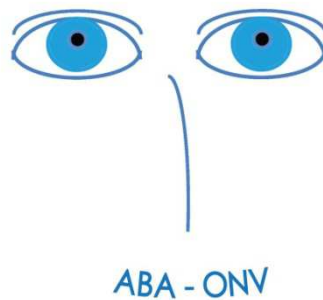




**KA2 STRATEGIC PARTNERSHIP PROJECT**  
**n° 2016-1-LT01-KA201-023166**  
**ABA - OUR NEW VIEW IN SPECIAL EDUCATION**



**Education staff opportunities for ABA**  
**integration in Schools**  
**COMPARATIVE STUDY**

**2017**

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# 1. STUDY DESCRIPTION

**Aim** - Foresees the realization of a comparative study on the main approaches on ABA integration in Schools in the participating organizations' countries and/or regions.

**Preparation time** - December 2016 - May 2017.

**Main impact of this methodology can be:**

- For educational government in local, regional or national level - to show most important aspect in child's with autism syndrome or emotional and behavioural disorders;
- For pedagogues - to realise suitable tools for ABA elements use in education. Also to know parents view and identify similarities or differences in view of child's education;
- For parents - to understand pedagogues position and make suitable suggestions for their child's education.

**Methodology:**

**Multilingual research** -each partner has conducted surveys in their mother tongue in order to facilitate an adequate understanding in the participating organizations' countries and/or regions. Information collected relates to quantitative and qualitative data.

The main aspects that were examined are the following:

- Different View about ABA strategy at schools and positive attitude;
- ABA integration in the curriculum: Schools integration of ABA across the special education curriculum. Possibilities and realization. The schools' awareness of ABA's positive affects on the quality of learning and teaching. School community attitudes and behaviour;
- Continuing Professional Development: Schools commitment to ongoing professional development in ABA;
- ICT using in ABA e-learning creating. Clear understanding of the staff on how ICT can be used to improve personal skills - actuality for every country;
- Resources and infrastructure: Schools appropriate ABA resources, including hardware, software and infrastructure to support particular learning environments, and reflect plans for ABA development as outlined in the school's policy.
- Partner will in order to investigate the reasons of success/ failure and learn lessons for potential good applications of the mechanisms that stand at the basis of them.
- Legislative framework in every country.

The study parts in every partner's country are as follows:

1. Legislative basis and possibilities analysis.

**Aim** - to realise law system suitability to autistic child's education, integration and look for schools feasibilities, awareness to use ABA.

This section is dedicated to present the main legislative basis for the education, integration and protection of the rights of children with autism or special needs in force in the countries involved.

Every country analysis and list of analysed documents is added at the end of research.

2. Questionnaires for educators and parents.

**Aim** - to identify and compare parents and teachers view in ABA benefit, real use for children and possible use in school they child attend.

This study includes the questionnaire results which applied on teachers and parents/care holders of six partner countries of the project.

Questionnaires have been applied on 145 teachers and 179 parents.

3. Semi-structured interviews/case studies.

**AIM:** The focus of this section of the study is to represent the educational treatment of children with autism spectrum disorders and to elicit the perspectives of usage or needs of applying ABA method with the ICT tools.

We prepared semi-structured interview administered to the specialized school staff or autism experts to obtain a reference frame of the real situation and possibility of implementing projects aimed at schools to support the training of children with special educational needs.

The case study semi-structured interview consists of an introductory section that explains the situation of followed children and their families (state social support, family relationships with environment, communication, opinion of using ICT tools and how institutions match the child's needs) and 10 open questions focused on ABA and ICT tools.

**Preparation time** - April 2017.

Number of target group (teachers who work with ASD) – 13.

## 2. LEGISLATIVE BASIS AND POSSIBILITIES ANALYSIS

This section is dedicated to present the main legislative basis for the education, integration and protection of the rights of children with autism or special needs in force in the countries involved.

**Aim** - to realise law system suitability to autistic child's education, integration and look for schools feasibilities, awareness to use ABA.

Every country analysis and list of analysed documents is added at the end of research.

More detailed information passed in Annex 6.



### LITHUANIA ANALYSIS

Education of special needs of the Republic of Lithuania is governed by the documents of Lithuanian Government and by the Ministry of Education, Social Security, Labour and Health Security.

Provisions of Special Education Law are incorporated into the Education Law. The concept of National schools (1989) and the United Nations Convention on the Rights of the Child played important role.

Another important document completed in 1994 – "Special Education System Outline" - which became one of the supporting transformation landmarks of children with special education needs.

Salamanca Declaration (1994) and adjustment procedures of "Special educational assistance for children with special needs in general education institutions" (1993) were especially important in creating a special education policy and its implementation in practice.

After adopted of the Special Education Law (1998), there was created and confirmed several major prescriptive functioning documents of the Special Education.

The most important of them - general Law 2002 of Education, Health security and Health security and Labour ministry "Groups of disorders. People with special needs are included in groups for people with special educational needs" and "Individual assessment of special educational needs" (2002).

After adopted of the Special Education Law (1998), there was published several important secondary legislations which standardized examinations, the opportunity of students learning at home, educational institutions of special education commission and its organization of work, special educational assistance for SN preschool children at home, procedure for admission to institutions of special education and other issues.

One of the most important ideas was an integrated education of SPV in searching changes of special education. With the new wave, came the concept of inclusive education, an idea „school

for all“, the need to connect of general and special education. This is a new challenge for the whole education system.

Children with special needs have the right to be educated in an educational institution located nearest to their place of residence, and thus the secondary school or pre-school institution, as determined by Lithuanian existing legislations.

Each family is free to decide whether the child will educate in special education institution, together with the children having the same or similar problems, or together with typical development peers. This is not an easy choice.

Not all Lithuanian general education institutions are ready to educate children with serious disorders. The reasons are several: lack of funds, the public is not ready to accept different children, lack of information for parents; teachers are not adequately prepared to work in an integrated group or class. There are no professionals for working with autistic children.

Many specialists working in various aspects involved in training programs and projects. Specialists working even after several decades with such children, say that autistic children are different and it is impossible to find two identical children.

Experts agree on one issue - the earlier the purposeful work, the better results will be achieved. There are many autism intervention strategies, but applied behaviour analysis has the most research evidence about its effectiveness.

Applied behavior analysis - is a science, applying behavioural and learning principles and methods approved of clinical analysis to establish the desirable behaviour. ABA principles are applied successfully and are popular in various areas of psychology, education studies, business, gerontology, sports, medicine, criminology, sustainable development and other sciences.

Therapy and intervention by the principles of ABA is the most effective way to improve autistic people’s quality of life, teaching them skills to help adapt to the environment and everyday life in society.

For children with disorders need a lot of individual activities, ABA therapy costs are considerable. For many families, this is not possible. However, providing ABA services through a system of educational institutions can reduce the therapy costs.

Education institution which child attends has to become member of team of the child's individual program implementation. Without a doubt, child will easier understand his challenges and educators working in a team with professional behaviour and the child's family will receive the necessary training and valuable advice as the greatest reward - the child's progress.



**GREECE ANALYSIS**

The law 3699/2008 concerns Special Education and Education of People with Disabilities or Special Education Needs. The article no. 7 of the Law 3699/2008 is dedicated in special/education law.

According to the law, the state is obligated to provide students with special needs with equal opportunities in education and social integration. Children with special needs can study in a classroom into a mainstream school, which has to do with students who are high functional and some hours of the day they attend a special classroom into this school. Moreover, a student can study in a mainstream school with a teaching assistant or attending special school setting for low functioning students.

Subsequently article 28 “issues related with special education” of Law 4186/2013 regulates the Restructuring of Secondary Education.

Regarding autism, professionals can become specialized in autism by bachelor degree or master degree. In public sector there is no commitment to ongoing professional development in ABA. ABA integration in the special education curriculum depends on the Ministry of Education.

It’s up to the teacher or the professional to choose if he wants to learn more about ABA.

The teacher assistant supports student with autism by sitting next to him and facilitating the procedure of teaching of each lesson. There is psychologist, school nurse, speech teacher, etc. There is no possibility to get extra pay for the creation of individual programs in public sector (public schools). There is no recreational space adapted to the child’s disability. Teacher of the classroom can shape the space adapted to the child’s needs.

As far as the education of children is concerned, ABA use is not widespread and it’s not common for parents to have access to the public schools. The cooperation with parents is expected but in practice it’s not really implemented.

Lots of educational institutions both public and private organize many seminars about autism and children with emotional and behavioural disorders, but not so much – about ABA.



## ITALY ANALYSIS

Italian legislation has never formally abolished special schools, but after ‘60s has ensured that the education of disabled children took place in the "normal" classrooms of the public school, forbidding the differential classes within the ordinary school system and establishing the figure of the school support teacher. There are currently few special schools, mainly located in northern Italy and the most numerous are primary ones. Many rely on a rehabilitation centre or housing community, especially those for children with severe or multiple disabilities.

For example The Vaccari Institute offers seven classes of public primary school relying on the XX Circolo Didattico di Roma “Istituto Comprensivo C. Abbado” attended by children with serious psycho-physic handicap. State educators who are specialized in educating disable children run these classes. The set up of the aforesaid classes entails the activation of numerous and profitable forms of collaboration between the Institute and the State School System. The mission is to provide to families, public and private schools a specialized service propaedeutic for integration of student in normal schools.

In 1977 Law no. 517 launched the inclusive education system established the principle of inclusion for all pupils with disabilities in elementary and middle school from 6 to 14 years

(imposing however the obligation of educational programming by all class teachers, who were joined by a teacher specializing in "teaching special education" and a concerted administrative and financial programming between the state, local authorities, local health units. According to law no. 104/92, children with autism have the right to attend the common classes of schools of every degree, so they spend most of their time with their teachers. The Presidential Decree of 24 February 1994 provides clear guidelines on the steps to be taken in order to establish cooperation between schools, local institutions and families and the Guidelines for Autism of Sinpia suggests the coordination of the interventions implemented by the child's care.

Following the Functional Diagnosis, by a multidisciplinary team, the PDF or Functional Dynamic Profile is planned by the team that did the diagnosis with the contribution of the teachers and with the collaboration of the family. The PDF describes analytically the functioning of the child with autism, both in relation to his acquired abilities and in relation to his potential development, based on several aspects: cognitive, affective / relational, sensory, motor / praxic, neuropsychological, autonomy and learning.

From the meeting of healthcare professionals, teachers, educators and parents, the PEI is born, or the Individual Education Plan, a document describing the integrated, balanced interventions needed to achieve educational and learning goals.

The most recent provision concerns the law of 18 August 2015, no. 134 that according to the resolution of United Nations General Assembly no. A / RES / 67/82 provides for the updating of the essential levels of assistance, with the inclusion, in the case of autism spectrum disorders, of early diagnosis, treatment and individualized treatment, by using methods and tools based on the most Advanced scientific evidence available. The ISS subsequently published an update to Autism guidelines where they recommended some ASD childcare such as PECS, TEACCH, ABA, and CBT.

Because of school and regions autonomy, implementation of the recommendations regarding special needs may vary according to available resources.

Supporting teachers are not required to provide specific training in ABA or other methods.

It's up to the teacher or the professional to choose if he wants to learn more about ABA



## **TURKEY ANALYSIS**

For disabled students, the first legislative regulation on special education has been made in 1889. A law about special education has been put into force in 1997 and it has been regulated with Special Education Regulation to, which has been published in 2006, its current situation.

According to Fundamental Law of National Education, educational institutes are open to everyone without discrimination based on language, race, sex, disability and religion. Individuals during the term of their education are directed to the programmes and schools in accordance with their talents, interests and skills. Also, individuals need special education, are within the scope.

In Turkey, all legislative regulations have been done for disabled people and the children who

have autism in this group to take advantage of the education and social rights. All these regulations are valid in the whole country. Universities train special educators and counsellors for autistic children. Education is free at public schools.

Students who attend to public schools have the right of getting official aid providing that they get private support on some days. If parents, whose child has a disability, have no income, get paid on a monthly basis.

At public schools, classroom sizes depend on the number of special students. The access to education of disabled students is provided. Generally educational environment has been organized according to the type of disability of the student has.

The government has no special education programme or application about ABA. There is no ABA integration or implementation option in the special education curriculum. Some teachers and non-governmental organizations apply the ABA privately

ABA is generally applied by teachers who have knowledge and ability on this field in some public school, in private institutions and non-governmental organizations.



## **SPAIN ANALYSIS**

The educational system arranges the necessary resources for pupils with temporary or permanent special educational needs to achieve the objectives established within the general programme for all pupils.

The Act on the Improvement of the Quality of Education (LOMCE, 2013) considers four types of specific educational support needs; between them there is “Students with special educational needs”. There is also a Law for Social Integration of Disabled People, but education of children with special needs (and autistic children) is regulated by the General Law of Education.

Autistic people are considered Dependent by the Spanish Dependency Law so, depending of the circumstances, parents can get support from the government. There are also some grants to private education of autistic children.

Teachers are generally not formed in special needs of autistics. In public education, there are general teachers for all the pupils or special education class, but there are not significant initiatives to promote the formation and training of teachers on specific methodologies for autistic child, such as ABA methodology.

Trained specialist and special pedagogues especially work with autistic child in special centre



## **BULGARIA ANALYSIS**

In recent years, a number of laws have been approved for special education including Law for family support for children of the 29.03.2002 and actualized 01.01.2017, Law for protection, rehabilitation and social inclusion of people with disabilities of the 01.01.2005, governmental law for inclusive education of the 01.11.2016 and governmental law for preschool and school education of the 8.10.2015.

Bulgarian legislation has paid attention to establish state rules for education of children with special needs and there is a progress in organizing special education in effective form but still there is a lack of autism-specific education and services in the country.

The next step in the school system is to incorporate more training activities and information on the world's most important outcomes in education of students with ASD, the most popular of which is ABA. These include programs for raising autism awareness, training autism professionals in ABA and generally building the nation's capacity to deliver modern teaching methods like ABA and autism-related services. Most importantly, families should take their role in these activities and to the entire process.

This will require collaboration between many government agencies including health, education and social welfare, as well as international collaboration a part of which could be the participation of the school staff in implementing the project 'ABA – OUR NEW VIEW IN SPECIAL EDUCATION'.

School for children with special needs – Vidin is a member of the national association of teachers in special education, which gives the opportunity the gained experience in the project to be spread among teachers' community in Bulgaria.



## **CONCLUSIONS OF ALL PARTNERS**

### **Legislative basis and possibilities analysis**

As outlined above, laws have been promulgated to guarantee the education, integration and protection of children with autism or special needs in each of the countries involved.

A considerable effort has already been made to support the implementation and dissemination of interventions and policies to protect the rights of children with disabilities and their families. Beyond the specificities of the laws, the goal that is to be pursued is common: to foster the integration and inclusion of all people in the community through good practice.

Nevertheless, there are some critical issues in making effective and widespread implementation of all those interventions and structured methodologies to enhance learning, growth and independence of children with autism and special needs.

There seems to be a gap between the regulatory body and its real applicability.

The first issue seems to be related to the available economic resources and the difficulty for school and health personnel to access specific training paths.

ABA training, like other intervention models, has to be paid for and, although recommended, is not supported / provided by the various institutions. It's up to the teacher or the professional to choose if he wants to train or learn more about ABA.

In general special education programs do not require the mandatory or predominant application of an intervention model such as ABA.

In addition, children with ASD show great variability in their functioning and the number of studies has not yet determined a single effective intervention.

For all this reason, the ABA is infrequent in public schools and health institutions.

Moreover, for these margins of discretion, the dissemination of this method is also not homogeneous within the same country, without guaranteeing the right of access to treatment and special education methods.

In many cases, families are responsible for providing this type of intervention to their children and providing ABA educator in school.

The project ‘ABA – OUR NEW VIEW IN SPECIAL EDUCATION’ can give the opportunity to highlight the critical points and strengths in special education and to spread the gained experience among teachers’ community.

### **3. ABA USE IN EDUCATION ORGANIZATIONS**

**Aim** - to identify and compare parents and teachers view in ABA benefit, real use for children and possible use in school they child attend.

This study includes the questionnaire results, which applied on teachers and parents/care holders of six partner countries of the project.

Questionnaires have been applied on 145 teachers and 179 parents. Prognosis was – 120 teachers and 120 parents, so the results exceeded expectations.

Teachers were selected among special education teachers who work with children have autism and among teachers who have at least one inclusive student in their classroom.

As for parents, they are mothers or fathers who have children with autism or emotional and behavior disorders.

#### **TEACHERS QUESTIONNAIRE**

The questionnaire was administered to a total of 144 teachers from the six countries involved.

The sample is composed of 86% by women. The most represented age range is 32-45 years, equal to 45% of the sample, followed by range > 45 equal to 30%.

The age ranges of the teaching years of our sample are represented as follows: 0-5 range of 30%, 6-10 range equal to 27%, 11-20 range equal to 21% and >20 range equal to 23%.

The 46% of the sample are class teachers, the 28% are support teachers and 26% other.

From the questionnaires it emerges that the most critical area found in the educational context is the one related to communicative function (38%) followed by behavioral function (23%) and integration into class group (16%).

In addition, the most common supportive measures in special education provided to teachers of our sample are: teacher assistant (26%), measure training (24%) and special place for activities (20%).

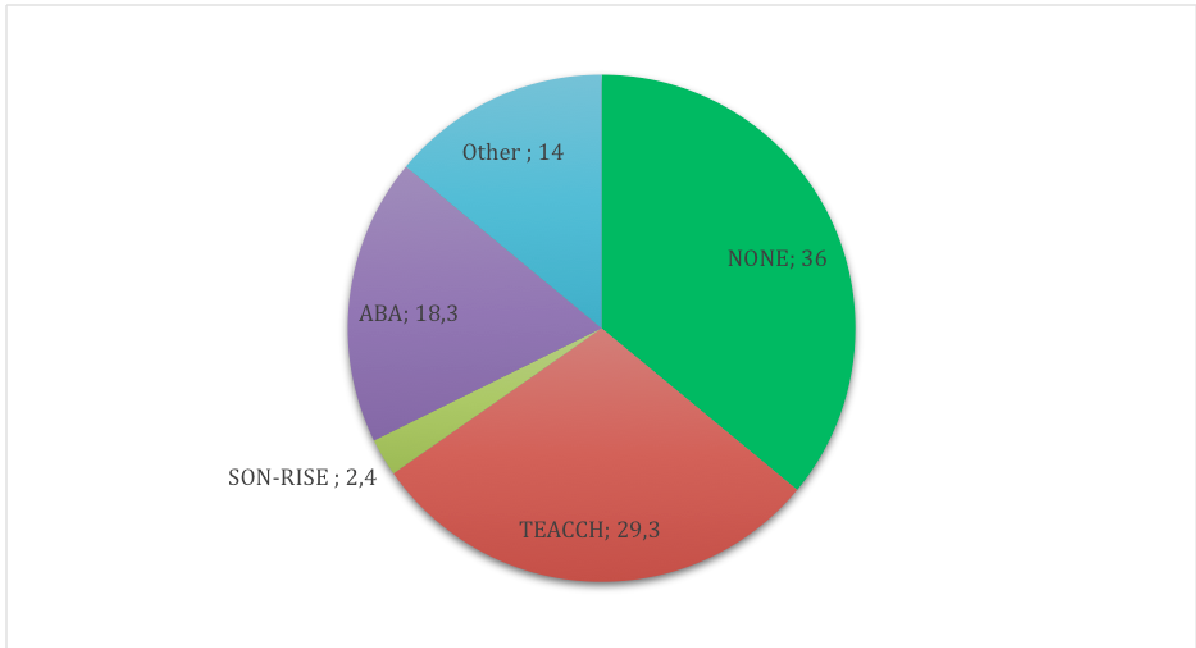
#### **SPECIAL TOPICS RELATED TO ABA**

##### **Question 8 - Which method of training/therapy do you use for your students who have autism at school?**

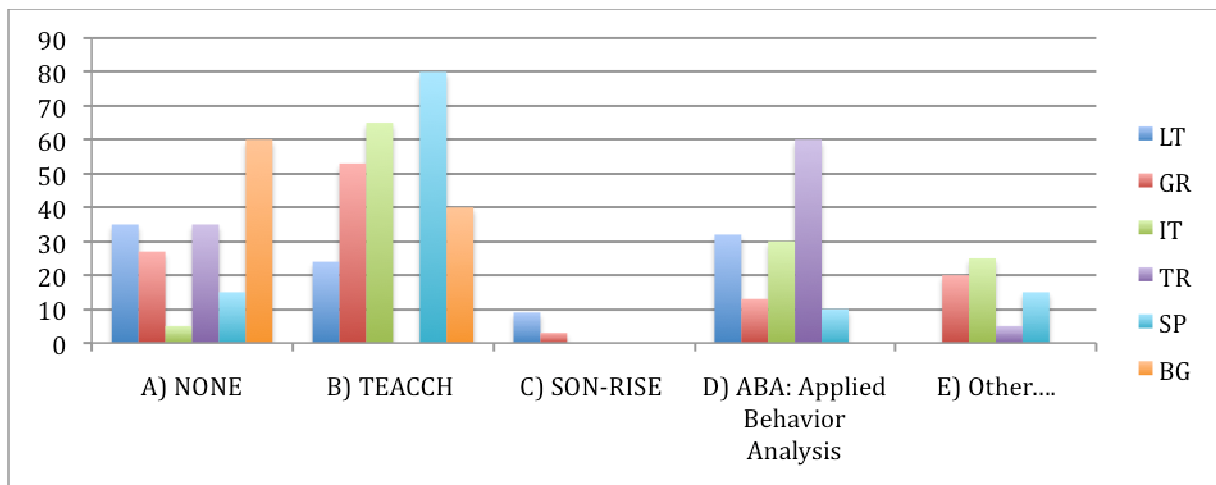
General diagram of the 8th question in teacher questionnaire is below. From 6 countries, 145 teachers answered this question. According to the average of the answer from six Project partner countries, the usage rate of ABA is 18,3 % and this is too low. This result shows appearance of ABA-ONV is based on realistic reasons.

Another important result from this is the option “None” with 36 % percentage. This result shows general method of education has been used for the education of students with autism, not other well-known methods or other methods. High percentage of “None” option shows, the education of students who have autism has been neglected.

Also “Other” option with 14 % shows the probability of existence of special methods by countries or each teacher use their own methods.



**General Graphic Question 8 – Which method of training / therapy do you use for your students who have autism at school? ANSWERS - %**



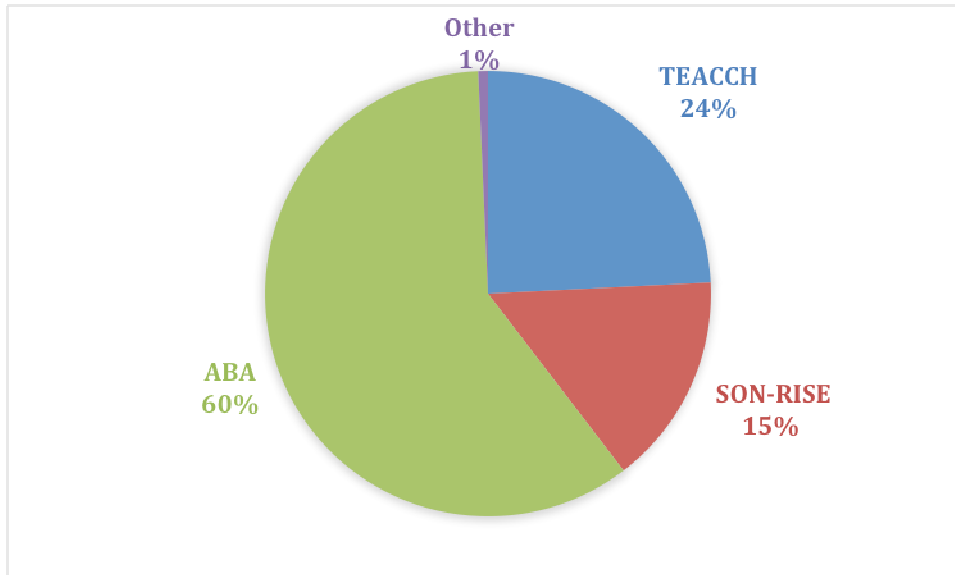
**Graphic by countries, question 8 - Methods for autistic students(%)**

According to answers which method is most often used for training/therapy with children who have autism, majority of respondents answered that they do not use any method - only 35% respondents in Lithuania, 30% in Italy. Turkey respondents most use ABA method - 60%. Also are used other therapy's, such as TEACCH - in Spain (80%), Greece (53%) and Italy (65%), Lithuania (24%), SON RISE - 9% in Lithuania. Also Spain mentioned PECS (15%).

When we look at results by countries, ABA method is mostly used in Turkey with the rate of 60 % and Lithuania with the rate of 35%. At the application stage for the project, Turkey and Lithuania have been chosen as the countries “Short Term Training” courses will be held. These results also shows right decision of our project have been made for the courses.

**Question 9-Which one of these methods do you want to have skills, knowledge?**

On this question, 3 educational methods have been suggested for teachers. These are ABA, TEACCH and SON-RISE. According to the given answers, ABA is the method which preferred most to have knowledge and skill by people at 60% rate. TEACCH in second place - 24% and less interested in SON-RICE - 15%.



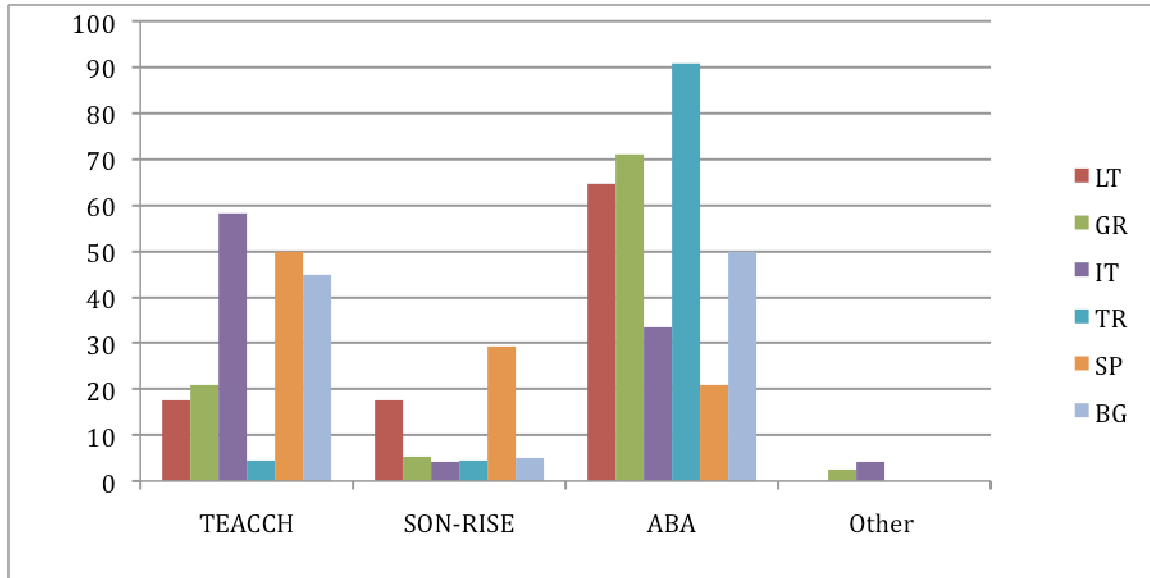
**General Graphic-Question 9- Which one of these methods do you want to have skills, knowledge? ANSWERS-%**

When we look at the result of previous question (question 8), although some teachers use this method they want to have training to enhance their knowledge and skill. This result especially for the education of disabled student proves that teachers need improve themselves continuously and they are already willing to do this.

Also it results (ABA - 60%) shows again that the ABA-ONV project is necessary.

When we look at the results by countries, in the four of six countries, the number of teachers want to have skill and knowledge about ABA is above average. In Italy and Spain, TEACCH method is the predominantly demanded one. This case shows a new project about TEACCH method after this can be done as a KA2 project.

SON-RISE method is the less demanded method and mostly Spanish teachers with 35% rate have mentioned it.

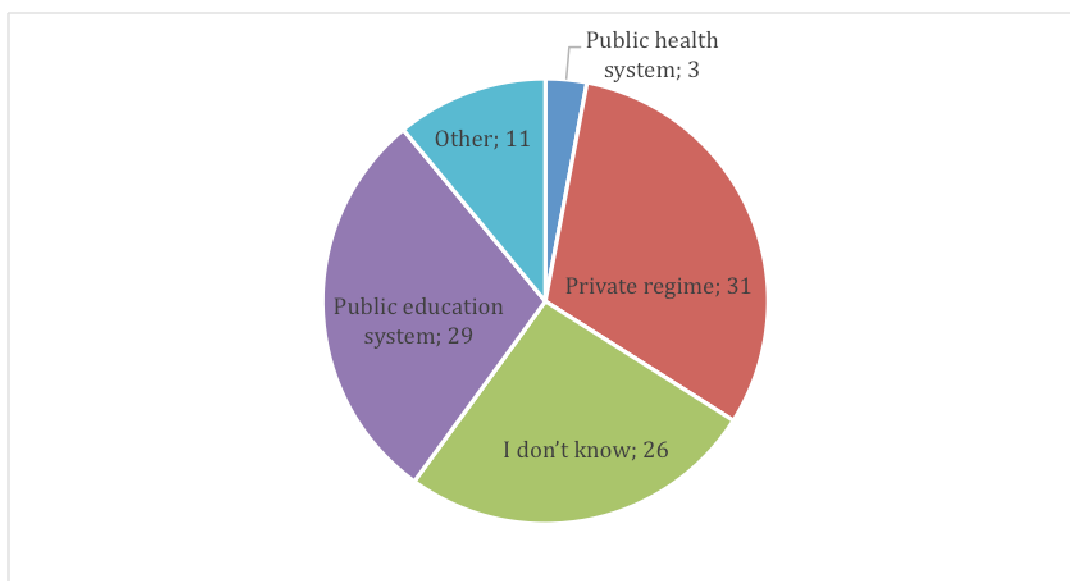


**Graphic by countries, question 9-Which one of these methods do you want to have skills, knowledge? %**

Majority of respondents would like to acquire more skills and knowledge about the ABA method - 91% Turkey respondents, 71% -Greece, 65% - Lithuania, 50% - Bulgaria, 33% - Italy. Less interested in ABA Spain respondents – only 21%. Also is interest in TEACCH%) (Italian - 58%, Spanish – 50%, Bulgarian - 45%, Greece – 21%, less – Lithuania (18%) and Turkey (5%) and SON- RISE (Spanish - 29%, Lithuanian - 18%. Less in Greece, Turkey, Bulgaria – 5% and Italia – 4%) methods.

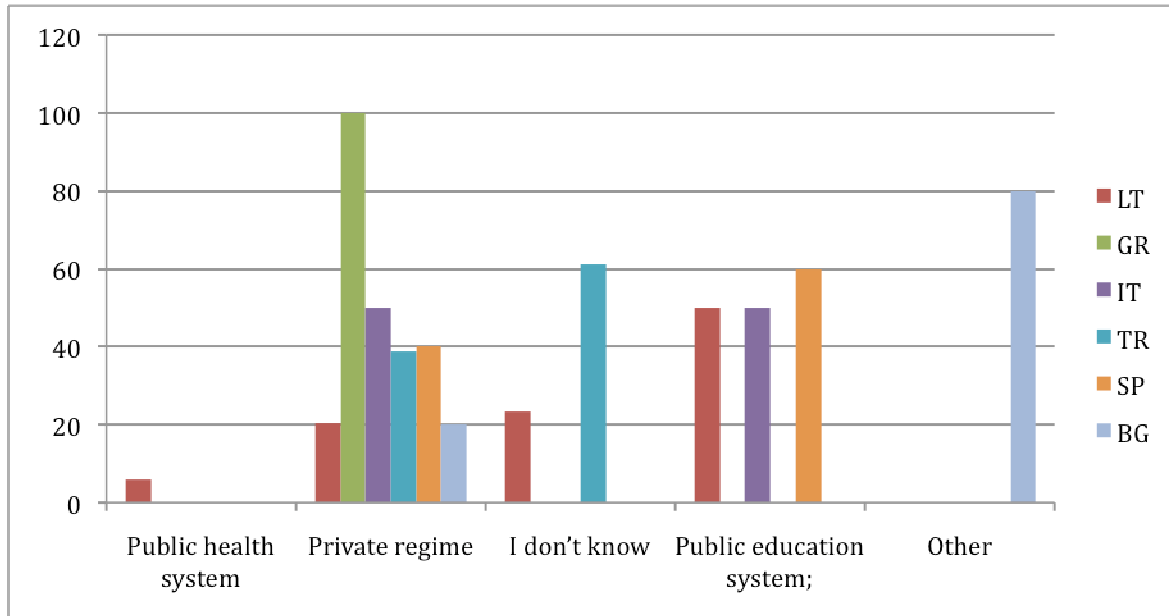
There are some special questions for the ones who marked ABA on the 9th question. (7 questions). Given answers:

**Question 9-11. In your opinion, the intervention ABA has provided by**



**General Graphic-Question 9-11 Teacher’s opinion, the intervention ABA provided by, %**

According to the revealed chart above with the results of the participant countries were combined, ABA is mostly used by private sector (31%). The rate of use in public schools is 29%. But there is significant differences in countries. So, to make an inference or to generalize is hard. The table explaining the situation by countries is below:

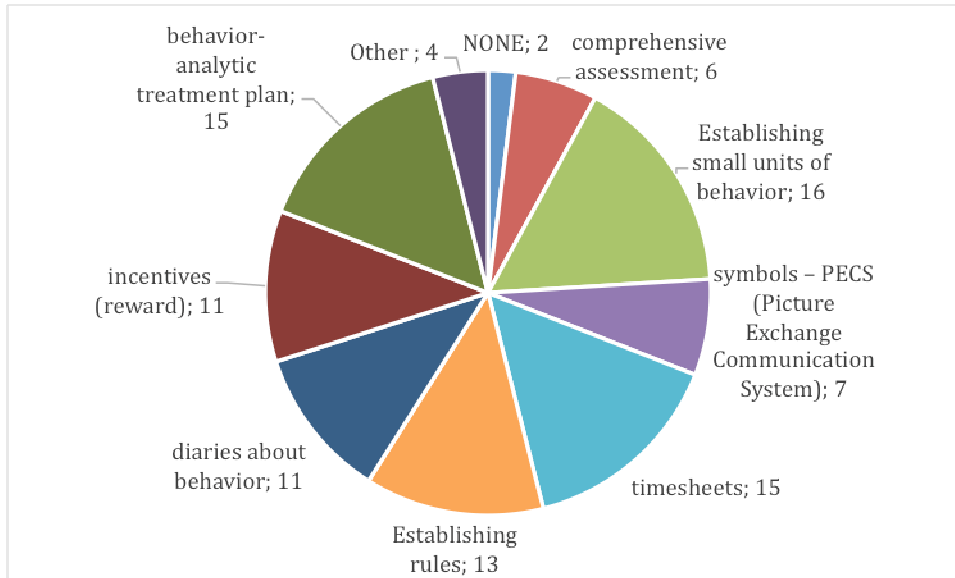


**By countries 9.11 diagram. Teacher’s opinion, the intervention ABA provided by, %**

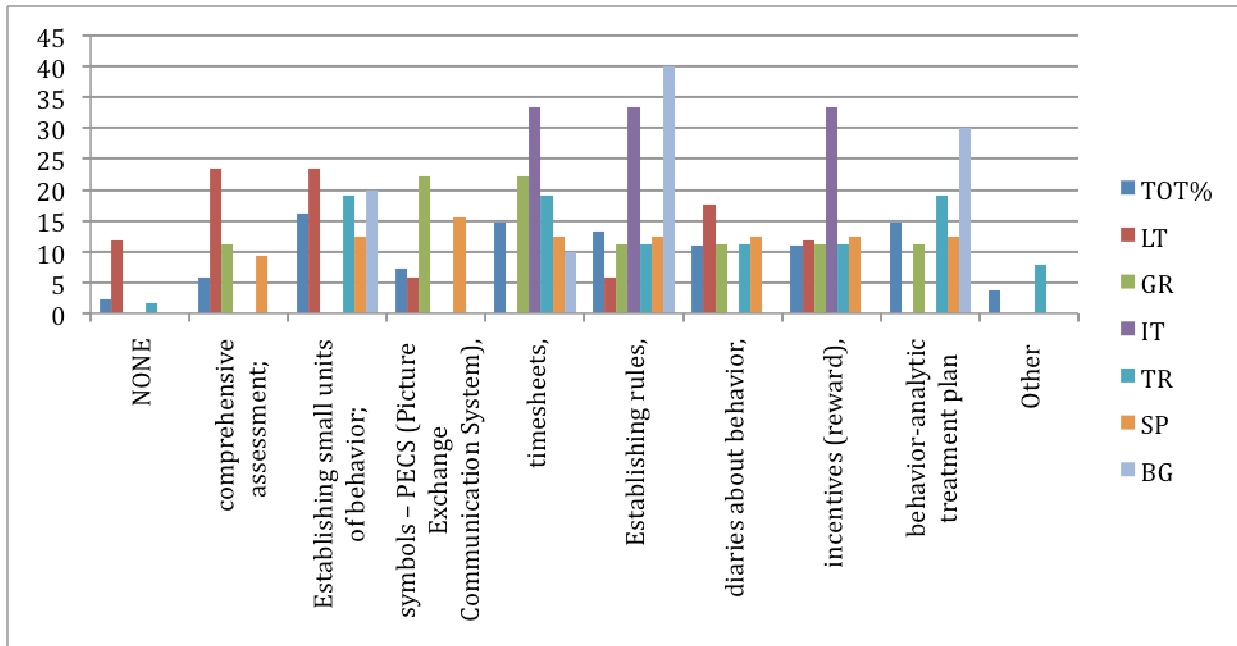
Most answers has shown that interventional ABA methodology might be applied at public educational system (Spain – 60%, Lithuania and Italy -50%) and private providers - (Greece- 100%, Italy – 50%, Spain – 40%, Turkey - 39%, Lithuania – 21% and Bulgaria – 20%). Most respondents have no idea or, however, it is oriented towards the application of ABA in the private regime.

**Question 9-12 Whether one or more of these elements are possible to be used in education?**

In the 9.12 graphic shows what element to be used possibly in education by the teachers who marked ABA on the 9<sup>th</sup> question. Here, teachers were able to mark more than one option. All in all, the possible methods to be used in education are Establishing small units of behavior, behavior-analytic treatment plan, timesheets and Establishing rules. Least possible ones are comprehensive assessment and symbols - PECS (Picture Exchange Communication System)



**General Graphic, 9-12, Elements are possible to be used in education, %**



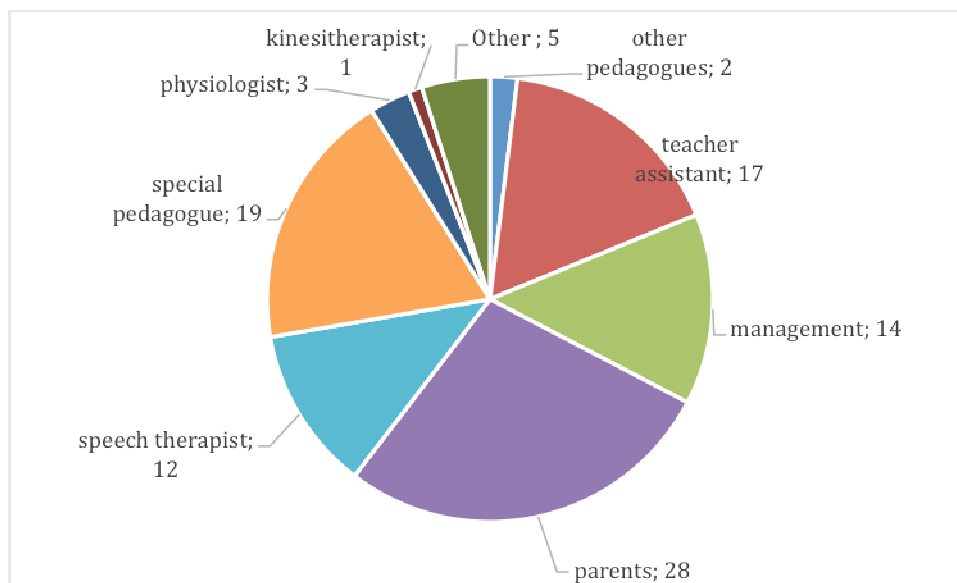
**By countries 9.12 diagram. Elements are possible to be used in education, %**

At least one of these elements might be used for educational purposes: comprehensive assessment (24% Lithuania, 11% Greece, 9% Spain), establishing small units of behavior (24% Lithuania, 20% Bulgaria, 19% Turkey, 13% Spain); timesheets (33% Italy, 22% Greece, 19% Turkey, 13% Spain, 10% Bulgaria), behavior-analytic treatment plan (30% Bulgaria, 19% Turkey, 13% Spain, 11% Greece), establishing rules (40% Bulgaria, 33% Italy, 13% Spain, 11% Greece and Turkey, only 6% Lithuania respondents), diaries about behavior (18% Lithuania, 13% Spain, 11% Greece and Turkey), incentives (reward) (33% Italy, 13% Spain, 12% Lithuania, 11% Greece and Turkey), PECS ( 22% Greece, 16% Spain).

**Question 9-13 In your opinion most useful cooperation with training team member using ABA could be.**

This question is about collaborating in the use of ABA. The teachers were asked “with whom you work cooperatively, ABA method would be more useful?”. When we consider the total given responses in 6 countries, teachers use ABA suggest collaborating mostly with parents (28%) The useful persons to be collaborated are private pedagogues and teacher assistants. At the same time the cooperative work with management is fourthly with 14% and it is a quite important issue.

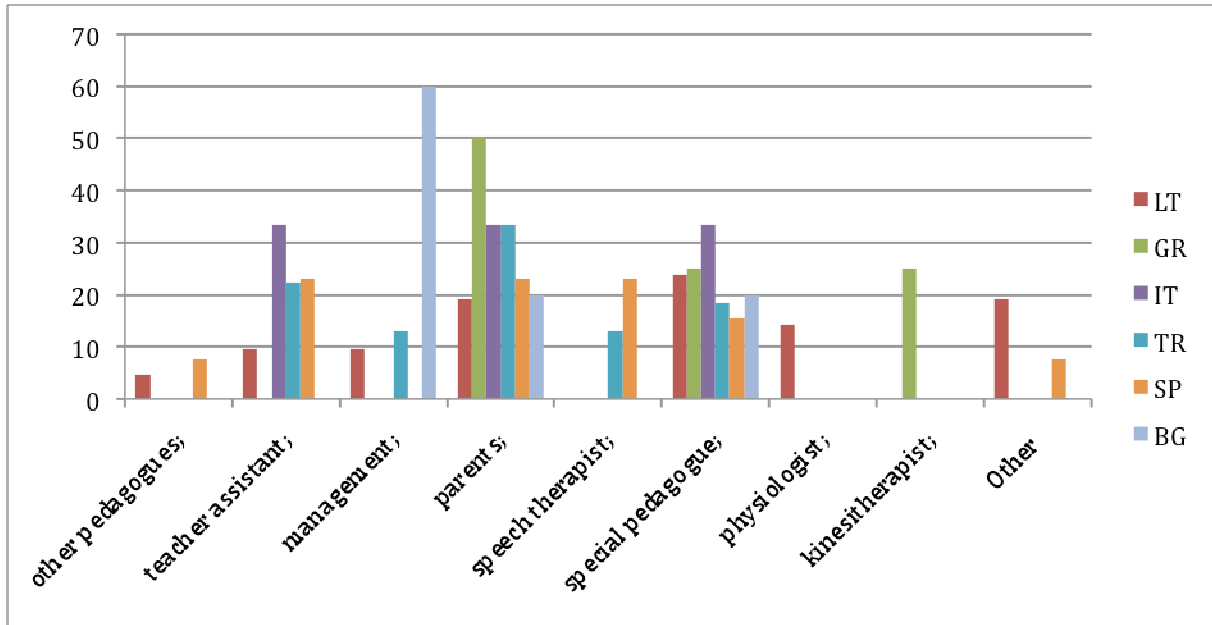
As a result, it is a fact that, Education is a team work. Especially in the education of autistic children, all persons around the child, especially teachers and parents, should cooperate. For this reason, the answers given by teachers to this question were generally evenly distribute



**General Graphic, 9-13. In teachers opinion most useful cooperation with training team member using ABA could be, %.**

When we look at the graphic below on countries basis, cooperation with management (60%) is considered very important in Bulgaria; also 13% in Turkey and 10% in Lithuania. The matter of cooperation with parents is important in all countries while the rate is 50% in Greece and 33% in Italy and Turkey, 23% in Spain, 20% Bulgaria and 19% Lithuania.

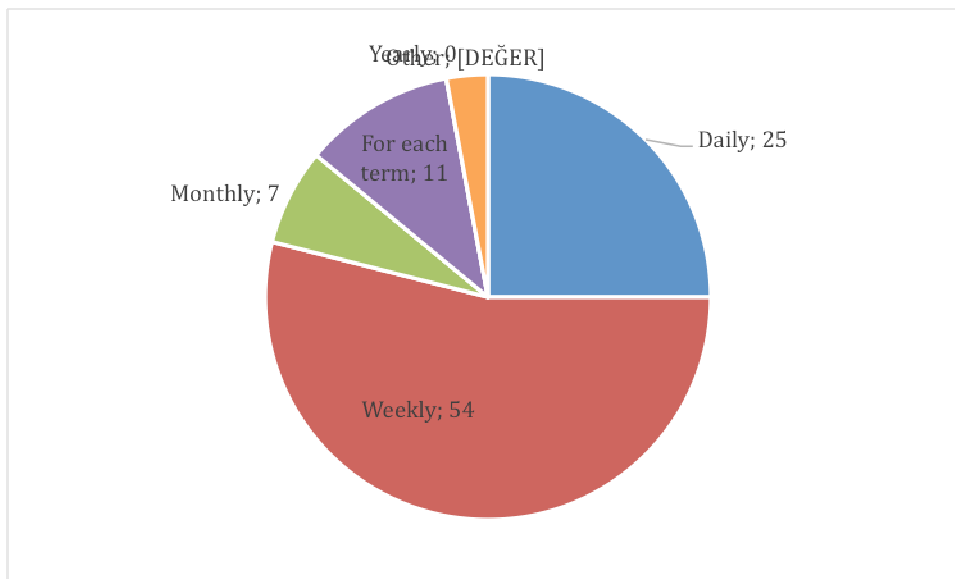
Besides, as really useful marked cooperation with special pedagogue – 33% in Italy, 25% in Greece, 24% in Lithuania and in other partner countries from 15-20%. No less important role is played to teacher assistant - 33% in Italy, 23% in Spain, 22% in Turkey and only 10% assigned Lithuanian respondents. Also mentioned speech therapist - is considered significant with the rate 23% in Spain, 13% in Turkey. Physiologist importance marked only Lithuanian respondents – 14%, kinesitherapist – 25% in Greece.



**By countries 9.13 diagram. In teachers opinion most useful cooperation with training team member using ABA could be,%**

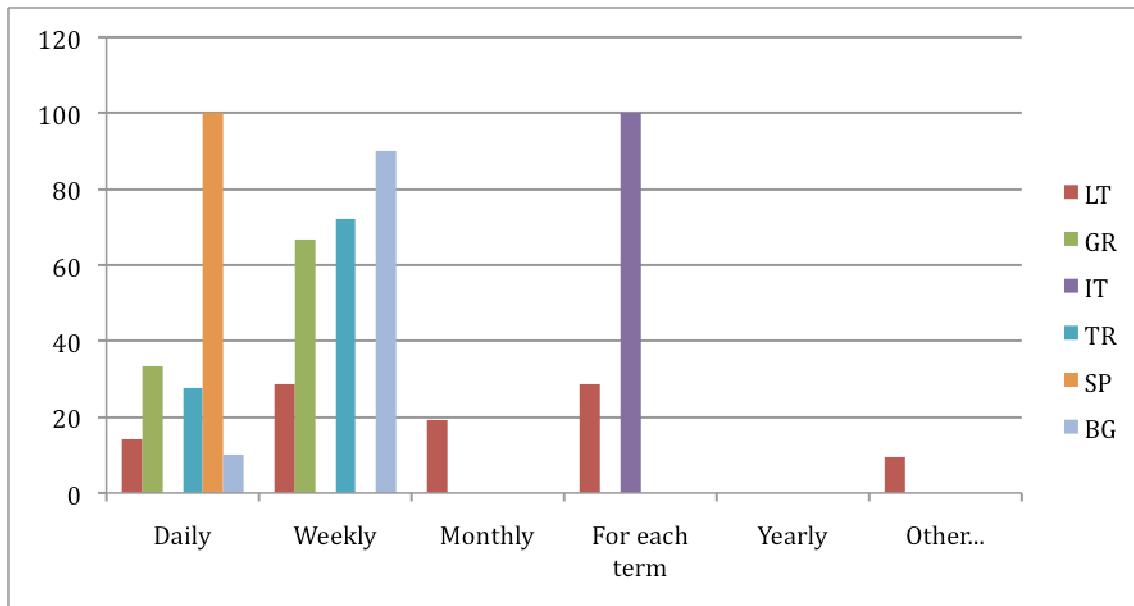
**Question 9-15. In your opinion, how often is needed to record behavioral changes of your students using ABA?**

Another graphic related with the 9th question that should be taken into account is the graphic below of the questions numbered 9th and 15th. Regarding to this graphic, the teachers use ABA method have been suggested recording behavioral changes in their students on a weekly basis necessarily at the rate of 54 %. Secondly, recording daily basis is just 25%. These results show the importance of recording to be monitored change and development in behaviors of the students.



**General Graphic 9-15. Frequency of need to record behavioral changes of your students using ABA,%**

We get a result below when we consider the results on countries basis.



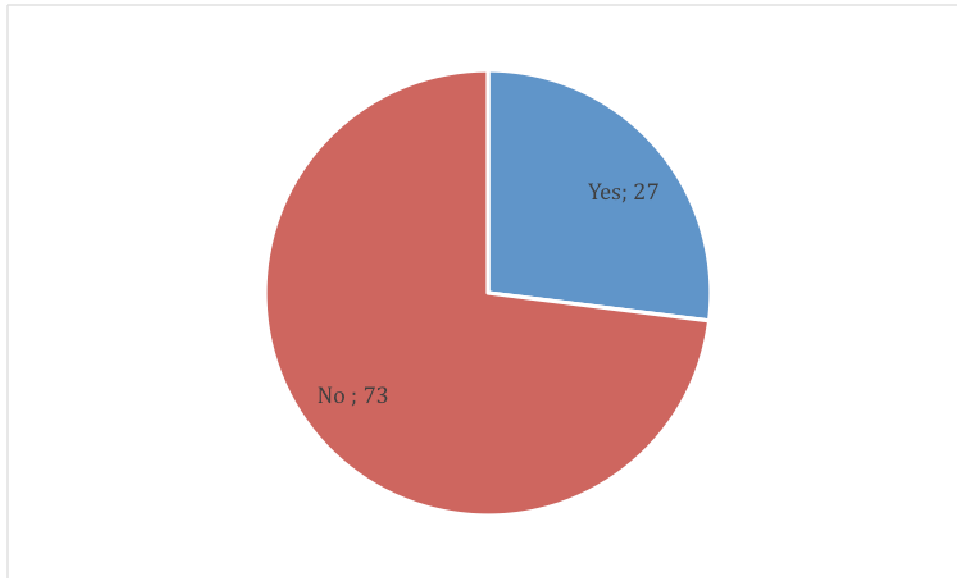
**By countries 9.15 diagram. Frequency of need to record behavioral changes of your students using ABA,%**

According to the respondents, how often was necessary behaviour change record using ABA, the most respondents were in two versions of the answers (equally), who said behaviour record was necessary every week (90% Bulgaria, 72% Turkey, 67% Greece and 29% Lithuania), daily (100% Spain, 33% Greece, 28% Turkey, 14% Lithuania, 10% Bulgaria) and for each term (100% Italy and 29% Lithuania). The least Lithuanian respondents (10%) believe that the behaviour record required on Other frequency.

**Question 10- Do you use ABA method on education?**

According to the given answers to this question, the rate of using ABA method in education in the partner countries in ABA-ONW project has been shown in the next graphic.

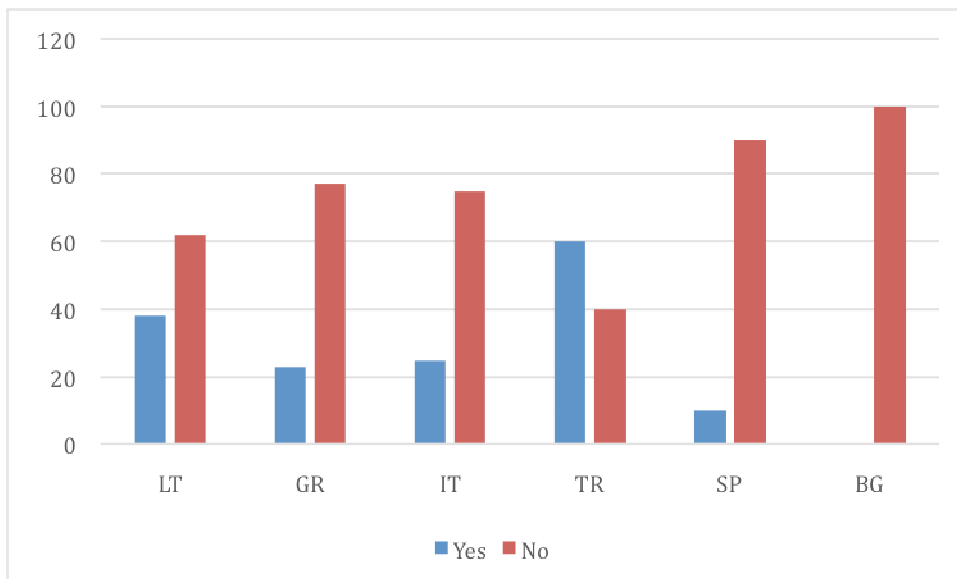
As seen in the graphic, the rate of using ABA method is 27%. We aim to increase this rate at the end of our project.



**General Graphic, Question 10; Do you use ABA method on education?(%)**

The results of the rate of using ABA in education on countries basis is very uneven. According to this, ABA is used mostly in Turkey (60%) and Lithuania (38%). In Italy and Greece ABA is used respectively by 25% and 23%; in Spain ABA method has a rate of using as 10 % while it is not used in Bulgaria with a rate of 0%.

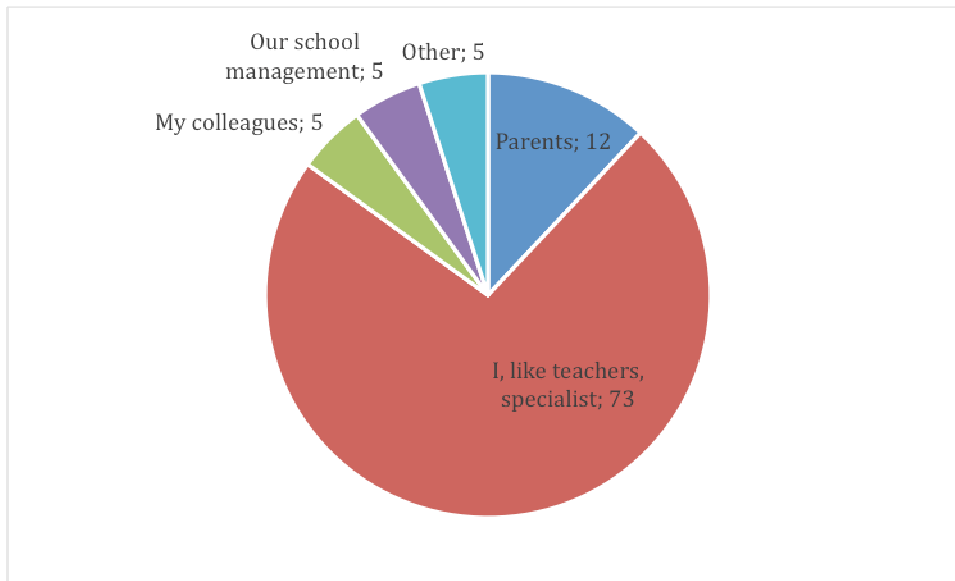
Our project aims to increase the rate of using ABA method to the level of EU.



**By countries Question 10, the graphic on country basis: Do you use ABA method on education?(%)**

In questionnaire there are specific questions for the ones who said Yes to the 10th question. Since the percentage is small for a general diagram, only the answers to some key questions will be illustrated.

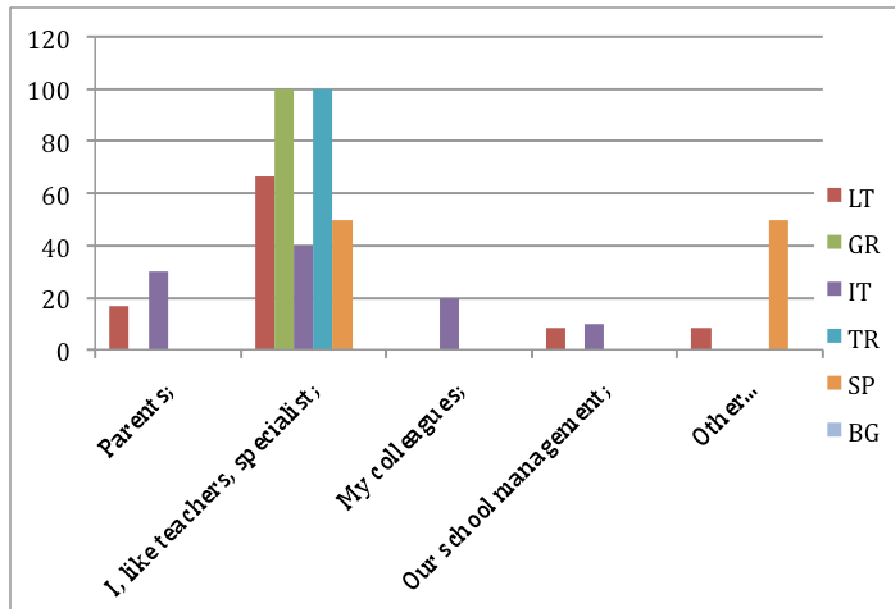
Besides, some of the given answers to the 9<sup>th</sup> question for the ones who selected ABA are similar answers to the ones who said Yes to the 10<sup>th</sup> question. That’s why every question has not been taken under review.



**General Graphic, Question 10-11. Initiator of ABA use in education is(%)**

When we look at the results above, the initiators of ABA method are generally teachers and specialists with the rate of 73 %. This result shows the importance of teaching ABA method on teacher training. Universities and teacher training agencies should teach especially ABA and other different educational methods to their proservice teachers for the students who have autism and other disabled students.

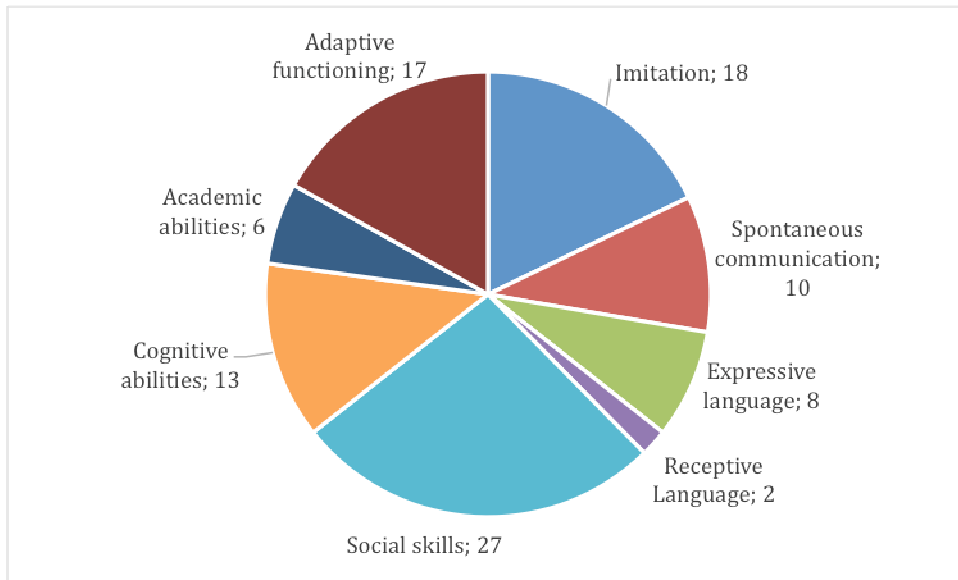
The graphic of initiator of ABA use in education on countries basis is below.



**By countries Question 10.11 diagram. Initiator of ABA use in education,%**

Most of the respondents (100% Greece and Turkey, 67% Lithuania, 50% Spain and 40% Italy) realized that the initiator of ABA use in education is a teacher, a specialist and only some (30% Italy and 17% Lithuania) respondents said initiators are parents. More less answers in Colleagues, in Other (Spain teacher also mentioned psychologist) and in School management role.

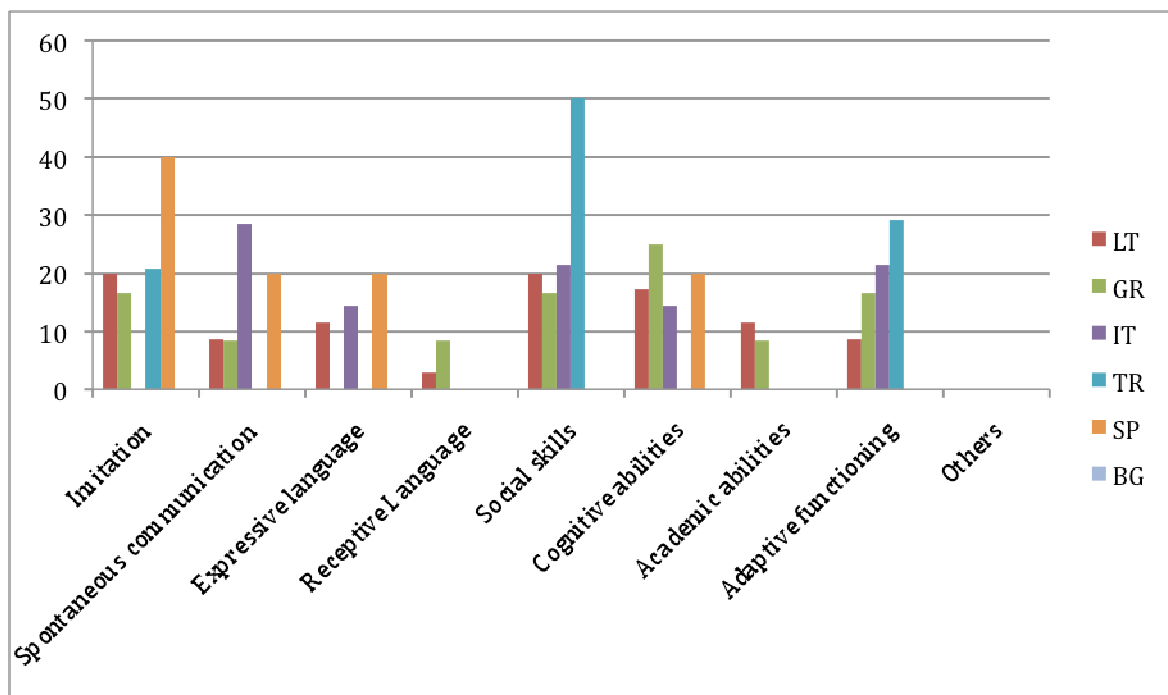
When we compound results of all countries, among the respondents who said Yes to the 10th question, the general graphic of given answers to the 18th question is below.



**Genel Grafik 10-18. Positive ABA therapy element's effect on students, %**

According to this graphic, the most important positive effect of ABA method is social skills (27%) This shows ABA is effective and important on serving a purpose. Because, for the students who have autism required to gain the most important skills are social skills. Another result emerged from general assessment is ABA has a positive impact on imitation skills (18%) and Adaptive functioning (17%).

At below, there are given answers on countries basis to the question of positive ABA therapy element's effect on students



**By countries question 10.18. Positive ABA therapy element's effect on students, %**

According to the graph, the most popular benefits in Turkey are social skills (50%), adaptive functioning (29%), imitation (21%). While in Lithuania there are imitation (20%), social skills (20%) and cognitive abilities (17%). In Italy the reported benefits are spontaneous communication (29%), adaptive functioning and social skills (both 21%). In the other countries, the benefits are present in lower percentages and are mainly related to cognitive abilities, imitation, spontaneous communication, and receptive and expressive language.

## **PARENTS QUESTIONNAIRE**

The questionnaire was administered to a total of 179 parents from the six countries involved.

The sample is composed of 83% by women. The most represented age range is 32-45 years, equal to 65% of the sample, followed by range > 45 equal to 19%.

The 33% of the respondents are parents of children aged 4-6, the 32% of children aged 7-12, the 24% of children aged > 11 years and the 12% of children aged 0-3. The 58% of their children have a diagnosis of Autism, for the 15% Not otherwise specified pervasive developmental disorders (Atypical Autism), for the 17% Other and for the 10% Asperger Syndrome. For 23% there is comorbidity with other disorders.

The parents of our sample find that the most critical area is currently Linguistic/communication function (35%), followed by Relational function-deficits in social-emotional reciprocity (28%), Behaviour (21%) and Learning abilities (14%).

While at the time of the first diagnosis it was for the 45% Verbal and or Non-verbal Communication function (Delay in linguistic skills, deficits in non verbal communications, etc.), for the 27% Deficits in social-emotional reciprocity, for the 14% behavioral disorders and for the 9% Affective/ emotional dysregulation.

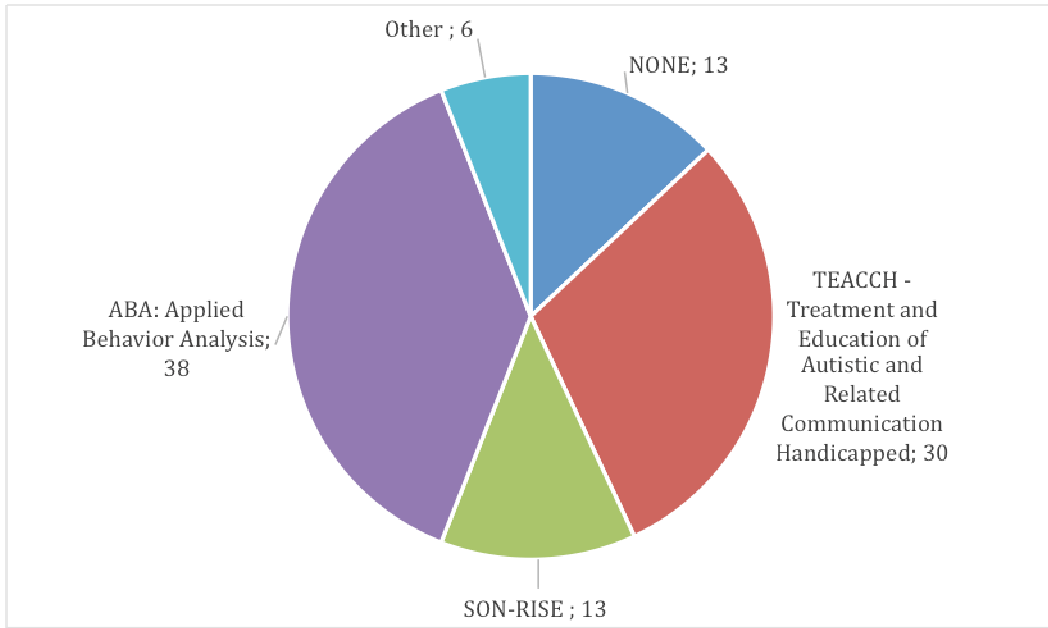
The 59% of the parents' sample provides private educational services for their children. In addition our sample replied that their priority need is for 42% individual counselling, for the 36% home tutor and for the 16% parent group training.

## **PARENTS QUESTIONNAIRE: SPECIAL TOPICS RELATED TO ABA**

In parents' questionnaires, after general questions, two special questions have been asked. Persons, who answered these two questions as ABA method, have been diverted to different questions. Answers seemed important among the answers to special questions and answers given to diverted other questions in this work, have been evaluated and created graphics.

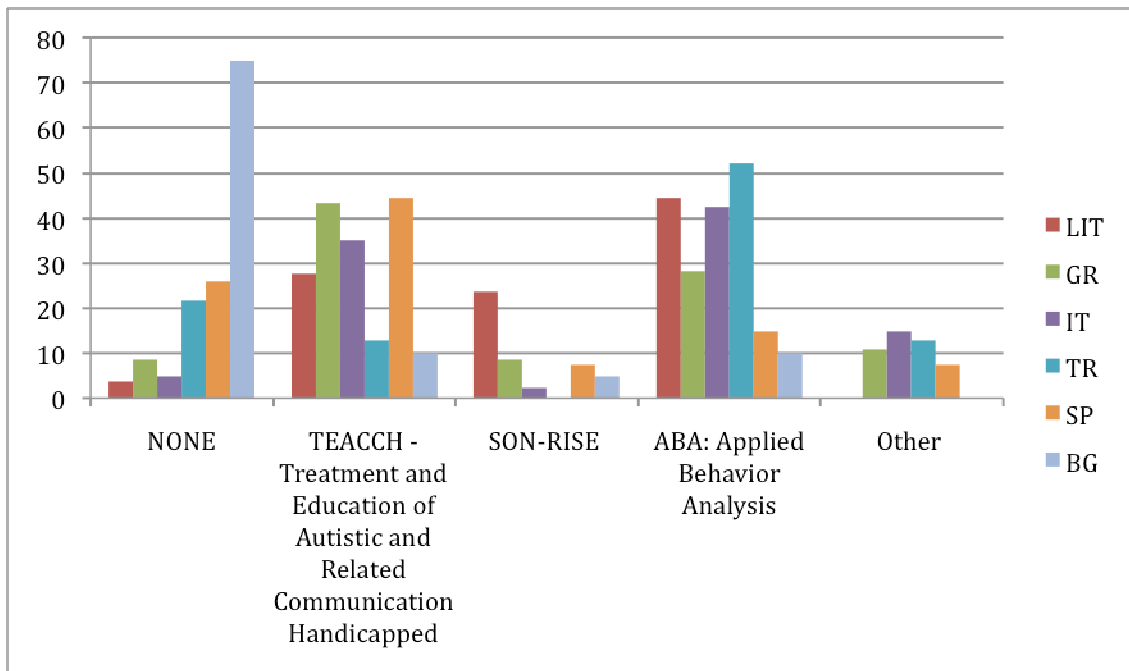
### **Question 13 – Which intervention models have you heard or do you know about autism?**

In the survey applied to families, total of the answers given from 6 countries, to this question first of two special questions about ABA method is like at the graphic below. According to this, 38% of the families know something about ABA method. But, when we look, 38% is a small number. To spread the knowledge about ABA and to boost this rate is among our aims. After ABA, TEACCH method is the method families know most (30%).



**General Graphic 13. Intervention models parents heard or know about autism,%**

Answers given to question of ‘Which intervention models have you heard or do you know about autism?’ on the country basis are below:



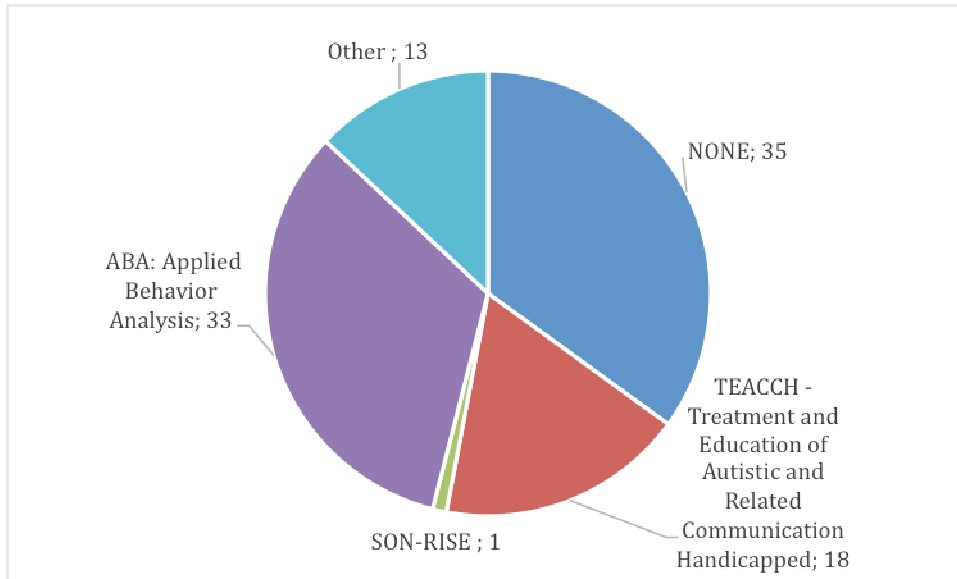
**By countries Diagram 13. Intervention models parents heard or know about autism,%**

According to answers parents have information about intervention models about autism. Majority of respondents answered that they know ABA - Applied Behavior Analysis method: 52% in Turkey, 44% respondents in Lithuania, 43% in Italy, 28% in Greece. Less knows in Bulgaria (10%) and Spain (15%). Also parents know other therapies, such as TEACCH – in Greece (43%), in Spain (44%) and Italy (35%), Lithuania (28%), SON RISE best known in Lithuania -24%. Also Spain mentioned PECS, Floor time, Denver.

**Question 14– Which intervention models are used for your child?**

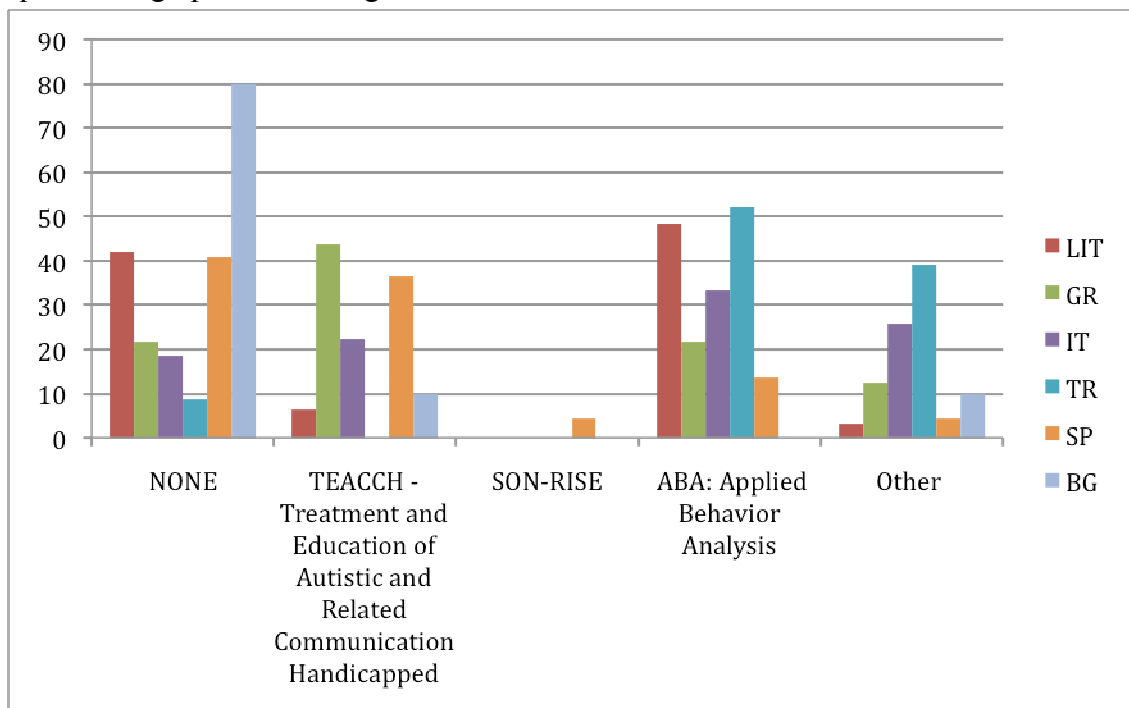
It is the second special question related with ABA among the questions asked for parents. In this question, methods used in their children’s education are asked. According to the answers coming from 6 countries, the method most used is ABA with 33%. TEACCH method appears as the second method with 18%. What draws attention here is that answer of NONE with 35% can have two meanings.

First one is that families are uninterested in the education methods used in school. Second one is that teachers use unique methods, which are not known much out of ABA and TEACCH although this differs according to countries.



**General graphic 14– Which intervention models are used for your child?(%)**

14<sup>th</sup> question’s graphic according to countries is below.



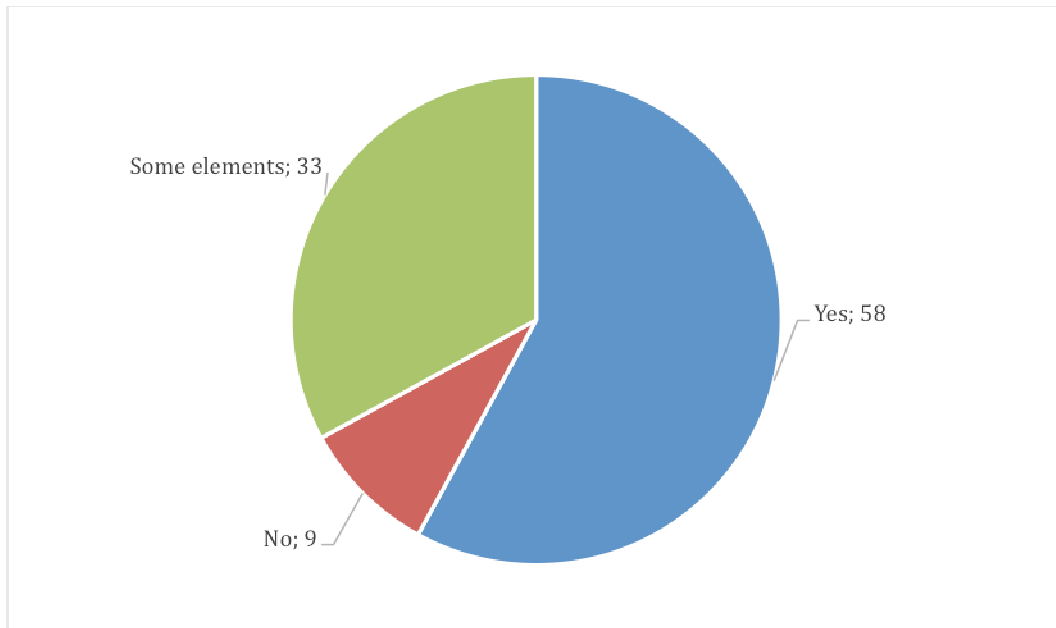
**Graphic by countries, question 14. Intervention models are used for child.(%)**

Majority of respondents mentioned intervention is used for their child: ABA: Applied Behavior Analysis (48% Lithuania), 52% Turkey respondents, 33% - Italy, 22% - Greece. Also for some TEACCH (Greece - 44%, Spanish - 36%, Italian - 22%, Bulgarian -10%, Lithuanian – 6%) and SON- RISE (Spanish - 5%) methods. Most “None” in Bulgaria (80%), in Spain (41%) and in Lithuania (42%).

Next part of the study has been written according to the answers of the parents who chose ABA in 13<sup>th</sup> and/or 14<sup>th</sup> questions. As seen graphics above, this rate is 38% in 13<sup>th</sup> question, 33% in 14<sup>th</sup> question. In other words, they are in minority case in regard to total rate. For this reason, answers seeming important have been taken into consideration.

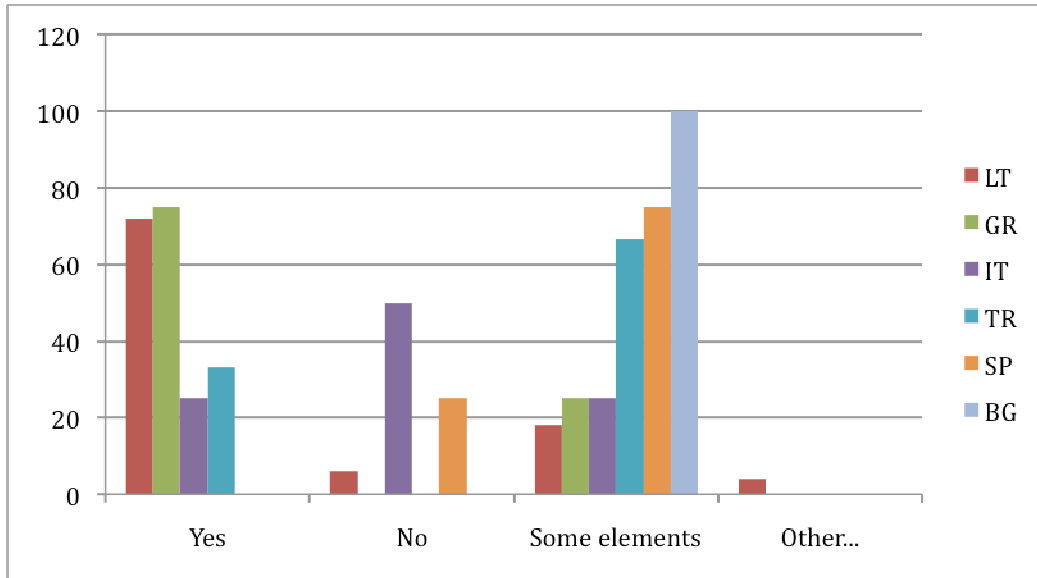
**Question 13-15. Would you like to use ABA in your child’s education?**

58% of the families who chose ABA method answered this question ‘yes’. 33% of the families wanted to use some elements. If we combine the two percentages, the 91% of the families want the ABA method is applied. This result shows that families who know ABA method or have heard about it want ABA applied in the educational pathway of their children.



**General Graphic 13-15. Would you like to use ABA in your child’s education? (%)**

Graphic of answers given to this question on the basis of countries is below.

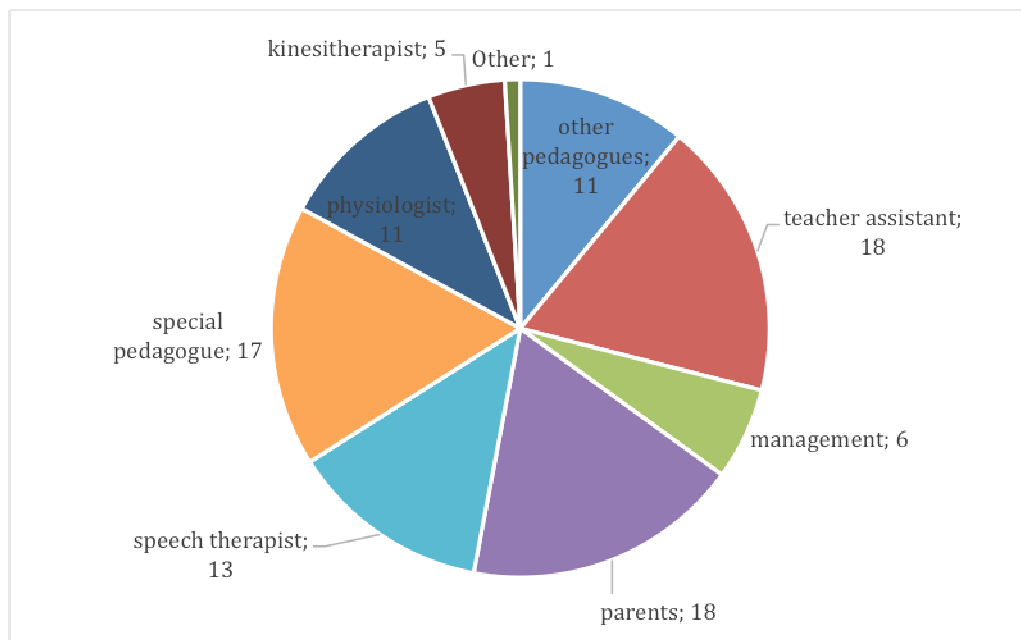


**Graphic by countries, question 13.15. ABA use in child’s education,%**

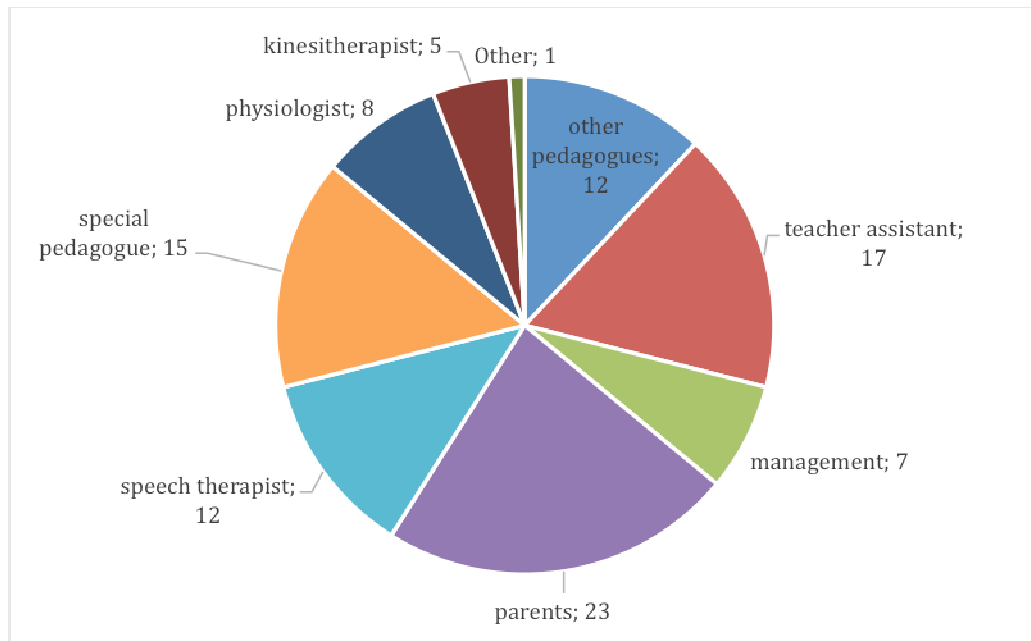
Parents were asked about if they wish to use ABA for their child. Part of answers has shown that parents would like to use ABA methodology in their child’s education (Greece – 75%, Lithuania - 72%, Turkey – 33%, Italy – 25%). Others would like to use some elements (Bulgaria 100%, Turkey - 67%, Spain -75%, Italy and Greece 25%, Lithuania - 18%)

**Question 13-18. Most useful cooperation with training team member using ABA could be?  
 Question 14-18. Most useful cooperation with training team members using ABA?**

As these two questions are a like, they have been assessed together. As seen in the graphics below, while ABA is being used, the most wanted persons to cooperate with are parents. (23% and 18%).Teacher assistants with rate of 18% and 17% is in rank two. These results shows parents who want to use ABA for their children education are willing to cooperate with teachers.

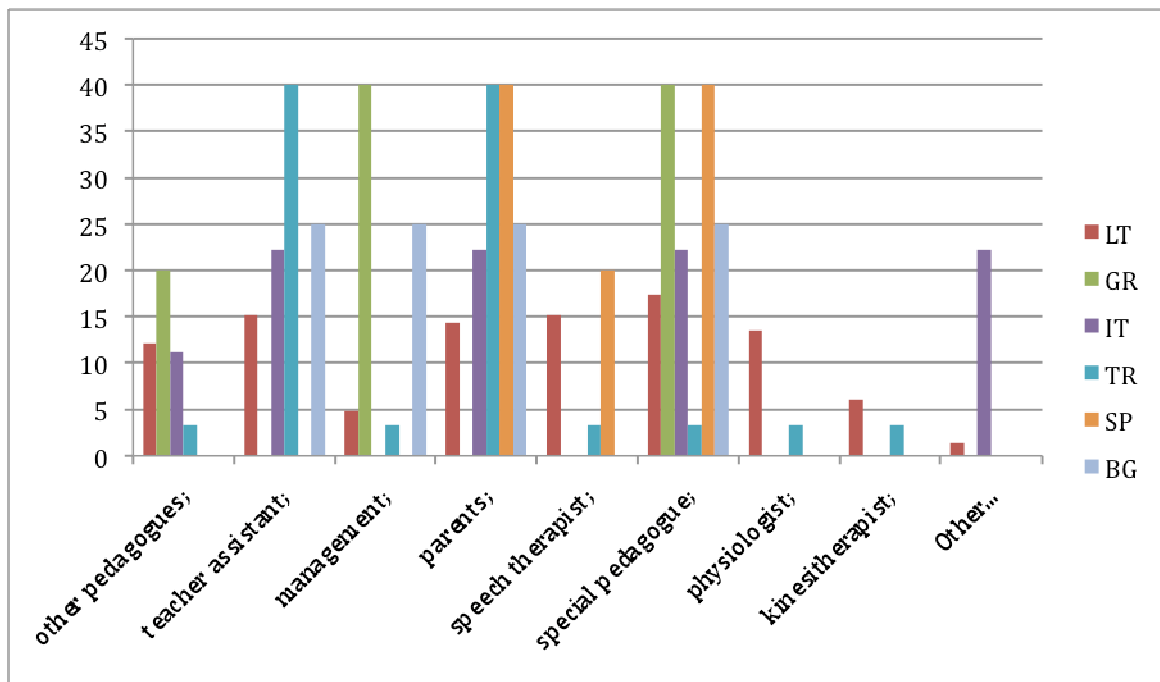


**General Graphic-Question 13-18. Most useful cooperation with training team member using ABA could be?(%)**



**General Graphic-Question 14-18. Most useful cooperation with training team members using ABA?(%)**

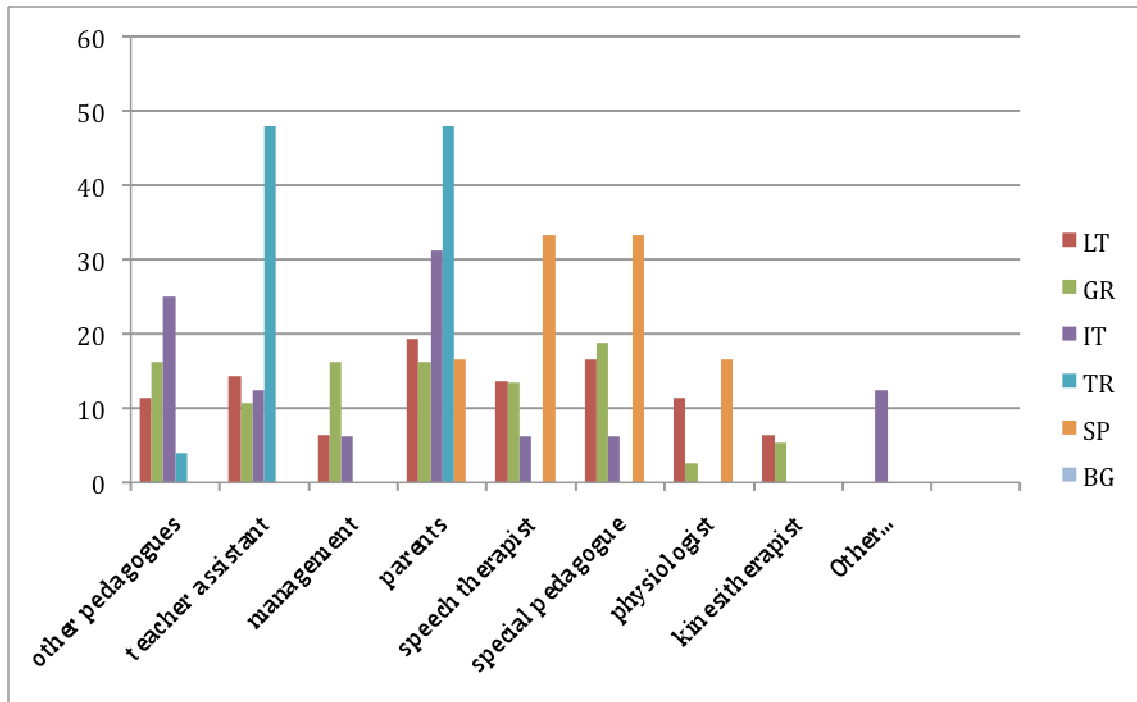
Graphics of these two questions on country basis are below.



**Graphic by countries, question 13.18. Most useful cooperation with training team member using ABA could be, %**

For parents was possibility to mark one or more choice. In parents view in cooperation team can be included special pedagogue (40% Greece and Spain, 25% Bulgaria, 22% Italy, 17% Lithuania), teacher assistant (40% Turkey, 25% Bulgaria, 22% Italy, 15% Lithuania). Include managements most important is for Greece parents – 40%, Bulgarian – 25% and some (5%) Lithuanian. Speech therapist (20% Spain, 15% Lithuania), physiologist (13% Lithuania), other

pedagogues (20% Greece, 12% Lithuania and 11% Italy), even kinesitherapist (6% Lithuania). And of course - Parents (40% Turkey and Spain; 25% Bulgaria, 22% Italy) and a bit less all other partners.



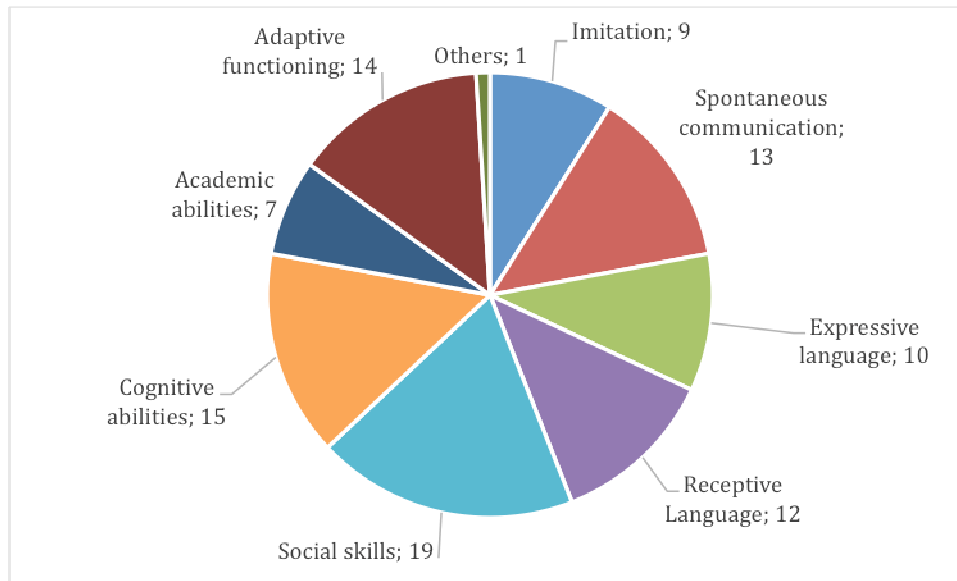
**Graphic by countries, question 14.18. Most useful cooperation with training team members using ABA, %**

According to the respondents the most useful cooperation with ABA are with parents (48% Turkey, 31% Italy, 19% Lithuania, 17% Spain, 16% Greece), teacher assistant (48% Turkey, 14% Lithuania, 13% Italy, 11% Greece), speech therapist (33% Spain, 14% Lithuania and Greece), special pedagogue (33% Spain, 19% Greece, 17% Lithuania). Also physiologist (17% Spain, 12% Lithuania) and other pedagogues (25% Italy, 16% Greece and 12% Lithuania). Less attention for collaboration is in management and kinesitherapist.

In the previous graphics, for example 14<sup>th</sup> question, ABA method is mostly used in Turkey (52%) and Lithuania (48%). In 13-18 and 14-18 numbered graphics, the parents in these two countries want to cooperate with teachers. The percentage of respondents saying working cooperatively with parents and teachers is necessary, has a rate in 48% in Turkey, 19% in Lithuania.

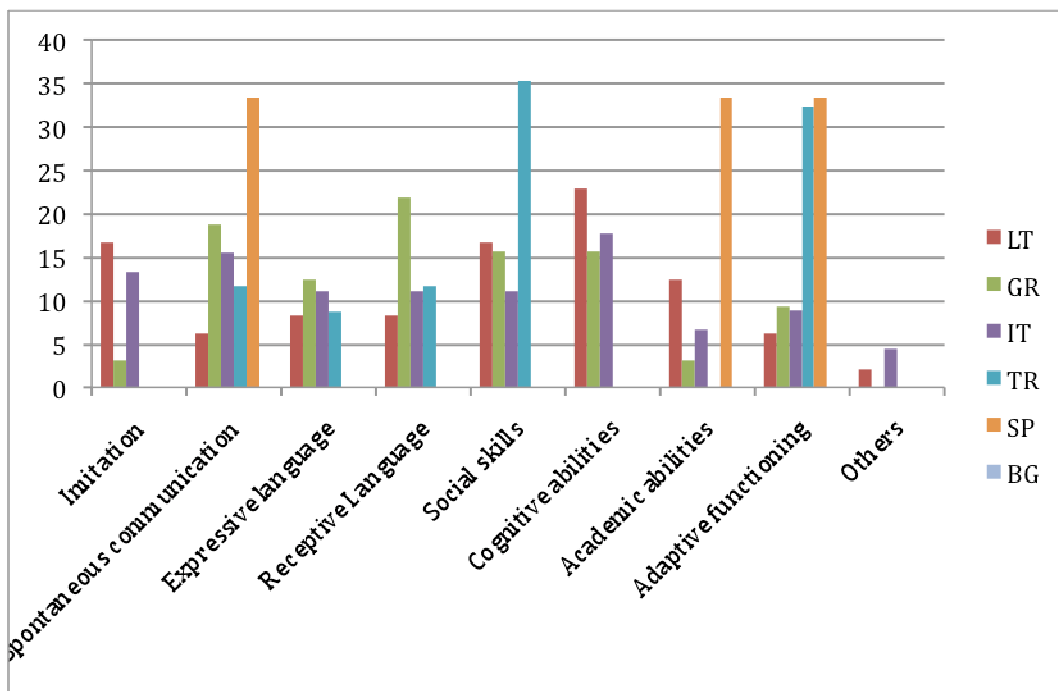
**Question 14-22. In which area have you noticed major improvements attributable to ABA?**

When we look at the responds of this question, which has a graphic below, by means of ABA method, development of children’s social skills (19%) at the very most has been seen. This result is similar to the answers given to the teacher questionnaire. In other words, the answers given by the teachers showed social skills at the most with 27%. Both parents and teachers questionnaires show that ABA is one of the most successful method for the social skills which are the one of the biggest problem of students who have autism.



**General Graphic question 14-22. In which area have you noticed major improvements attributable to ABA?(%)**

Given answers on country basis.



**Graphic by countries, question 14-22. Area parents noticed major improvements attributable to ABA,%**

According to the respondents, the areas notice major improvements attributable to ABA are different in partners countries: social skills (35% Turkey, 17% Lithuania, 16% Greece, 11% Italy), adaptive functioning (33% Spain, 32% Turkey), Cognitive abilities (23% Lithuania, 18% Italy and 16% Greece), spontaneous communication (33% Spain, 19% Greece, 16% Italy, 12% Turkey, 6% Lithuania). Fewer respondents replied it was academic abilities and only in Bulgaria marked bit more (33%) and Lithuania (13%). Less attention to receptive language

(Greece marked most - 22%), imitation (17% Lithuania, 13% Italy) and expressive language (most marked Greece – 13% and Italy -11%).

### **QUESTIONNAIRE CONCLUSIONS**

- According to questionnaire survey results, families who have heard about ABA method want it to be used for their children.
- Collaboration of teachers and family is very important in education of students with autism. However, there are still parents and teachers who do not collaborate. Our Project will be advisor to the parents and teachers in this subject.
- Additional to ABA method, the method, which is used and known most is TEACCH.
- Teacher who use ABA method elements and families who have information about it wants to have further information about practice.
- Usage of ABA and it's elements is generally low. At the end of the project and its findings, the point should be taken to increase this percentage.
- Once again both of survey results demonstrate that ABA method is the most successful one to enhance social skills, which is one of the biggest problems of Autistic children.

## 4. ABA AND ICT - TOOLS COULD BE USED

**Preparation time** - April 2017.



We prepared semi-structured interview administered to the specialized school staff or autism experts to obtain a reference frame of the real situation and possibility of implementing projects aimed at schools to support the training of children with special educational needs.

The case study semi-structured interview consists of an introductory section that explains the situation of followed children and their families (state social support, family relationships with environment, communication, opinion of using ICT tools and how institutions match the child's needs) and 10 open questions focused on ABA and ICT tools.


Number of target group (teachers who work with ASD) – 13.

**AIM:** The focus of this section of the study is to represent the educational treatment of children with autism spectrum disorders and to elicit the perspectives of usage or needs of applying ABA method with the ICT tools.




### INTRODUCTORY SECTION




Main Topics	Interviewed	Social state support	Parents/teachers position of using ICT tools. Is there a possibility to get state support? Is it possible to buy special measures in educational institution?
	I- Pre-school teacher II-Elementary school teacher working in pre-primary group	The resulting disability allowance	Institutions provided with special education measures in accordance with the law of the 30 September. 2011. Sometimes the institution, specialists or parents purchase special measures at their own expense. We recently received new measures at school. We have to participate in projects and in any chance of winning, we would be able to buy them, but there is a little chance to get it from the government.
	I-II Teachers	Not referred	Not referred

	<p>I- Support teacher, working in elementary school institution                  II- Expert in autism (psychologist, ABA operator and lecturer) that collaborates with educational organizations.</p>	<p>The resulting disability allowance</p>	<p>Institutions can provide with special education measures in accordance with current regulations, but do not always cover the needs of all pupils. Parents can purchase special measures at their own expense benefiting from tax relief on the purchase (Law 104/92).</p>
	<p>I-II Pre-school teachers                  III Primary school teacher whose school has a pre-primary group classroom</p>	<p>All children get special education twice in a week. Special programmes, which have been made by specialists, are applied and government meets its charge and transportation costs.</p>	<p>Government meets the cost of educational materials. Government pays the price of the service of special education at the centres for who benefits twice a week. Families use ICT tools when the teacher suggest. When teachers use them in their classrooms are available Smart board, computer and laptop.</p>
	<p>I-II Psychologists working with autistic children in an Autism Centre.</p>	<p>The resulting disability allowance</p>	<p>In Spain, children under 6 years old can access, free of charge or through the scholarship, the services that correspond to them, according to their diagnosis. In this case, he can access to individual therapy twice a week, the rest, and any support that is wanted or required, depends on the family support.</p> <p>Both parents and the professionals believe that ICTs are a good tool to work with, since among his interests are computers, mobiles and tablets, so they are attractive supports that we can use to work with him. Parents are involved and motivated to use ICTs or any appropriate tool that benefits their child. In the school, they also have audiovisual methods to make the teaching more dynamic, these are subsidized by the state. Associations in which the respondents work there are some tools like tablets, computers and tactile whiteboards. But they cannot cover all needs, since</p>




			demand and needs are higher than public expenditure
	<b>I-II</b> Teachers working at School for Children with Special Needs	The institution has received opportunity to make regular checks with psychiatrists and to appoint psychologists in their working team. The foster family receives disability allowance.	The Ministry of education in Bulgaria offers opportunity to schools’ management to participate in national projects for supplying schools with ICT tools. The school of both teachers is equipped with computers, laptops and interactive board. But these devices cannot be used in education treatment of the autistic disorders for lack of information, trained and experienced teachers in ABA as highly specialized method. The single opportunity to gain such kind of professional qualification is staffs’ involvement in European or other projects in order to obtain information and to share it with parents about the usage of ICT tools in ABA method.

**Family relationships with environment, communication.**

	<p>According to relationship with others, they don’t feel socially ostracized or isolated.</p> <p>Almost all-closest family’s friends also have an autistic child.</p> <p>In some cases relatives are avoiding to invite them for celebrations, because they are thinking, that a boy won’t be able to act normally. Sometimes they are hearing bullies and get uncomfortable looks taken at them.</p> <p>Family has a really good relationship with kid’s teacher, besides he’s going to a special education school. Kid has to stand for his place under the sun in the school, to get some service, where it has to be offered and given to them without any concerns.</p>
	Not reported
	<p>It is not possible to generalize the environmental situation of all families with children with developmental disorder. Much depends on the kind of help received in the knowledge of the child's disorder, the child's functioning framework, and the activities of the social agencies where families are involved.</p> <p>In Italy, we try to train other children and their families in a policy of diversity acceptance and inclusion.</p>

	<p>Generally, families when their child is with them don't prefer going out in public. Families just meet up with the closest relatives and other families whose autistic children at the same school and they do common activities together.</p> <p>Some parents for their own personal situation or for the characteristics of their own son, they can implement behaviour that do not guarantee inclusion such as not meeting with her own family and friends or overlying control their child.</p>
	<p>In the specific cases analyzed the members of the families maintain good relationships with each other and with professionals working with the child: psychologists, speech therapists and special education teachers. The family has support from the extended family and their closest friends. In a small town, where everyone knows each other they are involved in the cause.</p> <p>However, the family has difficulties in taking the child to the hospital, restaurant or other facilities where they are not aware of the problem of the child.</p> <p>One of the children has a very good relationship with their peers, since they take care of him; he is protected and supported by their peers.</p>
	<p>The parents' and teachers' findings indicate that early intervention during the preschool years could improve children chances for overcoming development delays. They both attend school for children with special needs but they need more specified methods of intervention for children with ASD like ABA, which at that time is offered only by private and non-governmental organizations.</p>






**Educational institution's matching the child's needs; how long ABA is used (if used).**


	<p>In the case analyzed:</p> <ul style="list-style-type: none"> <li>- One child receives comprehensive assistance (special educator, speech therapist, occupational therapist, physiotherapy, and attend classes in the pool). This also applies to ABA therapy 3 times a week.</li> <li>- The other one is going to a special educational school where conditions are quite good, they have a wide spectrum of activities to do. Teacher does a lot of activities with kids (but it only happens because teacher wants to do it). It is giving only half an hour per week a speech therapist at school, and it actually isn't covering all kid's needs. ABA is applied at home almost for 2 years and 3 months</li> </ul>
	<p><b>Non reported</b></p>
	<p>According to current Italian regulations for school and public health, children receive assistance in various ways. In school is provided a teacher support and AEC (Cultural Educational Assistant) and annual meetings between teachers, therapist, parents and others significant figure to monitor and discuss various interventions pursuing common objectives in terms of the quality and effectiveness of education, integration and school inclusion.</p> <p>Public health multidisciplinary team provided diagnosis certification that allows receiving support teacher and AEC and the possibility to benefit of therapies such</p>

	<p>as speech therapist, neuropsychomotricist therapist, neuropsychiatrist and also psychologist. The AEC, a figure increasingly present in schools, supports and promotes the autonomy of the pupil, facilitates the process of integration and communication in the classroom and makes educational and recreational school activities accessible.</p> <p>Public health institution does not provide ABA therapy. The families bear the costs of ABA therapy, which is carried out privately.</p> <p>The schools show openness to methods that can help them in their educational function but no specific method is used in a systematic way.</p>
	<p>In only one of case analyzed has been applied ABA intervention twice a week at the special education centre, which he attends to.</p> <p>It has been applied ABA for rewarding behaviours by another child's teacher for a year.</p>
	<p>One child attends classes in a specific autism classroom. In addition to school education, he receives private therapies of Psychology, Speech Therapy and Special Education Teacher. In addition he assists to diverse activities, like workshop of art therapy, musical stimulation, stimulation in the aquatic environment (in swimming pool), games and psychomotricity.</p> <p>As for ABA therapy, it is not applied in an integral way in exclusive sessions. At the moment, it is used with him records of behaviours for the situations in which he presents / displays disruptive behaviours.</p> <p>The other child attends an ordinary classroom, except twice a week when attending the specific classroom where he works with a special education teacher. In the breakfasts also has a support monitor to work the autonomy in that issue. He also attends individual therapy to 2 different associations (once a week each) and once a week he has home-based therapy with another therapist.</p> <p>As for the methodology, both in the school and in one of the associations, the Montessori methodology is used with some details of the ABA. In the other association and by the home therapist are used TEACCH methodology and some aspects of the ABA methodology, starting to introduce PECS. The services are coordinated so that there is no contradiction between their different methodologies.</p>
	<p>The parents' and caregivers' findings indicate that early intervention during the preschool years could improve children chances for overcoming development delays. They both attend school for children with special needs but they need more specified methods of intervention for children with ASD like ABA, which at that time is offered only by private and non-governmental organizations.</p>

## SEMI-STRUCTURED INTERVIEW

### 1. What is the situation of autistic child in education?

	<p>Child can learn in education institutions like all the other Lithuania’s Republic children. Education institutions have smart boards and kids can use them. Teachers apply a lot of ICT apps through the lessons, as well as PowerPoint presentations. By the way, kids are allowed to play learning games on the computers.</p>
	<p>I. Sometimes we feel complete rejection, isolation and charitable education in institutions.                  II. The nursery was very supportive and allowed us to use the ABA methods, although the Montessori method is completely different from the ABA.</p>
	<p>Italian schools seek to favour and ensure the inclusion and integration of children with disabilities. But an autistic child can also live a difficult condition because sometimes teachers and educators often lack adequate training and the approaches they use are based on "trial and error" attempts.</p>
	<p>All classrooms have a smart board and a computer at schools. Teachers sometimes use ICT tools in some lessons.</p>
	<p>Depending on the type of autism of the child, there are different modalities. The child can attend to an ordinary school with other peers without autism spectrum disorder, receiving support, or could be in a specific autism classroom where they will work most of the time with the reference classroom (classmates without ASD), or special education school.</p> <p>Anyway, ICTs are widespread and are used almost always, with various applications to work in different skills, as well as supports that make teaching more enjoyable (smart boards, support power point, videos, drawing tools...)</p> <p>Children under 6 years old in Spain, they receive free individual therapy or a scholarship for two sessions a week. The therapies are focused on providing structured sessions, support, counselling and information to families.</p> <p>The attendance in the school depends on the school frequented by the child. If it is private, or concerted, and the resources that the college possesses the child goes to a specific classroom, 2 times a week, 1 hour, so that the work performed by the child in that time at least, is more personalized, structured and has more support.</p> <p>In addition, the health services are responsible for giving the diagnosis in an official way, and to make periodic reviews on the evolution of the case, and medication if required.</p> <p>All those activities different from the individual sessions on associations or school that correspond to them according to diagnosis, are paid by the families, in case they can afford it.</p>

	<p>Children with autistic spectrum disorders have the possibility to study at all kinds of schools in Bulgaria.                  The schools are equipped with ICT tools by national financing. The problem is that the educational system should be supplied with software aiming teaching autistic children.</p>
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## 2. What would you like to change?

	<p>ABA therapy costs could be funded for autistic kids.</p>
	<p>I. The therapeutic approach, because of the wide range of autism problems.                  II. The thing I would like to change is to take my pupil outside the classroom to do the intervention, because sometimes the other children distracted him. Unfortunately, according to the policy of this school this was not possible.</p>
	<p>The psychologist suggests specific and continuous training both on understanding the disorder and on procedures that allow the child to learn properly while avoiding strategies which are not only ineffective but sometimes they may increase in the child the wrong answers that prevent real inclusion in the school context.                  The support teacher also suggests the attendance at the school of more experienced expert with disabilities.</p>
	<p>We would like to present all opportunities to all of the students. For example, I'd like them to participate all social activities free of charge (riding, swimming, and other sportive activities) It would be great such centres for autistic children. It would be useful for them to spend their time in such places. They would feel privileged if they had private nannies.</p>
	<p>I would be better if the education of these children was more directed towards autonomy and daily life and could work more frequently outside of the associations or schools, in the natural environment of the child and in situations where they present greater problems.                  It seems necessary a greater coordination between service, greater access to public resources and an increase in the resources that are given to families, so that families can afford all the expenses they require with their disabled relative. The same opportunities for all, and not only for those who can access certain schools or certain institutions or afford some extra service.                  And as for the associations, a greater investment in human resources and a greater specific formation.</p>
	<p>National educational authorities should include, regulate and perform trainings for educators, parents etc. in using ABA method at schools with children with autism.</p>

**3. If you tried to make changes, what were the difficulties? What was the main barrier for changes?**

	<p>There is a lack of information about ABA methodical and it's too low efficiency in a government education.</p>
	<p>There is a critical aspect in state mechanism.                  There is no information to parents and teachers.</p>
	<p>Educational organization requires changing and also the presence of experts who help them understand what approaches to use in educational practice with autistic children. Teachers are often in trouble because they do not really know how to help a child with autism. According psychologist the problem is that currently there are few resources to be allocated to autism and this do not allow continuous work and therefore a significant change. To date, most of the time families are involved by sending the specialists who follow the child to school and give directions to the teachers.                  The support teacher highlights that the biggest obstacle is bureaucratic elements of various governmental changes.</p>
	<p>The main obstacles are de facto rules, which cannot be got over so easily. However it has been suggested personal education, in practical it might not be valid all the time. Financial impossibilities or firm position of the people can prevent us from making them real. Even if government give chance, some people can be in the way.</p>
	<p>The difficulties encountered concern mainly the cost of these therapies and the time devoted to them. They would require more time with each child and adapted to each other's activities. It would also require one-on-one therapies, so it would be unfeasible to do it in schools, it would have to be private.                  There are few resources, especially few professionals that are badly paid and badly motivated. Furthermore, they are not enough specialized.</p>
	<p>Considering ABA as continuous and expensive training it is difficult to perform it. Although the training can be done with some self-paid programs the problem is it to legislate it as an official method regulated by the national educational experts.</p>

**4. How other children and people behave and react to children with autism syndrome?**






	<p>The reactions are different. Half of people are supportive and tolerant, other afraid and don't understand. It's really depends on person. If autistic kid is not aggressive, other kids will act normally, but if autistic kid is aggressive most of the time other kids are avoiding them. It also depends on an age of kids, as bigger the age gap is, as bigger a chance of bullying are. The adults who never met an autistic child before, they are surprised, how is it possible, why parents are not bringing up and etc. It actually depends on persons values, if he/she is accepting kid as it is/or not, it depends how he is treating kid, as any other kid, or he will ignore him, will be afraid and etc.</p>
	<p>The reactions are different. Often people do not care, are not interested, because of ignorance.</p>
	<p>If children are properly prepared to accept their "autistic friend", become extraordinary resources, as they are able to show a lot of sensitivity and are often of great help to their partner. Adults in the same way, if they are trained to recognize and understand typical behaviours of autism, are able to show appropriate and functional responses to that child's well being. Contrary to this, it is possible to activate reactions of avoidance, anxiety and frustration due to the difficulties that children with autism manifest thus neglecting the resources that these children are able to express and manifest if properly accepted.</p>
	<p>As far as we have seen in our families, friends and social environment, people treat autistic children kind-heartedly. Some look at them pityingly. Even if too little, there's a few people who don't want to see them or exclude them.</p>
	<p>There is as much variability in social response: the reactions are different, depending on both the person and the degree of autism that the child presents. Everything depends on the age, the formation, the sensitivity, the empathy, etc. But in general terms, in recent years, awareness about autism, fortunately is reaching the general population. Before people used to think that parents who spoiled their children created this problem, or they were seen as people with disabilities who had no solution. Now it seems that people see it more as a social problem, which has to be helped, and children individually tend to be seen more and more as normal people like the rest, with their capacities and limitations that require different support. Although in terms of discrimination, the misunderstanding or the stigmatization are issues that need to be fought. Unfortunately, there are still many stereotypes about children and people with autism, and sometimes people move away and reject people with ASD from fear or ignorance. Fortunately, our city is becoming more aware and these attitudes are the least, achieving more and more inclusion and respect.</p>
	<p>Autism disorders have been widely discussed and became popular last years in mass media. The Bulgarian society is increasing its public awareness about issues of families whose children are affected by the ASD trying to raise attention to the services and support they need in their everyday living</p>

**5. What is the educational institution community approach to ABA therapy?**




	<p>Lack of information about this therapy and it’s efficiency while working with ASD children.</p>
	<p>ABA does not exist in school community.</p>
	<p>Although the school demonstrates openness, unfortunately today ABA is not present in schools programme and where it is implemented it is up to families. In schools where through families of autistic children, ABA is implemented, it is greatly appreciated by teachers because the results are visible in children in terms of skills improvement.</p>
	<p>In ABA method, including teachers cannot perform successfully in practical. This may be the reason of not getting sufficient experience of teachers and educators while undergraduate training. As society has not known ABA method so well, they can be obstacles in ABA 's process and system by the book.</p>
	<p>ABA therapy is recognized as a therapy with demonstrated efficacy for autism, although few use it exclusively and in an integral way, being its majority use the choice of some techniques combined with other approaches or models (e.g. TEACCH)                  There is a general lack of knowledge about what ABA therapy is, although I believe that in many cases, some of its guidelines are indirectly applied, without knowing that it belongs to ABA methodology.</p>
	<p>Public schools need more information on ABA as educational intervention, which leads to significantly, improved outcomes. Most of the teachers in special education are not introduced in the details and efficiency of ABA method.</p>




**6. ICT (laptop, tablet, smart table, etc.) you use in educational activities with children.**

	<p>Smart table;                  Tablet PCs;                  Laptop.</p>
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	Smart table Tablet PCs and Laptop as a reward in activities.
	Usually the tools used are: PCs for word processing, reading and tablet programs for logic tasks. While PCs are used mainly for secondary school children, the tablet is also used for smaller children as it allows for easier access. The school can use various tools to respond to the special educational needs in the PEI (Individualized Educational Plan) drawn up for every pupil with disabilities.
	We are using ICT tools in education if student has some particular interests. We mostly use computer and laptops at teaching concept and speaking ability.
	Smart board, Tactile board, Tablet Computer.
	Interactive board Laptops PC Tablet


**7. What practical procedures will help you to apply ICT: movies, filming practical examples, educational games, educational programs or others?**

	Practical training; Training programs; Educational films; Video case studies.
	Educational games and videos. Some uses ICT for PECS and pupils find it more attractive.
	ICT is crucial to supporting learning programs in children with autism. First of all, the visual stimulation that results in facilitates learning processes and at the same time raises interest and curiosity because it is based on highly motivating and reinforcing systems for children.

	We do some research for resource according to the interest of our students in the Net or Educational websites have videos. We use materials, visual materials and videos for teaching.
	Videos, Practical examples Videos and educational activities. Educational games
	Video case studies Practical training Manual in using ICT in ABA Educational programmes.


**8. Which ABA elements can be used by ICT: timetables, behavioral diaries, symbols – PECS (Picture Exchange Communication System), incentives or other?**

	Visual agenda; Timetables; Symbols (PECS); ICT game; Great encouragement. With computer and tablets, you can accomplish a lot of the ABA therapy tasks.
	Keep a developmental file. Goals through diaries. Diaries for achieved objectives.
	There are no limits to the application of the ICT to ABA. The use of technologies can integrate the systems and proposals that are currently being used with autistic children, making them more motivating and interesting, and facilitating learning in different contexts.
	Stimulant is a must for us. Appropriate behaviour should be rewarded. And bad behaviours can be punished in the second way. We don't keep a diary regularly but we take some notes at some intervals for observation.
	Pictograms Visual diaries, Schedules, Timetables, Educational games It would be really useful to exchange information, about cases, activities and how to work, as it provides another point of view and you can always get ideas to

	<p>improve or change some methods.                  In the case of parents, it is also important to know how they work with the child and how they live the situation, both for professionals and other parents. Professionals can give a more global view of the situation of the child and his family, and therefore their true needs. Other parents will be able to acquire ideas and feel understood.                  Talks could be held between professionals and parents' workshops, in which they can talk about their experiences.</p>
	<p>Symbol and picture resources                  Voce messages - Voice Output Communication Aids                  Symbols / PECS / Pictorial representation of the tasks or diaries.</p>

**9. Would it be useful to use other teachers/parents practical experience? How?**

	<p>Experience dissemination seminar;                  Virtual diary of activities.                  Avoid situations, which was causing unsuccessful in the past. Apply the most working and give a positive efficiency.</p>
	<p>Sometimes this is not so useful, because each parents experience is different and no helpful.                  In any case, it is very helpful to exchange experiences with other teachers in order to make our practices better.</p>
	<p>Surely learning through good practices sharing makes easier to acquire effective models. However it is not enough. I believe that training should go through the acquisition of reference theoretical models and studies and research on this topic to acquire a real consciousness of the disorder and of good educational practices.                  Hence procedures can be integrated both through exchange and sharing moments and through time of reflection on the subject matter by expert figures.                  Furthermore it's important for the support teacher to collaborate but maintaining respect for roles.</p>
	<p>We always get help and suggestions from other people or we want them to observe and give us a feedback about it. We need different perspectives as we think application is not always right.</p>
	<p>As already explained above, it would be really useful to exchange information. ,                  It would be possible through:                  - Workshops for parents, siblings or grandparents                  - Coexistence or meetings of families, or professionals, or even institutions                  -Generation of better guides of intervention, and diffusion of these, of the materials and tools used and of the methodology carried out;                  -Forums or any tool that can provide advices or a joint collaboration and a facilitation to share knowledge, making it available for everyone.</p>

	<p>Exchange of good practices.                  At the school for children with special needs “Dr P. Beron” is efficiently working Parents association ”Cooperation” where teachers and parents share regularly their information and attend programs for children with SEN.</p>
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**10. Do you receive information about ABA - e-learning courses from educational institutions? What could you name some of them?**

	<p>There is a huge lack of ABA information in Lithuanian educational institutions. It was mentioned in many seminars that ABA therapy can be learned in America and in Russia or order e - training of these countries. In most cases the correct information is not possible. Only a few Lithuanian institutions use ICT tools, due to the weak material base. Another teacher stated that the kindergarten doesn't have the information because of the institutions position - there is no need to apply ABA as the unit cases.</p>
	<p>Unfortunately, this is not in case in Greece, as the public schools do not offer training to their teachers.</p>
	<p>According to my experience, few schools really know ABA. I believe that they need to be informed and formed on the subject, because sometimes, unrealistic information on ABA and especially on the procedures that are being used is perceived. In fact the support teacher and contact point for support teachers in her school confirmed they do not receive this kind of training.</p>
	<p>We help and get help with our colleagues working at different field of special education. We inform each other about latest developments. We follow successful teachers who have different experiences.</p>
	<p>There is widespread a general ignorance about ABA therapy in institutions, and a baseless criticism, due to lack of knowledge. Although the investigations support the effectiveness of the treatment, it is necessary a greater diffusion and training of the professionals in this therapy. People who attend to courses focused on this methodology, do it by its own motivation, or by the regulated formation that is given in the universities, besides is the professional curiosity that takes us to look for information and to form us independently.                  Information about ABA therapy and its application is often received through other professionals who apply that therapy.</p>
	<p>ABA method is not well known in the school educational society in Bulgaria. There are some brief training sections that do not give entire view of the treatment possibility of ABA method.</p>



## **Comparative Interview and Case study Analysis**

The survey highlighted some key aspects:

- It is not possible to generalize the environmental situation of families with children with ASD. It really depends on their environment, the kind of help received in the knowledge of their child's disorder, the child's functioning framework, and the activities of the social agencies where families are involved.
- Expert, Parental and teachers' experience in raising and educating children and students with ASD revealed the usefulness of applying ABA method also to school.
- It seems to be great interest in using and adapting ABA to the educational process. However the findings indicate that ABA is not so popular and used method due to lack of information and state educational support. Even in countries where ABA is better known and applied its spread is uneven. The possibilities to apply ABA in schools are really limited although teachers show the opening to collaborate with specialized figures and to use methods to ensure an adequate schooling.
- In fact they don't seem to be a lot of possibilities from the governments to sustain a systematic diffusion of such method of intervention in school but also in other public institution.
- ICT is really useful in schools. As students with autism have often difficulty in mastering certain skills it is useful for the schools to have the possibility to use ICT tools and appropriate educational software to respond to the special educational needs. In fact the use of technologies can integrate the systems and proposals that are currently being used with autistic children, making them more motivating and interesting, and facilitating learning in different contexts. Unfortunately not always the school can cover the needs of all pupils.
- There are no limits to the application of the ICT to ABA. The elements more quoted are: Pictorial representation of the tasks; Diaries; Educational games; PECS, Visual agenda; Tasks covered by ABA method.

## CONCLUSIONS

The diagnosis of autism is usually formulated with reference to the two major international classifications of mental disorders: the DSM - Diagnostic and Statistical Manual of Mental Disorders and the ICD - International Classification of Diseases (International Classification of Diseases Disorders and Diseases) of WHO - World Health Organization.

In DSM-V, autism subtypes were grouped into a single category called ASD (Autism Spectrum Disorders), with the exception of Rhett’s syndrome, which has been implicated in neurological disorders. DSM-V also introduces "social communication disorder", whose diagnostic features partially overlap with autism spectrum disorders, since the diagnosis of social communication disorder requires the presence of a "pragmatic language impairment" and a Mismanagement "in the social use of verbal and non verbal communication”.

Studies have shown that differences in the social and cognitive abilities of the previous subgroups are better characterized in terms of a continuum. It has also been found that the diagnosis of the various subtypes of pervasive developmental disorders is very variable between the different diagnostic centres and is most often associated with severity, linguistic level or QI.

Educational intervention on children with ASD or emotional-behavioural disorders poses a challenge to teachers who must necessarily shape their job based on the characteristics of their pupils with special educational needs. Educational interventions in these cases must be necessarily global and have to use a variety of methods and support to ensure a proper development and learning pathway.

The present study has allowed us to highlight some fundamental issues and take pictures of the current situation of children with special educational needs within the educational system by identifying some strengths and weaknesses.

First of all, analyzing the regulatory bases of the six countries involved in the project we found that

Each of the European countries involved has promulgated a series of legislative provisions aimed to guarantee the education, integration and protection of children with autism or special needs.

A considerable effort has already been made to support the implementation and dissemination of interventions and policies to protect the rights of children with disabilities and their families. Beyond the specificities of the laws, the goal that is to be pursued is common: to foster the integration and inclusion of all people in the community through good practice.

Nevertheless, there are some critical issues in making effective and widespread implementation of all those interventions and structured methodologies to enhance learning, growth and independence of children with autism and special needs.

There seems to be a gap between the regulatory body and its real applicability especially related to the available economic resources and the difficulty for school and health personnel to access specific training paths.

This determines that access to some intervention methods is limited. In fact ABA training, like other intervention models, has to be paid for and, although recommended, is not supported / provided by the various institutions. It's up to the teacher or the professional to choose if he wants to train or learn more about ABA.

Moreover, for these margins of discretion, the dissemination of this method is also not homogeneous within the same country, without guaranteeing the right of access to treatment and special education methods.

Our project ‘ABA – OUR NEW VIEW IN SPECIAL EDUCATION’ can give the opportunity to highlight the critical points and strengths in special education and to spread the gained experience among teachers’ community.

It seems to be useful applying ABA method also to school, using and adapting ABA to the educational process. but the findings indicate that ABA is not so popular and used method due to lack of information and state educational support. Even in countries where ABA is better known and applied its spread is uneven. The possibilities to apply ABA in schools are really limited although teachers show the opening to collaborate with specialized figures and to use methods to ensure an adequate schooling.

As students with autism have often difficulty in mastering certain skills it is useful for the schools to have the possibility to use ICT tools and appropriate educational software to respond to the special educational needs.

In fact the use of technologies can integrate the systems and proposals that are currently being used with autistic children, making them more motivating and interesting, and facilitating learning in different contexts.