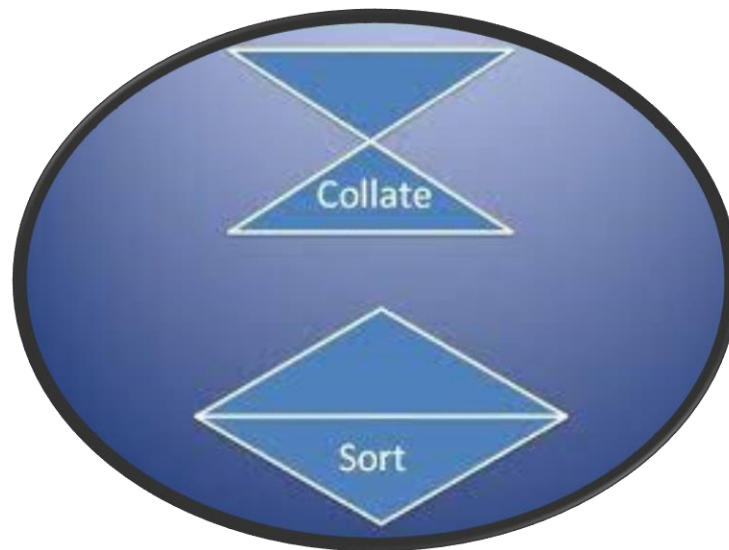


# ErISFaVIA

## Early Intervention Services for Families with Children with Vision Impairment and Additional Disabilities

IO5

Collation of case studies and research evidence



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Early  
Intervention  
Services for  
Families with Children with  
Vision  
Impairment and  
Additional Disabilities



UNIVERSITY OF  
THESSALY



# Collation of case studies and research evidence

## Intellectual Output 5 (IO5)

ErISFaVIA

Early Intervention Services for Families with Children with Vision Impairment and  
Additional Disabilities



Early  
Intervention  
Services for  
Families with Children with  
Vision  
Impairment and  
Additional Disabilities



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9	Blindeninstitut München/Maria-Ludwig-Ferdinand-Schule	
10	Mali dom-Zagreb dnevni centar za rehabilitaciju djece imladezi	



<b>INTELLECTUAL OUTPUT 5: Collation of case studies and research evidence</b>	
<b>Key Action:</b>	KA2-Cooperation for innovation and the exchange of good practices
<b>Action Type:</b>	KA201- Strategic Partnerships for school education
<b>Grant Agreement No.:</b>	2019-1-EL01-KA201-062886
<b>Prepared by:</b>	University of Thessaly (UTH)
<b>Contributors:</b>	All partners
<b>Intellectual Output:</b>	Collation of case studies and research evidence
<b>Date:</b>	28/2/2022
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<b>Form:</b>	Final

### **Acknowledgement**

*The present project ErISFaVIA-Early Intervention Services for Families with Children with Vision Impairment and Additional Disabilities (No: 2019-1-EL01-KA201-062886) funded by the Erasmus+ programme of the European Union.*



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## Executive Summary

The present Intellectual Output (IO5: “Collation of case studies and research evidence”) constitutes part of the activities of a European Project entitled “*project EriSFaVIA-Early Intervention Services for Families with Children with Vision Impairment and Additional Disabilities*” (code number: 2019-1-EL01-KA201-062886/coordinating organization: The University of Thessaly, Greece).

The aim of the present Intellectual Output was to build up the methodological framework which was applied during the implementation phase. The implementation phase after the intensive training events lasted approximately 10 months. Five members of the consortium (i. e. UTH, UBB, IMU, Blindeninstitut and Mali dom) acted as an advisory or/and mentoring group for the five organisations (i.e. LSDV, ANSGA, St Barnabas School for the Blind, AMIMONI, and Syzoi) which implemented early intervention programs. The above activities were captured by the strands of action research. Action research is a methodology that fulfils two important conditions; one is that it seeks improvement and the other is that it seeks an understanding of the setting and context in general. The aforementioned conditions were apparent in the EriSFaVIA project.

The present intellectual output was composed of three main activities (MA):

**MA1.** Collation of case studies through flexible reflective logs. These reflective logs followed the phases of action research methodology (i. e. planning, acting, observing, and reflecting).

**MA2.** Collation of representative snapshots on specific schemes of implementation. This task was worked out through Atlas. ti and gave an overview on the data which was obtained during the EriSFaVIA implementation phase.

**MA3.** Collation of representative professionals’ perspectives and opinions during the EriSFaVIA implementation phase.



## Why action research was seen as the best choice

The impetus for this project was the fact that children with vision impairment and additional disabilities or deafblindness have unique needs and require adaptations on intervention strategies (Horn & Kang, 2012). The severity of their needs means that delays are likely to have an impact on children’s development and their families during and beyond the early childhood years (Chen, 1999). Although the importance of early intervention services for young children with vision impairment and additional disabilities or deafblindness is widely recognized, there is a lack of knowledge about the practical implications of these programs. In general, early intervention has a critical effect on children’s health, education, and quality of life. Hence, questions such as “How do families deal with their children who have additional disabilities or deafblindness?”, “What kind of services are available for these families in order to support them?”, “What are the difficulties or constraints that the families have during intervention programs?”, “What are the needs of professionals when they apply early intervention programs?” needed to be investigated and because of the phases applied in this project (design, action and reflection), the framework of action research came to be as the best methodology for this project.

According to Feldman and Minstrell (2000), action research is an inquiry conducted by teachers and professionals regarding their own teaching and activities in their own placements. In fact, professionals need to get a deeper insight into their students’ understanding in order to improve their methods and practice. Hence, action research was seen as the best choice to adopt in the ErISFAVIA project because it is a systematically, evolving, living process (Kemmis & McTaggart, 1988).

## MA1. Collation of case studies through flexible reflective logs

What follows now is a “flavor” of reflective logs (see design and structure of the reflective logs in Intellectual Output 4) filled in by professionals during the implementation phase of the ErISFAVIA project. In specific, LSDV, ANSGA, St

Barnabas School for the Blind, AMIMONI, and Syzoi (four countries: Cyprus, Greece, Romania, and Türkiye), implemented early intervention programs using tools and methods from the training material (see IO3).

## Cyprus

<p><b>Child's/Family's profile (short description)</b></p> <p>The child – aged 5.5 years old- has microcephaly and significant developmental delay. Eye and vision condition: choroidal coloboma (CHC) which has developed retinal detachment (RD). His parents are collaborative especially his father; he is willing to do whatever it takes to help his child.</p>
<p><b>Family</b></p> <p><b>How did you approach the family? Were there any difficulties? If there were some sort of difficulties, would you mind describing them?</b></p> <p>So far there was no contact with the parents, because of the corona virus and because the child was coming to school by bus all this year. Last year it was different because he was coming with his parents, and it was possible to communicate with them (mainly with the father who gave information about the activities of the child at home and was willing to work with his child).</p>
<p><b>Child/Family</b></p> <p><b>What are your prior criteria in order to identify the intervention area(s) for your child/family in question?</b></p> <p>Child's mobility difficulties. Child's difficulties in using his residual sight in visual stimuli.</p>
<p><b>Intervention</b></p> <p><b>What was/were the goal(s)/objectives of the intervention program?</b></p> <p>Strengthening his trunk (abdominal, dorsal) and his lower limbs, because great instability was observed, both when walking and when changing position. In addition, strengthening his upper limbs, because he has difficulty holding objects in his hands, receiving and throwing objects. Increase concentration time in various activities and exercises that he is asked to perform, in order to cause visual interest at close range. When a stimulus is a little bit distant from him, then he shows no interest and does not participate in the activity. Strengthening communication and social interaction through games and PE, both with the PE teacher and other children. Finding a communication code, because the words that the child uses is very limited.</p>
<p><b>Which strategies, activities and educational tools (e.g. objects/materials) did you use during the intervention phase?</b></p> <p>I used objects such as soft balls, rubber balls with protrusions, objects with different surfaces and sizes to improve balance. I also used sound stimuli, such as balls with bells, various games with sounds and music, to keep the child alert as much as I could.</p>





I provided visual stimuli using objects with strong color contrasts, such as orange hoops, hurdles, cones and soccer saucers all placed on a dark brown floor. Generally speaking, I used many games with brightly colored targets (such as bright colored green, orange, yellow, red). The aim of all the above activities was to facilitate the child's residual vision to see or recognize objects more easily. I also used fit ball, small pilates ball and weights with adhesive tape, which were applied either to the legs or to the hands of the child, because the child couldn't hold an object in his hands for only a few seconds. Finally, I had music in all these activities to empower and entertain the child.

**Where did you implement your early intervention programme?**

In the classrooms, in the playground and in the yard of our school

**What was the impact of COVID on the intervention programme?**

Due to the pandemic, it was quite difficult to achieve the goals, because the child couldn't come to our school on a regular basis.

**What were the main challenges or difficulties you faced during the intervention and how did you deal with them? Please describe them?**

Due to the corona virus, there were many cancellations regarding outdoor swimming programs in the pool.

There were many difficulties in terms of understanding instructions given by the teacher to the child because the lessons were done using the mask.

Because of the lack of communication with the parents it was very difficult to understand the behavior of the child; many times, the child appeared to be very disorganized and negative in any kind of participation in the lesson. As a result, we couldn't achieve the short-term goals of the daily program and of course the long-term goals were out of question.

There is no possibility of daily contact and communication with the child, because I only go to school twice a week.

**What kind of methods, means or sources did you use in order to monitor your intervention?**

Diary

**Field notes** ✓

Checklists

Video recordings

Audio recordings

**Discussions with the working team** ✓

Meeting notes with the working team

Assessment activities

Self-assessment activities

Children's products



## Reflection

### **Did you feel that you met your objectives effectively? Please provide a brief description**

Unfortunately, I did not achieve all the goals I set in the intervention program, because the child's motor skills and perception are very limited. For example, when you give the child a ball and ask him to throw it, the child just lets it fall to the ground. He doesn't seem to understand the instruction. On the other hand, if the child is in a sitting position and he is asked to roll the ball then he will succeed. In general, he has a little improvement in some skills, such as walking (last year his balance was worse). Nevertheless, he faces many difficulties in some games such as hopscotch; he can manage only with assistance. Instability in the trunk and limbs continues, despite the strengthening done, both in the abdominals/back, as well as in the upper and lower limbs. Despite the difficulties and challenges of this year, due to the corona virus, the goals set in PE remain the same and we continue to work on these aims.

### **How did the child/family respond to the intervention in general? Were there any unexpected events?**

He has learned to be positive and cooperative (the routines were very helpful). When he comes to school and he is upset, then the cooperation is impossible, he reacts negatively to what he is asked to do. All he wants to do is to move freely in the room and throw objects on the floor. When he starts to learn something new, then it takes him time to master and execute, although he has the skills to do it.

### **How do you plan to exploit the data that you gathered from observation phase to improve your following interventions?**

He will continue to deal with activities he likes. The activities that he doesn't want to work on, will be modified or replaced with others that have the same goal. We will continue the educational program setting targets and restrictions in order to meet the goals of the gymnastics program.

## Greece

<p><b>Child's/Family's profile (short description)</b></p> <p>M. is 3 years old and has a rare mutation of Rett syndrome. He has trunk hypotonia and limb hypertonia and cannot support his back. He has frequent seizures, and he is on medication. He has CVI and lives with his parents and his older sister.</p>
<p><b>Family</b></p> <p><b>How did you approach the family? Were there any difficulties? If there were some sort of difficulties, would you mind describing them?</b></p> <p>I started to work with this family about a year ago when the family's interventionist changed. The family was very collaborative, but in the beginning, there were some sort of issues because they had developed strong bonds with the previous interventionist. On top of this, we had many difficulties stemmed from the quarantine, and during this period the seizures of M were increased.</p>
<p><b>Child/Family</b></p> <p><b>What are your prior criteria in order to identify the intervention area(s) for your child/family in question?</b></p> <p>I received the IEP from the previous trainer and after observing and re-evaluating the child's behavior and skills, I made a plan for an early intervention programme.</p>
<p><b>Intervention</b></p> <p><b>What was/were the goal(s)/objectives of the intervention program?</b></p> <p>We set three main goals: improve visual attention and concentration, body awareness and develop gross motor skills</p>
<p><b>Which strategies, activities and educational tools (e.g. objects/materials) did you use during the intervention phase?</b></p> <p>We used strategies, activities, and materials appropriate for children with CVI. Some of the materials we used are lights, bright objects, pom poms, garlands, vibration machine, sponge, chain, forms with strong contrast, musical instruments (tambourine, melody, piano), shiny objects, slides on tablets, etc.</p>
<p><b>Where did you implement your early intervention programme?</b></p> <p>At M's home.</p>
<p><b>Did you use any activities or/and strategies from the training manual? If you did, could you describe them?</b></p> <p>No</p>
<p><b>What was the impact of COVID on the intervention programme?</b></p> <p>During March-April 2020, and due to strict quarantine, there was a dramatic restriction to our services. Due to covid, there was no chance to meet and interact with the child and the members of its family. The use of skype was suggested to the parents, but they considered it difficult due to the child's increased seizures.</p>
<p><b>What were the main challenges or difficulties you faced during the intervention and how did you deal with them? Please describe them?</b></p> <p>The biggest challenge I faced was M.'s seizures and the frequent change of medication, which also affected his vision.</p>



<b>What kind of methods, means or sources did you use in order to monitor your intervention?</b>
<input type="checkbox"/> <b><u>Diary</u></b> ✓
<input type="checkbox"/> <b><u>Field notes</u></b> ✓
<input type="checkbox"/> Checklists
<input type="checkbox"/> <b><u>Video recordings</u></b> ✓
<input type="checkbox"/> Audio recordings
<input type="checkbox"/> <b><u>Discussions with the working team</u></b> ✓
<input type="checkbox"/> Meeting notes with the working team
<input type="checkbox"/> Assessment activities
<input type="checkbox"/> <b><u>Self-assessment activities</u></b> ✓
<input type="checkbox"/> Children's products
<b>Reflection</b>
<b>Did you feel that you met your objectives effectively? Please provide a brief description.</b> Initially we managed to develop a relationship of trust with the child and the members of the family. After M.'s seizures were stabilized, we also managed to achieve our main goal, which was to stabilize M.'s visual conditions.
<b>How did the child/family respond to the intervention in general? Were there any unexpected events?</b> M. responds very positively to the intervention, and he is happy. The parents feel comfortable to discuss any issues that concern them in relation to M. They also feel ok to discuss their own needs and wishes.
<b>How do you plan to exploit the data that you gathered from observation phase to improve your following interventions?</b> Goals will be reconsidered and redefined based on observation, re-evaluation and discussion with parents.

## Romania

<p><b>Child / family profile (short description)</b> T.C. is 5 years old and 4 months old has the following diagnoses:</p> <ul style="list-style-type: none"> <li>● Severe psychomotor retardation</li> <li>● Disorders in the acquisition of expressive and receptive language</li> <li>● Emotional disorders with onset in childhood;</li> <li>● RETT syndrome – in observation</li> <li>● Epilepsy – in observation</li> </ul>
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- Hypotonic syndrome;

The little girl is enrolled in the early intervention program from the age of three. T.C. is also enrolled in a special kindergarten that she attends from Monday to Thursday where she benefits from recovery and development therapies.

The little girl is part of a family of two children, she has an older sister who does not have health problems. The family is biparental, organized, involved in the girl's recovery programs. The cooperation with the parents is good, they are directly involved in the early intervention therapy. Parents also apply at home the stimulation exercises that they see taking place in the early intervention therapy

#### **Family**

**Describe how to approach the family. Did you encounter difficulties? If there were difficulties, can you present them?**

The approach of the family was done without difficulties. They responded well to the suggestions given. The parents heard about the early intervention program and wanted to enroll their little girl in order to stimulate and develop their daughter visually. They were proposed to continue the visual and psychomotor stimulation at home through simple exercises that they attended in the early intervention program.

Among the difficulties encountered would be the fact that sometimes when she comes with the little girl to the cabinet, she falls asleep and refuses cooperation, and the father does not want us to wake up the little girl and is visibly irritated that she has lost an hour of therapy. Also, another difficulty encountered in the last two months is that the father no longer manages to bring her to therapy every time because of the service and the busy schedule. We tried to change the time of therapy, but no time was found at which to be available.

#### **Child/Family**

**What were the criteria for identifying areas of intervention for the child / family?**

The criteria for identifying the areas of intervention were the following: identifying those areas of development presented by the Oregon evaluation scale, at which the child shows a level of development significantly lower than the development of the child's chronological age. One of the essential criteria is the level of development of visual behavior.

The proposed areas of development are: development of visual behavior, development of fine motor skills, sensory development and compensation.

#### **Intervention**

### **What were the objectives of the intervention program?**

The objectives of the early intervention program are:

- to fix bright objects in an obscure environment;
- to fix black and white images and black and white patterns and colored in light conditions at a short distance at different points of the child's field of vision;
- to fix the luminous stimuli with the Kaijdoos program;
- to fix the contrasting colored visual stimuli in the light medium;
- to visually fix the stimuli that are successively presented in the child's visual field;
- to visually fix the stimuli that ignite and extinguish alternately;

Visual tracking of stimuli;

- to visually follow stimuli in different directions in its visual field (horizontal, vertical, oblique);
- to follow the luminous stimuli in conditions of obscurity;
- to pursue bright stimuli in natural light conditions;
- to follow contrasting colored images and objects in different directions in the child's field of vision;

Developing the ability to visually locate visual stimuli;

to stretch out his hand to the object while visually fixing black and white images and contrastingly colored toys;

- to catch the toy that appears in its field of vision;
- to catch the colored toys contrasting with the palm of your hand;
- to catch the toys to get them out of the box;

Development of the manual gesture of palmar grip type;

- to catch the colored toys contrasting with the palm of your hand;
- to catch the toys to get them out of the box;

Development of the manual gesture of palmar grip type;

Development of fine motor skills;

- to spin the movable parts of a toy with the palm of his hand;
- to press the buttons of some toys;
- to press the keys of a piano;

Development of the ability of auditory orientation;

- to turn his head to the part from which the sound comes;
- to listen to the sound of sound objects moving from left to right and vice versa;
- to press with the help of the adult on the buttons of some toys to receive sound feedback;

### **What were the strategies, activities and educational resources you used in the intervention process?**

The activities carried out within the early intervention program were:

1. Activities of visual fixation of visual stimuli in different points of the visual field and at different distances;

Activities of visual monitoring of the visual stimulus on different directions of the visual field;

Localization activities by grasping with the hand of the stimulus fixed from the visual field.

For these activities we used educational resources and materials such as: Kaijdoos Program, spotlights, black box, light objects, black and white patterns, contrasting colored objects.

As strategies and methods, we used: observation, conversation, exercise, hand over hand technique;

The child was put to fix, to follow bright stimuli in conditions of obscurity. Contrasting colored stimuli were presented in natural light conditions.

2. Activities to develop fine motor skills such as handling the moving parts of toys, by pressing the buttons of some toys to obtain positive feedback, squeezing some toys with the palm of your hand.

3. Palmar-type fastening activities of objects.

The most common technique used is the hand over hand technique.

The material resources used were balls of different textures and colors, black and white images, piano, objects with buttons and sound, colored toys.

4. Tactile-kinesthetic stimulation activities.

The material resources used were objects of different textures.

The methods used were: conversation, explanation, hand over hand technique.

Early intervention therapies were carried out in the early intervention room and sensory stimulation is in the office.

**Did you use strategies and activities in the training manual? If so, can you present them?**

We used activities and strategies from the presented training.

We used visual fixation activities with materials of the type presented. We purchased teaching materials and made materials similar to those presented.

The objectives were formulated expressing both the maximum and minimal criteria as well as the conditions under which they can be achieved.

**What was the impact of COVID on the intervention program?**

The COVID period has affected the early intervention program in 2020 because it took place online. Online therapy does not have the same efficiency and fatigues both the child and the parent.

**What were the main challenges and difficulties in the intervention and how did you approach them?**

**Challenges**

- The child struggles to catch, to handle with his hand a given toy. So, I tried to help him touch objects by hand over hand technique using his favorite objects and textures that he likes.
- The child fixes bright stimuli only from the position on the back, and from the sitting position refuses to fix.
- The child was exposed to stimuli both from the lying position and from the sitting position.
- The child was tired at the therapy class, because he came from other therapies.

**Difficulties**

- The child accepts only a few textures and objects.
- The child refuses stimuli from the sitting position.
- The parent was trying to suggest me to stimulate her visually only from the lying position.
- The parents had difficulties to attend to meetings time and were absent at the last therapies because of the busy family schedule.

**What methods, methods, and resources did you use to monitor the intervention?**

- journal
- notes -observations**
- inventory
- video recordings (with the consent of parents / legal guardians)
- audio recordings
- discussions with team members**
- written documents from the team meetings
- evaluation activities**
- self-assessment activities
- products of children's activity
- others

**Reflection**

**Do you think you have achieved your goals? Give a short description**

The child has made a progress. I feel that I achieved my goals by referring to the minimum criteria. The child, via her residual vision, focuses on bright stimuli for a few seconds. Also, she manages to locate with her hand a visual stimulus that she had spotted. Finally, she can hold her favorite objects for a while.

**How did the child / family respond to the intervention? Were there any unexpected events?**

The child cooperates better and better with the therapist. The child is familiar with the early intervention cabinet. One of the unexpected events was the fact that the parent no longer manages to bring the child to therapies as often as it appears in the schedule.

**How do you intend to capitalize on the information gained through observation to improve further interventions?**

I will use the information acquired through observation as follows: I will use especially bright objects and luminous stimuli. In natural light conditions I will use black and white patterns and contrasting colored objects preferred and accepted by the little girl. Perhaps we need to change the schedule in order to be easier for the child to come more often to the therapy sessions.



## Türkiye

<p><b>Child's/Family's profile (short description)</b>  <b>Child / family profile (short description)</b>                  Child's name is EN and her mother's name is S. The economic level of the family is low. EN is 17 months old. She has a syndrome called Di George. She has a cleft palate. She swallows air and cannot gas. Therefore, she cries most of the time. She has microcephalia and cerebral palsy. She can see very little.</p>
<p><b>Family</b></p>
<p><b>How did you approach the family? Were there any difficulties? If there were some sort of difficulties, would you mind describing them?</b>                  I approached the family with the help of my association and my advisor from the University. There were no difficulties.</p>
<p><b>Child/Family</b></p>
<p><b>What are your prior criteria in order to identify the intervention area(s) for your child/family in question?</b>                  My prior criteria depend on the child's needs. In the case of her, she is so little. Firstly, she needs to discover herself and her environment. As an early interventionist, firstly I'm trying to develop a healthy and warm relationship with her.</p>
<p><b>Intervention</b></p>
<p><b>What was/were the goal(s)/objectives of the intervention program?</b>                  I observed how the child reacted when interacting with materials. My goal was to make eye function scan. Also, I had several meetings with the physiotherapist</p>
<p><b>Which strategies, activities and educational tools (e.g. objects/materials) did you use during the intervention phase?</b>                  We used some yellow materials and toys. I sang to her "hello" and "goodbye" songs. We worked in different rotations. The physiotherapist worked with the child in different positions. As we observe, EN liked "sitting position".</p>
<p><b>Where did you implement your early intervention programme?</b>                  I implemented my early intervention programme in the child's house.</p>
<p><b>Did you use any activities or/and strategies from the training manual? If you did, could you describe them?</b>                  No, I didn't.</p>
<p><b>What was the impact of COVID on the intervention programme?</b>                  Because of the COVID, we had to be more careful. We used masks all the time.</p>
<p><b>What were the main challenges or difficulties you faced during the intervention and how did you deal with them? Please describe them.</b>                  Our main problem was Esmanur is a crying baby. During the intervention process, she was crying most of the time because of her gas problem. Therefore, I couldn't know how to make her comfortable.</p>



**What kind of methods, means or sources did you use in order to monitor your intervention?**

- Diary** **x**
- Field notes** **x**
- Checklists
- Video recordings** **x**
- Audio recordings** **x**
- Discussions with the working team** **x**
- Meeting notes with the working team** **x**
- Assessment activities
- Self-assessment activities
- Children's products** **x**
- Other:

**Reflection**

**Did you feel that you met your objectives effectively? Please provide a brief description.**

I don't feel that I met my objectives effectively. Because I want to do more for them. However, when thinking about the plan for today, yes, we met our objectives. We will stick to the plan.

**How did the child/family respond to the intervention in general? Were there any unexpected events?**

The mother of the child is very kind and very supportive. She is eager to learn more and do more. There were not any unexpected events.

**How do you plan to exploit the data that you gathered from observation phase to improve your following interventions?**

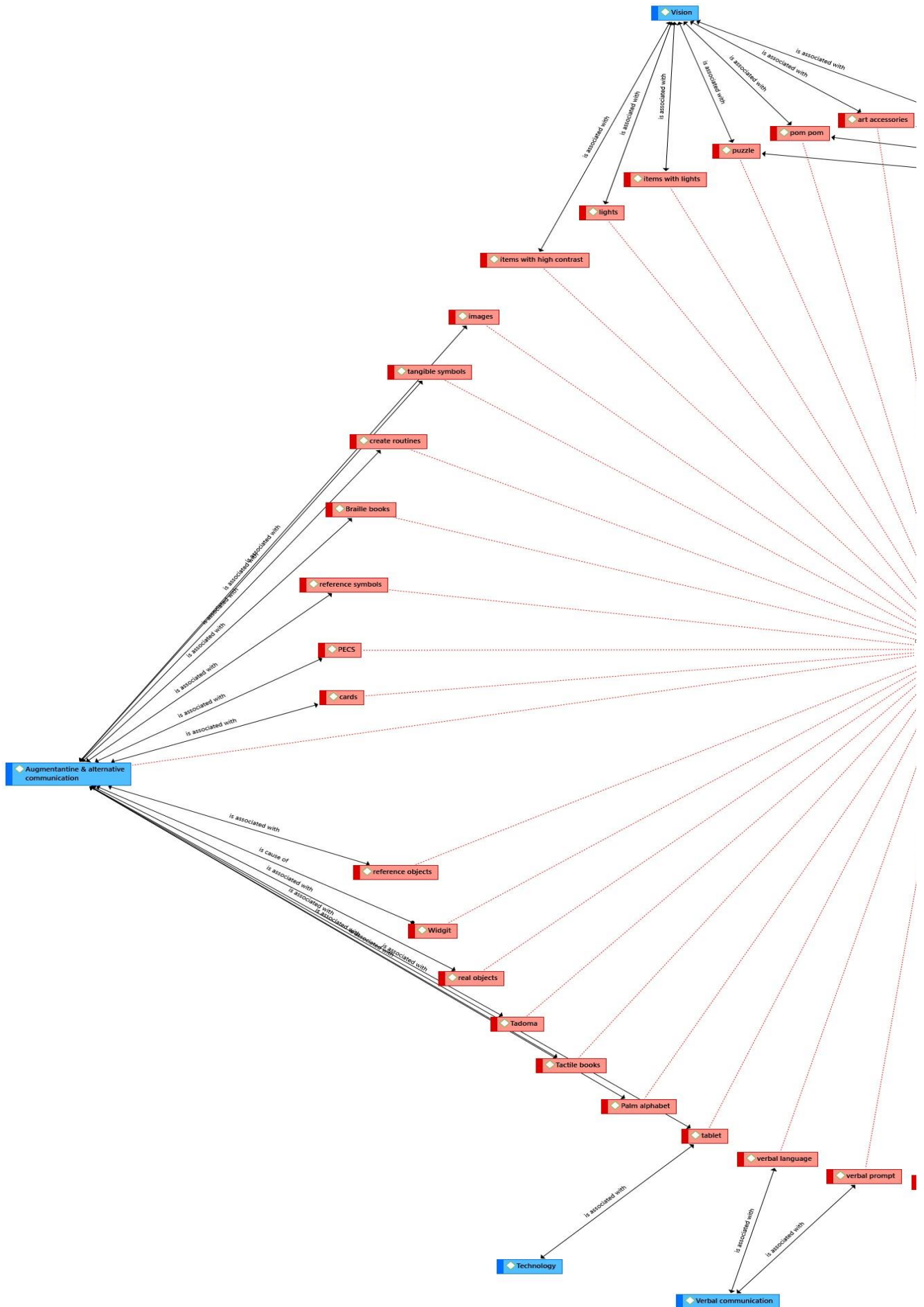
I learned a lot from the physiotherapist. For my next visits to the family, I am planning to work with the child in different positions.



## MA2. Collation of representative snapshots on specific schemes of implementation (Atlas. ti)

In total, 153 reflective logs were obtained and analysed through the software Atlas.ti. The analysis led to the discrimination of 130 codes which formed 5 core categories: a. Intervention Criteria, b. Intervention Place, c. Intervention tools, d. Intervention Challenges, and e. Monitor Intervention. One representative graphic is presented at this section regarding Intervention tools. You can find more information for these snapshots in Intellectual Output 6 (i.e. Best practices).

It is very characteristic the great variety of intervention tools that they professionals were using during the implementation of early intervention programs. In addition, the great number of tools reflects the great heterogeneity that takes place in the population of people with visual impairments and multiple disabilities. The following figure is an output from the Atlas.ti and provides in a visual type of the complexity of the intervention tools that were used by the professionals during the implementation phase of the project. Because the figure was big, it is presented here in two halves. The left half is on page 20 and the right half on page 21.





### MA3. Collation of representative professionals' perspectives and opinions during the ErISFaVIA implementation phase

Action research is a methodology which fulfils two important conditions; one is that it seeks the improvement of professionals' practice in order to improve their students' understanding, using any appropriate tool and the other is that it seeks an understanding of the educational setting and context in general (Feldman & Minstrell, 2000). All this is attained via reflection which is the non-action stage externally, but internally, involves a strenuous inter and intrapersonal reconnaissance to understand the motives and the orientation in continuing the research. The previous basic characteristics form an operational definition of action research which allow us to accept it as a methodology rather than a set of specific research tools (Feldman & Minstrell, 2000, p.432).

The following extracts represent the "reflection moments" of some professionals which allow them to re-consider their methods reflecting on the child's improvement (or not improvement) as well as on their personal opinions and feelings.

*Unfortunately, I did not achieve all the goals I set in the intervention program, because the child's motor skills and perception are very limited. For example, when you give the child a ball and ask him to throw it, the child just lets it fall to the ground. He doesn't seem to understand the instruction. On the other hand, if the child is in a sitting position and he is asked to roll the ball then he will succeed*

*In general, he has a little improvement in some skills, such as walking (last year his balance was worse). Nevertheless, he faces many difficulties in some games such as hopscotch; he can manage only with assistance. Instability in the trunk and limbs continues, despite the strengthening done, both in the abdominals/back, as well as in the upper and lower limbs. Despite the difficulties and challenges of this year, due to the corona virus, the goals set in PE remain the same and we continue to work on these aims*



*The child has made a progress. I feel that I achieved my goals by referring to the minimum criteria. The child, via her residual vision, focuses on bright stimuli for a few seconds. Also, she manages to locate with her hand a visual stimulus that she had spotted. The child cooperates better and better with the therapist. The child is familiar with the early intervention cabinet. One of the unexpected events was the fact that the parent no longer manages to bring the child to therapies as often as it appears in the schedule*

*The biggest challenge I faced was M.'s seizures and the frequent change of medication, which also affected his vision. Initially we managed to develop a relationship of trust with the child and the members of the family. After M.'s seizures were stabilized, we also managed to achieve our main goal, which was to stabilize M.'s visual conditions*

*I will use the information acquired through observation as follows: I will use especially bright objects and luminous stimuli. In natural light conditions I will use black and white patterns and contrasting colored objects preferred and accepted by the little girl. Perhaps we need to change the schedule in order to be easier for the child to come more often to the therapy sessions*

*Our main problem was that EN was a crying baby. During the intervention process, she was crying most of the time because of her gas problem. Therefore, I couldn't know how to make her comfortable. I don't feel that I met my objectives effectively. Because I want to do more for them. However, when thinking about the plan for today, yes, we met our objectives. We will stick to the plan*





## Conclusions

Action research is a methodology which depends heavily on reflection. This reflection stage is orientated in two ways. One direction is towards the data emerging from the interaction between professionals/teachers and children and the other direction is towards the professionals /teachers themselves. Thus, the stage of reflection in Action Research occupies a dynamic character, which renders a rather complex procedure. The benefits of the reflection phase in any type of intervention programme are extremely important because professionals have at their disposal a continuous flow of data relevant to intervention tools, progress, practices, challenges, obstacles, feelings, and opinions and all this data are able to bring a change. After all the main concern of action research is the change within professionals/teachers and in the situation or placement in which they act (Kemmis & McTaggart, 1988).

## References

- Chen, D. (1999). Learning to Communicate: Strategies for Developing Communication with Infants Whose Multiple Disabilities Include Visual Impairment and Hearing Loss. *reSources*, 10(5), 1-10. Published by California Deaf-Blind Services.
- Feldman, A., & Minstrell, J. (2000). Action Research as a Research Methodology for the Study of the Teaching and Learning of Science. In A. E. Kelly & R. A. Lesh (Eds), *Research Design in Mathematics and Science Education*. Lawrence Erlbaum Associates, Publishers: London.
- Horn, E.M., & Kang, J. (2012). Supporting Young Children with Multiple Disabilities. *Topics in Early Childhood Special Education*, 31, 241 – 248.
- Kemmis, S., & McTaggart, R. (1988). *The Action Research Planner*, (3rd ed.), Victoria, Australia: Deakin University.