma student body? Which of the strategies listed in Chapter 2 are employed by the school to improve attendance and academic progression of Roma students?
Engaging parents in their children's learning and schools	Developing trusting and respectful relationships with parents	What is the parental engagement in school like? which of the strategies listed in Chapter 2 are employed at school to establish trusting and respectful relationships with parents?
	Developing parental engagement activities and programs that are specifically linked to student learning	Which of the activities listed in Chapter 2 are undertaken at school or by teachers to connect parents with their children's learning?
	Developing the capacity of school staff to work with parents	Are teachers and administrators equipped to engage parents in the ways described in Chapter 2? Have they undergone any training?
Strengthening bonds between schools and local communities	Searching for, seizing and developing a variety of opportunities and concrete services that make schools useful and indispensable resources for everyday life and needs of their communities	What services, apart from regular classes, are offered by the school to the community (students, parents, others)? What other services can the school provide? Are there any opportunities for the school's additional involvement?
	Incorporating local content and conditions into curricula, learning materials and teaching practices that increase the relevance, attractiveness and usefulness of education	How relevant are the things that are taught at school for students' everyday life? Are there curricular and extracurricular activities at school that utilize and incorporate local culture, language, the social and natural environment?

Promoting early childhood education and care	Expanding access and improving quality of ECEC / preschool	How many children in school have attended ECEC / preschool? What percentage of age-appropriate children in the municipality attend ECEC / preschool? What is the capacity of current ECEC / preschool institutions (over-utilized, appropriate for demand, underutilized)?
Recruiting and retaining high-quality teachers	Providing financial incentives and opportunities to teachers	Are there teacher shortages in any subjects in school? How many applicants are there usually for one teaching spot? What are the usual recruitment practices in the school? Which of the activities listed in Chapter 2 are undertaken to provide financial incentives and opportunities to teachers?
	Collaborating with teacher education programs	Which of the activities listed in Chapter 2 are undertaken to collaborate with teacher education programs?
	Requiring greater responsibility of communities in teacher recruitment	Which of the activities listed in Chapter 2 are undertaken to involve communities in teacher recruitment?
	Mandating and financing teacher induction programs, with mentoring and professional development components	Do novice teachers in school undergo formal induction? Are there mentors for novice teachers? Do novice teachers in school utilize professional development opportunities in their first year of teaching?
	Fostering collaborative professional development and involving teachers in decision-making	Which of the activities listed in Chapter 2 are undertaken by the school to foster collaborative professional development and teacher decision-making in school?

Data for needs assessment should be collected by several means: 1) the school's and teachers' own records/ assessment of student attendance, behavior, grades and living conditions; 2) the school's or municipality's communication with social services in the municipality to identify SEN and low-SES students that may be eligible for free school meals and other benefits; 3) the school's or municipality's communication with the birth registrar in the municipality to identify school-age children who do not attend school; 4) the school's communication with parents / questionnaires to identify educational needs of their children, as well as parental concerns and desires; 5) the school's or municipality's communication with community leaders to identify non-attending students and the reasons behind their non-attendance; 6) the school's and teachers' assessment of practices employed at school that are relevant for the policies at hand.

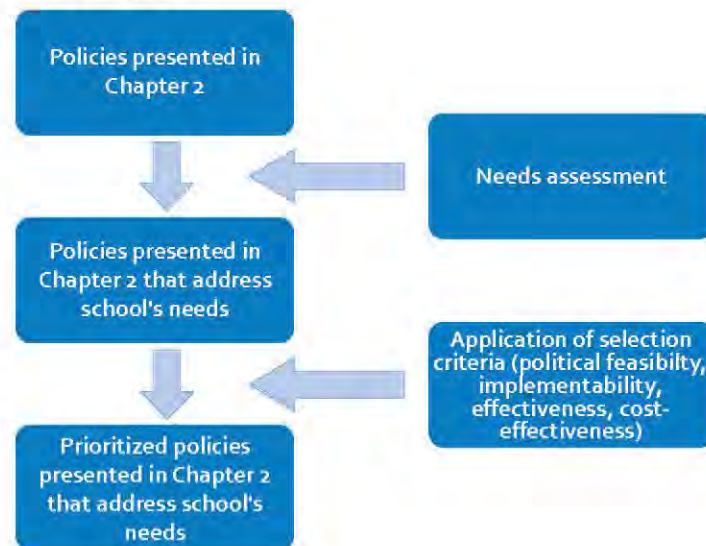
Even though data for needs assessment have to be aggregated for further analysis, this data should be collected at the individual level for each student that belongs to any one of the categories mentioned in Table 9 (e.g. low-SES, Roma, etc.), as well as kept and updated over the course of years. Ideally, this information should be a part of or be easily interchangeable with the EMIS for reliable storage, cross-checking of data, immediate availability of data for all schools in the municipality, and the ability to monitor and analyze data longitudinally. A secondary alternative would be data entry and storage in schools, with the municipality collecting and aggregating data at specific intervals. Qualitative data should be stored and utilized by schools and municipalities.

Collected data need to be aggregated at the school level to produce a school's needs profile on educational accessibility. For each educational measure in Table 9, column 3, individual data should be aggregated so that the school can assess the scope of each potential need associated with accessibility to education. In other words, there would be a set of quantitative and qualitative data describing the prevalence and gravity of particular need(s) within the school (or lack thereof) that need to be addressed in order to improve educational accessibility. A school can, for example, have trusting and respectful relationships with parents, have a mediocre performance in addressing Roma attendance, face serious problems with teacher retention, and so on. Such needs profiles on educational accessibility of each school in the municipality will thus be established so that the schools and municipality can subsequently select appropriate policies that will improve accessibility to education.

3.1.2.1. Selection of Education Policies

Once a school's needs profile on educational accessibility is known, appropriate policies targeting the school's most pressing needs should be selected. First of all, the policies that would most appropriately address the school's needs in regards to improving its educational accessibility need to be selected out of all policies presented in Chapter 2. For example, if the school identified through the needs assessment process that one of its needs is to improve relationships with parents, then a policy yielding trusting and respectful relationships with parents should qualify for further consideration. Secondly, all the qualifying policies targeting the school's various needs would need to be compared to each other using certain criteria that will be outlined below. In doing so, schools and local authorities will be able to prioritize policies in case budgets are limited, support for the policy is low, or some other obstacle listed in the section on criteria that would prevent policy implementation. For example, if the school has a considerable school-level dropout problem, enrolls students whose hidden costs of education are not sufficiently alleviated, and has a high teacher attrition, then policies addressing those needs should be compared with each other based on the selection criteria. This process is outlined in Figure 22.

Figure 22 – Selection of education policies



3.1.2.2. Criteria for Selection of Education Policies

Even though selecting criteria and making criteria-based decisions is notoriously difficult to undertake in education, there are nonetheless soft, sensible principles which local authorities can turn to when choosing education policies. While each of the education policies presented in Chapter 2 is worthwhile in its own right, it is likely that only some can be implemented due to the school's specific needs, limited capacities and budgets. No policy presented in Chapter 2 has precedence over any other. Therefore, educators should carefully consider which policy best fits their needs and goals. The following criteria can guide educators in selecting education policies for implementation²⁴. It is important to stress that these criteria are complex, as they contain several components, and are often intertwined, with their relative importance dependent on the specific policy and context.

²⁴ Authored by Dr. Gregg Jackson, George Washington University.

3.1.2.2.1. Political Feasibility

Political feasibility should be assessed by determining who the opponents and proponents of the policy might be, and what level of power they hold over the decision. The usual stakeholders include the central government, local government, local businesses, media, public, teachers, and parents. For example, public opinion may differ from the opinion of parents of young children on whether local funds should be invested in building a hospital versus building a local preschool. A similar, but somewhat distinct principle that should be considered is the relationship between a policy under consideration and other policies in the greater education policy arena. For example, if the central-level educational authorities focus on Roma inclusion, local authorities may judge that it is wise to select local-level policies focusing on Roma, as they would complement those initiated at the central level, and thus be more likely to garner more funding, more enthusiasm and more acceptance. Conversely, local authorities may decide that a particular set of policies – comprehensive induction programs for novice teachers, for example – already receives sufficient funds and support from the central level, so that they could shift their attention away from teacher retention strategies.

3.1.2.2.2. Implementability

Successful implementation depends on numerous factors, including: 1) there is little controversy over and lots of support for the policy; 2) the policy is specific and clear; 3) initial costs are low / modest; 4) benefits are apparent in the short term; 5) monitoring, incentives and sanctions are well thought out; and 6) implementation is not complex (i.e. the nature of activities, number of people involved and degree of changes required are not extensive). For example, developing trusting and respectful relationships with parents by regularly calling and meeting with parents face-to-face, consulting parents on school policies and plans, and offering incoming families tours of the school appears to be a highly implementable policy. On the other hand, policies targeting the attendance of Roma students usually draw more controversy in the community. This does not mean that they should not be pursued, but that educators should be aware that more effort and planning is needed to override these issues.

3.1.2.2.3. Effectiveness

Future effectiveness of the policy can be judged by several factors, including: 1) implementability – if successful implementation is unlikely, the effects will also be unlikely; 2) the effectiveness of similar policies used in similar contexts and for similar purposes; and 3) anticipation of unintended positive and negative effects of the policy. Even though all the policies described in Chapter 2 have been identified as effective by researchers, their effectiveness in a specific locale will depend on the context, implementability, anticipation of unintended consequences and other principles described in this section. A helpful elaboration of the effectiveness principle is to assess whether a particular policy appears to be effective for several purposes. For example, active and involved communities appear to strengthen parental engagement, help schools extend their relevance, and assist in recruiting teachers, all of which are posited to improve student attendance and other educational outcomes. Therefore, this policy appears to score well on the effectiveness principle. Another elaboration of the effectiveness principle is to consider how strong and unanimous the evidence appears to be behind a certain policy. For example, it is an uncontested and well-established fact that high quality preschool reaps a wide range of large benefits for all children, and especially those from disadvantaged backgrounds. It also has many positive externalities for the society, which makes it a very good societal investment. Therefore, a municipality would likely not be wrong in exerting its efforts on increasing preschool access and improving its quality. However, other policies may still be more easily implementable and have lower cost-benefit ratios in the short-term.

3.1.2.2.4. Cost-effectiveness

A policy that is more effective for the same amount of money than a policy that is less effective should be a preferable option for education policymakers. However, in education it is difficult to assess all the short-term and long-term, individual and societal costs and benefits of a particular policy, as well as attribute outcomes to actual policies [23]. In the absence of cost-effectiveness analyses of the policies described in Chapter 2, it appears sensible to select those policies that address particular educational needs and goals, are inexpensive and fulfill some of the other selection principles outlined here. For example, treating teachers as professionals – fostering collaborative professional development and involving teachers in decision-making – is an effective policy that appears to be quite implementable and inexpensive to undertake. It should be noted though that a thorough analysis of the policy's implementability may reveal that this policy's success hinges on the teachers' motivation or changes in teacher mentality that, in some cases, may not be so easy to achieve.

However, since no selection criterion is subordinate to any other criterion, there are no straightforward and foolproof decision-making guidelines that would help schools and local authorities use the criteria and prioritize policies. Prioritization and selection will largely depend on the local context. Schools are encouraged to thoroughly discuss the policies and carefully apply each outlined criterion to each policy under consideration so that the most appropriate policies are selected for implementation. Policies that are as close as possible to the ideal – that address school's need(s) in regard to educational accessibility and are politically feasible, highly implementable and effective, and relatively inexpensive – should be given the highest priority. A simplified, hypothetical example of how a school can organize its deliberations on which policy(ies) to choose to implement is given in Table 10 below. The school in question would likely select to implement one or more of the following policies: improving attendance and achievement of Roma students; developing parental engagement activities linked to learning; incorporating local content and conditions into curricula, learning materials and teaching practices; and fostering collaborative professional development and involving teachers in decision-making. It should be stressed that the many nuances and complexities that will characterize an actual selection process cannot be shown in the table. Also, it is worth mentioning that even parts of policies that appear suitable should be considered. For example, if central authorities do not provide free books to students, local authorities should still consider negotiating free or reduced-price school supplies with local businesses.

Table 10 - Selection of Education Policies Aimed at Improving Accessibility to Education - Example

		Needs to be improved	Politically feasible	Implementable	Effective	Inexpensive
Reducing hidden costs to education	Providing school meals for all children	X	X		X	
	Providing free access to learning materials and removing or reducing school fees	X	X	X	X	
	Providing direct fund transfers to families					
Targeting individual students / schools at risk for dropout	Utilizing data systems to allow realistic assessment of the students who drop out or those who are at risk for dropping out					
	Intensely intervening in the academic, social, and personal lives of students who are at risk of dropout					
	Undertaking comprehensive, school wide reform strategies aiming to increase the engagement of all students in school					
	Employing a variety of effective strategies for improving the attendance and academic progress of Roma students	X		X	X	X
Engaging parents in their children's learning and schools	Developing trusting and respectful relationships with parents					
	Developing parental engagement activities and programs that are specifically linked to student learning	X	X		X	X
	Developing the capacity of school staff to work with parents	X	X		X	
Strengthening bonds between schools and local communities	Searching for, seizing and developing a variety of opportunities and concrete services that make schools useful and indispensable resources for the everyday life and needs of their communities	X	X		X	
	Incorporating local content and conditions into curricula, learning materials and teaching practices that increase the relevance, attractiveness and usefulness of education	X	X		X	X
Promoting early childhood education and care	Expanding access and improving quality of ECEC / preschool	X			X	
Recruiting and retaining high-quality teachers	Providing financial incentives and opportunities to teachers					
	Collaborating with teacher education programs					
	Requiring greater responsibility of communities in teacher recruitment					
	Mandating and financing teacher induction programs, with mentoring and professional development components					
	Fostering collaborative professional development and involving teachers in decision-making	X	X	X	X	X

3.1.2.3. Planning for Implementation, Monitoring and Evaluation of Education Policies

Implementation of the selected policies needs to be worked out in detail, as concretely and coherently as possible. Even though policies have had to be thought about and scrutinized in detail in the process of policy selection, it is important - for proper budgeting, implementation, monitoring and evaluation - to clearly specify and describe the activities, responsibilities of main implementers, potential obstacles and other issues. Additionally, policies may need to be somewhat adapted to fit implementation in the local context.

Monitoring of education policies that are selected for implementation by schools and municipalities should be agreed on and planned for at the outset. A monitoring timetable, activities and indicators should be devised. A person / team from the local authority and schools should visit and talk to implementers and stakeholders to: ascertain whether the policy is being implemented as intended; identify the obstacles that prevent the policy from being implemented as planned; examine preliminary intended and unintended effects of the policy, and propose solutions that would improve policy implementation. All this should be documented. Monitoring reports should be produced by schools at agreed intervals. For example, if policies to improve parental engagement are implemented, then the school should document the number, nature and quality of parent-teacher interactions, new activities undertaken by the school to engage parents, acquisition and usage of learning materials for parent-student joint projects, and so on. Finally, all costs associated with the policy – direct, indirect, and shared with beneficiaries or other entities – should be accounted for at agreed intervals.

After the policy implementation has been refined, an impact evaluation assesses the overall impacts of the policy – it identifies its intended and unintended, positive and negative effects. Outcomes of the policy should be identified before the policy is enacted and baseline data collected, if possible. Then, at agreed intervals, outcomes should be measured again to ascertain that the policy is having the desired effect. For example, for policies targeting improvement of parental engagement, the parental satisfaction, parental participation in school events, interaction with students in learning activities, and finally, student academic engagement should be measured at the beginning and at specific intervals during implementation to assess the effects of implemented policies.

3.1.2.4. Budgeting of Education Policies

Education policies that improve educational accessibility need to be financed either through earmarked funding from the central authorities, rearrangement of existing funds, pro-active partnerships or external grants. Just as a variety of education policies that can improve educational accessibility exist, so are the means of funding them varied. For example, provision of school meals is commonly financed by the central authorities, as it usually requires more concerted efforts and considerable funds. On the other hand, existing funds can be utilized / rearranged to, for example, undertake professional development of teachers in the area of parental engagement or work in multicultural environments, as those funds may already be set aside for general professional development. Financing of some policies can also largely depend on the pro-active role of principals and local authorities, as they can approach local businesses and organizations to acquire funds / reduce costs (e.g. for school supplies or educational visits), as well as apply to a myriad of local, national and international grants and programs (e.g. for Roma inclusion). It is important to note that funding for policies that are initiated and developed locally should be sought out and secured by the local authorities, regardless of where the funds may originate.

The budget for each activity that the policy entails should be specified at the outset. The budget should account for implementation, monitoring and evaluation activities. Budget contributors – local authorities, central authorities, parents, local businesses, NGOs, etc. – and their share of the budget should also be defined in the Action Plan. In addition, all unexpected costs, indirect costs or social costs should be accounted for. When resources are limited, needs of students from disadvantaged families should be met first.

3.1.3. Adoption of the Action Plan

All the participants should formally accept the Action Plan. Even if the AP does not represent a legally binding document, signatures of the policy implementers should be sought so as to reflect their commitment to successfully enact the selected policies.

A timeline of all the activities relating to the policies should be established at the outset. Also, scheduling of more general matters (e.g., meetings, periods allotted for providing feedback) should also be contained in the plan.

3.1.4. Closing the policy cycle

Evaluation of the implemented policies and new needs assessment instigate the creation of a new Action Plan. After undertaking the needs assessment, selecting appropriate education policies, planning ahead for implementation, monitoring and evaluation, detailing the budget of the selected policies, as well as adopting the Action Plan, the implementation, monitoring and evaluation of the policies, ensue. Upon completion of evaluation, the success of the implemented policies is discussed among the stakeholders. Simultaneously, a new needs assessment is undertaken. Considering both the level of success of the implemented policies and the new profile on educational accessibility of the school(s), it is decided whether to continue, amend or discard each of the implemented policies, as well as introduce new ones. A new, improved Action Plan is created and the cycle starts again.

4. RECOMMENDATIONS

4.1. Transportation Policy Recommendations

The recommendations refer to AAP formalization, and precise definition of entitlement to transport considering student age and terrain conditions. Furthermore, they refer to the specification of the right to subsidies and their levels, and finally to issues of school bus maintenance.

It is recommended as follows:

(1) The first recommendation refers to formalization regarding the responsibility for TAAP drafting, the local authorities' competences thereof, supervision, updating and monitoring.

Programming of student transport needs (also those of poor populations) is falls outside the unique approach related to accessibility to education and is resolved on a case-by-case basis and in a different ways/using different criteria (relating to child transportation and education). TAAP provides a unique procedure for such needs programming.

The authors consider that TAAP formalization enables its drafting and later implementation by the local authorities according to a defined procedure. This may be accomplished by amending the existing education related legislation or issuing special guidelines ruling TAAP implementation. In that context, these Guidelines may serve as a basis.

The TAAP is an essential document that should be developed by each municipality in order to select and implement transportation options that are of the greatest help when improving accessibility to education under local conditions.

The overall monitoring and evaluation of the performance of the student transport service are the responsibility of the local school authorities, whereas the issues relating to the transportation itself are addressed by local transportation authorities.

The TAAP should be implemented first of all in pilot-municipalities under the expert supervision of the Ministry of Education, including the organization of seminars for instruction on how to draw up the Plan.

(2) The second recommendation relates to the definition of rules determining who enjoys the right to transport, be it free or subsidized.

The presented analysis (in Chapter 2 and Appendix 8.1) shows that in SEE Region countries the maximum home-to-school walking distance (so-called Acceptable Walking Distance) is usually used. Once exceeded, the government becomes responsible for transport provision.

In such cases no attention is being paid to student age or terrain characteristics. Younger children walk more slowly than older ones, they find it more difficult to deal with climbs, etc.

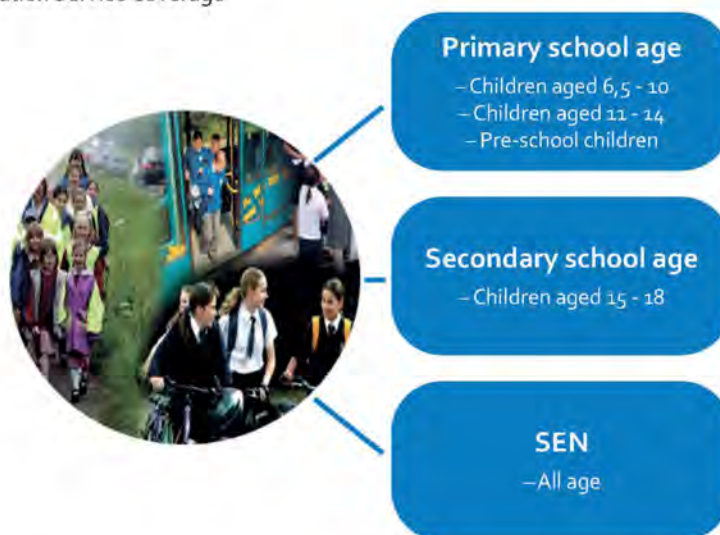
In this context, the following is recommended:

First, and starting from concrete regulations enforced in SEE region countries, the setting up of the following age ranges with respect to which acceptable walking distances will be determined, is suggested:

- Elementary school age:
 - *Children in the first group*: aged 6½ - 10, that cannot perform the trip to school without an escort,
 - *Children in the second group*: aged 11 - 14, that can perform the trip to school without an escort and
- High-school age:
 - *Children in the third group*: aged 14½ - 18 that can perform the trip to school without an escort.
 - *Children of all school ages*: aged 6½ - 18, if included in *the SEN group*.

The group of Elementary school age children should also include pre-school age children (ages differ within the Region) in compliance with the financial possibilities of the Municipality (Figure 23).

Figure 23 – Transportation Service Coverage



Secondly, it is suggested that the acceptable walking distance should be in accordance with children's age and terrain characteristics.

As for the terrain characteristics, a classification taking into consideration terrain/landscape characteristics of the SEE Region countries has been adopted. The classification is based on the available sources of information²⁵.

The following matrix could be used for defining terrain characteristics according to the controlling authority:

Table 11 – Criteria according to Terrain Properties

Prevalent terrain type at the Municipality level	Criteria
Plain	Up to 300 m above sea level
Hilly	Up to 300 to 800 m above sea level
Mountainous	More than 800 m above sea level

²⁵ Law on agricultural land (Republic of Srpska – Official Gazette RS, No. 1, 2004, Federation of Bosnia and Herzegovina – Official Gazette, No. 1, 1998, Instructions for unique methodology of agricultural land classification into value categories, Federal Ministry of Agriculture, Water Management and Forestry, 2009, GIS land valorization for the purposes of optimal route selection – E. Ferhatbegovic, A. Avdic, N. Kikanovic, www.gis.ba/gis).

With respect to the above defined prevalent terrain characteristics, when defining acceptable walking distance the following rules apply:

- *Distance measurement*: an appropriate map (topographic map) is used and the distance is measured from home (approximate location) to school along the shortest route.
- *Acceptable walking distance* (in one direction) is defined as shown in Figure 24.

The aforementioned criteria are suggested for location determination in qualifying students for transportation entitlement (eligible students).

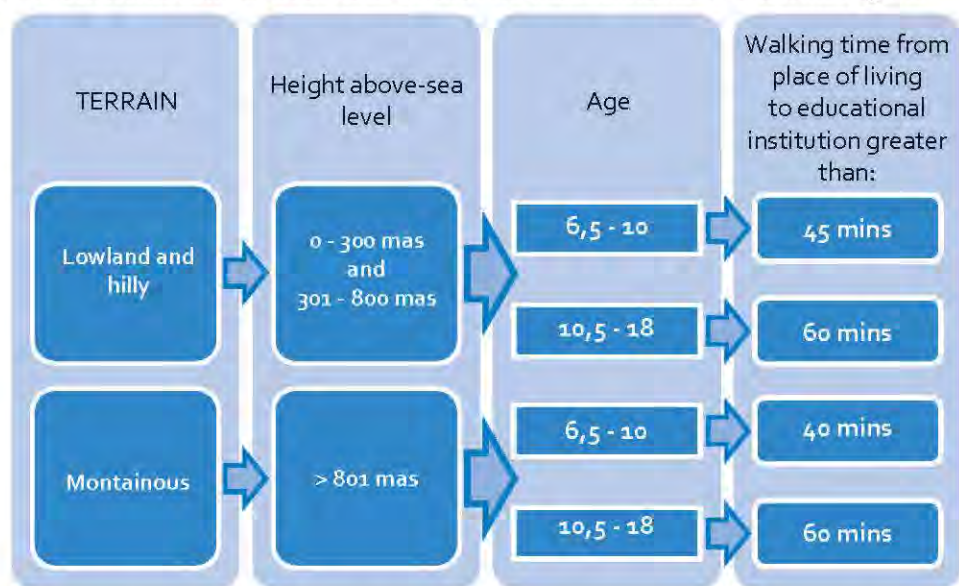
Figure 24 - The connection between terrain characteristics and maximum home-to-school walking distance

TERRAIN	Height above-sea level	Age	Distance of place of living from educational institution exceeding:
Lowland and hilly	0 - 300 mas and 301 - 800 mas	6,5 - 10	3 kms
		10,5 - 18	4 kms
Mountainous	> 801 mas	6,5 - 10	2 kms
		10,5 - 18	3 kms

Thirdly, distance does not represent accessibility conditions adequately, and home-to-school walking time is to be considered. The processors believe that a more suitable solution would be to determine the maximum acceptable walking distance using a time criterion – acceptable walking time. Thereby, the physical characteristics of children of different ages would also be taken into consideration when calculating walking speed. Of course, in this case the walking time should also be connected to terrain characteristics.

If acceptable, the rules explained in Figure 25 are suggested:

Figure 25 – The connection between terrain characteristics and maximum home-to-school walking time



Note: walking time is derived from pedestrians' walking speed – level terrain implies a walking speed of 4km/h, whereas mountainous terrain implies a walking speed of 3km/h. This speed can be adjusted to concrete ground conditions.

In relation to the aforementioned criteria, an exception for SEN students applies. That exception includes students with mobility problems or other medical (mental) problems requiring special transportation conditions from/to school. These students are provided with transportation from/to school regardless of the distance/time needed.

At the parents' request and upon assessment by a competent person from the school authorities based on a physician's opinion, the aforementioned may be waived. In that case, the criteria of acceptable walking distance/duration may be applied, or may be corrected using the corrective factor of 0.5. Parental consent must be obtained for these new (calculated) values of walking distance/duration.

Students having a temporary mobility problem (e.g. broken leg) also belong to the group of exceptions being referred to, as they are unable to walk to school.

(3) Due to the fact that in SEE region countries different practices are being applied in terms of setting up clear criteria for definition of entitlement to free or subsidized transportation, it is suggested to define a uniform framework serving as a basis for establishing new practices supported by well-known principles.

Hence, it is recommended that the entitlement to cost-free transportation should apply to the following students:

- *Elementary school students of all ages, and high school students belonging to financially disadvantaged families, and*
- *Students of all ages, if they belong to the SEN group.*

Identification of entitlement to cost-free transportation for students belonging to financially disadvantaged families is accomplished according to records kept by the competent authority²⁶.

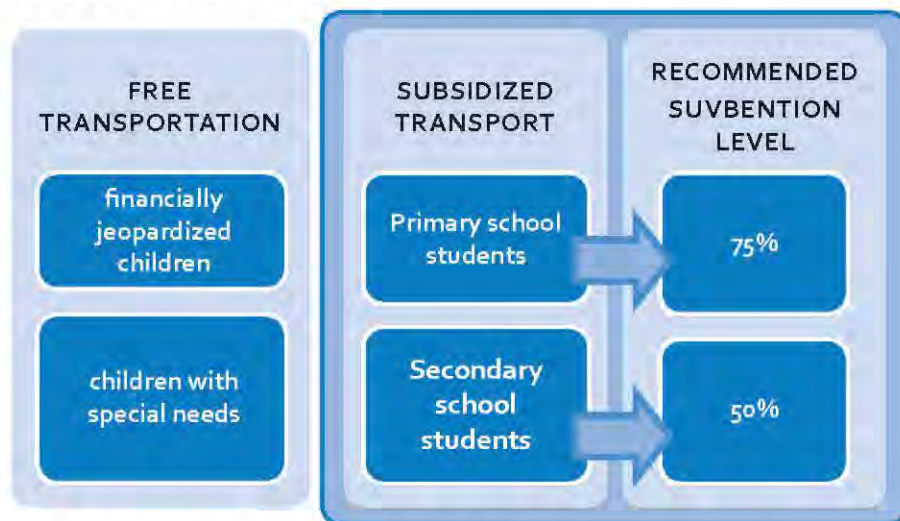
²⁶ In Serbia, the secretariats for social welfare at municipal authorities are in charge of these matters.

The right to transportation with applicable subsidizing applies to other students, as follows:

- *Elementary school students* are subsidized at 75% of the total cost of transportation service,
- *High school students* are subsidized at 50% of the total cost of transportation service.

The values listed above should be treated as a recommended framework, and all the adjustments to concrete on the ground conditions should comply with existing economic power.

Figure 26 – Free transport and subvention criteria



(4) School bus rolling stock management is an issue that deserves special attention. Even though these buses have a dedicated use, management by local authorities allows the possibility of using them for transportation of other populations, when not engaged for transportation of students (for example organizing special tours for citizens aiming to do business in the centre of the municipality, such as that related to administration, visits to the doctor etc). Transportation organized in this way is of great significance for those municipalities/parts of municipalities with no organized public transport, and may be a part of the municipal policy on improvement of general living conditions. In addition, by charging for the transportation service an additional income would be provided that could repay one part of vehicle operating costs.

As for the supply of the school buses, it should be based on a pre-study specifying the needs (number) and the bus structure. No less important is the issue of defining the following procedures: maintenance of the supplied rolling stock (upon warranty expiration) and the responsibility for rolling stock management. The Bulgarian experience could be a reference point for countries of the SEE region, although these Guidelines recognize some of their shortcomings in connection to the management and maintenance, depreciation, etc.

4.2. Education Policy Recommendations

4.2.1. Specific Education Policy Recommendations

In order to select and implement education policies aimed at improving accessibility to education, certain actions are usually required of multiple stakeholders. Table 12 details the necessary actions / recommendations for schools, local authorities and central authorities, so that the specific education policies presented in Chapter 2 can be undertaken. Additional, more general recommendations spanning several education policies are given in a later section.

Table 12 – Recommendations for Schools, Local and Central Government aimed at Improving Access to Education

POLICIES	RECOMMENDATIONS	
	LOCAL AUTHORITIES AND SCHOOLS	CENTRAL AUTHORITIES
Providing school meals for all children	Organize school meal provision if funds are available.	Continue / consider financing school meals for all students, but particularly for low-SES students.
Providing free access to learning materials and removing or reducing school fees	Partner with the local community, organizations and businesses to provide free school supplies for students, free educational trips and activities (visits to museums and theaters, for example). Priority should be given to low-SES students.	Continue / consider providing free learning materials for all students, but primarily for low-SES students.
Providing direct fund transfers to families	Act as a liaison between social services, schools and parents if funds are available.	Consider instituting conditional cash transfers for low-SES families in return for their children's school attendance, without withdrawing existing social benefits.
Utilizing data systems to allow realistic assessment of the students who drop out or those who are at risk of dropping out	Collect data and identify students at risk of dropping out. Ask / lobby for development of an Educational Management Information System (EMIS).	Develop an Educational Management Information System (EMIS) for safe storage, instantaneous accessibility and longitudinal analysis of data needed for monitoring of both students and schools at increased risk of dropout and of the implementation and effects of dropout prevention measures.
Intensely intervening in the academic, social, and personal lives of students who are at risk of dropout	Undertake dropout prevention / reduction activities described in Chapter 2. Most appropriate role for local authorities: Act as a liaison between schools, social services, mental health services and law enforcement.	Consider organizing the curriculum so that students do not repeat the entire year if they are failing several classes. Consider providing mandatory courses to failing students over the summer to finish coursework.
Undertaking comprehensive, school wide reform strategies aimed at increasing engagement of all students in school	Undertake dropout prevention / reduction activities described in Chapter 2. Most appropriate role for local authorities: Act as a liaison between schools and local businesses to provide internships for VET secondary school students and organize job fairs for them.	Increase engagement in education of secondary school students by providing relevant VET options and providing better horizontal and vertical integration between VET and academic tracks within the educational system.
Employing a variety of effective strategies for improving attendance and academic progression of Roma students	Undertake effective strategies for Roma described in Chapter 2 and Appendix 8.4. Most appropriate roles for local authorities: Partner with Roma parents and community leaders, as well as with local NGOs, on programs targeting Roma involvement in education. Act as a liaison between schools, health and social services and Roma communities.	Provide the overall policy framework for Roma integration. Stimulate the development and attendance of professional development courses improving capacities of school staff to work in multicultural environments. This could be accomplished either by mandating attendance of or financing relevant existing courses, or by promising to mandate or finance courses that would be newly developed to produce those specific teacher skills. Prevent homogenization of classrooms and schools by minority or SES status by abolishing unnecessary channeling of students into special needs classrooms and schools, limiting ability tracking and ensuring an even mix of the student body in oversubscribed schools.

Developing trusting and respectful relationships with parents	Undertake parental engagement activities described in Chapter 2 and Appendix 8. 4. Most appropriate role for local authorities: Act as a liaison / organizer of activities that provide smooth transitions between schooling levels (e.g., visits of preschoolers and their parents to neighborhood schools).	
Developing parental engagement activities and programs that are specifically linked to student learning	Undertake parental engagement activities described in Chapter 2. Most appropriate role for local authorities: Act as a liaison between schools and local after-school or other programs to link their content to classroom teaching to reinforce student learning.	
Developing the capacity of school staff to work with parents	Ask / lobby for the development and attendance of professional development courses that improve the capacities of school staff to work with parents and utilize already existing, relevant professional development courses.	Stimulate the development that improves the capacities of school staff to work with parents. This could be accomplished either by mandating attendance of or financing relevant existing courses, or by promising to mandate or finance courses that would be newly developed to produce those specific teacher skills.
Searching for, seizing and developing a variety of opportunities and concrete services that make schools useful and indispensable resources for the everyday life and needs of their communities	Consider undertaking activities described in Chapter 2, as well as generate ideas of your own. Most appropriate role for local authorities: Act as a liaison and information provider between schools, local community, organizations and businesses.	
Incorporating local content and conditions into curricula, learning materials and teaching practices that increase the relevance, attractiveness and usefulness of education	Undertake activities described in Chapter 2. Most appropriate role for local authorities: Act as a liaison and information provider between schools, local community, organizations and businesses.	Consider formally adapting national curricula to allow some local flexibility and increase diversity of electives.
Expanding access and improving quality of early childhood education and care (ECEC) / preschool	Local authorities: Provide ECEC / pre-school. Enable / aid legal conversion of closed primary schools into ECEC centers / pre-schools where needed.	Enable / aid legal conversion of closed primary schools into ECEC centers / pre-schools where needed. Consider expanding access to pre-school education by lowering mandatory age for enrollment into preschool. Consider improving initial training of ECEC and pre-school teachers.
Providing financial incentives and opportunities to teachers	Local authorities: Undertake activities described in Chapter 2.	Provide financial incentives for good teachers willing to work in hard-to-staff schools if this is in line with the established priorities of central authorities (e.g., improving education of Roma students or improving education in remote rural areas)

Collaborating with teacher education programs	Undertake activities described in Chapter 2. All the activities are appropriate for local authorities.	Enable teacher training institutions to attract higher quality students by increasing the number of spaces at teacher training institutions that are centrally financed. Induce teacher training institutions to develop courses that address educational accessibility problems (e.g. a course focusing on school-family-community partnerships). Consider inducing teacher training institutions to develop dual majors, such as mathematics / physics, biology / chemistry, history / geography in order to more smoothly absorb changes in teacher availability. Both curricular interventions can be done through increasing funding to teacher training institutions that adapt their curricula to produce teachers with competencies defined by Ministries. Alternatively, Ministries of education could stir curriculum development by partnering with teacher training institutions in programs such as TEMPUS, which support curricular and structural reforms in higher education. Finally, financial incentives can be created by the central authorities for teacher training institutions to establish partnerships with local authorities / schools.
Requiring greater responsibility of communities in teacher recruitment	Undertake activities described in Chapter 2. All the activities are appropriate for local authorities.	
Mandating and financing teacher induction programs, with mentoring and professional development components	Facilitate induction programs when they are instated centrally. Recruit informal mentors to novice teachers within the school if no induction programs exist. Ensure that novice teachers undergo professional development.	Mandate and finance induction programs with mentoring and professional development components.
Fostering collaborative professional development and involving teachers in decision-making	Undertake activities described in Chapter 2. Most appropriate role for local authorities: Act as a liaison and information provider between administrators and schools.	

4.2.2. General Education Policy Recommendations for Central Authorities

Additional, more general recommendations that are useful for multiple policies and that are under the purview of central authorities are given below.

Consider providing earmarked funds to local authorities /schools to use transparently and accountably for improving accessibility to education. These funds should be used to finance concrete policies that are selected as most needed and agreed upon in the Action Plan (e.g., acquiring learning materials to support parental engagement activities and programs that are specifically linked to student learning). Policies that are usually adopted at the national level (provision of school meals and provision of free learning materials) or require greater financing and involvement of central authorities and other stakeholders (mandating and financing induction programs with mentoring and professional development components) need to be funded from sources other than these earmarked funds. Earmarked funds could be distributed to those local authorities / schools that apply for funds with a prepared AP, as they are obviously willing to address their educational accessibility needs. In order to maintain equity, however, a portion of the earmarked funds should be reserved for the local authorities / schools that are identified as being in dire need of improving accessibility of education regardless of whether they apply for funds. The latter group should also be provided with help in developing their capacities for crafting and implementing the AP.

Establish an advisory resource center at the Ministry of education in order to support schools and local authorities in their attempts to improve accessibility of education to students. This advisory resource center should be able to answer and direct inquiries from local authorities or schools on a variety of practical questions – how to apply for funds, select appropriate professional development or identify NGOs in their area. They could also provide them with additional resources – in-depth research reports or details on innovative projects in the world – as well as coordinate regular meetings / networking of local authorities in charge of education. Finally, the advisory resource center could be in charge of establishing or utilizing a variety of venues to inform local authorities and schools of opportunities that exist for them to improve educational accessibility (see below).

Provide / encourage regular meetings / networking of local authorities in charge of education so that ideas and best practices relating to educational accessibility can be shared. Utilize already established structures within the central government (e.g. Sector for School Authorities and Inspectoral and Supervision Affairs at the Ministry of Education of the Republic of Serbia) or independent networks (e.g., Standing Conference of Towns and Municipalities (SKGO) in Serbia).

At regular intervals, take stock of the impact of implemented policies documented in APs of local authorities. Identify reasons behind less and more successfully implemented policies. Work with local authorities on amending less successfully implemented policies. Promote best practices of more successfully implemented policies.

Build capacities of local authorities to craft and implement the AP through training.

Establish a variety of mechanisms for informing local authorities and schools about local, national and global programs / grants / funding sources, local NGOs, community organizations and support services available to them in order to improve accessibility to education. These mechanisms include, but are not limited to: websites of the Ministries of education, web portals used by teachers, the news section of the EMIS, regularly distributed e-mail or printed newsletters to local authorities and schools, regional centers for professional development (such exist in Serbia, for example), and regular meetings / networking of local authorities in charge of education.

Finance research on dropout causes / profiles of dropouts in specific countries, if needed.

4.2.3. General Education Policy Recommendations for Local Authorities

In addition to the policy-tailored recommendations presented in Table 12, more general recommendations that are relevant for multiple policies and are under the charge of local authorities are summarized below.

Ask / lobby for the specific above-mentioned recommendations to be undertaken by the central authorities, namely: establishment of earmarked funds; establishment of an advisory resource center at the Ministry of Education; provision of regular meetings / networking of local authorities; building the capacities of local authorities to craft and implement the AP; and establishment of a variety of mechanisms for informing local authorities and schools about local, national and global programs / grants / funding sources, local NGOs, community organizations and support services.

Proactively seek and apply to local, national and global programs / grants / funding sources, local NGOs, community organizations and available support services in order to improve accessibility to education.

Urge schools to consider rearranging existing funds to finance some educational accessibility policies (e.g. utilize money for professional development through specific professional development courses that address parental engagement).

Establish regular meetings / networking of schools under the same jurisdiction so that information, ideas and best practices relating to educational accessibility can be shared.

Network with other local authorities through established structures within the central government (e.g. Sector for School Authorities and Inspectoral and Supervision Affairs at the Ministry of Education of the Republic of Serbia), independent networks (e.g. Standing Conference of Towns and Municipalities (SKGO) in Serbia) or other means (e.g. regional centers for professional development) so that information, ideas and best practices relating to educational accessibility can be shared.

5. SUSTAINABILITY

5.1. Transportation AAP Sustainability

A fundamental aim of the overall effort to create the Guidelines is to come up with a sustainable solution for how to improve the availability of educational and transport services. Furthermore, the offered suggestions/solutions encompass the overall problems of student transport. They also address the problem of students coming from socio-economically vulnerable families and those with any kind of health issues (limited mobility, disrupted development) contributing to their social inclusion.

Sustainability implies the following:

- Starting from the criterion of uniform accessibility, the TAAP will be considered socially sustainable if all the students encompassed by the transport service do not spend more than two daily hours in traveling from home to school and back;
- Also, the TAAP shall be socially sustainable if the organization of student transport enables commuters to participate in extracurricular and other social activities.
- the system created by the local authorities can be financed from its own funds, without any additional help from the central level of authority.
- the system does not involve any elements of social and economic discrimination/financial accessibility in compliance with the users' economic power.

The TAAP will be considered socially sustainable if it offers a transparent procedure of enjoying the rights to free/subsidized transport. In that sense, recommendations and solutions offered by the Guidelines may be quite helpful.

The Guidelines support the responsibility for provision of adequate accessibility to education by defining a transparent procedure that rules the needs and measures at the annual level, not only in connection with transport, but also with other issues relating to infrastructure. The fact that TAAP definition and implementation fall under the responsibility of local authorities may imply that they will strive to find suitable solutions for all relevant issues concerning transport.

The circumstance implying that TAAP drafting should be carried out by the local authorities, reinforces their responsibility for adopting sustainable solutions, which must never jeopardize quality. Of course, the problem of insufficiently developed municipalities remains the outstanding issue in the countries of the SEE region, hence the continued need for support coming from central level authorities.

5.2. Sustainability of Education Policies

To make education policies sustainable and effective in the long run, the recommendations given in previous sections should be heeded. Several specific recommendations are particularly emphasized.

Local authorities and the schools under their jurisdiction should formally agree to carry out parts of education policies that they agree are responsible. Regular monitoring and evaluation, as well as regular meetings to discuss the progress and plan further activities, should sustain the education policies selected for implementation.

Consistent financial, advisory, regulatory or political support should be secured for many education policies carried out at the local level to be successful. Obtaining such help from central authorities is crucial for both the implementation and sustainability of many policies.

Capacity building of both local authorities and schools should enable them to improve their skills to carry out policies successfully, improve self-efficacy, maintain motivation, start owning the implemented policies and generate ideas for improvement. All these should work toward sustaining selected policies.

Parents and students should regularly be kept informed about the initiation, progress and impact of the implemented policies, as well as surveyed about their level of satisfaction with them. They will be the best monitors of any local policies.

Schools and local authorities should network with other schools and local authorities not only to share information, ideas and best practices, but to also acquire / maintain allegiance with the teaching profession, participate in a wider professional discourse, feel appreciated and renew / maintain an impetus for improvement.

6. FUTURE DIRECTIONS

Improvement of accessibility to education is a continual, long-term endeavor. Implementation, monitoring and evaluation of the aforementioned policies will undeniably uncover new and unforeseen areas where improvements will be needed. By gaining experience, the capacities of local authorities will improve so they will be ready to tackle new, more complex policies.

The TAAP, or the Overall Student Transport Plan which is how they refer to it in Great Britain, represents a document rendered by the local authorities covering all the issues of importance for safe, sound and sustainable accessibility to educational institutions. With its scope, this document represents *an integral part of an overall local policy of improvement of accessibility to social, educational, health institutions for all citizens.*

Within the aforementioned framework, the TAAP suggested in these Guidelines should develop, in the future, into a comprehensive document addressing all the issues connected to educational institution accessibility for children.

In developed countries the way of planning accessibility to educational and transportation services is based on clear procedures. Planning at the annual level represents a part of routine practice. In the last few years, the planning scope has been broadened. Since 2006, the practice of Overall Student Transport Plan drafting has been initiated in Great Britain (see reference 9). This document addresses the following issues:

- **The issue of safe walking from/to the nearest school** through the creation of solutions that stimulate such practice (with the purpose of reducing the participation of parents in student transport), especially in rural areas and smaller municipalities;
- **Stimulating bicycle use**, wherever conditions are favorable, through the construction of the required infrastructure (bicycle lanes, the possibility of safe bicycle storage);
- **Improving the safe student transport criterion** (possibility of seat reservation for younger children, introduction of seat belts in school buses, etc.);
- **Boosting transportation comfort** (air conditioned buses, etc.)

In education, distance learning has been steadily gaining ground worldwide. Educational institutions in the SEE region have not yet fully embraced the potential of distance learning, so this topic was not addressed in these Guidelines as a mainstream option for improving accessibility to education. However, to improve accessibility to education for the most remote students, it is likely that distance learning will need to be taken up by the local authorities and schools in the near future. Distance learning – especially via interactive technology that provides classroom-like, real-life and hands-on experiences – would provide a comprehensive and advanced curriculum to students and professional development opportunities to teachers [37]. However, this venture requires access to high-speed internet connections and the resources necessary to support and maintain these kinds of networks. Working on providing schools and municipalities with these kinds of resources is a task fit for local and central authorities, who could, for example, provide incentives for telecommunication companies to provide the necessary services in those areas [37].

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8. APPENDICES

8.1. Case studies

This appendix contains a review of existing practices. It is classified by regions – the experience of EU countries and the USA is commented on separately, with a special emphasis on the experiences of the SEE Region countries. Also, classification is done with respect to modes of transport, thereby simplifying the use of the Guidelines. The review fulfills the general picture presented in Item 2.1.

For completing the general picture, visits were organized to a certain number of municipalities in Bulgaria and Serbia that were chosen as representative examples of the condition of student transport. In addition to the performed visits, the Study team conducted surveys in a number of schools in Serbia.

The insights obtained from literature, as well as the knowledge acquired during visits to Bulgaria and Serbia, point out that there are common denominators of the policies regarding the responsibility for transportation service provision, implemented practical solutions, issues related to the definition of the coverage of children, entitlement to free transport, service financing as well as other issues related to transport (other modes of transport, issues related to the improvement of transport capacity usage and manners of transportation demand management).

8.1.1. EU countries and the USA

The selection of countries in this section was driven by the available literature, highlighting relevant experiences. The choice, however, did not influence attitude creation and, moreover, some of the experiences were instructive for creating the Guidelines.

Hungary, Spain and Greece were included in the ARTS (Action on the Integration of Rural Transport Service) Project, a part of the Fifth EU Framework Programme, dedicated to innovative transport policies in EU countries.

Transporting Children Using Public Transportation in Selected EU Countries

Holland²⁷

Students mainly rely on cycling. At the age of 16, some switch to mopeds. Less than 30 percent of students use PT. In larger areas, however, education is the most important motive for travelling by PT. Separately organized school transport is rare, operating mostly in rural areas striving to attract students from urban areas.

A student's home municipality is responsible for providing organized transport to schools. Until recently, children under the age of 10 were entitled to support for traveling to religious schools of choice at distances exceeding 4 kilometers on "the shortest possible road"/ the equivalent of an hour's walk.

PT is also preferred for children who are mentally and physically able to use it (accompanied by parents if necessary).

²⁷ Source: Enne de Boer, *The Dynamic of School Location and School Transportation*, TR News 237, March - April 2005

Hungary²⁸

In Hungarian families that do not own a car, children aged 6–14 use PT (bus, train) often suffer long transfer delays between two or more services. School transportation is funded at the municipal level.

The UK²⁹

The provision of home-to-school transport is regulated by the Education Act 1996 (in England and Wales, and similar legislation in Northern Ireland) which defines a maximum walking distances of two miles for children under eight, and three miles for older children up to the age of 16, to the nearest school³⁰. Children whose distance from the „nearest suitable schools” exceeds the maximum stipulated distance, are entitled to free transportation. The statutory distances do not distinguish between urban and rural areas, and do not take the nature of the route into account.

The current practice strictly separates the pupils entitled to free transport from those paying the full price for it, in case they don't attend the „nearest available suitable school”.

In some districts (the Kirklees district School) pupils pay half fare, and those over 11 years of age require a Young Person's Photocard³¹.

Children over 8 but under 11 who come from low-income families are entitled to free transportation if they live at a distance exceeding 2 miles from the nearest available school with space in the relevant year group (Low-income families are defined as those who are entitled to free school meals or those who are receiving their maximum level of Working Tax Credit (WTC)³²). Travel support for children from low-income families (defined as above) will be extended in one of two ways: to a choice of schools within 6 miles (but more than 2 miles) of the child's home, or to the nearest school that is preferred due to parents' religious beliefs up to a maximum distance of 15 miles from the child's home. A child's 'home' is the place where s/he normally resides³³.

Outsourcing Transportation Services to Private Providers

Holland³⁴

The transport consequences of integrating schools into larger units were not taken into consideration. The planned physical relocation is unlikely to cause changes in the choice of travel mode. Students cycle distances of up to 5 kilometers all year round, and the school journey is unlikely to exceed that distance. Moreover, PT is insufficient and therefore is not an attractive alternative.

If the journey by PT takes more than 1½ hours, and if the commute can be reduced to less than half the time, special transport must be provided. If special transport must be provided for one or two children, municipalities will assign the remaining seats to other students. Municipalities often cooperate in organizing this transport, usually under contracts awarded after competitive bidding. The contracts, however, make few stipulations about quality and safety.

²⁸ ARTS: Action on the integration of Rural Transport service, is a project within the fifth framework programme of the European Union – competitive and sustainable growth. The main goal of the ARTS project was to test and demonstrate the effective provision of innovative transport services in the rural environment, DEMOSTE – DEVELOPMENT, Hungary, www.rural-transport.net

²⁹ Extracts from the document: School Transport – Eighth Report Session 2003-04, House of Commons, Transport Committee, Volume I, 31 March 2004

³⁰ *Statutory walking distance* is measured along the route that a child might reasonably be expected to walk to school (accompanied if necessary) from its home and return along at the end of the school day.

³¹ Sustainable Travel Strategy, Kirklees Council – West Yorkshire, England

³² Travel to school policy for Children and Young People's Services, Bristol City Council

³³ Same as in footnote 29

³⁴ Source: same as in footnote 27

The volume of transport often precludes the use of large buses, which would take too long to collect a full load. Most special transport is provided by minibuses and taxis, which pick up the children at home.

Previously, only children ages 10 and older had to be provided with a bus seat. Three children aged 4-10 could be placed on two seats, and those under the age of 10 did not need a seat – they could sit in someone's lap. Since January 2004, every child must be provided with a bus seat and seatbelt, which must be fastened during the ride. This has increased the cost of transport considerably, leading to the standard of 6 kilometers.

The UK³⁵

Most LEAs contract at least some home-to-school transport out to the private sector. Some municipalities³⁶ currently provide transport for pupils with SEN through private contractors. In cases of several individual contracts, varying in the size of vehicles provided each day, centralizing this service allows the combination of contracts and therefore a reduction in the need for additional vehicles and expenditures. Even if technically roadworthy, buses used for home-to-school transport are often 20-30 years old. It is unacceptable for school children to be forced to use the oldest buses on the road³⁷.

The use of private operators increases the number of vehicles available for other purposes too.

To improve the safety and comfort of school buses, LEAs should specify minimum service quality standards in tenders. The specifications for buses allocated to general public use were much higher than the specifications applied by the same authority for vehicles that convey school children. Contractual specification enables introducing requirements for vehicles, providing thereby improvements of the service. These include using only vehicles below a certain age, which reduces carbon emissions, pollution etc. All vehicles under contract pass a semestral inspection by an independent garage and are issued a certificate to demonstrate their suitability. All drivers and escorts who work under contract are to pass a Criminal Records Bureau check before they start working³⁸.

Although LEAs are required to secure the best value when negotiating school transport contracts, contracts are traditionally awarded to the „lowest price bidder as a poor interpretation of best value provider“. Most authorities ruled out the three-for-two rule³⁹. The shortage of companies tendering for school bus contracts meant that it was time to look at the tendering regime, as many authorities interpret „best value“ as „lowest cost“, which is not ideal⁴⁰.

Hungary⁴¹

Over the last few years, schools in rural areas in Hungary have closed their doors and moved to larger population centers, thus forcing parents to drive their children to school twice a day.

In order to contribute to school transport development, two regular school buses have been introduced between Kecskemét and two nearby settlements, Matkó and Szarkás. School buses operate every school day in the morning and in the afternoon with a fixed schedule. The local bus company Kunság Volán has been contracted for the service. The average trip is 11-12 km and takes 15-20 minutes. The demonstration started in September 2002 and has proved to be a great success, both for parents and students.

³⁵ Same as in footnote 29

³⁶ Same as in footnote 33

³⁷ Same as in footnote 31

³⁸ Same as in footnote 32

³⁹ Regulation 5(1) of the Public Service Vehicle (Carrying Capacity). Regulation 10984 allows three seated children under 14 to count as two passengers if seatbelts are not fitted.

⁴⁰ Same as in footnote 31

⁴¹ Source: same as in footnote 28

School Bussing

Spain⁴²

School transport is well funded by the state and is contracted to local operators. In many cases school buses and mini-buses operate with significantly underused capacity. Legal issues and lack of coordination between government departments (education and transport) usually imply that only students can use school transportation services.

During the 2002/2003 school year, in the region of Galicia in three municipalities in the east of the Ourense province - a very rural and sparsely populated area - 13 school services served stops in 36 villages, most of them without public transport. The services encompassed all types of passengers who travel to the three main villages, arriving early in the morning and leaving in the afternoon, according to school timetables. Shopping or going to the bank, visiting the doctor, taking the bus to the outskirts or just spending the morning in the main village are activities that could be arranged thanks to these new services. This solution demonstrates how to integrate regular and school transport using underused school bus capacities.

Greece⁴³

In the South Crete region (Messara Valley) which is mainly mountainous, sparsely populated and dominated by an agricultural population, the students of elementary and high schools are conveyed by their parents to the nearest public transport line. Local authorities of the Messara Valley already possessed a minibus, which was mainly being used only for school trips, until they decided to use it for transport of students to school.

USA⁴⁴

Student transportation, also known as school bussing, has become one of the most important segments of the American education system. It is subject to the same rules one might find in classrooms, including the dictates of the Americans with Disabilities Act (ADA) of 1990, and a host of laws and rules governing disabled or special needs pupils.

The number of school children using school buses soared:

- in 1950, 7 million children were transported by 115,000 school buses,
- in 1960, 22,625,116 children were transported by 448,307 school buses.

The fifty states spent \$11,746,576,005 for the 1999/2000 school year, which included expenditures for transportation and capital cost of purchase or school bus replacement. Public school transportation approximately amounts to \$500 per year per pupil.

The school bus remains the safest form of land transportation. It is safer than the automobile, truck, public bus, or train. School buses are designed and manufactured specifically for the safety and protection of student passengers.

The UK

Some local authorities have introduced yellow buses for their free home-to-school transport as an alternative to the existing school transport contracts. The vehicles are imported from the United States. They are modified to meet UK bus and coach regulations, including those relating to seat spacing, step heights and gangway widths. The buses are high-capacity, purpose-built vehicles, thereby not involving standing during either the ride or the need for double-decker buses. They are not wheelchair accessible, with the exception of one type, which has a lift.

⁴² Same as in footnote 28, RUTO project.

⁴³ Same as in footnote 28, Messara Valley project.

⁴⁴ Source: <http://education.stateuniversity.com/pages/2512/Transportation-School-Busing.html>

The other key elements of yellow bus schemes are that each bus has the same driver every day, who has received special training, and every child has an allocated seat, as is the case in the United States.

The introduction of a "yellow bus" package of measures could generate a positive modal shift away from cars, improve the perception of home-to-school transport and could result in improved behavior and reduced vandalism.

So far, the schemes have only been used in smaller areas. Yellow school bus schemes should focus on primary school children who travel more than a mile to school.

Spending £184 million (\$298 million) per year to provide buses for primary school children traveling more than a mile to school would result in benefits valued at £458 million (\$742 million) per year (time savings for parents who no longer have to drive their children to school and therefore decreased congestion)⁴⁵.

The Yellow Bus Scheme⁴⁶ provided services to around 300 West Yorkshire schools by 2006. This allowed Metro⁴⁷ to order a rolling stock of new vehicles used exclusively for home-to-school transport and educational trips.

Vouchers / Subsidies for Parental / Carpool Transportation

The UK

Where a pupil qualifies for travel support between home/care placement and school, the nature of the support is determined by the Local Authority primarily according to the pupil's specific needs, but consideration is also given to the **availability and cost efficiency of each option**. These options may include:

- Bus or rail pass
- *Reimbursement for mileage for parents/carriers*
- Cycling allowance (including road safety training)
- Escorts for walking/public travel⁴⁸.

Car Share / Park and Stride is an initiative designed to encourage parents to park away from schools and walk their children the rest of the route. Where possible, a school can identify a parking area which is a short distance away (it could be a supermarket or pub car park), gain permission to use the facility and 'Stride' to school from there⁴⁹.

8.1.2. Current Practice in the SEE region

Croatia

Pursuant to the Law on Education, the funding of educational institutions is provided at the state or regional/local level. Funding is carried out through the budgets of authorities at the aforementioned levels. Among other things, the provided funds are aimed at student transport, expenditures on school meals and student accommodation in boarding schools. The state level of authority provides the funds for high-school students. Students bear a part of the expenses for these services.

SEN students, regardless of their age, are entitled to free services.

⁴⁵ Same as in footnote 31

⁴⁶ Source: same as in footnote 31

⁴⁷ METRO is the title of an official transport company - West Yorkshire, England

⁴⁸ Same as in footnote 31

⁴⁹ Same as in footnote 31

According to the same Law, transportation of primary school students as well as their accommodation in boarding schools should be funded from the local/regional self-governments' budget.

In compliance with the State pedagogical standards for the primary school level, there are some definitions that could be important for this study:

- accessibility should be understood as the possibility of education in primary school or other educational institutions to be provided to all primary school students within an adequate home-to-school distance and transportation connection which is suitable regarding student safety;
- wherever possible, authorities should provide adequate space for students who stay at school after classes. The facilities for this purpose should be at such distance that transportation is not required;
- accessibility of institutions in charge of additional educational programs must be defined in such a manner that would enable their accessibility to all the inhabitants within an area;

In compliance with the aforementioned standards, it is recommended for purposes of student safety, and referring especially to areas without PT and pedestrian paths, that student transport should be organized regardless of the home-to-school distance.

The same document also deals with the time spent in home-to-school transportation, which should not exceed 2 hours per day. Schools are obligated to provide a room for students who come to school earlier and leave school later after classes. For the purpose of rationalization, schools could have their own bus for student transportation.

Funds for implementation of Standards must be provided from the state or regional/local authorities' budgets.

Bosnia and Herzegovina

The Federation of Bosnia and Herzegovina

There are differences among canton regulations ruling the walking distance, as the key criterion for student transportation provision (both for the primary and secondary school level). If the walking distance is in the range of 2-5 kilometers or more, the authority responsible for education is in charge of providing student transport. There are also differences in terms of responsibility for student transport provision ranging from the local to the state level. In some cases, it is a local responsibility whereas, in others, the state level of authority participates in the local budget (in the form of a subvention). Students/parents should participate in the coverage of transportation service costs.

The Republic of Srpska

Wherever PT is available and its schedule is in line with students' needs, it will be considered an acceptable solution. Otherwise, the student transport service should be contracted through public procurement. The contract with a chosen operator is to be signed by the School Principal. The operator should fulfill technical requirements for the vehicle, whereas the drivers should be provided with lists of students under their responsibility.

SEN students are entitled to transportation compensation. Compensation corresponds to the current tariffs valid in the students' places of residence.

Some examples show ticket price fluctuations for equidistant rides, depending on the operator⁵⁰. Following discussions between local authority representatives and the service providers, it was agreed that the final fare should be the same for the same distances, i.e. in accordance with the distance traveled (distances up to 5 km, up to 10 km, up to 20 km, and more than 20 km). For high school students, a subvention of up to 30% will be provided by local municipalities, whereas 15% will be granted by the operator. Families with

⁵⁰ The case of the Kozarska Dubica community.

three children will have a discount for the third child, whereas those with 4 children will be entitled to a discount price for two children (an element of social policy on the local level).

Montenegro

Certain facts provide a picture of student transport⁵¹:

- free student transportation for both primary and secondary school students is a part of the practice, being financed mainly through municipality subventions and operators' discounts;
- timetables are adjusted to the beginning of school classes;
- wherever there is PT, it is the main mode of student transport;
- In some cases, along with PT, special offers are available. Typically, these are mini buses for transportation of first and second class primary school students, i.e. children up to the age of 8;
- schools are in charge of collecting data on transportation needs. According to the collected data, operators issue student bus passes with a student's personal photo.

Serbia

Student transportation is provided pursuant to the Law on Education, and local authorities are in charge of it.

Almost as a rule, primary school students are entitled to free transportation if their homes are at distances exceeding 4 kilometers.

Secondary school students are also provided with transportation services, but subventions for them differ from municipality to municipality. The rate of subventions ranges from 20% to 40% of the total transportation cost, while some municipalities provide a 100% subvention (see Table 13).

In compliance with data shown in the tables on pages 117 – 123, and based on the results of the surveys conducted in schools located within the Uzice School District, a review of the level of subsidies provided by the municipalities has been drafted. The table shows the price lists of student transportation on a monthly basis (according to the survey data) solely for the purpose of demonstrating their order of magnitude.

Transportation of students is organized mostly by regular PT, but service financing is subject to negotiation between local authorities and service providers.

There is also contracted service, mostly with private operators.

The main problem with PT is the lack of coordination between their timetables and school activities.

In some municipalities, special incentives are recognized regarding service provision. In those cases, free, or significantly subsidized transportation is available for those students who are continuing their education in local secondary schools/who choose one of the education profiles important for the local economy.

A review of the following data is given hereafter:

- Data on student transport, systematized by different Serbian municipalities, collected either from websites or statistical sources. These data include general information about the municipalities (area, population, etc.), information on general accessibility conditions (road network conditions), and finally, information on student transport (including information collected from official municipal websites, as well as the data obtained through interviews in a selected group of municipalities belonging to the educational districts of Uzice and Cacak).
- In order to round off the picture of student transport conditions, a survey of school management was conducted in a certain number of schools. The survey printed form as well as the results thereof are summarized in the tables below.

⁵¹ Bar Municipality

Table 13 – Level of Subsidies Granted to Students in Serbia

Municipality/Region	Transport Price		Level of Transport Costs Covered by the Municipality
	RSD/month	EUR/month	
Vojvodina			
Novi Becej/ Srednjobanatski District	n.a.		20-40% depending on socioeconomic status of the family; 30% for high school students attending school within the municipal territory; 50% if the route exceeds 60km.
Apatin / Zapadnobački District	n.a.		100% if students attend a school within the municipal territory; depending on the socioeconomic status of the family, if students attend a school out of the minicipal territory.
Zrenjanin / Srednjobanatski District	n.a.		100% for elementary school students whose place of residence is located at distance exceeding 4 km from the school.
Nova Crnja / Srednjobanatski District	n.a.		100% for elementary and high school students who come to the minicipal center from Toba village; 100% for students from the families who are social welfare beneficiaries.
Secanj / Srednjobanatski District	n.a.		100% for elementary and high school students attending school within the municipal territory; depending on socioeconomic status if they attend schools out of the municipal territory.
Zitiste / Srednjobački District	n.a.		all transport tickets amountig more than 4.200 RSD.
Kovin / Juznobański District	n.a.		50% of monthly ticket price.
Central Serbia			
Pozega / Zlatiborski District	Elementary school: 2.752; high school: 3.000 in minicipal transport, and 4.000-7.000 in inter-municipal transport, depending on direction	Elementary school: 26; high school: 28,60 in minicipal transport, and 30,10-70,50 in inter-municipal transport, depending on direction	50% for elementary school students; 50-100% for high school students.
Prijepolje / Zlatiborski District	2.700 in contracted transport; 2.000-4.000 in contracted transport; 2.000-3.700 in inter-municipal transport, depending on direction	25.70 in contracted transport; 19-38.10 in contracted transport; 19-35.23 in inter-municipal transport, depending on direction	25% for elementary school students; 50-100% for students from socially vulnerable families.

Source of information: website of municipalities in Vojvodina and the tables on pages 111 - 116

Note: The EUR/RSD exchange rate for 2010 was 105 RSD/EUR (website of the National Bank of Serbia)

Data referred to in the following table are derived from Serbian national statistics and web presentations of the selected communities.

Table 14 – Region of Vojvodina examples

Municipality (district)	GENERAL FACTS				ACCESSIBILITY CONDITIONS				Student transportation
	Area (km ²)	Population (2008 estimate)	Density (inh./km ²)	Average settlement size (inh.)	State roads total length (in km)	% of modern roads	Local roads length (in km)*	% of modern roads	
Novi Bečej (Srednjobanatski District)	609	24.970	41	6.242,5	82	100	6	100	<ul style="list-style-type: none"> All primary school students are entitled to free transport pursuant to the Law; Secondary school students (in 2010, 172 of them traveled to school) have a discount in accordance with home-to-school distance (if they travel farther than 60 kilometers, the discount is 50%); The local community covers 20 – 40% of the transportation costs depending on the family social/economic status (40% if the family is awarded child support); All other students who travel to secondary schools within the territory of the community are entitled to a discount of 30%; Secondary school teachers support the initiative of additional subvention for students who follow educational programs for occupations in demand in schools which are situated in the community.
Apatin (Zapadnobacki District)	350	30.484	87,10	6.096,8	65	86,2	34	73,5	<ul style="list-style-type: none"> Primary and secondary school students are entitled to free transportation to their schools if they attend schools belonging to the community school network; Students who attend schools outside the municipality, are entitled to subvention in accordance with their family social/economic status.
Zrenjanin (Srednjobanatski District)	1.327	126.325	95,20	5.742,1	379	90,0	222	82,9	<ul style="list-style-type: none"> Primary school students are entitled to free transport if they live at distances exceeding 4 km (pursuant to the Law on Education); The monthly bus pass for secondary school students, both for urban and rural public transport, has the same price and is subsidized by the local authority and authority of the Vojvodina region (because schools are founded by local/regional authorities).

Nova Crnja (Srednjobanatski District)	273	11.058	40,51	1.843	70	100	14	100	<ul style="list-style-type: none"> All primary school students who travel from Toba village are entitled to free transport to the community center as are all secondary school students, if they are students of schools which belong to the community school network; Community authorities subsidize transportation costs and the transporter offers a discount on the full basic cost of transportation; Secondary school students are entitled to free transportation depending on their family social/economic status.
Secanj (Srednjobanatski District)	523	14.530	27,78	1.320,9	82	100	20	100	<ul style="list-style-type: none"> Primary school students (140-150 students) are entitled to free transportation; Secondary school students (134 students) are entitled to free transportation if they are students of schools located in Secanj; Out of a total of 338 secondary school students who travel to the Zrenjanin community (neighboring community), the transportation cost is subsidized for 120 of them, in accordance with their family social/economic status. Monthly tickets for secondary school students are valid on weekdays, without limits.
Zitiste (Srednjobanatski District)	525	19.307	34,84	1.525,6	130	93,1	36	75	<ul style="list-style-type: none"> The municipality subsidizes all monthly tickets for students whose ticket price exceeds 4,200 RSD, plus, there are 20 students who are entitled to free transportation; Due to scattered, distant settlements, there are 105 remote classes of 10 primary schools and therefore, almost 90% of the teachers travel;
Kovin (Juznjobanatski District)	730	36.214	49,61	3.621,4	111	100	43	100	<ul style="list-style-type: none"> Secondary school students have seasonal tickets that are valid for regional bus transportation; According to certain criteria, 48 students are entitled to free transportation and 202 students have a 50% discount on the ticket price;

Note: Local roads form part of the state roads, i.e. they are included in the total length of the state roads.

Central Serbia

The tabulated data result from a visit made by the Study team to municipalities in Western Serbia that are under the Uzice and Cacak Regional Authorities, November 2010.

Table 15 – Central Serbia - examples

Municipality (district)	GENERAL FACTS				ACCESSIBILITY CONDITIONS				Student transportation
	Area (km ²)	Population (2008 estimate)	Density (inh/km ²)	Average settlement size (inh.)	State roads total length (in km)	% of modern roads	Local roads length (in km)*	% of modern roads	
Pozega (Zlatibor District)	426	30.455	71,49	725,12	249	85,5	146	77,4	<ul style="list-style-type: none"> Regular public service is used for student transport; The operator's time schedule doesn't meet students' needs; There are students who walk up to 7 kilometers to the nearest school/bus stop; Schools collect data on student travelers and provide this information to the community authorities, who are responsible for service procurement; <p>Other school related issues:</p> <ul style="list-style-type: none"> There are 2 central primary schools, with 10 multi-grades each in rural areas One Roma assistant in the Petar Lekovic school No organized nor paid transportation for students with disabilities In a case of longer absences from school due to health issues there is the possibility for students to have teachers visit them at home or the healthcare institution
Kosjeric (Zlatibor district)	358	12.729	35,56	471,44	167	83,2	90	78,9	<ul style="list-style-type: none"> There are several types of services in practice: <ul style="list-style-type: none"> contracted service, regular public transport service, parent transportation (but some students also walk to school); As for the contracted service, mini – buses are in use along three routes. This kind of service has been assessed as a reliable one; The public line has a circular scheme with one morning and one afternoon departure; Schools collect data on student travelers and provide this information to the municipal authorities, who are responsible for service procurement; There is a compensation for trips made by private (parents') cars providing they transport three or more students. The compensation is based on the total length of trips in one month and fuel consumption per 100 kilometers <p>Other school related issues:</p> <ul style="list-style-type: none"> There are 2 central primary schools, one in Kosjeric, another 17km from the center of the municipality; Central schools work on a two shift schedule, whereas the remote ones work on one shift schedule; Central schools don't have canteens, whereas the remote ones do; Students with disabilities are transported by taxi service, paid for by the local government.

Prijepolje (Zlatibor District)	827	39,540	47,81	494,25	434	52,3	292	46,2	<ul style="list-style-type: none"> • Transportation of student travelers is performed mainly by PT. Contracted bus service is also in practice; • The time schedule of PT is not in accordance with the school schedule; • The average distance is 9 – 10 km, and travel time depends on road quality (10–20 minutes per direction); • The cost of transportation service is partially covered by the municipality: 50% for primary school students; 30% for high school students; <p>Other school related issues:</p> <ul style="list-style-type: none"> • There are 8 central primary schools, 25 multi-grades in rural areas with 228 students; • Lack of qualified arts teachers.
Gornji Milanovac (Moravicki District)	836	45,167	54,03	716,94	510	82,2	282	68,8	<ul style="list-style-type: none"> • There are 830 student travelers, out of which 433 are from primary schools and 397 from high schools; • Transportation service is contracted through public procurement (pursuant to Serbian legislation). Service is contracted exclusively for school transport purposes. Service is organized in full accordance with school schedules; • Primary school students cover 50% of the total service cost; the rest is covered by community subventions (20%) and the operator's discount (30%). Secondary school students cover 60% of the total service cost; the rest is covered by the community (15%), and provider discount (25%); • Free service is granted to students whose parents/guardians are entitled to unemployment benefits according to local regulations. It is also granted to disabled students (accompanied by an escort); students who belong to refugee families at the proposal of the School Principal following local regulations; students who are the third, forth, etc. child in the family; students without one parent and students whose parents are voluntary blood donors; • According to local regulations on student transport, the community transfers funds to schools, upon being issued an invoice on a monthly basis. <p>Other school related issues:</p> <ul style="list-style-type: none"> • Primary school "Ivo Andric", Pranjani settlement: • The school area covers 1/3 of the community area and encompasses three 8th-grade remote classes and six 4th-grade remote classes; • The school catchment is very large; it stretches for 60 kilometers; • Students who live in the most distant parts have to walk up to 12 kilometers to the nearest school/bus stop; • School has and accredited program „<i>Znacaj škole za održivi demografski razvoj</i>“ – a program for professional development of school teachers. • The primary school "Takovski ustanak", Takovo, includes the central school and 17 remote classes with the total number of students being 220; • Transportation to the central school and remote classes is organized by contracted service and 40% of students use this service; • The longest traveling distance is 17 kilometers/30minutes;

Lucani (Moravicki District)	454	22.426	49,39	622,94	286	78,0	184	75,0	<ul style="list-style-type: none"> • There are several modes of student transportation: • public transportation, • transportation organized by parents and • walking. • For transportation services, the Community contracts a provider operating along the regular local network; • The transportation schedule is not in accordance with school schedules; student tardiness is quite frequent; • The longest traveling distance is 20 kilometers/40 minutes; • During the 2010/11 school year there were 440 students travelers.
Ivanjica (Moravicki District)	1.090	33.466	30,70	682,98	404	62,1	177	42,4	<ul style="list-style-type: none"> • About 90% of transportation needs is covered by contracted transport, whereas about 10% is covered by public (regular) service. Where there are no conditions for organized transportation service, students walk; • Transportation along congested routes is covered by buses with 50 seats, whereas mini-buses operate along less busy routes; • The transportation time schedule generally is not in accordance with the school schedule; student tardiness is quite frequent; • The longest distance for student travelers is 15 kilometers in each direction; • Schools are in charge of data provision for the purpose of assessing the number of student travelers (for distances exceeding 4 kilometers);
Cacak City (Moravicki District)	636	115.918	182,26	1.998,59	498	78,5	347	69,2	<ul style="list-style-type: none"> • About 50% of student transportation is covered by the public transportation service (main provider), while the remaining 50% is covered by contracted operators; • The maximum distance students travel is 40 minutes;

In addition to visits, the Study team conducted a survey in the schools of the Uzice school district. The questionnaire and survey results are in the appendix.

SCHOOL TRAVEL QUESTIONNAIRE

Municipality:

School name:

Place:

Total number of students:

Number of shifts:

Shift starts at:

• First:

• Second:

1. How many students walk to* ...	<ul style="list-style-type: none"> the nearest school? the nearest bus stop of regular public transport?	..... .....
2. How many students travel to school...	<ul style="list-style-type: none"> from a village to the nearest school? from a village to the school in the community center?	..... .....
3. Please provide the number of students according to school grades	<ul style="list-style-type: none"> 1 – 4 grade 5 – 8 grade secondary school	...............
4. Is the regular Public Transport (PT) used for student transportation?	<ul style="list-style-type: none"> If the answer is yes, please state the number of lines?	.....
5. Is the timetable in PT in accordance with school shifts?	<ul style="list-style-type: none"> If not, what is the estimated waiting time for acceptable transport on the line (in minutes)?	.....
6. Do you have contracted transportation for students?**	<ul style="list-style-type: none"> If yes, on how many lines?	.....
7. Do pre-school students travel?	<ul style="list-style-type: none"> If yes, how many children do?	.....
8. What is the longest travel distance?	<ul style="list-style-type: none"> Provide length (in km) or duration (in minutes) or both	..... (min.) (km)
9. How much does the monthly ticket in PT cost for students of?	<ul style="list-style-type: none"> Primary school Secondary school	..........
10. To what extent do parents cover transportation costs?	<ul style="list-style-type: none"> Primary school Secondary school % %
11. Do community authorities cover transportation expenditures for socially marginalized families?	<ul style="list-style-type: none"> If the answer is yes, what percentage of the cost does the community cover? %
12. What is the monthly price for contracted transportation service per student? (in RSD)	<ul style="list-style-type: none"> Please state the monthly transportation price	.....
13. Will there be any possibilities for school bus purchase?	<ul style="list-style-type: none"> Could this solution be acceptable as an alternative to the contracted service? Which of the given reasons is the most important one - name at least two: (regularity of the service, safety, comfort, enabling students to take part in after-school activities) Is it acceptable for the school to cover all school bus costs (driver, regular cost, depreciation, etc.)?	..... ..... .....

* — Applies to children who walk to the nearest school for up to 4 kilometers

** — The contracted transportation involves a special arrangement with the provider for exclusive transport of students and/or pre-school children.

This questionnaire is to be used for the project "Access to Educational and Transportation Services for Poor Children of South-Eastern Europe – Practical Guide for Local Authorities and Users in the Field of Transport and Education", which is initiated by the World Bank – Serbia Country Office in Belgrade.

Through your participation you will help us collect all the relevant information needed for defining a possible solution.

The Study Team of the Project thank you for your collaboration.

SURVEY RESULTS - CONTINUE

Table 16 – Serbia

SCHOOL DATA			
Name	PS "Svetozar Markovic"	PS "Emilija Ostojic"	PS "Petar Lekovic"
Village/city / Municipality	Brodarevo/Prijepolje	Pozega/Pozega	Pozega/Pozega
Number of shifts	1	2	2
First shift starts at:	8:00	7:00/7:30	7:30
Second shift starts at:		12:30/13:30	13:30
Total number of students	527	1.000	1.262
How many students walk?	172	1.000	446
to the nearest school	172	906	425
to the nearest bus stop		94	21
How many students travel?	251	94	197
from village to the nearest school	251	12	197
from village to the school in the community center		82	
Please quote number of students according to school level	251	94	204
1 - 4 grade	115	14	7
5 - 8 grade	136	80	197
secondary school level			
Is regular PT is used for students transportation?	No	Yes	Yes
How many lines are used for students travelers?		6	5
Is time table in PT in accordance with school shifts?		No answer	In accordance
Do you have contracted transportation for students?	Yes	No	Yes
On how many directions?	5		

Do pre-school students travel?	Yes	No answer	
How many?	6		No available information
Which is the longest travel distance?			
In minutes	40		
In Kilometers	15	10	24
How much is monthly ticket?			
for primary school students		2.572	
for secondary school students			
To what extent do parents cover transportation cost?			
for primary school students	25%	30%	50%
for secondary school students			
Does community authority cover transportation expenditures for socially marginalized families?	Yes	No answer	Yes
If yes, what is the coverage percentage?	50%		100%
What is the monthly price of contracted transportation service per student? (in RSD)	2.700		2.310
Will there be any possibility for school bus purchase			
this solution could be acceptable as the alternative to the contracted service	Yes	Yes	Yes
Which of the quoted reasons is the most important one - quote at least two:			
regularity of service	-	+	+
safety	+	+	+
comfort			+
enabling students to take part in the after school activities	+		+
Is it acceptable for school to cover all school bus costs (driver, regular cost, depreciation, etc.)?	No	Yes, if it is affordable for school budget	Yes

SCHOOL DATA				
Name	Tchnical SC	GS "Sveti Sava"	Agricultural SC "Ljubo Micic"	PS "Dusan Tomasevic"
Village/city / Municipality	Pozega/Pozega	Pozega/Pozega	Pozega/Pozega	Velika Zupa/ Prijeplje
Number of shifts	2	2	2	2
First shift starts at:	7:00	7:00	7:20	7:30
Second shift starts at:	13:00	13:00	13:20	13:00
Total number of students	603	448	400	202
How many students walk?	485			
to the nearest school				
to the nearest bus stop	485			
How many students travel?	391			
from village to the nearest school	391			
from village to the school in the community center				
Please quote number of students according to school level	391		300	202
1 - 4 grade				81
5 - 8 grade				121
secondary school level	391	112	300	
Is regular PT is used for students transportation?	Yes		Yes	Yes
How many lines are used for students travelers?	6		3	1
Is time table in PT in accordance with school shifts?	At acceptable level	Yes	No answer	No answer
Do you have contracted transportation for students?	Yes	Yes	Yes	Yes
On how many directions?	2	3	3	1
Do pre-school students travel?				No answer
How many?				

Which is the longest travel distance?				
In minutes	70	up to 20	50	
In Kilometers	45	up to 30	40	10
How much is monthly ticket?				
for primary school students				
for secondary school students	3000 at average		direction Uzice: 4000; Direction Ivanjica: 5.600; direction: Kosijerac: 7.400	
To what extent do parents cover transportation cost?				
for primary school students				50%
for secondary school students	100%	100%	50%	
Does community authority cover transportation expenditures for socially marginalized families?	For 4-5 students cost is covered by school	No	Yes	Yes
If yes, what is the coverage percentage?			50%	50%
What is the monthly price of contracted transportation service per student? (in RSD)	2000	from 3.500 to 4.000	direction Uzice: 2000; Direction Ivanjica: 2.800; direction: Kosijerac: 3.700	400
Will there be any possibility for school bus purchase				
this solution could be acceptable as the alternative to the contracted service	Yes	Yes	Yes	No answer
Which of the quoted reasons is the most important one - quote at least two:				
regularity of service	+		+	
safety	+	+	+	
comfort		+		
enabling students to take part in the after school activities	+			
Is it acceptable for school to cover all school bus costs (driver, regular cost, depreciation, etc.)?	In the students interest, Yes	No	No	

Bulgaria

General data on student transport, collected by the Ministry of Education, are as follows:

- Transportation for students and teachers is provided by the Central Government, regardless of which mode of transport is in use (regular PT, contracted transport, special school buses);
- Free transportation is provided for students whose schools are closed;
- The data base on transportation demand volume is updated three times during one school year;
- Data base updating is carried out by school headmasters;
- Pre-school children are included in the transportation scheme, starting at the age of 5. Collected data are transferred to the Ministry for the purpose of calculating the funds needed;
- The funds are transferred to schools three times a year;
- Expenditures for transportation are calculated on the basis of distance and number of students.

The tabulated data result from a visit made by the Study team to communities in Bulgaria, November 2010.

The difference between the table formats of the Serbian and Bulgarian reviews is due to different data obtained from the available sources. The state road quality data for the municipalities in Bulgaria were not at our disposal, hence the aspect of availability was not tabulated.

Table 17 – Bulgaria

Municipality/Town	FACTS ABOUT MUNICIPALITY/TOWN					Student transportation
	Area size (km ² , or hectares)	Population (01/01/2007)	Density (inh/km ² , or inh/ha)	No of towns/Villages	Average village size	
Svoje (Sofia District)/Svoje	866/2.193,2	23.509/8.230	27,15/3,75	1 town and 37 villages	443	<ul style="list-style-type: none"> • Three schools have their own buses + contracted transportation service; • Travel distance is the key criterion for transport. The longest distance takes one hour of travel time; • There is a discount on the total monthly bus pass price along existing public bus lines. Unit fare is calculated on the basis of kilometers traveled.
Peshtera (Pazardzik District)/Peshtera	174,72/9.024,5	23.990/13.302	137,31/1,47	1 town and 2 villages	5.344	<ul style="list-style-type: none"> • There is contracted transportation for students with one private operator; • All departures from villages are coordinated with the beginning of school activities; • Transportation for students who live the town of Peshtera is also coordinated with the beginning of school activities. There are three tours per day; • The contract with the operator is signed by the school headmaster; • The contract with the operator is made on a yearly basis;
Rakovsky (Plovdiv District)/Rakovski	264/9.799,9	29.026/15.526	109,95/1,58	1 town and 6 villages	2.250	<ul style="list-style-type: none"> • The municipality has 3 buses. Transportation is organized for all students who need it. Buses also transport children to kindergarten. The municipality has 3 drivers and each tour is supervised by one teacher. Buses have 32 places; • The municipality manages and organizes transport in order to eliminate competition between schools (to attract students). The initial timetable was provided by a specialist. The municipality introduced gradual beginning of classes (7:45, 8:00 and 8:15); • Student data – travelers are collected through special paper forms completed by parents, one month before the beginning of the school year. That is how schools gain a clear insight into the attendance of classes; <p>Before the introduction of school buses, the municipality had contracted service, but they abandoned it mainly due to the high price of service, low quality of buses (without air conditioning, safety measures, etc), lack of available seats (the operator used the same bus for the general public), etc.</p>

8.2. Approximate Value of the Annual Expenditure Calculation Method for Service Contracting

When analyzing the budget allocated to student transport, as described in Item 3.1.2.4. of these Guidelines, practical examples can be used, if available.

Tables 18 and 19 systematize the data on public transport in Serbia in 2008 by municipality (most recently published data). The choice of municipalities is made in such a way that it represents qualities of the public transport network (according to level of development), performed transport operation (vehicle kilometers) and produced financial indicators. The currency conversion of income into euros is made on the basis of the dinar average exchange rate for 2008 (website of National Bank of Serbia).

The second approach refers to estimates of vehicle kilometer prices given hereafter, which are provided for the purpose of applying the simplified procedure of student contracted transport budget calculation (Figure 19). The calculations are primarily intended for professionals from local administrations (in charge of traffic), and they should help when estimating the necessary budget for student transport.

It was considered that the most suitable solution would imply reviewing the calculation results graphically. For those purposes, a calculation was completed taking in the following elements:

- Minibus purchase price – €140,000, and bus purchase price €280,000;
- Depreciation rate – 7%
- Net employee income amounting to €350, that is, €500, with a coefficient of calculation into gross income that includes employers' obligations – 1.52096⁵²
- Vehicle maintenance costs – 10% of vehicle purchasing price⁵³
- Costs of insurance, vehicle registration, etc. – €1,000 /vehicle
- Lump sum for unforeseen expenditures – 5% of vehicle purchasing price⁵⁴
- Specific fuel consumption: for minibuses – 0.23 l/km, for buses – 0.25 l/km.
- Average price per 1 liter of diesel fuel – €1.13⁵⁵, highlighting that each percent of fuel price increases the vehicle – kilometer price by 0.69% (monthly salary amounting to €350), that is, by 0.61% (monthly salary amounting to €500).

Diagrams 1 and 2 are drawn up separately for minibuses and buses for two different salary levels of employees: €350 and €500.

Table 19 demonstrates that the average operator's line length, operating along a network of up to 900km (the average network length is 427km) amounts to 44.28km, whereas the average operator's line length operating along a network of up to 350km (the average network length is of 191km) amounts to 21.02km.

Starting from this fact, and taking into consideration that most of the municipalities in Serbia are within the following domain, the recommended area is 20 – 40 kilometers of average length, corresponding to the annual route of a single vehicle ranging from 25,000 to 50,000 kilometers, within which the vehicle kilometer price should be chosen.

If necessary, the analyst can also calculate the vehicle kilometer price for some other situation/other potential operator using the same simplified procedure, adjusting, however, his/her calculation/diagrams to the input change.

⁵² These data refer to current taxes and contributions prescribed in Serbia. For other countries of the Region these data were not available.

⁵³ Sources: (1) Study of Public Transport of Bijeljina, Republic of Srpska, Bosnia and Herzegovina, (2) The Concept of Organizing and Transformation of Ownership of Belgrade Urban Public Transport, (3) Definition of Elements of Urban and Suburban Public Transport Lines in Belgrade.

⁵⁴ Sources the same as in 2

⁵⁵ The average euro-diesel price is calculated on the basis of data on the average price of this fuel in Serbia, Croatia, Montenegro, Macedonia, Bulgaria and Romania (1.13 €/l).

Table 18 – Review of Produced Major Effects of Public Transport in Serbia in 2008

Municipality/Area Type/Network Type	Network Lengh (in km)	Transported passengers (in 000)	Vehicle Kilometers/ yearly (in 000)	Annual Income (in 000) RSD	Vehicle Kilometer (Based on Annual Income)		Average service price (Annual Income per passenger)	
					RSD	In €	RSD	In €
Plain and Hilly terrain - Central Serbia								
Extensive Networks								
Vranje	1.378	6.382	5.153	615.000	119,35	1,46	96,36	1,18
Pozarevac	2.020	4.543	2.666	332.352	124,66	1,52	73,16	0,89
Kraljevo	1.284	3.706	4.915	213.434	43,43	0,53	57,59	0,70
CaCak	1.685	4.366	4.344	402.749	92,71	1,13	92,25	1,13
Average	1.592	4.749	4.270	390.884	95,04	1,16	79,84	0,97
Networks up to 900 km								
Bajna Basta	580	257	883	52.625	59,59	0,73	204,77	2,50
Zajecar	813	946	517	60.408	116,84	1,43	63,86	0,78
Leskovac	595	1.203	1.001	58.720	58,66	0,72	48,81	0,60
Average	663	802	800	57.251	78,36	0,96	105,81	1,29
Networks up to 350 km								
Valjevo	138	2.418	1.233	80.216	65,06	0,79	33,17	0,41
Pozega	207	205	844	58.000	68,72	0,84	282,93	3,45
Krusevac	253	10.091	4.944	366.056	74,04	0,9	36,28	0,44
Paracin	339	1.979	3.065	300.235	97,96	1,2	151,71	1,85
Average	234	3.673	2.522	201.127	76,44	0,93	126,02	1,54
Mountainous								
Extensive Networks								
Raska	1.352	540	1.008	127.720	126,71	1,55	236,52	2,89
Networks up to 350 km								
Nova Varos	290	35	88	7.040	80	0,89	201,14	2,46
Uzice	269	616	1.131	48.375	42,77	0,52	78,53	0,95
Arilje	129	22	50	3.540	70,8	0,86	160,91	1,96
Kosjeric	76	7	17	3.540	53,88	0,66	505,71	6,17
Average	191	170	322	15.624	61,86	0,76	236,57	2,89
Plain - Vojvodina								
Extensive Networks								
Backa Palanka	2.604	1.298	2.583	239.453	92,7	1,13	184,48	2,25
Vrbas	1.459	1.625	1.567	128.034	81,71	1,00	78,79	0,96
Stara Pazova	1.245	5.162	3.650	473.189	129,64	1,58	91,67	1,12
Average	1.769	2.695	2.600	280.225	101,35	1,24	118,31	1,44
Networks up to 350 km								
Sremska Mitrovica ⁽¹⁾	408	805	923	102.050	110,56	1,35	126,77	1,55
Indjija	317	3.161	2.219	106.958	48,2	0,59	33,84	0,41
Sombor	327	2.452	1.657	172.417	104,05	1,27	70,32	0,86
Average	351	2.139	1.600	127.142	87,61	1,07	76,97	0,94
Extensive Networks Average	1.571	2.661	2.626	266.276	107,7	1,31	144,89	1,77
Average of Networks up to 900 km	427	802	561	36.437	70,11	0,86	105,81	1,29
Average of Networks 350 km	191	2.906	322	15.624	61,86	0,76	101,50	1,24

⁽¹⁾ Note: the municipality is included in this category in order to increase data quantity.

Table 19 - Network Length and Average Line Length

Municipality/Area Type/Network Type	Network Length (in km)	No of vehicles in operation (year average)	Number of lines	Average line length (km)
Plan and Hilly terrain - Central Serbia				
Extensive Networks				
Vranje	1.378	62	55	25,05
Pozarevac	2.020	58	90	22,44
Kraljevo	1.284	49	61	21,05
CaCak	1.685	62	51	33,04
Average	1.592	57,75	64,25	25,40
Networks up to 900 km				
Bajna Basta	580	14	21	27,62
Zajecar	813	6	9	90,33
Leskovac	595	49	40	14,88
Average	663	23,00	23,33	44,28
Networks up to 350 km				
Valjevo	138	16	14	9,86
Pozega	207	8	17	12,18
Krusevac	253	83	24	10,54
Paracin	339	34	26	13,04
Average	234	35,25	20,25	11,40
Mountainous				
Extensive Networks				
Raska	1.352	13	50	27,04
Networks up to 350 km				
Nova Varos	290	10	13	22,31
Uzice	269	14	10	26,90
Arilje	129	2	3	43,00
Kosjeric	76	1	2	38,00
Average	191	6,75	7,00	32,55
Plain - Vojvodina				
Extensive Networks				
Backa Palanka	2.604	19	28	93,00
Vrbas	1.459	14	9	162,11
Stara Pazova	1.245	38	11	113,18
Average	1.769	23,67	16,00	122,76
Networks up to 350 km				
Sremska Mitrovica (1)	408	13	18	22,67
Indjija	317	24	16	19,81
Sombor	327	15	22	14,86
Average	351	17,33	18,67	19,11
Extensive Networks Average	1,571	31,47	43,42	58,40
Average of Networks up to 900 km	427	23,00	23,33	44,28
Average of Networks up to 350 km	191	19,78	15,31	21,01

Figure 27 – Bus/minibus vehicle kilometer price in cases where the driver's net salary amounts to €350

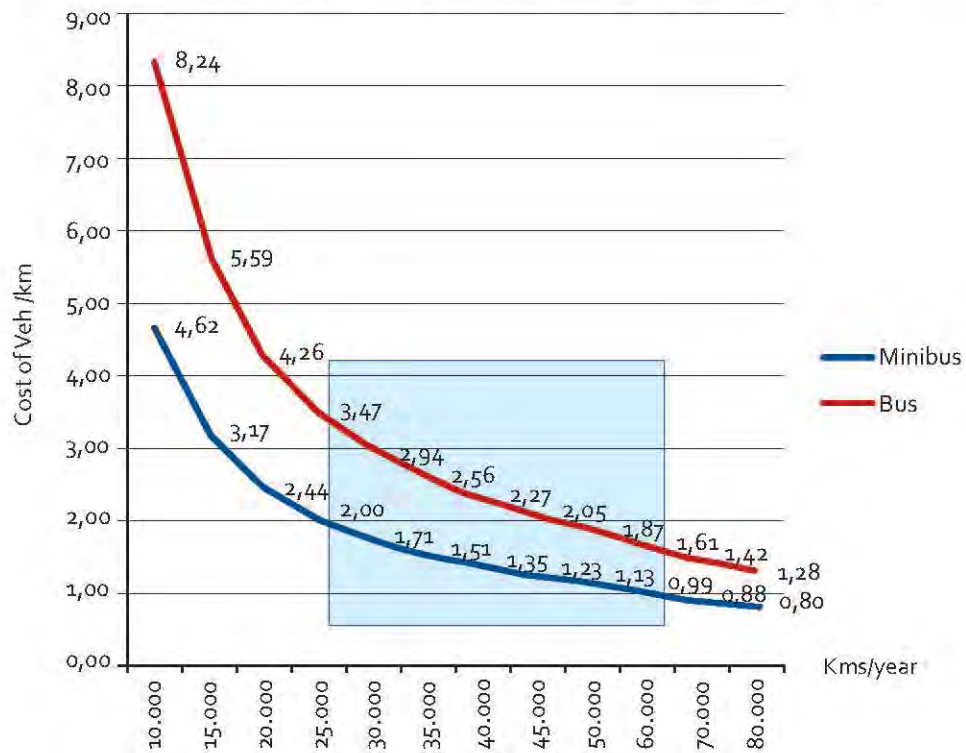
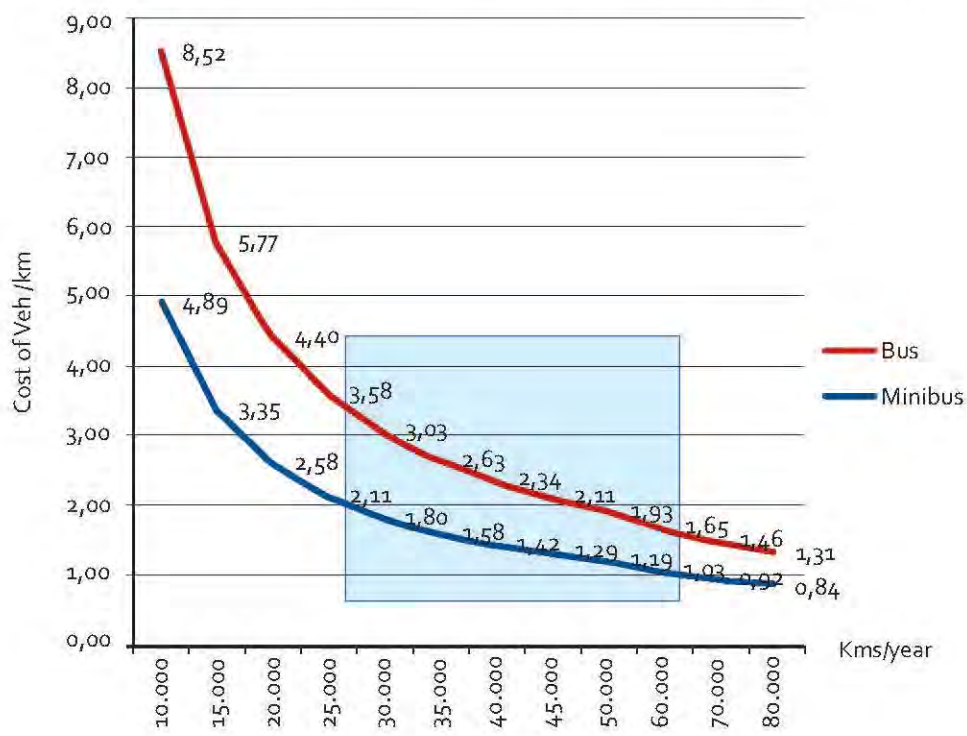


Figure 28 – Bus/minibus vehicle kilometer price in cases where the driver's net salary amounts to €500



Example 1: Calculation of Required Funds for Contracting a Single Line

Input data (1):

Line length (km):	10
Number of students/day	125
Number of students in the first shift	65
Number of students in the second shift	60

Based on the fact that the transportation service is performed in two shifts, the conclusion is that a vehicle will perform two tours daily, consisting of going to the starting point and returning to the end point – the school. This further means that the vehicle will be covering a daily distance equal to 4 line lengths. According to the algorithm in Picture 19,

$$\text{Daily Mileage} = \text{Line Length} \times 4 = 10 \times 4 = 40 \text{ km}$$

Estimated funds required for contracting transportation will amount to:

Input data (2):

- The transport volume per tour will require a bus-type vehicle.
- The average salary of the operator's employed personnel amounts to €350/month

In Diagram 27 we are choosing the vehicle kilometer value for an annual mileage of 40,000 km (or higher, depending on the average market conditions for which the statistical data given as an illustration in Table 18 could be used). The corresponding value for the given annual mileage and vehicle type is €2.27.

Hence, the funds required for bus engagement will amount to:

$$\begin{aligned} \text{Annual volume of funds} &= \text{daily mileage} \times \text{statistical number of days} \times \text{vehicle kilometer price} \\ &= 40 \times 295.67 \times 2.27 = \mathbf{€26,846.84} \end{aligned}$$

Narrowed down to a single student, the annual expenditure will amount to €214.77, that is monthly – $214.77/10 = \mathbf{€21.48}$

Using the same procedure, we can calculate the volume of annual funds involving an employee salary of €500.

Example 2: Calculation of Required Funds for School Bus Operation

Input data (1):

Line length (km):	15
Number of students/day	62
Number of students in the first shift	30
Number of students in the second shift	32

Based on the fact that the transportation service is performed in two shifts, the conclusion is that a vehicle will perform two tours daily consisting of going to the starting point and turning to the end point – the school. This further means that the vehicle will be covering a daily distance equal to 4 line lengths. According to the algorithm in Picture 19,

$$\text{Daily Mileage} = \text{Line Length} \times 4 = 15 \times 4 = 60 \text{ km}$$

Estimated funds required for contracting transportation will amount to:

Input data (2):

- The transport volume per tour will require a minibus-type vehicle.
- The average salary of the operator's employed personnel amounts to €350 /month

Za razliku od prethodnog primera, ovde smo izabrali godišnju kilometražu tipičnu za školski prevoz koja varira između 24.000 i 35.000km i zaključili da će nam godišnja kilometraža u ovom primeru iznositi 30.000km. Odgovarajuća vrednost za datu godišnju kilometražu i vrstu vozila iznosi 1,71 €.

Hence, the funds required for minibus engagement will amount to:

$$\begin{aligned}\text{Annual volume of funds} &= \text{daily mileage} \times \text{statistical number of days} \times \text{vehicle kilometer price} \\ &= 60 \times 295.67 \times 1.71 = \text{€}30,335.74\end{aligned}$$

Narrowed down to a single student, the annual expenditure will amount to €489.29, that is monthly – $489.29/10 = \text{€}48.93$.

8.3. Forms

Form 1: Application for home-to-school transport support

SCHOOL TRANSPORTATION APPLICATION FORM	
SCHOOL AUTHORITY OF THE COMMUNITY OF:	
SECTION 1: STUDENTS' DATA	
Name:	Surname:
<input type="radio"/> M <input type="radio"/> F	Data of birth: Class:
School for which application is submitted:	Date of submission:
SECTION 2: PARENTS'/GUARDIANS' DATA	
Name:	Surname:
Address: Place: Street/home number:	
How long do you live at this address? Years: Months:	
Telephone:	Mobile:
SECTION 3: PARENTS'/GUARDIANS' SOCIAL STATUS	Social aid beneficiary: <input type="radio"/> YES <input type="radio"/> NO
Attachment: (social institution document)	Attachd? <input type="radio"/> YES <input type="radio"/> NO
SECTION 4: DATA APPROVAL	Name and surname (printed letters): Signature: Date:
To be filled by school service:	
Home/school destination (m):	Eligibilty code:
Distance assesed by:	Date:
Eligibility codes: Eligible for: free primary school transport code 1 free secondary school transport code 2 subsidized primary school transport: code 3 subsidized secondary school transport: code 4	

TRANSPORTATION NEEDS FORM FOR SCHOOL

SCHOOL AUTHORITY OF THE COMMUNITY OF:

Village		Number of students for:	
		free transportation	subvented transportation
TOTAL			

SCHOOL HEADMASTER APPROVAL

DATE:

School headmaster (name and surname):

Signature: (seal)

IRREGULARITY REPORT FORM

SCHOOL AUTHORITY OF THE COMMUNITY OF:

TYPE OF IRREGULARITY:

1. Students are late due to time table changes:

2. Absence of transportation:

3. Unclean bus:

4. Nonventilated cabine:

5. Faulty seats:

6. Bus driver's inappropriate behaviour:

7. Escort person is inappropriate behaviour:
(to be filed in case of contracted service
and school bus)

8.4. Additional Information on Select Education Policies

Employing a variety of effective strategies for improving attendance and academic progression of Roma students. The following points summarize effective practices for Roma participation in education [38]: 1) involving Roma in the design, implementation, and evaluation of programs targeting their involvement in education; 2) encouraging involvement of Roma parents by bringing parents into the classroom as teachers' aides, involving them in parent-teacher associations, and having regular parent – teacher interactions; 3) employing Roma assistants, mediators, peer advisors and education inspectors to assist in the classroom environment, work with parents, link Roma communities and schools, help with job placement and monitor the quality of Roma education; 4) utilizing health and social workers to increase outreach to Roma communities and identify families in need of assistance; 5) designing curricular and extracurricular activities on Roma language, history and culture; 6) abolishing unnecessary channeling of Roma into separate classrooms and schools; 7) coordinating social assistance and education policies by providing school meals, linking school enrollments / graduation to social assistance and providing scholarships for low-SES students; 8) training teachers to accommodate learning in a multicultural environment and training local government officials to reduce discrimination by public service providers, and 9) transporting Roma students from Roma settlements to integrated, mainstream schools. More detailed elaboration of these policies is offered in „Roma in an expanding Europe: Breaking the poverty cycle“ [38].

Developing trusting and respectful relationships with parents. A review of 51 studies on the impact of school, family and community connections on student achievement identified the following practices as effective in increasing parental engagement [18]: 1) establishing routine, frequent and concerted communication (home visits from educators with similar cultural backgrounds or with knowledge about their culture); regular calls to and meetings with parents face-to-face, both routinely and when there are problems; translating relevant communication with families into their home languages; creating a school directory, so parents can contact each other; 2) creating a trusting and enticing atmosphere (holding small and friendly teacher parent conferences; inviting families to class to tell their education stories and share cultural traditions; asking about families' expectations for, encouragement of and concerns about their children's education; offering childcare, meals, and transportation for major activities at school); 3) supporting parental involvement in decision making (consulting a representative sample of parents, not just the school board leadership, about school policies and plans, and their ideas about school development; developing ways for parents to voice their concerns with teachers, counselors and the principal; training parents for participation in school governance councils or boards; asking the superintendent, board members, district staff to speak to parents at the school); and 4) providing smooth and successful transitions to the next schooling levels (offering incoming families and students tours of the school and opportunities to observe classrooms; meeting with students and families at the feeder schools to introduce staff, explain the school's programs and answer questions; making home visits the summer before school starts; working with families to prepare children for the next level and help them plan for the future). An even more detailed description of effective activities is given in „A new wave of evidence: The impact of school, family and community connections on student achievement“ [18].

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ABBREVIATIONS

AP	Action Plan
APB	Action Plan Budget
ECEC	Early Childhood Education and Care
EMIS	Education Management Information System
GDP	Gross Domestic Product
LAE	Local Education Authority
MTD	Monthly Transport Diary
NGO	Non-Governmental Organization
NSLP	National School Lunch Program
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
PT	Public Transport
SEE	South East Europe
SEN	Special Education Needs
SES	Socio-Economic Status
SKGO	Standing Conference of Towns and Municipalities
TAAP	Transportation Annual Action Plan
TEMPUS	Trans-European Mobility Scheme for University Studies
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training
WB	World Bank



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