

**Evaluation of the Sustainability of the 2009-2015 Schools of  
the Future Program  
Full Report  
Junction Bulgaria**

**November 2018**

**Content**

<b>1. Executive Summary</b> .....	<b>3</b>
<b>2. Project Background</b> .....	<b>11</b>
<b>3. Evaluation design and Methodology</b> .....	<b>11</b>
<b>3.1. Purpose of the Evaluation</b> .....	<b>11</b>
<b>3.2. Scope of the Evaluation</b> .....	<b>11</b>
<b>3.3. Methodology</b> .....	<b>12</b>
<b>4. Evaluation Results</b> .....	<b>14</b>
<b>4.1. Overall condition of the learning premises renovated as part of the 2009-2015 Schools of the Future program</b> .....	<b>14</b>
<b>4.1.1. Findings</b> .....	<b>14</b>
<b>4.1.2. Conclusions</b> .....	<b>15</b>
<b>4.2. Adequacy of the available technologies and equipment to the needs of teachers and students</b> .....	<b>15</b>
<b>4.2.1. Findings</b> .....	<b>15</b>
<b>4.2.2. Conclusions</b> .....	<b>17</b>
<b>4.3. Usage of the equipment and technologies – frequency and comparison with the initial years of the project</b> .....	<b>18</b>
<b>4.3.1. Findings</b> .....	<b>18</b>
<b>4.3.2. Conclusions</b> .....	<b>21</b>
<b>4.4. Investments in maintenance of the technology acquired as part of 2009-2015 Schools of the Future program</b> .....	<b>22</b>
<b>4.4.1. Findings</b> .....	<b>22</b>
<b>4.4.2. Conclusions</b> .....	<b>22</b>
<b>4.5. New initiatives for improvement of the learning environment inspired by the 2009-2015 Schools of the Future projects</b> .....	<b>23</b>
<b>4.5.1. Findings</b> .....	<b>23</b>
<b>4.5.2. Conclusions</b> .....	<b>23</b>
<b>4.6. Current funding opportunities for projects aiming at improving the learning environment of Bulgarian schools</b> .....	<b>23</b>
<b>4.6.1. Findings</b> .....	<b>23</b>
<b>4.6.2. Conclusions</b> .....	<b>24</b>
<b>5. General conclusions and recommendations</b> .....	<b>25</b>
<b>5.1. General conclusions</b> .....	<b>25</b>
<b>5.2. Recommendations</b> .....	<b>28</b>
<b>6. Annexes</b> .....	<b>30</b>
<b>6.1. Evaluation Matrix for sustainability</b> .....	<b>30</b>
<b>6.2. Evaluation Matrix for schools</b> .....	<b>Error! Bookmark not defined.</b>
<b>6.3. Individual school evaluation</b> .....	<b>Error! Bookmark not defined.</b>

## 1. Executive Summary

### Background and purpose of the Evaluation

In the period 2009-2015, the ABF ‘Schools of the Future’ Program has been implemented with the overall aim to create new interactive learning spaces and introduce educational technologies in schools. The program reached 45 schools in 29 locations, around 40,000 students and invested 3.2 million USD. The objective of this evaluation is to determine how sustainable the projects of the 45 schools, which have participated in the 2009 – 2015 ‘Schools for the future’ Program, are.

### Methodology

The methodology is based on collection and analysis of information, using different methods to achieve data triangulation. All 45 beneficiary schools were covered and all the beneficiaries took part in the evaluation process in the period September – November 2018.

Several key criteria of sustainability were defined in the following areas: overall condition, adequacy to the needs of teachers and students, usage, investments and new initiatives.

The main methods for data collection implemented during the fieldwork process, were:

**Table 1 Summary of the methods used**

Method	Type of Stakeholders	Number
<b>Quantitative Methods</b>		
Surveys	Students	2,420
<b>Qualitative Methods</b>		
Observations	School premises	45
Interviews	School principals	44
Interviews	Teachers	116

### Findings

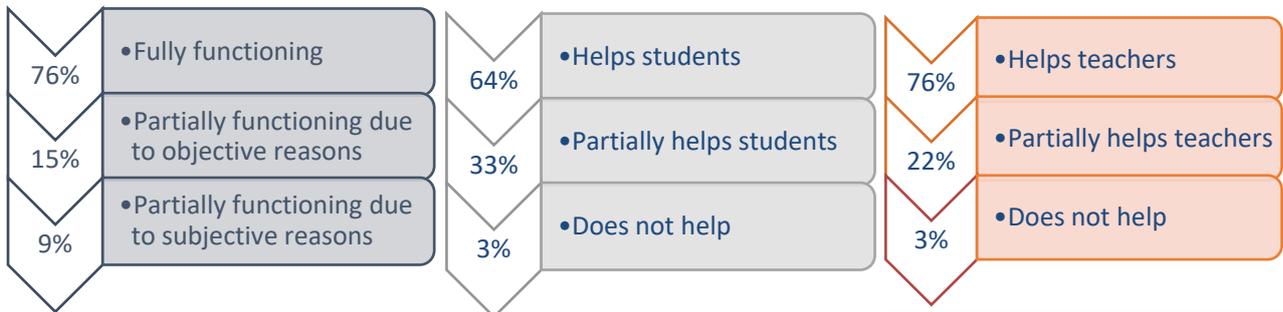
#### Overall condition

The **overall condition** of the learning premises, renovated as part of 2009-2015 Schools of the Future program, is good. In 91% of the schools the equipment from the ABF project is fully available and the premises are maintained.



**Adequacy**

The **level of adequacy** of the ABF project equipment is measured through three key components – **condition of equipment, usefulness for students and usefulness for teachers**, reflected in the three columns below.



**ABF projects have mostly fully functioning technology.** In some of the schools, equipment is functioning partially due to two types of reasons: objective reasons, such as old technology that is not possible to maintain and repair, or it is more expensive to maintain than to buy new technology, etc. and subjective reasons such as traditional approach to language education and change of leadership and philosophy in the school against the technological development.

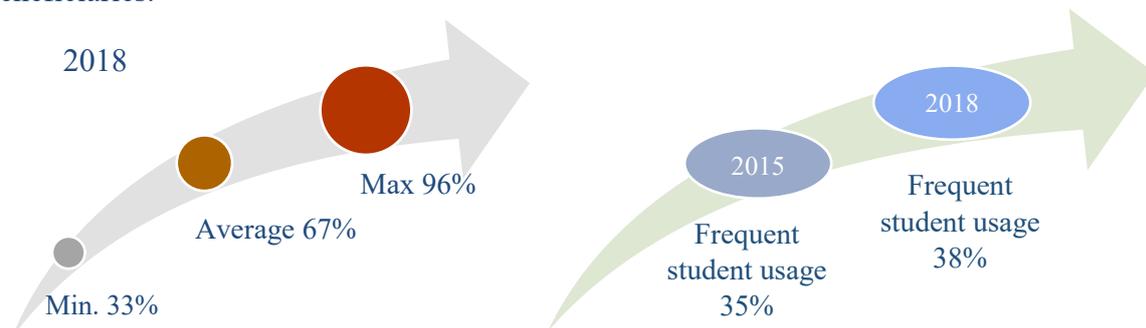
**ABF project equipment helps students** understand the educational content. The reasons for the partial usefulness of technology could be less frequent usage, type of technology (computers, multimedia, interactive boards) as well as level of knowledge, regarding technical equipment. There is one school where technology does not help the students. This school is currently under a big renovation.

**ABF project equipment helps teachers** predominantly for demonstrations and teaching lessons content. The aspects of its usefulness are improved flexibility, making subjects more interesting and helping students to be proactive, among others. Another factor, defining the usefulness for the teachers, is the available educational software products. The teachers who say that technological equipment is partially useful usually think that the teacher and his/her individual approach to the teaching process are as important as technology.

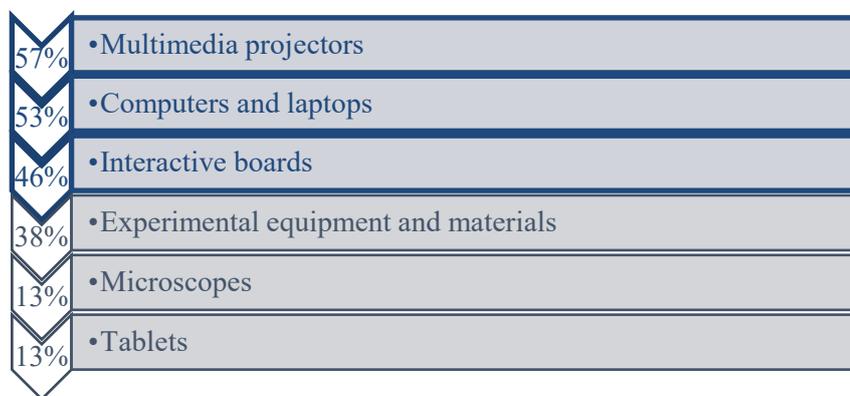


**Usage**

The **usage of the ABF project equipment by students** varies among the 45 school beneficiaries.



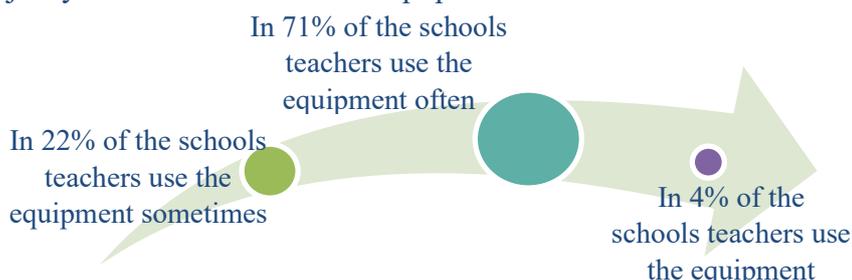
There is an increase in the frequent usage of ABF equipment over the last three years. This change depends on different factors, such as number of students and student beneficiaries, availability, condition and technological investments.



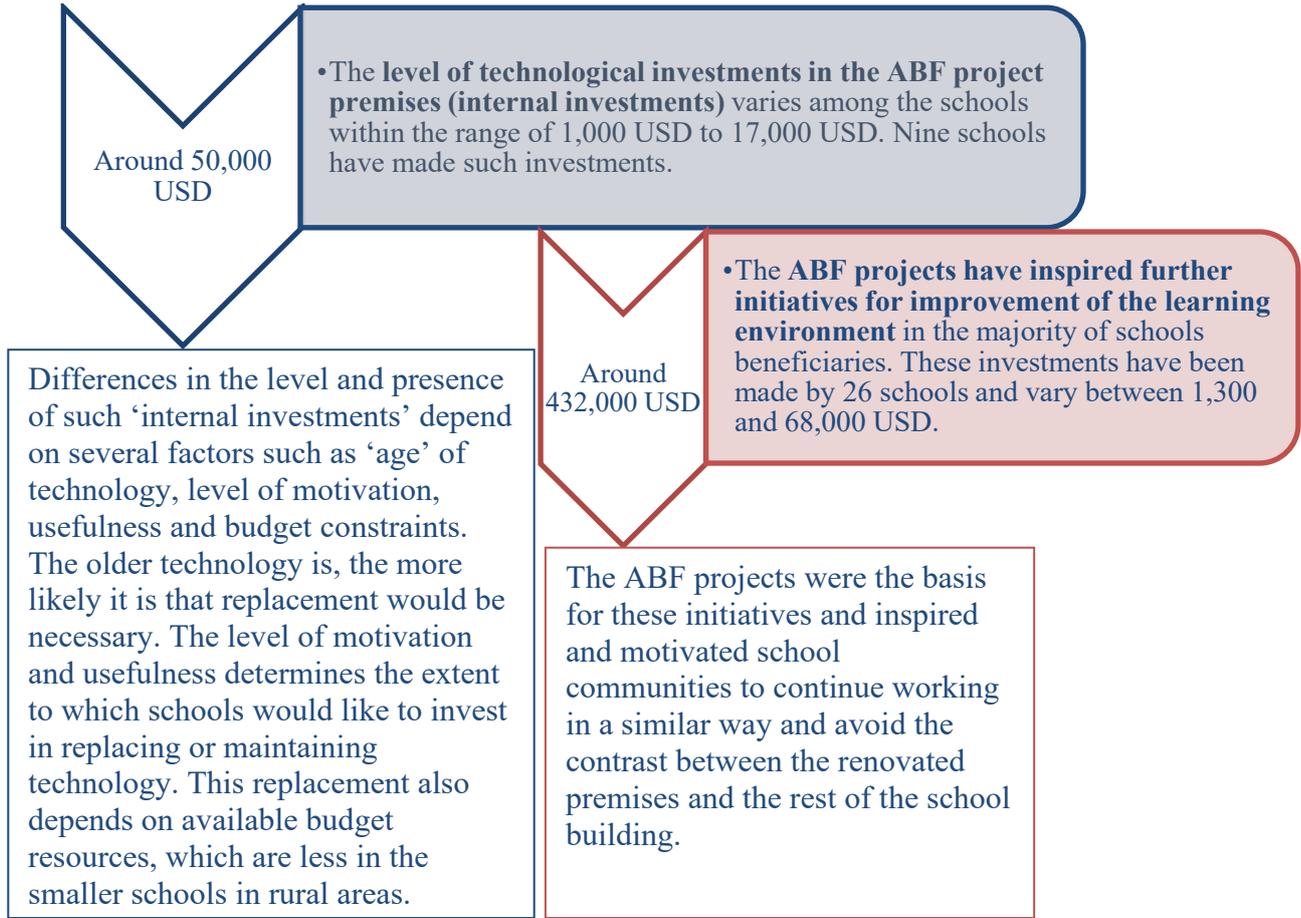
The technological appliances which are most used by the students are multimedia projectors, computers, laptops and interactive boards. The use of tablets and microscopes is limited, because they help for certain educational subjects and topics, which are not repeated that frequently throughout the school curriculum. The data from the Impact Assessment of the Program by OSI demonstrates a similar tendency - there is a large share of students in the ABF supported schools that use multimedia projectors and interactive boards regularly (almost every day or several times a week).

The **usage of the ABF project equipment by teachers** is 67% on average. The main factors, which influence this result, are whether teachers from the beginning of the projects are still working at schools, their adaptability to technological innovations, the influence of the school community and environment on their teaching approaches, the number of teachers planned as expected beneficiaries in the applications and/or reports.

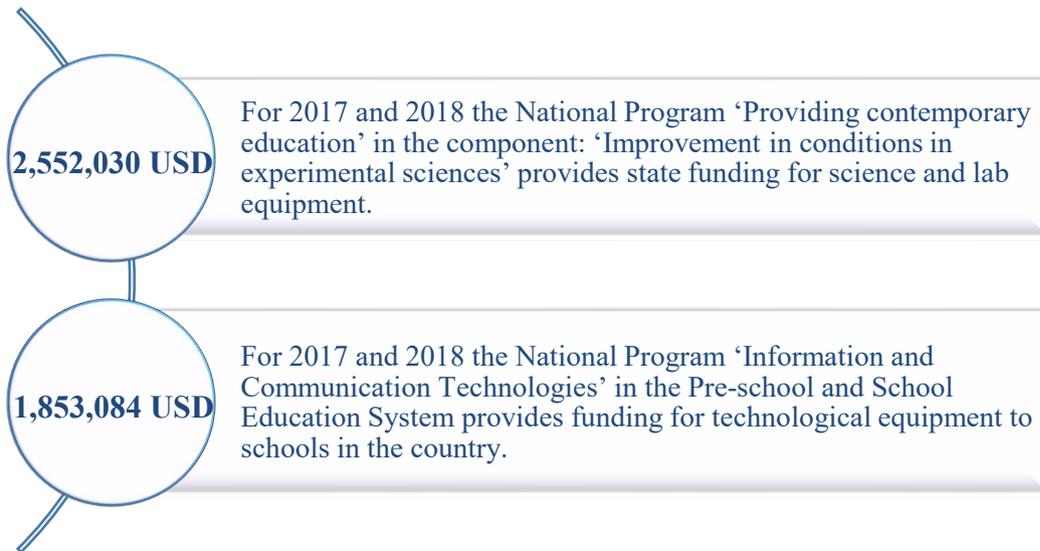
The majority of the teachers use the equipment often.



**Investments**



**Current funding opportunities** are available for renovation and acquirement of technological equipment in the schools.



The key take-aways for ABF are that available opportunities are not flexible enough to satisfy specific needs of schools, taking into consideration the size of the different locations, the needs of students and teachers, etc. In addition, available opportunities lack a system approach, which could lead to a system change in the school taking into account the needs and possibility for development.

## School ranking from the point of view of sustainability

The highest share of schools is in the groups high and middle level of sustainability. In each school these projects became the basis and the beginning of further development in many directions, depending mostly on level of motivation and available possibilities.

The several schools with a very high level of sustainability have had the motivation, the leadership, the teamwork, the vision and the possibilities to achieve their goals. These are science and math schools, unlike the few schools with a low level of sustainability – they are language schools.

**Table 2 School ranking**

Level of Sustainability	Description	School Typology
 <p>Very High Level of Sustainability  <span style="border: 1px solid green; border-radius: 50%; padding: 2px;">11%</span> of all schools</p>	 <p>Maintained premises and available equipment - new or from the project but maintained.</p>  <p>Adequate equipment to the needs of teachers and students, in good condition, very useful for both groups of beneficiaries. Used regularly or often by teachers and students.</p>  <p>Major new investments in the ABF Project Premises are available as well as in other projects – whole floors, parts of the building are renovated/equipped after the project.</p>	 <p>Schools in big cities, science schools or high schools with different specializations.</p>  <p>Relatively new (one is from 2011) and different types of projects, but predominantly science centers.</p>  <p>Key factor is the leadership with clear strategic vision about the school development.</p> <p>Teamwork and shared vision of teachers and the principal. There is also a high level of motivation of all the school community, which inspires new initiatives and inspires the students.</p>
	 <p>Maintained premises and at least partially available and fully</p>	 <p>Mostly in bigger cities, language schools and high schools.                      Relatively older projects, mostly</p>

 <p>High Level of Sustainability</p> <p><b>33%</b> of all schools</p>	<p>functioning equipment.</p>  <p>Adequate equipment to the needs of teachers or students, in fully functioning condition, useful for at least one the groups of beneficiaries. Used often by teachers and/or students</p>  <p>Several new investments are available in other projects – some classrooms are renovated/equipped after the project.</p>	<p>from 2013. Projects are of different types, only one language center.</p>  <p>Either high level of teamwork or a clear leader is present. Usually, the school community also has a vision about the future development.</p>
 <p>Middle Level of Sustainability</p> <p><b>47%</b> of all schools</p>	 <p>Maintained premises and at least partially available equipment and partially functioning.</p>  <p>Adequate equipment to the needs of teachers or students, in fully or partially functioning condition, useful or partially for the groups of beneficiaries. Used often or sometimes by teachers and/or students.</p>  <p>Some new investments in other projects are available – some equipment for other classrooms has been bought.</p>	 <p>Schools in smaller and bigger towns, mostly primary, high schools and less language and science schools.</p> <p>Relatively new projects (2011 – 2015) of different types.</p>  <p>The leadership is predominantly authoritarian. Principals do not always have the same vision as the teams. Teamwork is partially existent. Motivation is at a middle level, regarding all the school community.</p>

 <p>Low Level of Sustainability</p> <p>9% of all schools</p>	 <p>Partially maintained premises and at least partially available equipment.</p>  <p>Partially adequate equipment to the needs of teachers or students, in partially functioning condition, partially useful for the groups of beneficiaries.</p> <p>Sometimes used by teachers and students.</p>  <p>No new investments are available in other projects.</p>	 <p>Language schools in big cities, stable traditions.</p>  <p>Projects are predominantly older, mainly of the type language centers.</p>  <p>The leadership is connected to keeping traditions and the vision for development is not that clear.</p> <p>There is teamwork, but not so much shared visions and high level of motivation.</p>
---	---	---

## Recommendations

Based on the overall findings of this evaluation of sustainability, it is recommended that the ABF ‘Schools of the Future’ Program should continue forward with launching new waves of competitions in the future. These further initiatives should be flexible and allow schools from previous cohorts to be able to reapply under certain conditions such as amortization of equipment and presence of clear new initiatives, leadership and vision.

The recommendations below aim to support the achievement of a higher sustainability of the ABF ‘Schools of the Future’ Program.

### Premises and equipment

In relation to the overall good condition of the premises, it is important to ensure a high quality of renovation and this should remain a requirement for future programs as it was in the previous ones. The usage of high-quality materials would ensure a higher level of sustainability of the condition of renovated project premises. We encourage this requirement and it should be a part of the call for proposals and guides for application.

In addition, it is recommended to include a possibility for support for maintenance and repair in the project, since some schools face difficulties regarding this process. This should be integrated in the budget, for example as a component called ‘Maintenance and repair’ and be a part of the total finance support from the program.

In relation to the overall good condition of the equipment, it is recommended that the purchase of new generation technology should be required from the project applications and budget documents.

### Students and teachers

The type and number of equipment for schools should be considered in relation to the curriculum and content of the school lessons. This would lead to more frequent usage by students and teachers. For example, it was found that computers, laptops, multimedia and new generation interactive boards are used with higher level of frequency; therefore, their central role for the study process at some schools should be encouraged by prioritizing their purchase.

In addition, software products are tightly connected to the level, frequency and possibility for usage of interactive boards, computers and other similar equipment. Therefore, software programs and packages should be integrated into planned budgets.

In relation to the fact that in some schools technology is fully functioning, but partially useful for either students or teachers, it is recommended that the planning should include all the stakeholders in order to ensure a high level of involvement of all the school community. This would increase their ownership and commitment. It could be done by conducting a survey with students and teachers prior to creating the project application. This survey could include questions about expectations and needs regarding the project and be integrated into the application of the schools as a requirement.

In relation to the fact that some teachers think technology is partially useful since the educator is more important, it is recommended that teacher trainings should be a component of the program. These trainings should not focus so much on how to use equipment, but rather on why to use it, by looking for the successful way to combine the role of the pedagogue with the role of technology instead of opposing the two.

In relation to the level of usage of teachers and students and, more specifically, the planned number in the project application, a clear system of indicators of all the components of sustainability should be created at the planning stage, so that this data can be collected early on, at equal intervals of time and uninterruptedly. For example, the share of users should be planned realistically according to the scope of the project.

## **2. Project Background**

This report presents the main findings, conclusions and recommendations of an evaluation of sustainability of the 45 school projects, which have participated in the ABF ‘Schools of the Future’ program. The aim of this program is to create new interactive learning spaces in and outside the traditional classrooms; introduce new educational technologies per the needs of each school, facilitate interactive and engaging teaching practices that will lead to the development of 21st century skills for students and complement theoretical education with practical and experimental work, particularly in the sciences.

In the period 2009-2015, 45 schools across 29 towns and cities in the country participated in the program. The projects are 18 interactive learning centers, 14 science centers, 7 language centers and 7 IT centers. The other main characteristics of the program are:

- USD 3.2 million invested by ABF
- USD 1.5 million fundraised by the schools
- 40,000 students reached
- 10 school projects in Sofia

## **3. Evaluation Design and Methodology**

### **3.1. Purpose of the Evaluation**

The objective of this evaluation is to determine how sustainable the projects of the 45 schools, which have participated in the 2009 – 2015 ‘Schools for the future’ Program, are. Having in mind that the duration of projects’ usage varies among the schools (between 3 to 10 years), the goal of the evaluation is to identify to what extent the improvements and changes introduced by the Schools of the Future Program are still in place and adequate to the needs of the students and teachers. To achieve this, the evaluation should analyze the main supporting factors and barriers, as well as the actual changes that this program has went through. In this sense, the main purpose is to answer the following questions: sustaining what, for whom, where, and for how long.

### **3.2. Scope of the Evaluation**

The scope of the evaluation includes all the 45 schools in the country, which have received financing in the ‘Schools of the Future’ Program. In the process of development of the Evaluation Execution Plan, the key questions were identified:

- What is the overall condition of the learning premises renovated as part of 2009-2015 Schools of the Future program?
- Taking into consideration the time (year) of ABF investment, are the technologies and equipment purchased (laptops, computers, tablets, projectors, interactive boards, specialized software to mention few) still adequate to meet the needs of students and teachers and if not why, what is the reason?
- What part of the students uses the equipment and technologies as of today and how frequently? Has this share changed since the first year of the project?
- What part of the teachers uses the equipment and technologies as of today and how frequently? Has this share changed since the first year of the project?
- To what extent have schools invested in maintenance of the technology acquired as part of 2009-2015 Schools of the Future program?
- Did the 2009-2015 Schools of the Future projects inspire further initiatives for improvement of the learning environment in the respective schools?

- What are the current funding opportunities for projects aiming at improving the learning environment of Bulgarian schools? What are the key take-aways for ABF?

### 3.3. Methodology

The methodology for this evaluation was chosen in a way, which would allow achieving the main goal: to evaluate sustainability at the level of each specific school project and of the ABF Program in general.

A non-experimental evaluation design was applied due to the specifics of the program and the various projects included in it. This design is based on a comprehensive study approach and it was used to understand the differences between the projects as well as the common features, which would allow making general conclusions about the overall sustainability of the program.

**Table 3 Areas of sustainability and indicators**

Area of sustainability	Indicators
<b>Overall condition</b> of the learning premises renovated as part of the 2009-2015 Schools of the Future program	Overall maintenance of the project furnished premises, availability of the equipment, availability of the signs
<b>Adequacy</b> of the available technologies and equipment to the needs of teachers and students	The extent to which the available technology from the ABF projects is functioning and in good condition, as well as responding to the needs of teachers and students and the level of usefulness
<b>Usage</b> of the equipment and technologies	The level and frequency of usage by teachers and students at the schools
<b>Investments</b> in maintenance of the technology acquired as part of 2009-2015 Schools of the Future program	The level of investments in maintenance of the premises equipped in the ABF Project
<b>New initiatives</b> for improvement of the learning environment inspired by the 2009-2015 Schools of the Future projects	The availability and degree to which new initiatives are present at the schools beneficiaries

The main methods for data collection implemented during the fieldwork process, were:

**Table 4 Summary of the methods used**

Method	Type of Stakeholders	Number
<b>Quantitative Methods</b>		
Surveys	Students	2,420
<b>Qualitative Methods</b>		
Observations	School premises	45
Interviews	School principals	44
Interviews	Teachers	116

- Observations: focused on gathering information about the availability and condition of the equipment and school premises. Forty-five observations of different number of premises at each school according to the different projects were conducted.

- Interviews with professionals at school – principals, teachers and project managers. They were carried out with the goal to collect information about project details at the individual school level about availability of the equipment and state of the premises; number of students and teachers using it, etc. Interviews with 44 principals/project managers and 116 teachers were conducted.
- Surveys with students to collect information about degree of usage of the equipment provided, level of satisfaction with it, how useful it is, whether it satisfies their needs, etc. Surveys with 2,420 students were conducted. The number of students surveyed at each school differs depending on the number of student users in the previous school year, size of the school and presence at the day of the visit. The quantitative sampling strategy for the survey is based on a sample including students who have used the project facilities longer (i.e. mainly students from the 6th and 7th grades were surveyed at primary schools, from 11th and 12th at secondary). The number of surveyed students was at least 30 per school<sup>1</sup>. The sample units were student classes, in which all the students were invited to complete the survey. The sample units were chosen by a random approach based on the list of classes that use the project facilities/equipment in the school.

The sample was calculated for each school in a way that would ensure a confidence interval of around 10% (at 95% confidence level), using as basis for the general population the number of students currently using the equipment at the respective school. This was done to achieve a statistical relevance of the results at the school level and at a general level for the whole program.

In tables 5 and 6 below are presented the measurement levels for the different evaluation components.

**Table 5 Measurement levels for availability, maintenance, share of users, usefulness**

<b>Yes</b>	<b>Partially</b>	<b>No</b>
Yes means at least half of technologies are available and maintained; at least half of expected teachers/students use technologies; technologies are useful to at least half of expected teachers/students.	Partially means less than half of technologies are available and maintained; less than half of expected teachers/students use technologies; technologies are useful to less than half of expected teachers/students.	No means no technologies are available and maintained; none of the expected teachers/students use technologies; technologies are useful to none of the expected teachers/students.

**Table 6 Measurement level for frequency of usage**

<b>Regularly</b>	<b>Often</b>	<b>Sometimes</b>
Regularly means equipment is used every school lesson by students/teachers.	Often means equipment is used most school lessons by students/teachers.	Sometimes means equipment is used once every 3-4 school lessons by students/teachers.

<sup>1</sup> There are 5 schools, where there was a change in the sample size due to the several reasons: small number of students and/or student users in the school.

## 4. Evaluation Results

### 4.1. Overall condition of the learning premises renovated as part of the 2009-2015 Schools of the Future program



#### 4.1.1. Findings

The overall condition of the learning premises renovated in the Program is looked at through several key components – maintenance of the project premises, availability of equipment and availability of the ABF signs.

The data of all 45 schools shows that the majority (42) of the ABF Project Premises are fully maintained. Two schools have partially maintained learning spaces and the third one cannot be evaluated as the ABF Project Premises at this school are currently undergoing a big repair and an observation of these premises was not possible.

There are several identified factors leading to the partially maintained premises at the two schools.

- Big repair/renovation works – the schools are awaiting big renovations.
- Period since the project implementation – one of the schools is among the first cohort of the program.
- Attitude of the school community – one of the schools does not fully appreciate the need for maintenance of the premises

Talking about repair and renovation, the 42 schools with maintained premises can be divided in three main groups:

- In 32 schools, other premises have also been renovated after the ABF Project. These new renovations vary from sports halls to classrooms, whole floors and buildings. In most cases they try to do these repairs in a similar way to the ABF Project Premises. Principals share different challenges in the process of achieving this similarity. An example of such a challenge are the limitations by construction companies in what types of colors and materials are used, which could sometimes lead to loss of the individual look of the premises, renovated after the project, or reduce the possibilities of achieving similarities. Other challenges could be the quality of materials used, restricted budget resources of the schools, etc. It should also be taken into account that some school buildings are cultural monuments, therefore they have limitations in the process of big renovations;
- Two schools underwent big renovations and the overall look of the new and ABF Premises remained similar. These are science high schools;
- Another eight schools did not go through any repairs or renovations but maintained the premises in the same condition.

The findings from the data collected about the availability of equipment show that in 42 beneficiary schools, at least half of equipment is available and in the rest three schools less than half is available. This means that more than half of equipment was not physically present at the school. Reasons for the partial availability are:

- Period since the project implementation - in one of the cases the equipment bought in the project got old and was no longer relevant for teachers and students;

- Usage and initiative for investments - old technologies are no longer in use and have not been replaced. The lack of replacement initiative could be a result of lack of motivation and/or lack of possibility.

It is important to note that in the group of 42 projects with currently available equipment are also schools, which have replaced not well functioning technology with new one. The schools with replaced equipment are mainly older projects (2009 -2012). One of the reasons for replacement is the interactive devices for the white boards, which were not functioning properly or were used for a short period. Contrary to that, computers are technology with longer ‘life period’ due to the possible software updates.

The third component –the ABF signs were available and observed in 43 schools. The other two schools currently do not have signs put up. There is also one school with a broken sign, which was not put up, but it was available. This school was undergoing a big repair work and its sign is shown on the left picture above.

#### 4.1.2. Conclusions

The data, triangulated from all the sources, shows that the overall condition of the learning premises, renovated as part of 2009-2015 Schools of the Future program, is good. In 91% of the schools the equipment from the ABF project is fully available and the premises are maintained.

The main factors, which lead to this result, are:

- The quality of renovation of the ABF Project Premises, e.g. only small repair works were necessary
- The endeavors of the school community to maintain these premises and to replace the old equipment
- The possibilities in most of the schools for big renovations and investments in new equipment, whenever necessary

There is no relation between the condition of premises and equipment and different types of investments, size of investment, type and location of the school. A relation between the period since the project implementation and the overall condition and availability of equipment could be identified – all three of the schools with partially maintained premises and partially available equipment are older projects (2009-2011). It should be noted, however, that this factor should be considered in combination with other factors, such as school philosophy, motivation, etc.

### 4.2. Adequacy of the available technologies and equipment to the needs of teachers and students



#### 4.2.1. Findings

The adequacy of the available technologies and equipment is assessed by: (1) their overall condition and level of functionality and (2) students’ and teachers’ perception of the usefulness of technologies and equipment.

The study has found that 34 schools (76%) have fully functioning equipment in good condition (meaning at least half of the equipment). At one of the schools, the funding for the equipment came from two different donors. The main factors that explain this good result are:

- Most of the projects with fully functioning equipment were funded after 2011. The oldest projects with fully functioning equipment are dated 2011 and in most of them technology has been replaced with new one;
- The possibility for maintenance of equipment – people or external companies, responsible for maintaining equipment. There are usually no financial limitations in this regard.

Data shows that seven schools have partially functioning equipment due to objective reasons, such as old technology that is not possible to maintain and repair, it is more expensive to maintain equipment than to buy new technology, etc.

In four of the schools, equipment is partially functioning mostly due to:

- Traditional approach to language education – e.g. writing by hand is important. This was shared by some teachers;
- Change of leadership and philosophy in the school – the principal has changed one or more times, and the same has happened to the school priorities. Technology could become less important in this process.

The second component of the adequacy to the needs is the level of usefulness for teachers and students. For students, usefulness is connected to the degree to which technology helps the understanding of educational content. In relation to this, three levels of usefulness are defined – Useful/Partially useful/Not useful (see Table 5).

Data on Figure 1 shows that in 29 schools (64%) technology helps students, which means that the majority of them share that most technologies help. The reasons for higher level of usefulness of technology are related to the factors: type of technology, purpose and frequency of usage and educational subject. Equipment in scientific subjects is more useful, with the exception of microscopes. This is related to the frequency of usage. Projectors appear to be the most useful for students. An additional factor, connected to the level of usefulness, is the purpose of usage of equipment, which will be presented in Figure 3 further below.

In 15 schools (33%), technology helps partially. This means that most of the equipment is not helpful to the majority of the students. The reasons for the partial usefulness of technology for students could be the frequency of usage, type of technologies, level of knowledge and standards of students, regarding technology. Most of the school beneficiaries are in bigger cities and are predominantly language schools.

There is one school where technology does not help the students. This school is currently under a big renovation and the equipment has not been used in the past 12 months. This might be also explained with the specificity of the project, where the equipment was meant for use by students during their free time outside of the classroom.

**Figure 1 Usefulness of ABF equipment for students**

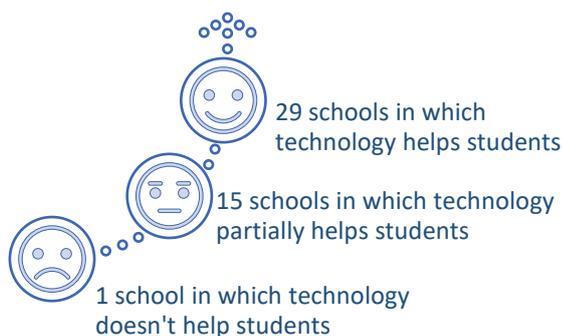
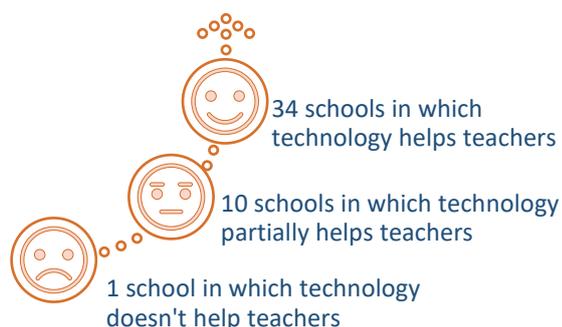


Figure 2 presents the level of adequacy of technology to the needs of teachers at the beneficiary schools. It shows the findings about the adequacy of technology regarding teachers' needs. The conclusion is that technology helps teachers in most of the schools (34 schools or 76%). The differences between the students' and teachers' perception about the usefulness of the equipment are explained by its usage: predominantly for demonstrations, teaching lesson's content, and not so much for group or individual students' work.

Technology is useful for teachers, because *'it improves flexibility of the teaching and learning process, helps students to be proactive, makes subjects more interesting for them and in all these ways makes teachers' work easier, they want to make things interesting for the students.'*<sup>2</sup> Some teachers say *'technology is more useful for extracurricular than curricular activities'*.<sup>2</sup>

Those teachers (in ten schools or 22%) who say technological equipment is partially useful usually express the opinion that the teacher and his/her individual approach to the teaching process is as important or more important than technology, which is only the means of instruction. Another factor, defining the usefulness for the teachers, are the available educational software products. Examples of such are electronic teacher books, Mozabook, Kahoot, Jumpido, Envision, Quizlet, ucha.se. These software products could make the teaching process easier, but also sometimes they could make it more difficult. The reason for this is related to time needed for adjusting the available products to educational content and state requirements. In addition, some of these products are less interactive; they are not suitable for all ages, classes, and subjects.

**Figure 2 Usefulness of ABF equipment for teachers**



#### 4.2.2. Conclusions

The overall analysis shows that technologies from the ABF projects are adequate for more than half of beneficiary schools (56%), regarding all the criteria: condition of ABF project equipment, usefulness for teachers and usefulness for students. These schools have fully functioning equipment in a good condition, which is useful for both teachers and students at the same time. In 20% of the schools technology is fully functioning but partially useful for either students or teachers. In 15% of the schools the equipment is useful for at least one of the groups and in a partially functioning condition in general. Only in 9% of the schools the equipment is partially functioning and partially useful for both students and teachers.

The main factors, influencing this result, are:

- Level of maintenance – in some schools the period of using the equipment is longer, but they have invested in its maintenance or replacement. In other schools, the equipment is new,

<sup>2</sup> Interviews with teachers

and they are making the effort to keep it in good condition. Newer and better technologies results in better adequacy to the needs of students and teachers;

- Motivation, leadership, and taking part in planning – these factors increase the level of adequacy and usefulness. Therefore, school communities also invest in keeping technology in good condition;
- The level of adequacy and condition are also influenced by the degree and frequency of usage by teachers and students.

### 4.3. Usage of the equipment and technologies – frequency and comparison with the initial years of the project



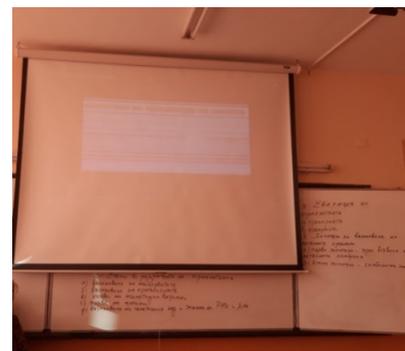
#### 4.3.1. Findings

The level and frequency of usage of ABF Project equipment at the 45 schools is analyzed based on the survey of students and the interviews with teachers among the expected users, presented in the project proposals/reports and information collected especially for this evaluation from principals.

There are 37,003 students studying at the 45 school beneficiaries in the Program. The total number of expected student beneficiaries in the year of reporting is 32,030 (this estimate is the sum of the number of expected student beneficiaries planned in each of the 45 school applications). On average, 67% of the expected student beneficiaries currently use the premises. Less than half (38%) of them use the equipment and technologies often, in most of the school lessons.

The usage of the ABF project equipment by students varies among the 45 school beneficiaries - between the minimum of 33% and maximum 96% of the expected number of users. The average usage is 67%. Among the schools with the highest share of student users are the following schools, illustrated on the pictures below:

- Science/Language high schools with several premises renovated as part of the project, new or maintained/replaced equipment;
- Smaller schools in rural areas with one equipped classroom;
- Middle schools with one classroom equipped



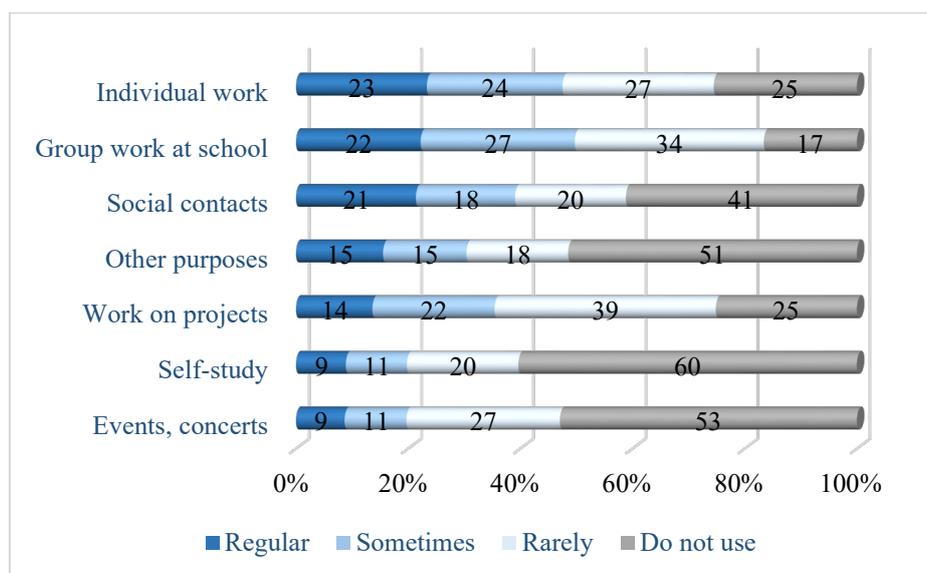
In 15 of the schools, students use the equipment in the premises sometimes, which means every 3-4 school lessons. In the other 30 schools, students use equipment in the premises often, which means during most school lessons. There are no schools where students use the equipment regularly, meaning every school lesson (see Table 6).

The analysis by type of projects supported shows that there is a high usage of equipment by students at the schools where there were only science centers renovated in the Program. The frequency of usage is mostly 'often' (there are three exceptions out of a total of 13 schools).

The schools where only learning centers were equipped show a variety, but still mainly higher usage of students. These students use the premises with a different frequency. Schools, where only IT centers were equipped, are often used by a different number of students. Results in schools, where only interactive learning centers were equipped, do not demonstrate a tendency. The schools with a combined type of projects show results in the two ends of the spectrum and are specific cases.

Students use equipment for the activities, presented in Figure 3. It is evident that the individual, group, and project work at school are the purposes for which students mostly use the premises. Equipment is more used for group, individual work and work on projects and less for social contacts, self-studying and events.

**Figure 3 Purposes of usage of the equipment by students (%)**



The second group of beneficiaries, which is analyzed, are teachers. To simplify the findings, teachers will be divided by schools, related to the available information about number of expected beneficiaries at the stage of project planning, reporting and current situation:

- Schools (9), in which there was no information about the number of expected teacher beneficiaries at the planning or reporting stage. This prevents the estimation of the percentage of teachers, using the ABF Project Equipment, since this % should be based on the number of expected users;
- Schools (15), in which the number of expected teacher beneficiaries is the same as the total number of teachers working at the school. The current situation in these schools shows that only a part of these teachers uses the equipment;
- Schools (21), in which the number of expected teacher beneficiaries is the same as those currently using premises. In this group are also schools, in which the share is more than 100, because the number of teachers working at the school has increased.

The frequency of usage is divided into three groups – regularly, often, and sometimes, defined in the same way as with the students’ group (see Table 6). In two of the schools, teachers use the equipment regularly. Both are science schools in big cities. They have equipped science and IT centers. The projects are among the group of recently implemented (2014 – 2015).

In most of the schools (71%) teachers use equipment often (in most school lessons). The reasons vary from objective to subjective – type of lesson topics, subjects, organization of the study process in one or more rooms for one subject, etc.

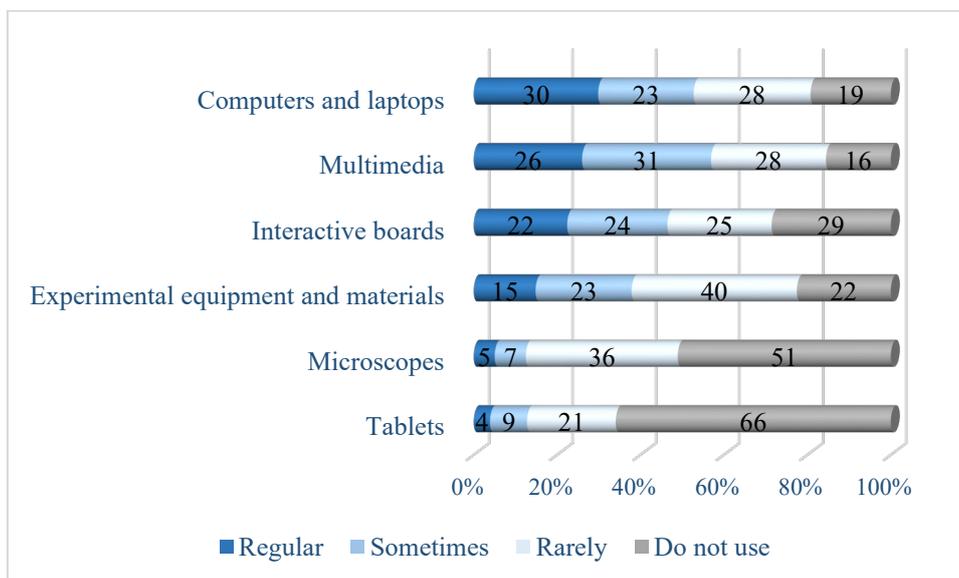
In 22% of the schools, teachers use the equipment sometimes (once every 3-4 school lessons), depending on the type of school lessons and topics covered or the understanding of the teacher, as well as the organization of the curricular activities, using one classroom for many purposes or one subject, by one or different classes, etc. In 4 % of the schools, teachers use the equipment regularly, which means every school lesson.

Regarding the type of equipment, used by teachers, some of the most mentioned and used are computers, projectors and lab equipment. They share that *‘IT can’t be studied without computers; physics needs these instruments in order to attract attention of students and help them understand.’*

Depending on the type of equipment, data shows that students use multimedia projectors (57%), computers and laptops (53%) and interactive boards (46%) most regularly – in most school lessons. The use of tablets and microscopes is limited, because they help for certain educational subjects and topics, which are not repeated that frequently throughout the school curriculum. The data from the Impact Assessment of the Program by OSI demonstrates a similar tendency - there is a large share of students in the ABF supported schools who use multimedia projectors and interactive boards almost every day or several times a week. This is relevant to the overall observation and opinion of teachers about the most used technology.

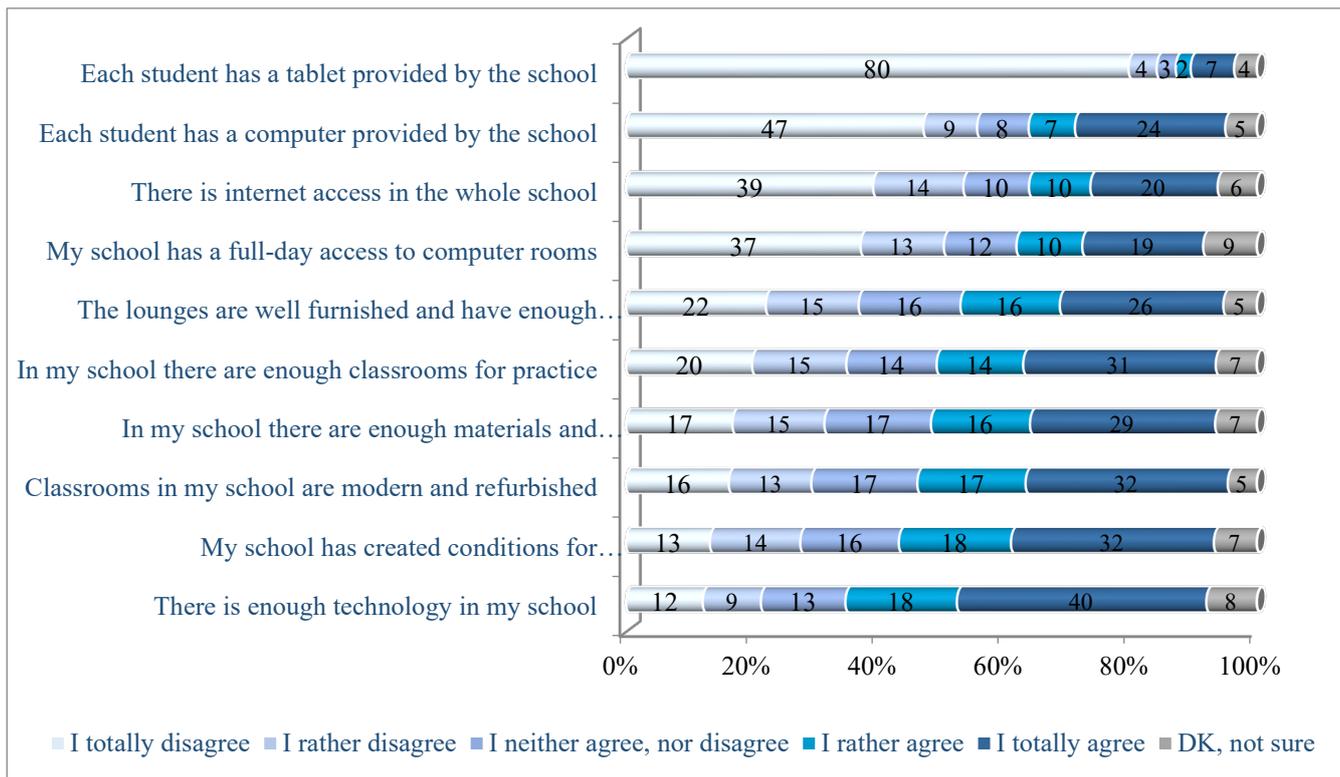
The use of tablets and microscopes is limited. This is explained by the fact that they are a relatively new technology for the schools and not that suitable for the educational system. Microscopes are used more rarely, which could be seen on the graph, because they help for certain educational subjects and topics, which are not repeated that frequently throughout the school year.

**Figure 4 Frequency of student usage by type of equipment (%)**



Technology is becoming increasingly important in everyday lives of students and the educational system is responding to their developing needs. (Figure 5). However, this is still the beginning of a process and it could be seen in the replies of students about the overall situation at their schools. Individual technology for each student, such as tablets and computers, is still not provided by schools. This is seen from the highest share of disagreement with the first two statements on the graph. Contrary to that, students express a higher level of agreement with the overall availability of technology at schools. These results reflect the process of adoption of technologies at schools, which have still not reached the individual student. This could be related to the fact that individualization of the learning process is not currently happening.

**Figure 5 General school situation**



**4.3.2. Conclusions**

On average, 67% of expected student beneficiaries at schools are currently using the equipment in the ABF project premises. Most of them use it often – 38%. At the different schools, the share has changed in different way since the first year of the project. The total share of users depends on the number of student beneficiaries, who were indicated in school reports or applications. Similarly to the situation with teachers, in most of the schools this number is the same as the total number of students studying there. Due to this specific, a comparison could be made only with the data from the impact assessment of the Program conducted by OSI in 2015. The share of students, who were using the project equipment often, was 35%. Currently, as mentioned, it is 38%, so there is an increase in usage level. This change in the share of users of equipment and technologies as of today depends on different factors:

- The availability and condition of the equipment has been changed at some schools since the first year of the project – technologies have been replaced with new generation technologies and/or maintained in a good condition.
- A lot of other changes have been made to the school premises on the whole, especially related to technological investments;
- The technological changes in the lives of students on the whole, as well as in the educational system. Technology is becoming increasingly important for every area, including education. Students use all kinds of equipment daily, so it is natural that the usage at schools has increased over the last three years.

On average, 67% of expected teacher beneficiaries use the equipment in the project premises. Most of them use it often. The main factors, which influence the frequency and share of usage by teachers, are:

- Most of the teachers, who have planned the projects and were there during the implementation, are still working at the schools and influence the change in the school community
- There is a tendency of increase in the number of younger teachers at some of the schools in big cities and they are sometimes former students from the same schools. This factor could increase the extent to which technologies are used in class.
- The technological possibilities at these schools are increasing – more new computers, interactive boards, projectors, lab equipment, software products.
- In some of the schools, traditional approaches are still relevant – the teacher is the most important figure in education, some teachers make the distinction between the role of technologies and the role of humans, instead of combining the two.

#### 4.4. Investments in maintenance of the technology acquired as part of 2009-2015 Schools of the Future program



##### 4.4.1. Findings

The data shows that there is a difference in the ways schools have invested in maintaining the technology in the project premises. Investments have been identified in nine of the schools on different levels and for different purposes:

- Small repair works, such as painting, changing parts of furnishing, etc.;
- Maintenance and repair of equipment, such as upgrading software, changing equipment parts, etc.;
- Replacement of technology with new one – when it was necessary and the price of maintenance was higher than cost of replacement. Mostly schools with ‘older’ projects have made these replacements.

In the majority of these nine schools there are two main sources of financing for internal investments – school budget and other programs.

The estimation of the amount of internal investments is very difficult because the prices have changed over the years and school principals and staff don’t always know what and how much they have changed. Relatively, these amounts vary from 1,000 USD to 17,000 USD. The total amount of estimated internal investments is around 50,000 USD. These are only technological investments, since big repair works have been made only in one school and in the rest - they are currently happening and cannot be estimated.

In the rest of the schools, there have not been internal investments identified.

##### 4.4.2. Conclusions

The level of internal investments varies among the schools. These differences depend on several factors:

- ‘Age’ of technology- the older the equipment, the more it is necessary to maintain and/or replace it. Examples are multimedia projectors, for which it is sometimes less expensive and easier to replace than repair;
- Level of motivation and usefulness;
- Budget constraints.

#### 4.5. New initiatives for improvement of the learning environment inspired by the 2009-2015 Schools of the Future projects



##### 4.5.1. Findings

There are two types of new initiatives for improvement of the learning environment. First, in some of the schools, as mentioned in part 2.1.1 of the report, there are renovations, repair works and furnishing in the buildings. There is a big variety of initiatives; therefore, they cannot be estimated accurately – different years, requirements, scope, materials used, etc. In addition to these renovations, there are also investments in buying new technological equipment.

The data shows that 26 schools have new initiatives for improvement of the learning environment by acquiring new equipment. These investments vary from 1,300 to 68,000 USD. The total amount of estimated external investments is around 432,000 USD. The bases for these estimations are the assumptions about the price, type and number of bought equipment, shared by principals of the schools. It is highly likely that these estimations do not reflect all of the investments and amounts are bigger. This is partially due to the fact that only investments in equipment have been taken into account, as well as the fact that estimations are not based on financial documents.

It is important to note that the majority of the school principals and teachers shared that the ABF Project was the basis for further initiatives, therefore inspired them to continue developing the educational learning environment. They really appreciate the flexibility, good communication and the results for the whole school community that are visible. This motivates them to continue working in a similar way and avoid the contrast between the renovated premises and the rest of the school building.

##### 4.5.2. Conclusions

The 2009-2015 Schools of the Future projects have inspired further initiatives for improvement of the learning environment in the majority of the school beneficiaries.

An overall conclusion about this component of sustainability is that in the majority of schools ABF set the basis and inspired further initiatives of working in the same way as it was done in the program to continue developing the educational learning environment. This is shown by the fact that the total number of estimated external technological investments is 432,000 USD. In addition to these estimations, there have been other external investments in maintenance and repair work, trainings, exchange, etc. They are also noteworthy and add to the conclusion that ABF projects were a very inspiring basis for schools across the country.

#### 4.6. Current funding opportunities for projects aiming at improving the learning environment of Bulgarian schools



##### 4.6.1. Findings

The overall current funding opportunities at the country are mainly governmental and of few private funders. Examples:

Programs/private funders	Amount of funding (2017 - 2018)
Science and Education for Smart Growth Operational Program, Priority area Quality of school education –funds are not planned for allocation for activities in 2017/2018	N/A
Growing Regions Operational Program, Priority area Sustainable and integrated urban development - –funds are not planned for allocation for activities in 2017/2018	N/A
National Program ‘Providing contemporary education’– the component: ‘Improvement in conditions in experimental sciences’ for 2017 and 2018. This sum includes the level of state funding for science and lab equipment.	<b>2,552,030 USD</b>
National Program ‘Information and Communication Technologies’ – the level of funding for 2018 is 547,845 USD and for 2017 is 1,305,239 USD. This program provides funding for equipment to schools in the country.	<b>1,853,084 USD</b>
Telenor, investing in renovation and equipment in school premises at two of the schools beneficiaries in the ABF Project. – In 2015 Telenor donated <b>174,019 USD<sup>3</sup></b> to three Bulgarian schools for renovation of digital classrooms and a ‘Center for leaders’ (out of which two are ABF project schools). This sum includes the level of state funding for both facilities and equipment, since there is no available information solely for equipment. There is no available information for further investments from 2017/2018.	<b>174,019 USD</b>
ORT Foundation for ‘Jewish schools’ in the country and around the globe – one school in the program has received funding as part of the ABF Project and this school is the only possible beneficiary of this foundation, therefore there is no estimation of level of funding	N/A
<b>Total for the period 2017-2018</b>	<b>4,405,114 USD</b>

On the whole, there are different funding possibilities, but the process of application is not flexible and requires adjustment between different priority and strategies of the specific school.

#### 4.6.2. Conclusions

The current funding opportunities can be divided in three main groups:

- Operational Programs, financed by EU and the state budget, in which municipalities could apply and municipal schools are beneficiaries
- National Programs of the Ministry of education, which have specific and clear annual priorities and beneficiaries
- Private competitions and sponsors – these private possibilities have limited access and scope and are rarely encountered

<sup>3</sup> <http://uspelite.bg/telenor-investira-200-000-leva-v-bulgarski-uchilishta>

The key take-aways for ABF are the following:

- Available opportunities are not flexible enough to satisfy specific needs of specific schools, taking into consideration the size of the different locations, the needs of students and teachers, etc.
- Available opportunities lack a system approach, which could lead to a system change in the school considering the needs and possibility for development.

## 5. General conclusions and recommendations

### 5.1. General conclusions

In conclusion, based on all of the information collected, it is observed that Bulgarian education is going through a process of change, influenced by many different factors. This change is influenced significantly by the ABF Projects. This influence has a different level of sustainability for each project, due to many factors having an effect:

- Period since the project implementation
- Type of school
- Type of project
- Leadership
- Motivation
- Level of involvement of teachers in the planning process

In Table 7 below is presented the matrix of sustainability, including description of the different levels, which were identified, according to the key components, evaluated for each school; the school typology and the share of schools in each group.

Table 7 Typology of schools

Level of Sustainability	Description	School Typology
 Very High Level of Sustainability 11% of all schools	 Maintained premises and available equipment - new or from the project, but maintained.   Adequate equipment to the needs of teachers and students, in good condition, very useful for both groups of beneficiaries. Used regularly or often by teachers and students.	 Schools in big cities, science schools or high schools with different specializations.   Relatively new (one is from 2011) and different types of projects, but predominantly science centers.

	 <p>Major new investments in the ABF Project Premises are available as well as in other projects – whole floors, parts of the building are renovated/equipped after the project.</p>	 <p>Key factor is the leadership with clear strategic vision about the school development.</p> <p>Teamwork and shared vision of teachers and the principal. There is also a high level of motivation of all the school community, which inspires new initiatives and also inspires the students.</p>
 <p>High Level of Sustainability</p> <p><b>33%</b> of all schools</p>	 <p>Maintained premises and at least partially available and fully functioning equipment.</p>  <p>Adequate equipment to the needs of teachers or students, in fully functioning condition, useful for at least one the groups of beneficiaries. Used often by teachers and/or students</p>  <p>Several new investments are available in other projects – some classrooms are renovated/equipped after the project.</p>	 <p>Mostly in bigger cities, language schools and high schools.</p> <p>Relatively older projects, mostly from 2013. Projects are of different types, only one language center.</p>  <p>Either high level of teamwork or a clear leader is present. Usually, the school community also has a vision about the future development.</p>
 <p>Middle Level of</p>	 <p>Maintained premises and at least partially available equipment and partially functioning.</p>	 <p>Schools in smaller and bigger towns, mostly primary, high schools and less language and science schools.</p> <p>Relatively new projects (2011 –</p>

<p>Sustainability 47% of all schools</p>	<p> Adequate equipment to the needs of teachers or students, in fully or partially functioning condition, useful or partially for the groups of beneficiaries. Used often or sometimes by teachers and/or students.</p> <p> Some new investments in other projects are available – some equipment for other classrooms has been bought.</p>	<p>2015) of different types.</p> <p> The leadership is predominantly authoritarian. Principals do not always have the same vision as the teams. Teamwork is partially existent. Motivation is at a middle level, regarding all the school community.</p>
<p> Low Level of Sustainability 9% of all schools</p>	<p> Partially maintained premises and at least partially available equipment.</p> <p> Partially adequate equipment to the needs of teachers or students, in partially functioning condition, partially useful for the groups of beneficiaries.</p> <p>Sometimes used by teachers and students.</p> <p> No new investments are available in other projects.</p>	<p> Language schools in big cities, stable traditions.</p> <p> Projects are predominantly older, mainly of the type language centers.</p> <p> The leadership is connected to keeping traditions and the vision for development is not that clear.</p> <p>There is teamwork, but not so much shared visions and high level of motivation.</p>

This typology is a summary of all the efforts for evaluating sustainability and it can be used to see the tendencies. The highest share of schools is in the groups high and middle level of sustainability. The ABF Projects have influenced the development of these schools, regarding the motivation, inclusion of technologies in the learning process, desire for development and

investment in new projects. In each school, these projects became the basis and the beginning of further development in many directions, depending mostly on level of motivation and available possibilities.

The several schools with a very high level of sustainability have had the motivation, the leadership, the teamwork, the vision and the possibilities to achieve their goals. These are science and math schools, unlike the few schools with a low level of sustainability – they are language schools. This finding is important and could be combined with the fact that the type of school has proven to have an effect on many of the key components of sustainability, which were analyzed in this report. In language schools, traditional ways of instruction are still preferred, while leadership or teamwork is not lacking. Science and math education are becoming increasingly important for the economy and labor market, which is influencing the development of these schools.

## 5.2. Recommendations

Based on the overall findings of this evaluation of sustainability, it is recommended that the ABF ‘Schools of the Future’ Program should continue forward with launching new waves of competitions in the future. These further initiatives should be flexible and allow schools from previous cohorts to be able to reapply under certain conditions such as amortization of equipment and presence of clear new initiatives, leadership and vision.

The recommendations below aim to support the achievement of a higher sustainability of the ABF ‘Schools of the Future’ Program.

### **Premises and equipment**

In relation to the overall good condition of the premises, it is important to ensure a high quality of renovation and this should remain a requirement for future programs as it was in the previous ones. The usage of high-quality materials would ensure a higher level of sustainability of the condition of renovated project premises. We encourage this requirement and it should be a part of the call for proposals and guides for application.

In addition, it is recommended to include a possibility for support for maintenance and repair in the project, since some schools face difficulties regarding this process. This should be integrated in the budget, for example as a component called ‘Maintenance and repair’, and be a part of the total finance support from the program.

In relation to the overall good condition of the equipment, it is recommended that the purchase of new generation technology should be required from the project applications and budget documents.

### **Students and teachers**

The type and number of equipment for schools should be considered in relation to the curriculum and content of the school lessons. This would lead to more frequent usage by students and teachers. For example, it was found that computers, laptops, multimedia and new generation interactive boards are used with higher level of frequency; therefore, their central role for the study process at some schools should be encouraged by prioritizing their purchase.

In addition, software products are tightly connected to the level, frequency and possibility for usage of interactive boards, computers and other similar equipment. Therefore, software programs and packages should be integrated into planned budgets.

In relation to the fact that in some schools technology is fully functioning but partially useful for either students or teachers, it is recommended that the planning should include all the stakeholders in order to ensure a high level of involvement of all the school community. This

would increase their ownership and commitment. It could be done by conducting a survey with students and teachers prior to creating the project application. This survey could include questions about expectations and needs regarding the project and be integrated into the application of the schools as a requirement.

In relation to the fact that some teachers think technology is partially useful since the educator is more important, it is recommended that teacher trainings should be a component of the program. These trainings should not focus so much on how to use equipment, but rather on why to use it, by looking for the successful way to combine the role of the pedagogue with the role of technology instead of opposing the two.

In relation to the level of usage of teachers and students and, more specifically, the planned number in the project application, a clear system of indicators of all the components of sustainability should be created at the planning stage, so that this data can be collected early on, at equal intervals of time and uninterruptedly. For example, the share of users should be planned realistically according to the scope of the project.

## 6. Annexes

### 6.1. Evaluation Matrix for sustainability

Evaluation Question and Sub questions		Indicators	Data Collection Method(s)	Data Source	Sampling	Comments
<p>Taking into consideration the time (year) of ABF investment, are the technologies and equipment purchased (laptops, computers, tablets, projectors, interactive boards, specialized software to mention few) still adequate to meet the needs of students and if not why, what is the reason?</p>	<p>Is there a process of changing/improving the equipment in order to meet the developing needs of students (for example, software updates, new programs added, etc.) If there is/is not such a process, what are the conditions and reasons for it?</p> <p>What is the attitude of students towards the equipment in the schools? Do they have different needs, which are not satisfied?</p> <p>What is the level of usefulness of the equipment for students?</p>	<p>The level of usefulness of the premises and equipment for the students at the current point of time</p> <p>The level of use of the premises and equipment by the students at the current point of time</p>	<p>Semi-structured interviews with principals</p> <p>In-depth interviews with teachers</p> <p>Surveys with students</p> <p>Observations</p>	<p>Topic list for interviews with principals/project managers</p> <p>Topic guide for interviews with teaches</p> <p>Student survey</p> <p>Observation protocol</p>	<p>45 interviews with principals/project managers</p> <p>3 to 5 interviews with teachers per school</p> <p>Min. 30 students surveyed per school<sup>4</sup>.</p> <p>45 observations</p>	<p>The level of usage depends on the condition of the premises and it is included in the other indicators.</p>
<p>What part of the students uses the equipment and technologies as of today and how frequently? Has this share changed since the first year of the project?</p>	<p>Do students still use the IT equipment provided in the school? For what purpose and how frequently?</p> <p>Has the share of students using the equipment increased or decreased? What are the reasons for that?</p> <p>What are the supportive factors/barriers for using the new technologies?</p>					
<p>Taking into consideration the time (year) of ABF</p>	<p>Is there a process of changing/improving the equipment in order to meet the developing</p>	<p>The level of added value of the premises</p>	<p>Semi-structured interviews with</p>	<p>Topic list for interviews with</p>	<p>45 interviews with</p>	<p>The level of usage depends</p>

<sup>4</sup> The number depends on the total number of students using the equipment currently for the target confidence level and confidence interval (look at section 5)

## Evaluation of the Sustainability of the 2009-2015 Schools of the Future Program

investment, are the technologies and equipment purchased (laptops, computers, tablets, projectors, interactive boards, specialized software to mention few) still adequate to meet the needs of teachers and if not why, what is the reason?	needs of teachers (for example, software updates, new programs added, etc.)  If there is/is not such a process, what are the conditions and reasons for it?  What is the attitude of teachers towards the equipment in the schools? Do they have different needs, which are not satisfied?  What is the level of usefulness of the equipment for teachers?	and equipment for the pedagogical and learning process at the current point of time  The level of use of the premises and equipment by the teachers at the current point of time	principals  In-depth interviews with teachers  Observations	principals/project managers  Topic guide for interviews with teaches  Observation protocol	principals/project managers  3 to 5 interviews with teachers per school  45 observations	on the condition of the premises and it is included in the other indicators.
What part of the teachers uses the equipment and technologies as of today and how frequently? Has this share changed since the first year of the project?	Have the trained teachers, from the beginning of the program, left the schools or are still working there? If they have left, have they transferred the acquired skills to their new colleagues?  Have additional trainings or other supportive activities been organized in order to increase teachers' skills and competencies? To what extent are the competencies, acquired during the trainings, sustainable?  Do teachers use the equipment and how often? Do they have the necessary skills to use this equipment?					
What is the overall condition of the learning premises renovated as part of 2009-2015 Schools of the Future	Is there a change in the condition of the learning premises renovated as a part of the program and what is it?  What are the reasons for this change, if there	Availability and condition of the equipment at the current point of time	Observations  Surveys with students	Observation protocols  Student survey	45 observations  Min. 30 students surveyed per school <sup>5</sup> .	By condition it is meant: state of the 'hardware and

<sup>5</sup> The number depends on the total number of students using the equipment currently for the target confidence level and confidence interval (look at section 5)

## Evaluation of the Sustainability of the 2009-2015 Schools of the Future Program

program?	is such?					software'
To what extent have schools invested in maintenance of the technology acquired as part of 2009-2015 Schools of the Future program?	<p>Have schools been able to attract funding for consumables, how much, and what is the source?</p> <p>Where have schools received funding from and under what conditions?</p> <p>Where does the initiative for new funding come from?</p>	The level of investments in maintenance of the program equipment, if needed, after the project implementation	Semi-structured interviews with principals/project managers	Topic list for interviews with principals/project managers	45 interviews with principals/project managers	
Did the 2009-2015 Schools of the Future projects inspire further initiatives for improvement of the learning environment in the respective schools?	<p>What kind of initiatives has the program inspired? Have they been successful?</p> <p>Are these initiatives an addition to the Schools of the Future project? Are they connected to it? How were they realized?</p>	Availability of investments in similar projects and attempts to renovate the rest of the school premises	Semi-structured interviews with principals/project managers	Topic list for interviews with principals/project managers	45 interviews with principals/project managers	
What are the current funding opportunities for projects aiming at improving the learning environment of Bulgarian schools? What are the key take-aways for ABF?	What are the criteria for funding for projects aimed at improving the learning environment? Are they oriented toward individual schools or more general? What are the procedures for these funding opportunities?	Availability and conditions of current funding opportunities in the field	<p>Semi-structured interviews with principals/project managers</p> <p>Desk review</p>	Topic list for interviews with principals/project managers	45 interviews with principals/project managers	



