

PrECIVIM
Promoting Effective Communication for Individuals with a Vision Impairment and Multiple Disabilities



IO1: Scoping



Promoting Effective Communication for Individuals with a Vision Impairment and Multiple Disabilities

INTELLECTUAL OUTPUT 1: SCOPING

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The PrECIVIM consortium

No.	Partner Name	Logo
1	PANEPISTIMIO THESSALIAS (UTH)	 UNIVERSITY OF THESSALY
2	Amimoni - Panhellenic Association of parents and friends of visually impaired people with additional handicaps	 αμυμώνη
3	St Barnabas School for the Blind	
4	Liceul Special pentru Deficienti de Vedere Cluj-Napoca (L.S.D.V.)	
5	Special School For the Deafblind	
6	ROEHAMPTON UNIVERSITY LBG (RU)	
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Executive Summary

This report presents the findings from Intellectual Output 1 (IO1) of the PrECIVIM project, which aimed to gather information on policies, practices and research in the 4 participating countries in relation to individuals with Multiple Disabilities and Visual Impairments (MDVI), and more specifically, communication.

In order to meet these aims, we divided activities for IO1 into 2 tasks, i.e. a scoping study, including a systematic review of the literature, and a situation analysis, including case studies in the 6 partner educational settings.

In terms of policies, we found that all 4 countries have adopted generic legislation for the rights and inclusion of people with disabilities; and all countries apart from Cyprus have some basic legislation aimed specifically at those with multiple disabilities (and MDVI).

In terms of practices, we found evidence that the 6 partner educational settings are leading the education of individuals with MDVI in their countries and that there is a need to systematise their approaches and to disseminate them more widely, especially given the big gap in training programmes for professionals that we found.

In terms of research, we found that there are few research studies on MDVI across the participating countries, a lack of clarity as to what MDVI is, and a great variety of terminology currently in use.

According to the findings of the scoping phase, we make the following recommendations:

1. Legislation specifically targeted for individuals with MDVI could be made more extensive, covering areas such as teacher training and preparation.
2. The practices and programmes developed and used by the 6 partner educational settings need to be systematised and disseminated more widely.
3. More professionals' training programmes on working with children and young people with MDVI need to be urgently developed.
4. The meaning of the term MDVI and any overlaps with other terminology currently used need to be clarified in theoretical literature.
5. More empirical research in the field of MDVI is urgently needed.

Furthermore, the findings of the case studies in the 6 participating educational settings include a list of a) needs of individuals with MDVI according to the experts, b) most successful strategies, c) best practices currently in use, as well as d) the key challenges faced by professionals when working with MDVI. We further produced vignettes summarising rich background data on the educational settings, including students' and professionals' profiles and the organisation of the provision. All these findings will feed into the next phase of the project (i.e. IO3), which is the development of the training materials for professionals. These materials will be based on the findings presented in this report and will thus systematise and disseminate more widely the expert practices developed by our partner educational settings.

1.0 Introduction

This report presents the findings from Intellectual Output 1 (IO1) of the PrECIVIM project. IO1 had three overarching aims, namely:

1. Scoping of policies in the participating countries in relation to MDVI.
2. Mapping of practices in the participating countries in relation to MDVI and more specifically, communication.
3. Review existing research in participating countries and beyond as relevant.

In order to meet the above aims, we divided activities for IO1 into two tasks:

- Task 1 entailed two main activities: identification of national, regional, and local policies in relation to MDVI across participating countries; and of research literature on MDVI and assessment of communication methods and tools, challenges and needs; and secondly, engaging with practitioners in order to gather more information on implementation of practices.
- Task 2 entailed more in depth engagement with practitioners regarding their practices, including case studies in the 6 participating educational settings.

This report summarises and presents the methodology we adopted and our results.

2.0 Methodology

2.1 Scoping phase: mapping the literature

Task 1 for IO1 (October 2017-April 2018) comprised two activities, as follows:

1. Comprehensive review of literature on policies, practices and research.
2. Engaging with practitioners to gather data on their practices.

The review of the literature was completed in two stages: firstly, all partners were contacted through the project portal and were asked to collect information on their countries' policies, practices and research. For this, 3 templates were provided to partners to complete (see Appendix 1). In the second stage, the team at UR conducted a comprehensive and systematic search of the literature using a specifically designed protocol (see Appendix 2).

2.2 Situation analysis: case studies in educational settings

For Task 2 of IO1 (March -May 2018) we adopted a multiple case study research design, and used the following methods of data collection:

1. Collating background data from participating schools/educational settings.
2. Interviews with professionals.

The focus of each case study was each participating school/educational setting, i.e. in total 6 case studies were conducted, 1 school and 1 educational setting in Greece, 1 school in Romania, 2 schools in England, and 1 school in Cyprus:

1. Whitefield Academy Trust - Margaret Brearley School, England
2. Whitefield Academy Trust – Joseph Clarke School, England
3. Special Primary School for the Deafblind, Greece
4. Amimoni, (Panhellenic Association of parents and friends of visually impaired people with additional handicaps) Greece
5. High School for the Visually Impaired, Romania
6. St Barnabas School, Cyprus

The research aims of the case studies were as follows:

1. Description of educational settings.
2. Overview of communication needs of specific population in question.
3. Summary of current strategies used to assess and develop communication.
4. Identification of best practices and challenges according to the practitioners.

In order to address Research Aim 1, i.e. description of the educational setting, we gathered data on the students enrolled, professionals and organisation of the provision. We developed and used templates for this purpose (see Appendix 3). In order to address Research Aims 2, 3, and 4, we interviewed professionals in the 6 educational settings using a semi-structured interview schedule (see Appendix 4).

3.0 Presentation of findings

3.1 Findings of scoping phase

3.1.1. Greece: policies

In 2012 and 2017, Greece passed Law 4074/2012, FEK 88 and Law 4488/2017, FEK 137, which ratify the Convention on the Rights of Persons with Disabilities (CRPD), and render the implementation of the CRPD in education, social life and vocational life a legal requirement.

Moreover, since 1981 Greece has passed several laws on Special Education, more specifically on the following areas:

1. Structure of special primary and secondary schools in terms of administration, assessment, curriculum (Law 1143/1981, FEK 80; P.D. 603/1982, FEK 117; Law 1566/1985, FEK 167; Law 2817/2000, FEK 78; FEK 1067/2002; Law 3699/2008, FEK 199; FEK 2544/2009; Law 4368/2016, FEK 21).
2. Ways of assessment and classification of children with SEN/D (FEK 1319/2002).
3. Structure of secondary Special Education (Law 4186, FEK 193/2013).
4. Requirement for special primary and secondary schools to support students with learning difficulties and behavioural and emotional difficulties from primary and secondary schools located in the same area (Law 4125/2013 and FEK 315/2014).
5. Structure and implementation of co-education programmes (FEK 3561/2016)
6. Specification of the number of students in each class in special schools (Law 4452/2017, FEK 17).

In specific relation to MDVI, Greece has signed legislation regarding accessible assessment, i.e. Greek sign language recognised as the official language for deaf students' and braille recognised as the official way of reading and writing for blind students (Law 3699, FEK 199/2008).

3.1.2 Romania: policies

Romania ratified the CRPD in 2010 with Law no. 221/2010 and the country's current National Strategy ('A barrier-free society for people with disabilities', 2015-2020) ensures its implementation. Moreover, since 1992, Romania has passed several laws relevant to people

with disabilities, more specifically on the following areas:

1. Promotion of equal chances and opportunities for disabled people; special support in education, employment, and social integration (Law No. 53/ from June 1992).
2. Social and professional integration of people with disabilities through employment and participation in the social life (Law no. 57/ from June 1992).
3. Legal framework to foster and support employment of people with disabilities (Law no. 519/ from 29th July 2002).
4. The general and specific criteria for assessment of disability level (Decree no. 725 from October 2002).
5. Regulation and quality of services for people with disabilities (Decree no.14 from January 2003).
6. Framework regulations for the organization and functioning of institutions for the special protection of persons with disabilities (Decree no. 329 from March 2003).
7. Organisation and operationalisation of educational support services (Minister of Education and Research Decree no. 5379 from November 2004).
8. National Strategy for the Protection, Integration and Social Inclusion of Persons with Disabilities (2006-2013), (Decree no. 1175 from September 2005).
9. Approval of the general standards of social services (Decree no 383 from 2005)
10. Support for the education of pupils with SEN/D (National Education Law nr. 1/2011 - Article 12 (1)).
11. Right to education for people with SEN/D (National Education Law nr. 1/2011 - Article 12 (6)).
12. Differentiated and adapted schooling (National Education Law nr. 1/2011 - Article 12 (7)).
13. Specialised training and adequate psycho-pedagogical support for people with SEN/D (Article 94 (2) (k)).

Moreover, certain laws in Romania are directly linked to the education of pupils with MDVI:

1. General educational framework for special schools catering for pupils with severe and profound learning disabilities (Minister of Education and Research Decree no. 4928/08.09.2005).
2. Recognition of deafblindness as a distinct disability (Law 448/2006 from December 2006).
3. Regulation of early intervention (Annex 3071 from 18 January 2013).

3.1.3 England: policies

England (UK) ratified the CRPD in 2009 but a recent report from the Committee indicates that the UK government needs to work harder to ensure that disabled people have equal rights, including access to education.

England has a history of legislation for Special Educational Needs and/or Disability (SEN/D) in Education. Different governments over the last 30 years have proposed different agendas

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with implications for the education of people with SEN/D. Here are some key historical policy documents:

1. 1978 Warnock Report: introduced term 'Special Educational Need' and a positive approach; move from segregation to integration.
2. 1981 Education Act: introduced Statement of Special Educational Need.
3. 1993 & 1996 Education Acts: provided guidance on identification and assessment; introduced SEN tribunals.
4. 1994 SEN Code of Practice: introduced 8 categories of SEN, Individual Education Plans (IEPs) and Special Educational Needs Coordinator (SENCo).
5. 1997 Excellence for all Children: meeting special educational needs: government endorses Salamanca Statement on Special Needs Education (1994).
6. 2000 Curriculum: sets three inclusionary principles, i.e. setting suitable learning challenges, responding to individuals' diverse learning needs, overcoming potential barriers to learning and assessment of individuals/groups of pupils.
7. Special Educational Needs and Disability Discrimination Act (SENDA, 2001): extends the Disability Discrimination Act (1995) to education, thus making discrimination against disabled pupils unlawful; places a duty on schools to identify 'reasonable steps' to avoid discrimination and make 'reasonable adjustments' in provision.
8. 2001 SEN Code of Practice: introduces School Action and School Action Plus for children with SEN.
9. 2004 Removing Barriers to Achievement: the Government strategy for SEN: sets out four areas of intervention, as follows: early intervention, removing barriers to learning, raising expectations and achievements, delivering improvements in partnership.

In terms of the current policy framework, all schools in England have statutory duties towards children with SEN/D under the 2015 SEN Code of Practice, which covers age range of 0-25 years; it replaces Statements of SEN with Education, Health, and Care plans (EHCPs); it provides guidance to ensure co-operation between Health, Education and Social Care; it places emphasis on the participation of child/young person in decision making; it takes account of the Children and Families Act 2014, which places emphasis on Joint services for Education, Health and Social Care, and participation.

In specific relation to individuals with MDVI, the following have been adopted in the past:

1. Department of Health (1997). Think Dual Sensory. London: Department of Health (DH): good practice guidelines for old people with dual sensory loss.
2. Department of Health (2001 and updated in 2009). Local Authority Circular (LAC): Social Care for Deafblind Students and Adults. London: DH: guidance on assessment and appropriate support by local authorities.

Whereas the most current relevant policy is the following:

1. Care and Support for Deafblind children and adults policy guidance (2014),

published by the Department of Health: this guidance takes account of the Care Act (2014) and places duty on Local Authorities to make contact and maintain a record of Deafblind people, ensure that assessment of needs is carried out by trained experts, provide appropriate services and one to one support when necessary.

3.1.4 Cyprus: policies

Cyprus ratified the Convention on the Rights of Persons with Disabilities (CRPD) in 2011 (8(III)/2011) and it has moreover passed the following laws in relation to people with disabilities:

1. Education and training of children with SEN/D (113(I)/1999).
2. Rights and provision for people with disabilities, including early diagnosis, specialised support and accessibility to inclusive education (127(I)/2000).
3. Employment of people with disabilities in the public sector (127(I)/2000).
4. Mechanisms for early detection of children with SEN/D (185(I)/2001).
5. Regulations for education and training of children with SEN/D (186(I)/2001).

Also the Department for Social Inclusion of Persons with Disabilities/Services and Social Benefits is in charge of several schemes that support people with disabilities and enable their access to education and society.

3.1.5 Summary of policy findings

The policies identified can be divided in two broad categories:

- a) Generic policies aimed at all disabled people and their right to be included in education and society
- b) Policies specifically aimed at individuals with multiple disabilities (and MDVI).

There is clear evidence that all four countries' governments have shown increased awareness and willingness to support individuals with disabilities, including those with MDVI. All four countries have signed and ratified the CRPD, which is an international agreement protecting the rights of individuals with disabilities, and have introduced extensive relevant legislation. In terms of legislation specifically designed with multiple disabilities (and MDVI) in mind, we found some evidence in all countries apart from Cyprus. Moreover, there seems to be a gap in specific policies concerning teacher training and preparation for working with MDVI and on the role of special schools within the context of an inclusive education system.

3.1.6 Greece: practices

In Greece, practices are centred on the work of the Special Primary School for the Deafblind, and the educational setting AMIMONI (see Vignettes 1 and 2). Both schools use specific strategies when working with children with MDVI, as follows:

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1. Individual Education Plan (IEP).
2. Transdisciplinary team.
3. Choice of appropriate communication method.
4. Multi-sensory learning.
5. Environmental adaptation.
6. Informal assessment.
7. Promoting social and emotional development through peer activities.
8. Extracurricular activities.
9. Input from caregiver (AMIMONI).
10. Observation of responsive behaviour and building of expressive and receptive communication.
11. Touch cues/object cues.
12. Design of personalised communication system.
13. Use of other senses (taste and smell).

Areas covered by the special school and the educational setting programmes are: spatial and temporal cognition, mobility and orientation, development of daily living skills, multisensory stimulation, visual stimulation and training, social and recreational activities, music therapy, physical therapy, physical education, occupational therapy, services for students (counselling); services for the families (counselling, social assistance, psychological support); early intervention programme for MDVI children and their families.

The following specialised curriculum has been developed and is used in the school and the educational setting as a tool for observation of developmental stepping stones:

1. Educational guide and curriculum for the development of communication of deafblind students. Athens: Educational Institute (2004).
2. An observation tool based on the tool provided by the Early Intervention Program of Blindeninstitut, Munich. Amimoni (2010).

Teacher training initiatives/resources developed for professionals:

1. Seminar on improving inclusion: 'Deafblindness. Educational Seminar titled: Improving the conditions of educational inclusion of students with multiple disabilities', by Zeza, M. (2004).
2. Online guide for differentiation and seminars offered to teachers: guidance on differentiation strategies, by the Institute of Educational Policy, (2015).
3. In AMIMONI, internal training workshops, are organised at least once a year, including mobility and orientation training to the personnel involved with MDVI pupils; simulation training activities regarding daily living skills of VI population.

3.1.7 Romania: practices

In Romania, the High School for the Visually Impaired in Cluj-Napoca provides education for children with MDVI, with a focus on personalised programmes, interventions and an

adapted curriculum (see Vignette 3). Some of the specific programmes offered are:

1. Psychological assessment, diagnosis, counselling, school and career orientation.
2. Orientation and mobility.
3. Visual Stimulation and Training.
4. Multi-Sensory evaluation and stimulation.
5. Snoezelen – The Multi-sensory Stimulation Room.
6. Compensation and Rehabilitation Therapies.
7. Physical therapy.
8. Speech Therapy.
9. Integrated Educational Therapy.
10. Development of Daily Living Skills.
11. Development of Pre-professionalization Skills.
12. Dog-assisted Therapy.

Moreover, the school is involved in projects that foster social skills development for children with multiple disabilities such as the Leonardo da Vinci partnership project.

In Romania, relevant services and support are provided (sometimes in collaboration with the school and external partners) by several organisations, as follows:

1. Sense International Romania: focuses on programme support, public awareness of needs of children/young people with MDVI, increase of numbers who access education; skills training and support for special education teachers
2. Centre of Educational Assistance and Resources "Speranța" Timișoara: its services for teachers are focused on the promotion of early intervention and inclusive education in nurseries and schools.
3. Centre 'CRISTAL': offers early intervention for 0-3 years; specific therapies for children with sensory, physical disabilities and autism; personalised interventions.
4. Light into Europe: providing educational support services to schools for sensory impaired and families; promoting accessible information and equipment; changing attitudes; encouraging better education, training and employment of people with sensory impairments.
5. Association of deafblind people: NGO that promotes the rights of persons with deafblindness.
6. Association 'The Only Sense': NGO, which supports the parents of children with deafblindness.
7. Resource Centre for Children with MDVI (Department of Special Psychopedagogy, Faculty of Psychology and Education Sciences): psycho-pedagogical evaluation services, counselling and material resources for working with MDVI.

Some of the above organisations do provide teacher training, but also the Perkins School for the Blind has set up collaborative projects, which include in-service training and summer schools on single and dual sensory impairment and additional disabilities, training on the development of the curriculum, and support for the development of resources.

A specific curriculum has been developed for multiple disabilities, as follows:

1. Curriculum for classes / groups in special or school education for students with deafness / multiple sensory impairments
2. Framework education curriculum for preschool education intended for deafblind / multiple sensory deficiencies: this curriculum refers to early intervention. It is framework for early intervention curriculum for multisensory impairment/deafblindness included.

Under resources developed for professionals, we identified the following:

1. Casapu, A., Săndoiu, F. Casapu, M., Marin, M., Buică-Belciu, O. (2007). *Early intervention in children at risk of developing sensory disabilities*. Parents Guide, Bucharest.
2. Celizic, M., Hathazi, A., Stoilova, E. & Tóth, M. (2017). Building Mutual Framework of Quality Educational Services Offering for Individuals with MDVI and Deafblind in Europe/Euro Asia Region. Proceedings from the *9th ICEVI European Conference, 2-7 July 2017, Bruges, Belgium*, pp. 112-116.

Finally, the journal of Sense International Romania publishes examples of best practices; approaches and methods of assessment and intervention; information on events; and articles by parents.

3.1.8 England: practices

In England, students with MDVI are usually in special schools, specialising on Visual Impairment and Additional disabilities, such as our partner schools of the Whitefield Academy Trust (see Vignettes 4 and 5). These schools have developed their own practices for assessment, intervention and communication, such as for example:

1. A curriculum for multi-sensory impaired students developed by the MSI Unit at the Victoria School in Birmingham.
2. Policies for identification, assessment and provision for students with sensory and multi-sensory impairment of Castle Hill School in Huddersfield.
3. Whitefield School Curriculum: bespoke personalised curriculum so that all students benefit from individualised learning with reference to the National Curriculum, based on direct experience of objects, people and activities accessible to the individual student bearing in mind their sensory and physical needs. It aims to develop skills in sensory exploration, information gathering, communication, interaction and physical control.

In terms of teacher training, the following courses were identified:

1. Whitefield Academy Trust ran a Level 7 course for teachers working with children and young people with complex needs, including MSI/MDVI; validated by Kingston

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University London but closed in July 2015.

2. The School of Education at the University of Birmingham offers a distance, online postgraduate programme on the Education of Learners with Multisensory Impairment (Deafblindness).

The following tools have been developed:

1. Tool for auditing access: Naish, L. Bell, J. & Clunies-Ross, L. (2003). *Exploring Access: How to Audit your School Environment, Focusing on the Needs of Children who have Multiple Disabilities and Visual Impairment*. London: RNIB.
2. Guidance on communication: RNIB - *Working with complex needs in the classroom*.
3. Evidence for Learning – Assessment programme: EfL is a recording application that enables the user to upload their own curriculum before documenting progress through photos/videos, curriculum target descriptors and staff comments.

In terms of resources for professionals/parents, we identified the following:

1. McInnes, J.M. & Treffry, J.A. (1982). *Deaf-blind Infants and Children: A Developmental Guide*. University of Toronto Press.
2. Aitken, S., Buultjens, M., Clark, C., Eyre, J. & Pease, L. (2000). *Teaching Children Who are Deafblind: Contact, Communication and Learning* Fulton Publishers.
3. Nind, M. & Hewett, D. (2001). *A Practical Guide to Intensive Interaction Paperback*.bild.
4. Pagliano, P. (2012). *The Multisensory Handbook: A guide for children and adults with sensory learning disabilities*. Fulton Publishers.
5. McLinden, M. & McCall, S. (2002). *Learning through touch: Supporting children with visual impairments and additional difficulties*. David Fulton Publishers Ltd.
6. Lacey, P. & Ouvry, C. (1998.) *People with Profound and Multiple Learning Disabilities: a Collaborative Approach to meeting Complex Needs*. London: David Fulton Publishers.
7. Ware, J. (2003). *Creating a Responsive Environment for People with Profound and Multiple Learning Difficulties (2nd edition)*. London: David Fulton Publishers.
8. Miller, O. & Hodges, L. (2005). 'Deafblindness'. In A. Lewis & B. Norwich (eds.) *Special Teaching for Special Children? Pedagogies for Inclusion*, Maidenhead: Open University.
9. Nind, M. & Hewitt, D. (2005). *Access to Communication*. London: David Fulton.

Finally, the journal of Sense UK publishes articles on communication with the target group through a variety of means and in different contexts. Sense UK, Deafblind UK and the Royal National Institute for the Blind (RNIB) focus on supporting people with complex sensory and communication needs including support for education and employment.

3.1.9 Cyprus: practices

Our partner school in Cyprus, St Barnabas School in Nicosia (see Vignette 6) is a multi-

dynamic centre providing a wide range of services including:

1. Special education for children with Visual Impairment (VI).
2. Support services for students with VI attending mainstream educational settings.
3. Support services for VI students who attend Higher Education Institutions in Cyprus and abroad.
4. Environmental audits.
5. Vocational training programmes for adults.
6. Training programmes for adults aiming towards the enhancement of creativity, skills and self-development.
7. Afternoon programmes for students who attend mainstream schools on various subjects.
8. Telephony Department.
9. Training in the use of technology.
10. An Early Intervention Programme for children with VI and their families.
11. School for parents.
12. Recording and transcription services.
13. A unit for children with VI and additional disabilities.
14. Programme of education for persons with deaf-blindness.
15. Support services for employed persons with VI.
16. Psychological support and counselling.
17. Social services.
18. Cooperation with other institutions and organisations.

Finally, the Pancyprian Organisation of the Blind supports adults with VI by offering them access to leisure, sports and recreational activities, rehabilitation services and opportunities for employment for example.

3.1.10 Summary of practice findings

- The 6 partner educational settings are leading the education of students with MDVI in their countries, and provide specialised education and other services using tailor made individual plans and personalised interventions, adapted curricula, differentiated strategies and tools for the assessment of communication.
- In England, EfL is used, i.e. an application that enables the user to upload their own curriculum before documenting progress through photos/videos, curriculum target descriptors and staff comments. This innovative strategy is worth exploring further.
- There is clearly a need for the development of more training programmes for professionals, especially in Greece, England and Cyprus.
- Several organisations in Romania and England provide relevant services and support for individuals with MDVI.

3.1.11 Greece: research

In total, 10 documents were identified (see Table 1), as follows:

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- 3 empirical studies on VI and MD/MDVI, out of which 1 on parental satisfaction, 2 focused on collecting data from pupils
- 7 empirical studies on VI and HI or deafblindness, all of which were educational interventions or programmes

Table 1: Greece Research

	Full reference	Type of research
1	Orfanos, P. (2006). <i>Program of educational Intervention focused on the development of communicative abilities in deafblind students</i> . Panteion University of Social and Political Sciences: Phd Thesis (in Greek).	Empirical study
2	Zeza, M. (2007). The development of the concept of time from deafblind students. <i>Proceedings from the 5th Panhellenic Scientific Conference in Special Education</i> . 193-201 (in Greek).	Empirical study
3	Zeza, M., & Stavrou, P.D. (2010). Research program in the field of deafblindness: the framework of the cognitive and communicative profile of deaf-blind students and the application of educational plan of intervention. <i>28th International Association of Logopedics and Phoniatrics (IALP) World Congress: "Where the sciences of communication meet the art of culture</i> , 469-473.	Empirical study
4	Argyropoulos, V., & Thymakis, P. (2014). Multiple Disabilities and Visual Impairment: An Action Research Project. <i>Journal of Visual Impairment & Blindness</i> , 108(2),163-167.	Empirical study
5	Neofotistou, K., Foriadou, E., Kontaxakis, E., Giagazoglou, P., Tsimaras, V., & Sidiropoulou, M. (2014). Parental satisfaction with early intervention services for children with visual impairments and multiple disabilities in Greece. <i>Journal of Physical Education and Sport</i> , 14(1), 60–65.	Empirical study
6	Zeza, M., & Stavrou, PD. (2015). Program of Educational Intervention for Deaf-Blind Students. In Y. Tan, Y. Shi, F. Buarque, A. Gelbukh, S. Das, & A. Engelbrecht (Eds.), <i>Advances in Swarm and Computational Intelligence. ICSI 2015. Lecture Notes in Computer Science</i> (9142). Springer, Cham.	Empirical study
7	Zeza, M., & Stavrou, PD. (2015). Intervention program in Deaf-Blind Students. An educational plan for body schema awareness. In G. Kouroupetroglou (Ed.), <i>Enabling Access for Persons with Visual Impairment, Proceedings of the International Conference ICEAPVI-2015</i> , Athens, Greece, 12-14 February 2015. Available at: http://access.uoa.gr/ICEAPVI-2015/proceedings.html	Empirical study
8	Zeza, M., & Stavrou, PD. (2016). Perceiving the concept of time through the use of tactile time sequence cards: an educational plan of intervention for deafblind students. <i>8th International Conference on Education and New Learning Technologies</i> , Barcelona, Spain, 4-6 July 2016. Available at: https://library.iated.org/publications/EDULEARN16	Empirical study
9	Argyropoulos, V., & Papazafiri, M. (2017). Investigating tactile exploratory procedures of students with multiple disabilities and visual impairment: current trends in education. <i>10th annual International Conference of Education, Research and Innovation</i> , Seville, Spain, 16-18 November 2017, 2023-2029. Available at: https://library.iated.org/publications/ICERI2017	Empirical study
10	Argyropoulos, V., Nikolarazi, M., & Papazafiri, M. (2018). Disaster Education and children with visual impairment. <i>Proceedings of the 20th International Conference on Advanced Pedagogical Sciences and Educational Policies</i> , Sydney, Australia, 2134-2137.	Empirical study

3.1.12 Romania: research

19 documents were identified (see Table 2), as follows:

- 7 literature reviews on VI/MDVI/non-verbal children and covering topics such as interventions (e.g. structuring the environment, Alternative and Augmentative Communication), access technologies, evaluation and assessment

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- 7 empirical studies on MD, including symbolic systems for development of communication, AAC for development of symbolic understanding, communication, evaluation of quality of services for MD people, interventions for communication and interaction, and development of social and emotional skills
- 5 empirical studies on DB/HI/VI, including assessment of communication, tactile sign language, accessibility through culture

*NB. 5 resources/books translated from other languages to Romanian were also identified, but are not included in this review.

Table 2: Romania Research

	Full reference	Type of research
1	Racu, A., Popovici, D.V., Dani, A., & Crețu, V. (2006). <i>Rehabilitation and Therapeutic Intervention for children with multiple disabilities</i> . Chisinau: Editura Pontos.	Literature review
2	Casapu, A., Săndoiu, F., Casapu, M., Marin, M., & Oana Buică-Belciu, O. (2007). <i>Intervenția timpurie la copilul cu risc de deficiențe senzoriale Ghid Pentru Parinti</i> . Bucuresti.	Empirical study
3	Farcas, I. (2009). Particular factors of Tactile Sign Language Communication in Deafblind People. In M. Anca (Ed.), <i>Modern Special Education Trends in Stimulating Communication Skills, Special Education Studies, 1</i> . Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
4	Hathazi, A. (2009). The individualization of the assessment process of deafblind children. In M. Anca (Ed.), <i>Modern Special Education Trends in Stimulating Communication Skills, Special Education Studies, 1</i> . Cluj-Napoca, Presa Universitara Clujeana.	Empirical study
5	Hathazi, A. (2009). Using symbolic systems for the development of communication of children with multiple disabilities. In M. Anca (Ed.), <i>Modern Special Education Trends in Stimulating Communication Skills, Special Education Studies, 2</i> . Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
6	Hathazi, A. (2010). Using AAC systems in the development of symbolical understanding of multiple disabled children. In M. Anca (Ed.), <i>Special Education between Praxis and Research, Special Education Studies, 3</i> . Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
7	Hathazi, A. (2012). Communication in the context of multiple disabilities. In A. Hathazi (Ed.), <i>Education of People with Multiple Disabilities Collection, 1</i> . Cluj-Napoca: Presa Universitara Clujeana.	Literature review
8	Cziker, R.E.. (2014). <i>The Analysis of The Quality of Services Provided to People with Multiple Sensorial Disabilities/Multiple Disabilities -Participatory Action, Participatory Research</i> . Bucuresti: Ed. Mica Valahie.	Empirical study
9	Hathazi, A. (2014). Interaction-based intervention programs in multiple disabilities. <i>International Journal of Humanities and Social Science, 12(4)</i> , 1-5.	Empirical study
10	Hathazi, A. (2014). Developing communication abilities for deafblind children. In <i>Education of People with Multiple Disabilities Collection, 2</i> . Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
11	Tufar, I. (2014). Particularities of an intervention program on communication used with children with deafblindness or MDVI. In C. Bodea Hategan (Ed.), <i>Therapeutical Approaches on Language. Present Perspectives</i> . Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
12	Cziker, R.E., & Hathazi, A. (2015). Visual disabilities. In A. Rosan (Ed.), <i>Special Education – Models of Evaluation and Intervention. Collection of Educational Sciences</i> . Iasi: Polirom.	Literature review
13	Hathazi, A. (2015). Multiple disabilities. In A. Rosan (Ed.), <i>Special Education – Models of Evaluation and Intervention. Collection of Educational Sciences</i> . Iasi: Polirom.	Literature review
14	Padure, M. (2015). Access Technologies in Specialized and Inclusive Education. In A. Rosan (Ed.), <i>Special Education – Models of Evaluation and Intervention. Collection of Educational Sciences</i> . Iasi: Polirom.	Literature review
15	Tufar, I. (2015). Alternative and Augmentative Communication Systems. In A. Rosan (Ed.), <i>Special Education – Models of Evaluation and Intervention. Collection of Educational Sciences</i> . Iasi: Polirom.	Literature review
16	Popovici, D.V., Cozma, R.A., Tutu, A.S., Constantin, D.M., Cotae, P., & Neagoe, S. (2016). <i>Strategies of alternative and augmentative communication for nonverbal children</i> . Bucuresti: Ed. Universitatii din Bucuresti.	Literature review

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17	Serban, I. (2016). The role of total communication in the development of vocabulary for the hearing-impaired students. In <i>Education of People with Multiple Disabilities Collection</i> , 3. Cluj-Napoca: Presa Universitara Clujeana.	Empirical study
18	Hathazi, A. (2017). Development of social-emotional skills in multiple disabilities. In Romanian Academy, George Baritiu History Institute, Social and Humanities Research Department. <i>Studies and Research in the field of Social Sciences and Humanities</i> , 30. Cluj-Napoca: Ed. Limes & Argonaut.	Empirical study
19	Serban, I. (2017). Accessibility through Culture for Visually Impaired and Blind People. Good European Practices in the BaGMIVI Project. In Romanian Academy, George Baritiu History Institute, Social and Humanities Research Department. <i>Studies and Researches in the field of Social Sciences and Humanities</i> , 30. Cluj-Napoca: Ed. Limes & Argonaut.	Empirical study

3.1.13 England: research

21 documents were identified (see Table 3), as follows:

- 12 empirical studies on MDVI, PMLD, VI and complex needs
- 7 empirical studies on deafblindness and sensory needs
- 2 literature reviews on DB and challenging behaviour; and haptic methods for children with MDVI

*NB. 17 sources were also identified pre-1998, which were not included in this review.

Table 3: England Research

	Full reference	Type of research
1	Ouvry, C. (1998). Making relationships. In P. Lacey, & C. Ouvry (Eds.), <i>People with Profound and Multiple Learning Disabilities: A Collaborative Approach to meeting Complex Needs</i> . London: David Fulton Publishers.	Empirical study
2	McLinden, M. (1999). Hands On: Haptic Exploratory Strategies in Children Who Are Blind with Multiple Disabilities. <i>The British Journal of Visual Impairment</i> , 17(1), 23-29.	Empirical study
3	Ockelford, A. (2000). Music in the education of children with Severe or Profound Learning Difficulties: issues in current U.K. provision, a new conceptual framework, and proposals for research. <i>Psychology of Music</i> , 28(2), 197-217.	Empirical study
4	Miller, O.L. (2001). <i>Multisensory Environments: The Use of Interactive Technology in Effective Pedagogy with Learners who Have Severe and Complex Forms of Special Educational Needs</i> . Institute of Education, University of London: PhD Thesis.	Empirical study
5	Deuce, G. (2002). Sensory Integration Dysfunction in Deafblind Children. <i>DBi Review</i> . 30(2), 8-10.	Empirical study
6	Sense. (2002). <i>Breaking Out: Opening the Community for Deafblind Children and Young People. A Sense Campaign Report</i> . London: Sense.	Empirical study
7	Hodges, E. (2004). <i>Learning Styles in Deafblind Children: Perspectives from Practice</i> . University of Birmingham: Unpublished PhD Thesis.	Empirical study
8	Park, K. (2004). Interactive storytelling: from the Book of Genesis. <i>British Journal of Special Education</i> , 31(1), 16-23.	Empirical study
9	Sense. (2004). <i>Local Authority Survey Results</i> . Available at: http://www.sense.org.uk/publications/allpubs/rights/RT03.htm Last accessed: 20th Dec 2007	Empirical study
10	Watson, L., Douglas, G., Hodges, L., McLinden, M., & Hall, N. (2004). Current Conceptions of Literacy. Insights from Work with Children and Older Learners with Sensory Needs. <i>Journal of Research in Special Educational Needs</i> , 4(2), 82-90.	Empirical study
11	Levy, G. (2005). Seeing for ourselves: Producing accessible information for people learning difficulties and visual impairments. <i>British Journal of Learning Disabilities</i> , 33(2), 77-82.	Empirical study
12	Kamenopoulou, L. (2005). Challenging behaviour and deafblindness: a critical review of the literature. <i>The SLD Experience</i> , 42(1), 15-22.	Literature review

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13	Hewett, D. (2007). Do touch: physical contact and people who have severe, profound and multiple learning difficulties. <i>Support for Learning</i> . 22(3), 116-123.	Empirical study
14	Taylor, K., & Preece, D. (2010). Using Aspects of the TEACCH Structured Teaching Approach with Students with Multiple Disabilities and Visual Impairment: Reflections on Practice. <i>British Journal of Visual Impairment</i> , 28(3), 244-259.	Empirical study
15	Harding, C., Lindsay, G., O'Brien, A., Dipper, L., & Wright, J. (2011). Implementing AAC with children with profound and multiple learning disabilities: a study in rationale underpinning intervention. <i>The Journal of Research in Special Educational Needs</i> , 11(2), 120-129.	Empirical study
16	Kamenopoulou, L. (2012). A study on the inclusion of deafblind young people in mainstream schools: key findings and implications for practice. <i>British Journal of Special Education</i> , 39(3), 137-145.	Empirical study
17	McLinden, M. (2012). Mediating haptic exploratory strategies in children who have visual impairment and intellectual disabilities. <i>Journal of Intellectual Disability Research</i> , 56(2), 129-39.	Literature review
18	Bunning, K., Smith, C., Kennedy, P., & Greenham, C. (2013). Examination of the communication interface between students with severe to profound and multiple intellectual disability and educational staff during structured teaching sessions. <i>Journal of Intellectual Disability Research</i> , 57(1), 39-52.	Empirical study
19	Little, S., & Dutton, G.N. (2014). Some children with multiple disabilities and cerebral visual impairment can engage when enclosed by a 'tent': Is this due to Balint syndrome? <i>British Journal of Visual Impairment</i> . 33(1), 66-73.	Empirical study
20	Brigg, G., Schuitema, K., & Vorhaus, J. (2016). Children with profound and multiple learning difficulties: laughter, capability and relating to others. <i>Disability & Society</i> . 31(9), 1175-1189.	Empirical study
21	McLinden, M., Douglas, G., Hewett, R., Cobb, R., & Lynch, P. (2017). Facilitating Participation in Education: The Distinctive Role of the Specialist Teacher in Supporting Learners with Vision Impairment in Combination with Severe and Profound and Multiple Learning Difficulties. <i>Journal of Blindness Innovation and Research</i> , 7(2). Available at: https://nfb.org/images/nfb/publications/jbir/jbir17/jbir070203.html	Empirical study

3.1.14 Cyprus: research

3 empirical studies were identified (see Table 4), as follows:

- 1 research on a programme for the integration of children with MDVI in a mainstream school
- 1 research that collected quantitative data on the needs of persons with MDVI
- 1 survey on the use of AAC in Cyprus

Table 4: Cyprus Research

	Full reference	Type of research
1	Papageorgiou, D., Andreou, Y., & Soulis, S. (2008). The evaluation of a ten-week programme in Cyprus to integrate children with multiple disabilities and visual impairments into a mainstream primary school. <i>Support for Learning</i> , 23(1), 19-25.	Empirical study
2	Kyriacou, M., Prónay, B., & Hathazi, A. (2015). <i>Report of the mapping exercise carried out by the commission of persons with visual impairment and additional disabilities. Working period 2011 – 2015</i> . European Blind Union Internal document. Available at: https://zapdoc.tips/authors-maria-kyriacou-coordinator-beata-pronay-andrea-hatha.html	Empirical study
3	Pampoulou, E., Theodorou, E., & Petinou, K. (2018). The use of augmentative and alternative communication in Cyprus: Findings from a preliminary survey. <i>Child Language Teaching and Therapy</i> . 34(1), pp. 5–21.	Empirical study

3.1.15 Summary of research findings

In total 53 relevant documents were identified in all four participating countries, out of which 9 were literature reviews and 44 were empirical studies. Out of the latter, 25 were

focused on MD/MDVI/PMLD/VI and complex needs; and 19 were focused on sensory needs (i.e. deafblindness/HI/VI). The key findings are:

1. No literature review studies in relation to MDVI have been conducted in Greece or Cyprus.
2. The most literature review studies were found in Romania.
3. In research on MDVI various different terms are used and there seems to be a need to clarify terminology and what we mean by MDVI.
4. There is clearly need for more research studies on MDVI in all countries, both empirical and literature reviews.

3.2 Findings of case studies

3.2.1 Interviews with professionals

3.2.1.1 Needs of students with MDVI in relation to communication

According to all educational settings:

1. **Each individual is unique:** the need to be individually known and accepted. Their individual needs will depend on whether they are verbal or not and the type of learning difficulties they may have.
2. **Expressing self:** the need to be able to express their needs (biological, emotional and secondary) and of thoughts, preferences, choices.
3. **Communicating with others:** the need for a suitable communication method (verbal and/or non-verbal, which may include: development of a basic vocabulary, simple language with AAC, tactile sign language, turn taking, participating in classroom activities); *It was also stressed that students with VI need more support to develop communication skills. They need to use their voice more than other students, and require more time to process the input they are receiving.*
4. **Understanding the environment:** the need for physical contact and understanding their surroundings and the world through other senses.
5. **Social interaction:** the need for opportunities to socialise with peers and adults.
6. **Other needs regarding the characteristics of the educational setting:** stimulating resources, activities, an adapted environment, and staff with receptivity, sensitivity and understanding of their individual needs.

3.2.1.2 Strategies used to assess communication

Two educational settings mentioned that there is no formal strategy for assessing communication and stated that they use informal assessment as a result of which a recommended method of communication is recorded and reviewed as part of student's IEP.

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Strategies common to all educational settings:

1. Evaluation of the response to simple instructions, questions and various stimuli.
2. Methods of alternative communication.
3. Direct and indirect observation, which may range from informal observation of social interaction (1 educational setting) or observation of structured activities according to curriculum goals (1 educational setting).
4. Providing the children with information about their surroundings.
5. Family involvement.
6. Speech and language therapy.
7. Tactile, physical and multi-sensory activities, e.g. musical instruments, bubbles, sensory stories, sensory rooms, interactive software.
8. Storytelling, didactic play/play, making sentences using pictures, pictograms.
9. Non-verbal and para-verbal communication, total communication.
10. Intensive interaction, interactive strategies and interactive behaviours.
11. Prompts and routines: using particular sounds and smells for particular activities. Object cues and references. Repetition.

Important pre-requisites emerging from all educational settings:

1. Consistency in strategies but also flexibility when necessary; 'trial and error'.
2. Cooperation between professionals and strategies sharing culture in the school.
3. Providing multiple stimuli.
4. Working with families.
5. Focusing on the individual child.

Strategies mentioned by individual educational settings:

1. Scales of evaluation for verbal communication.
2. Oral and written assignments and answers to questions.
3. Curricular assessment items and structured evaluation sheet for communication skills.
4. Going back to initial stages of communication development and starting from there.
5. Building trust.
6. Evidence for Learning – Assessment programme.

3.2.1.3 Professionals' views about best practices

1. Establishing a relationship of trust, building connection and engagement.
2. Simplifying all activities on a basic level.
3. "Individualizing" interaction: adapting methods to the student's unique needs.
4. Simple instructions for the students who have some verbal communication.
5. Combining speech and tactile cues for students with non-verbal communication.
6. A multi-sensory approach.
7. Positive reinforcement: verbal, rewards.

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8. Consistency and repetition, labeling; steady and calm intonation; physical contact, when the mdvi person allows it.
9. Cooperation of all professionals involved, a multidisciplinary team.
10. Family involvement.
11. Ongoing assessment of communication goals and objectives modified accordingly.
12. Staff professional development.

Specific strategies mentioned as best practices include:

AAC, short stories / storytelling, real/concrete objects, poems, role playing, verbal instructions, total communication, questions and answers, pictures/pictograms, Accuracy of solving tasks, observation, sensory based strategies, routines, intensive interaction, music.

3.2.1.4 Professionals' views about biggest challenges

1. Difficulty in intervention, which often leads to frustration and disappointment.
2. Severity and complexity of disabilities, also depending on the age of the MDVI student; particularly challenging were considered the following: severe disabilities, lack of/low communication skills, lack of feedback, observing functional behaviours, interpreting responses, limited understanding of surroundings, limited social skills, temporal and spatial understanding and difficulty to adapt to changes, demand of care for biological needs, behavioural challenges, the need to maintain children stimulated, teaching limits of physical contact.
3. The need to be open, creative, flexible and to constantly adapt strategies and resources.
4. Lack of funding for more staff and resources; lack of resources and tools, high cost of AAC devices.
5. To understand each student's individual mode of expression.
6. To establish a relationship.
7. The lack of a standardised assessment tool and the need to identify an evaluation method.
8. Frequent changes of professionals involved in the students' education.
9. Majority of professionals lack relevant experience and training, and lack knowledge of accurate strategies.
10. Collaboration with external professionals.
11. Communication with the families.

Challenges mentioned by individual educational settings:

1. Communication through pictures, Lack of AAC, PECS.
2. Time availability to assess and meet the students' needs; time for team meetings.
3. Adaptation stages when receiving new students.
4. Government's assessing criteria for students with MDVI.

3.2.2 Vignettes of participating educational settings

3.2.2.1 Vignette 1: Amimoni, Greece



Amimoni is the Panhellenic Association of parents, guardians and friends of MDVI people, and runs 4 programmes, designed for the needs of people with MDVI and their families:

1. Early Intervention: programme for infants and toddlers up to 6 years.
2. Polihni: family relief programme and the first guesthouse in Greece supporting autonomous living for MDVI people from the age of 8 years.
3. Supported Living Residence "Lilian Voudouri": the first house in Greece specially structured to accommodate MDVI people for their entire lives.
4. Irida: Day Care Centre that provides educational and therapeutic services to children and adults with MDVI from 6 years to 44 years old.

The fourth strand of Amimoni's work was the focus of this case study.

a) Pupils

At the time of the research, the school had 37 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
6-10	6	16.22
11-18	4	10.81
20- 24	3	8.11
26- 30	9	24.32
30-32	5	13.51
32- 38	6	16.22
40- 44	4	10.81
Total	37	100

Table 2: Pupils gender

Gender	N	%
Female	14	37.84
Male	23	62.16
Total	37	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
ROP, CVI, Leber's congenital amaurosis, Pseudoglioma, Multiple retinal detachment, Amblyopic eye, Phthisic eye, Congenital optic atrophy, Bilateral optic atrophy, Congenital cataracts, Bilateral eyeball atrophy due to congenital glaucoma, Bilateral glaucoma, Bilateral microphthalmia, Glaucoma, Aniridia, Phthisic, Aphakia	Mental retardation with below-average IQ, Autism spectrum disorder, Cerebral Palsy, Non-organic psychosis, Behavioural disturbances, Syndrome OPPG, Movement disability, Seizures, Trisomy 9P, Paraparesis, Spastic quadriplegia, Hearing impairment, Syndrome Sturge-Weber, Syndrome Micro, Deafness, static encephalopathy, Hemiparesis
Note: examples of combinations of the above included: ROP with Mental retardation with below-average IQ, Autism spectrum disorder; Congenital cataracts with Mental retardation, Hearing impairment, Cerebral Palsy (Spastic quadriplegia)	

b) Staff

The total number of members of staff was 27, out of which 11 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff roles

Roles	N	%
Psychiatric – Scientific Director	1	3.7
Coordinator	1	3.7
Psychologist	1	3.7
Social worker	1	3.7
Occupational therapist	1	3.7
Speech therapist	1	3.7
Physiotherapist	1	3.7
Music therapist	1	3.7
Physical education teacher	2	7.4
Special educator	15	55.6
Nurse	1	3.7
Caregiver	1	3.7
Total	27	100

Table 5: Staff qualifications

Qualifications	N	%
Vocational Training Diploma	3	11.1
Bachelor degree	18	66.7
Masters	1	3.7
Others	5	18.5
Total	27	100

Table 6: Staff years of experience

Years of experience	N	%
<1	7	25.9
1 – 5	5	18.5
6 – 10	9	33.4
11 – 15	5	18.5
>15	1	3.7
Total	27	100

Table 7

Specific Training on communication
Sign language
Makaton
TEACCH
Braille

c) Organisation of provision

1. **Adult pupil ratio:** 1/ 1.37, i.e. 27 adults for a total of 37 MDVI students.
2. **Classroom organisation:**
 - **Size of groups/factors for grouping together:** pupils are grouped together based on age, level of functionality, type/types of disability; the number of pupils in each workgroup varies from 6 to 8 max and the adult/ pupil ratio does not exceed that of 1:3. Mobility issues are also an important factor affecting the size of the class as well as the number of trainers/caregivers in each workgroup.
 - **Approach relevant to communication:** work towards getting to know the child, helping him become aware of themselves and others, meeting his/her needs and developing communication through a multisensory approach, also integrated in group work; build an environment of opportunities to help pupils understand the importance of being part of a group, working on social and emotional skills such as tolerating, anticipating, sharing or handling difficult emotions and finally promoting their interaction and communication skills.
 - **Resources relevant to communication/multiple areas of functionality:** Special Physical Education, Hydrotherapy, Physiotherapy, Occupational therapy, Music therapy, Speech therapy, Therapeutic horse riding (in cooperation with a Horse Riding Association).

3. Subjects taught: daily routine activities, orientation and mobility, sensory stimulation, workgroups/workshops including cooking, gardening, recycling, sensory integration and visual stimulation, creative crafts. There is also a community outreach actions programme, with field trips, museum visits, theatrical events and other outdoor activities.

4. Special interventions: functional visual environment, open spaces, stable positioning of furniture; tactile cues to assist pupils in differentiating spaces in the classroom or to move autonomously around the school, including different floor surfaces or use of different material or high contrast surfaces (play areas/ lunch areas); different tactile surfaces on chairs, tables. Different sounds, music or objects to denote particular activities (maraca for the music therapy session/ Lego brick for the occupational therapy session/ bouncing ball for the physical education session; "Time out" spaces, sensory stimulation areas; objects of reference, calendar, home-school communication book, TEACCH boards, Tablets, scents; modified educational material/ social stories.

Special Resources: dark room, gym, speech therapy room, music therapy room, physical therapy room, occupational therapy room, play area, switches

5. A typical day:

8:30: Arrival at school, orientation and mobility to the "classroom"

9- 9.45: Breakfast and hygiene, objects of reference/ sequence of actions/ tactile cues: Morning circle, objects of reference, roll call, good morning songs, calendar, program, day correlation to scent/ activity/ meal, home-school communication notebook.

10 -11: Workshops

11 - 11.15: Break/ snack time

11.15- 12.30: Workshops

12.30 - 13.30: Lunch and hygiene

13.30 - 14.00: Midday circle (goodbye song, recall of events, planning), orientation and mobility.

Notes:

- From 9am to 13.30pm individualized 30min therapeutic sessions also take place.
- Monday and Friday: community outreach

3.2.2.2 Vignette 2: Special Primary School for the Deafblind, Greece

The Special Primary School for Deafblind Students in Athens, Greece, offers individualised and comprehensive educational programmes. Priorities are early communication and cognitive development of 6 to 14-year-old students. The special primary school for deafblind students coexist/ is co-located with:

1. Special primary school for the blind.
2. Special nursery school for the blind.
3. Department of Infant - Nursery Education and Support for children up to 5 years old.

a) Pupils

At the time of the research, the school had 24 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
05-06	5	20.8
07- 08	10	41.7
09- 10	2	8.3
11 - 12	4	16.7
13- 14	1	4.2
15 - 16	2	8.3
Total	24	100

Table 2: Pupils gender

Gender	N	%
Female	7	29.2
Male	17	70.8
Total	24	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
OVI, CVI	Leber's congenital amaurosis, Micro-ophthalmology, developmental immaturity (+in all areas), mental retardation, developmental disorders, ROP-mental retardation, congenital nystagmus, ADHD, Anomaly Peters, epileptic seizures, severe health problems, cerebral palsy, Alstrom syndrome, Stickler syndrome, Lowe syndrome, neurological problems, orthopedic defects, prematurity, hydrocephalus, Jubert Syndrome, physical disability, serious neurological problems, neuroblastoma, movement impairments, Zellweger syndrome
Note: examples of combinations of the above included: OVI with epileptic seizures, severe health problems, cerebral palsy, physical disability; CVI with serious neurological problems, cerebral palsy, physical disability.	

b) Staff

The total number of members of staff was 22, out of which 8 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff roles

Roles	N	%
Teacher (Special School for the Blind)	9	33.33
Nursery Teacher	6	22.22
Special Supported Staff (Special Primary School for the Blind)	3	11.11
Speech Therapist (Special School for the Blind)	2	7.41
Psychologist (Special School for deafblind)	1	3.7
Occupational Therapist (Special Nursery School for the Blind)	1	3.7
Total	22	100%

Table 5: Staff qualifications

Qualifications	N	%
Vocational Training Diploma	1	4.5
Bachelor degree	7	31.8
Bachelor + Training/Seminar	4	18.2
Bachelor degree + Med	2	9.1
Masters	8	36.4
Total	22	100

Table 6: Staff years of experience

Years of experience	N	%
<1	0	0
1 – 5	2	9.1
6 – 10	3	13.63
11 – 15	5	22.72
>15	12	54.6
Total	22	100

Table 7

Specific Training on assessing communication	
Sign language	Tactile sign language
Makaton	Tactile cues
TEACCH	Objects of reference
PECS	Pictograms

c) Organisation of provision

- 1. Adult pupil ratio:** Special primary school for deafblind students and Department of Infant - Nursery Education and Support for children up to 5 years old: 1/1 – Special primary school for the blind and Special nursery school for the blind: 1/3.
- 2. Classroom organisation:**
 - **Size of groups/factors for grouping together:** grouping is based on students' motor, learning skills, disabilities and needs. Pupils work either individually or in groups also depending on the school they are, e.g. the Special primary school for deafblind students has individualised educational program and structured team activities (3-4 students); the teams synthesis is based on communication skills.
 - **Approach relevant to communication:** communication is recognized as fundamental in learning, acceptance by peers and meaningful participation in the home and community. An accurate assessment of communication enables professionals to set realistic goals, develop appropriate learning exercises and addressing the educational needs of children with MDVI. The school does not currently employ any formal strategy for assessing communication. Based on teaching and academic experience, a communication strategy is recommended to the pupils to be implemented at school and home. The strategy is unofficially evaluated while it is reviewed with the rest of the IEP.
 - **Resources relevant to communication/multiple areas of functionality:** educational session with occupational therapist, speech therapist, physiotherapist, orientation and mobility.
- 3. Subjects taught:** communication skills (sign language, tactile sign language, makaton, pictogrammes, braille, object of reference, tactile and touch cues, sensory integration, pecs, oral speech), learning skills, social skills, daily living skills, art activities, reading, writing, maths, environmental education, music, physical education, occupational therapy, speech therapy, physiotherapy.
- 4. Special interventions/resources:** emphasis on the utilization of other non-vision sensations - adjusting material tactilely, enhancing orientation and body, autonomy / self-service, adaptations of activities and materials depending on the diagnoses and the issues that coexist with the visual problems, educational session with occupational therapist, speech therapist, physiotherapist, orientation and mobility.

5. A typical day:

- **Special primary school for deafblind students:** Spatiotemporal orientation using calendar, communication skills, educational activities, occupational therapy, speech therapy, physiotherapy, educational kitchen, art activities (music, movement, roleplaying, crafts, drama), physical education
- **Special primary school for the blind:** Educational activities.
- **Department of Infant - Nursery Education and Support for children up to 5:** toilet training, music-song-dramatisation of songs (morning / evening routine (good morning, day of week, discussion, etc.), activities using educational material according to pedagogical goals (usually individual), seasonal activities aimed at contact with the environment, food, washing, free play in the yard or in the playground, continuation of previous activities, relaxation.

3.2.2.3 Vignette 3: High School for the Visually Impaired, Romania



The Special High School for the Visually Impaired Cluj-Napoca is the first school for blind children in Romania. The main goal is to prepare students for a successful transition towards life challenges and to offer opportunities for social and work inclusion. The focus is on personalised programmes, interventions and an adapted curriculum, covering Early intervention, Kindergarten and MDVI classes. Some of the specific programmes offered are: psychological assessment, diagnosis, counselling, school and career orientation; Snoezelen – The Multi-sensory Stimulation Room; Compensation and Rehabilitation Therapies; Development of Pre-professionalization Skills; Dog-assisted Therapy.

a) Pupils

At the time of the research, the school had 46 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
01 -02	2	4.3
03 - 04	6	13.0
05 - 06	5	10.9
07 - 08	3	6.5
09 - 10	6	13.0
11 - 12	8	17.4
13 - 14	7	15.2
15 - 16	5	10.9
17 - 18	4	8.7
Total	46	100

Table 2: Pupils gender

Gender	N	%
Female	23	50.0
Male	23	50.0
Total	46	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
OVI, CVI	Sturge-Weber Syndrome, epilepsy, right facial central paresis, right hemiparesis, severe psychomotor delayed, (+congenital) hydrocephalus operated, cerebral palsy, atrial parietal occipital cortical atrophy, Turner Syndrome, psychomotor deficiency, dysmorphic syndrome, central coordination disorder, Rubinstein-Taybi syndrome, Flasco-spastic diaphoresis, microcephaly, macrocephaly, tetraparesis, delay in the development of expressive language, developmental delay (+ and behavior problems), delay in psychomotor development, ventricular septal deficiency, convulsive syndrome, corpus callosum hypotrophy, (+sequelae of) infant encephalopathy, right spastic hemisphere, hyperkinetic syndrome, hyperkinetic disorder with anxiety attacks, hearing loss, (+infant ischemic) hypoxic encephalopathy, extrapyramidal mixed tetraparesis, autism spectrum disorders, thoracic hypotonia of upper members, archaic diminished reflexes (MORRO), pyramidal syndrome, central coordination disorder, microcranial (+structural changes), attention deficit hyperkinetic disorder, dysplasia, specific learning disabilities, complex dyslalia, mental retardation with below-average IQ, neuromotor development delay, Down syndrome, early hypergeneradotropic puberty, primary hyperthyroidism, primary nocturnal enuresis, cerebral atrophy, sensory alali, Apert syndrome, hereditary spastic paraparesis, congenital absence/hypoplasia of hand's fingers, pyramidal frustus syndrome, congenital glycosylation deficit of type I proteins, chronic ataxia with severe static and coordination disorders.

Note: examples of combinations of the above included: OVI with infant hypoxic ischemic encephalopathy, congenital glycosylation deficit of type I proteins, chronic ataxia with severe static and coordination disorders; CVI with epilepsy, microcranial structural changes, delay in the development of expressive language, developmental delay and behavior problems.

b) Staff

The total number of members of staff was 36, out of which 20 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff roles

Roles	N	%
Special education teacher - early intervention	3	8.3
Kindergarten educator	3	8.3
Special education teacher – kindergarten	2	5.6
Special education teacher - MDVI classes	25	69.4
Speech therapist	1	2.8
School psychologist	1	2.8
Kinetotherapist	1	2.8
Total	36	100

Table 5: Staff qualifications

Qualifications	N	%
Special education	19	52.8
Psychology	5	13.9
Pedagogy	6	16.7
Physical Education and Sports	2	5.6
Others	4	11.1
Total	36	100

Table 6: Staff years of experience

Years of experience	N	%
<1	0	0
1 – 5	6	16.7
6 – 10	8	22.2
11 – 15	7	19.4
>15	15	41.7
Total	36	100

Table 7

Specific Training on assessing communication	
Sign language	Sign language
ACC systems	ACC systems
Communication approaches	
Language therapy and educational audiology	

c) Organisation of provision

1. **Adult pupil ratio:** Early intervention: 1/1. Kindergarten: 4-5/1. MDVI classes: 2-4/1.
2. **Classroom organisation:**
 - **Size of groups/factors for grouping together:** Grouping based on age and type of disabilities. Early intervention: 2 groups with 12 and 14 children. Kindergarten: 2 groups with 5 and 4 children. MDVI: 10 classes with 2-4 pupils from I to X grades.
 - **Approach/resources relevant to communication:** Corrective/compensatory activities and multidisciplinary teams are fundamental, as they help stimulate and train the residual visual functions, the application of tactile, auditory, olfactory and tasteful functions. The team assesses and sets up

interventions for each child so as to highlight his/her real potential.

3. Subjects taught:

Early intervention: visual stimulation, psychomotor activities, multisensory and cognitive therapy.

Kindergarten: language and communication, science (maths, environmental knowledge), arts (music, painting, modeling), graphic activities, daily living skills, social autonomy, ludotherapy. **MDVI classes:** according to the curriculum for deaf and blind children / students with multiple disabilities: reading-writing, communication, applied mathematical elements, manual ability, music, visual arts and practical skills, education for work, religion, daily living skills, play activities, physical activity and sports, socialisation.

4. Special interventions: psychodiagnosis; counselling, educational and vocational guidance; sensory and cognitive education; orientation and mobility; visual training; physical therapy; speech therapy; alternative communication techniques (speech, sign languages, total communication, tadoma, pecs system, braille); assisted animal therapy (dog assist); pre-professionalisation programme; kinetherapy. **Special**

Resources: rehabilitation therapy rooms, black Box, water blankets, light systems with special effects for stimulation of visual perception in students with residual vision; materials for the stimulation and development of tactile-kinesthetic sensibility of blind children, pre-braille books and materials for children aged 4-7.

5. A typical day:

Early Intervention: programme established with parents and teacher and takes place at the children's home and in the school's early intervention room. **MDVI:** basic subjects, i.e. communication, maths, etc., and specific therapies, followed by a lunch break and practice daily livings skills, and afterwards cognitive therapy, ludo therapy, socialising, occupational therapies, daily living skills, outdoor activities.

Kindergarten:

7.00 - 9.00 - arrival of external children [7.30 - awakening of children in boarding school]

8.00 - 9.00 - breakfast, daily living activities (hygiene, routines)

9.00 - 12.00 / 13.00 - learning and recovery learning activities, group and individual

13.00 - 14.00 - lunch, activities of personal autonomy

14.00 - 16.00 - relaxation activities (rest, sleep)

16.00 - 18.30 - recreational and game activities, (inside and outdoor)

18.30 - 20.00 - dinner, activities of personal autonomy, playactivities

20.00 - 7.30 - sleeping

3.2.2.4 Vignette 4: Whitefield Academy Trust - Margaret Brearley School, England



Whitefield Schools and Centre caters for pupils from 3-19 years with a wide range of special needs including autism, complex needs and multi- sensory impairments. It has an international reputation in special education expertise, curriculum and resources.

There are three sub-schools within Whitefield Schools, each providing tailored teaching and learning for a specific group of pupils. Margaret Brearley School focus on pupils with complex needs including learning difficulties, physical impairment and sensory impairment.

Whitefield also counts with an Outreach Service and a Research and Development Centre to provide support, training and resources for other educational settings. In April 2014, Whitefield Schools and Centre and its partner school, Joseph Clarke School, joined together to become Whitefield Academy Trust.

a) Pupils

At the time of the research, the school had 44 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
03 - 04	3	6.82
05 - 06	3	6.82
07 - 08	4	9.09
09 - 10	9	20.45
11 - 12	9	20.45
13 - 14	6	13.64
15 - 16	5	11.36
17 - 18	5	11.36
Total	44	100

Table 2: Pupils gender

Gender	N	%
Female	18	40.91
Male	26	59.09
Total	44	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
Nystagmus, Rod-Cone Dystrophy, Strabismus, Nystagmus, Severe Visual Impairment, Visual Impairment, Esotropia and Anisomyopia, Cortical Visual Impairment, Mild Ocular Albinism, Registered Blind, Severe Visual Loss, Corneal Apathy, Left Sided Squint	(+Significant) Global Developmental Delay, Global Delay, Feeding Difficulties, PMLD, Quadriplegia, Spasticity, (+Symptomatic) Epilepsy, Intractable Epilepsy (Neo Natal Encephalopathy), Cerebral Palsy, Quadriplegic Cerebral Palsy, Asthma, Severe Gastroesophageal Reflux Disease, Hypotonia, Pallister Killian Syndrome, Gastro Tube, Infantile Neuro-axonal Dystrophy, Diagnoses Of Molybdenum Cofactor Deficiency, No Active Movement, Spinal Scoliosis, Microcephaly, Disordered Motor Pattern, Ventriculomegaly, Dystonia, Oral Stage Dysphagia, Leukodystrophy, Spastic Quadriplegia, Dysphagia, Absent Corpus Callosum, Hearing Impairment, And Bi-Lateral Hearing Loss, Congenital Heart Disease, Hypothyroidism, Ring Chromosome 18, Dysmorphic Features, Bilateral Ptosis, Gastro-Oesophageal Reflux, Cockayne Syndrome, Severe Growth Retardation, Eczema, Unidentified Condition Causing Microcephaly, Tuberous Sclerosis, Charge Syndrome, Profound Learning Difficulties, Autosomal Regressive Condition Causing Microcephaly, Carpenter Syndrome, Chromosomal Abnormality 13Q32, Kypho-Scoliosis, Cockayne Syndrome, Premature Baby, GDD, Undiagnosed Neuro Metabolic Syndrome, Brittle Bones, Multiple Complex Medical Difficulties, Mitochondrial Disorder, Undiagnosed.

Note: examples of combinations of the above included: Severe Visual Impairment with Symptomatic Epilepsy, Microcephaly With Significant Development Delay, Motor Disorder With Spasticity And Dystonia, Oral Stage Dysphagia; Left Sided Squint and Nystagmus with Global Developmental Delay, Autosomal Regressive Condition Causing Microcephaly.

b) Staff

The total number of members of staff was 15, out of which 13 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff roles

Roles	N	%
Deputy Head of School & Class Teacher	1	6.67
SLD Curriculum Leader & Class Teacher	1	6.67
Behaviour and Staff Development Leader & Class Teacher	1	6.67
PMLD Curriculum Manager & Class Teacher	1	6.67
Class Teacher	11	73.33
Total	15	100

Table 5: Staff qualifications

Qualifications	N	%
Qualified Teacher Status	1	6.67
Bachelor degree	1	6.67
*Postgraduate Diploma	4	26.67
*Postgraduate Certificate in Education	4	26.67
*Masters	4	26.67
*PhD (c)	1	6.67
Total	15	100
*In combination with other qualifications in the list		

Table 6: Staff years of experience

Years of experience	N	%
<1	1	6.67
1 – 5	4	26.67
6 – 10	2	13.33
11 – 15	2	13.33
>15	6	40
Total	15	100

Table 7

Specific Training on assessing communication	
SEN	Complex needs
QTS	In house training

c) Organisation of provision

1. **Adult pupil ratio:** 6.6 pupils - 3.4 adults.
2. **Classroom organisation:**
 - **Size of groups/factors for grouping together:** depending on the characteristics of the pupils in the room. Most have a sensory area for self-occupational time. Classroom organisation should allow 1 to 1 activities for children with more complex needs, and 2 to 1, or group activities for the most responsive.
 - **Approach/resources relevant to communication:** holistic approach: communication is main target, but approached through other activities, e.g. physical activities and motor skills stimulation. Work towards getting to know the children (engagement), helping them to build relationships based on trust on self and others, meeting needs and developing communication through a multisensory approach. Activities are planned with special consideration of each child needs/pace, also integrated in group-work. Focus on functional communication. Promoting pupils' engagement with the world: Making them aware of the

context around them, observation of their responses. The school encourages and facilitates staff training (specialisations). Sharing culture in school. Assessment programme: Evidence for Learning.

- 3. Subjects taught:** Non-linear curriculum developed by school: Reaching out, which covers level B1 to B3, and Stepping on, which covers levels B4 to B8. The curriculum works the following areas: communication and interaction; exploring, ordering the world (maths, ICT and sciences); physical development; social emotional development; creative development; knowing and understanding the world.
- 4. Special interventions/resources:** physiotherapy (physical-physio programs); speech and language therapy; hydrotherapy pool; going outside and visiting community places (e.g. garden, cafés, play-ground); prompts and routines; joint activities with other classes; auditory stimuli and music therapy; tactile-multi sensory activities, immersive room (interactive and multisensory resources) and sensory room; intensive interaction; plasma screens; assessment tablets.
- 5. A typical day:**
Different structured activities, changing from an area to another.
 - 9:15-9:30 Arrival and start of the day routine
 - 9:30-10:00 Postural management / physio massage / breakfast
 - 10:00 – 10:30 Morning circle
 - 10:30 – 11:00 Break / snacks / play skills / sensory or immersive room
 - 11:00 – 11:45 Session
 - 11:45 – 12:00 Play and self-care routine
 - 12:00 – 13:00 Lunch
 - 13:00 – 13:30 Collective worship / individual target session
 - 13:30 – 14:00 Postural management / changing / self-care
 - 14:00 – 14:50 Session
 - 14:50 – 15:15 Snack and personal hygiene
 - 15:15 – 15:15 End of day routine (afternoon circle)

3.2.2.5 Vignette 5: Whitefield Academy Trust – Joseph Clarke School, England



Joseph Clarke School was established in 1918 (and is looking forward to celebrating its centenary in 2018). The school caters for pupils from 3-19 years is highly regarded for its expertise in visual impairment teaching. It attracts pupils from across London and surrounding counties with visual impairment and/or complex needs. In April 2014, Whitefield Schools and Centre and its partner school, Joseph Clarke School, joined together to become Whitefield Academy Trust.

a) Pupils

At the time of the research, the school had 37 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
03 - 04	2	5.41
05 - 06	3	8.11
07 - 08	6	16.22
09 - 10	2	5.41
11 - 12	7	18.92
13 - 14	6	16.22
15 - 16	5	13.51
17 - 18	6	16.22
Total	37	100

Table 2: Pupils gender

Gender	N	%
Female	20	54.05
Male	17	45.95
Total	37	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
No functional vision, Underdevelopment of the optic nerve, Sight Impaired, Severely Sight Impaired, Ahlstrom Syndrome - blindness due to congenital retinal dystrophy, Leber's Amaurosis inherited retinal degenerative disease characterized by severe loss of vision at birth, CVI, Genetic disorder leading to blindness, eye abnormality from before birth.	Developmental Delay, Global Developmental Delay, Global Delay, Cerebral Palsy, Septo-Optic Dysplasia, Osteoporosis, Severe Communication Difficulties (+Selective Mutism), Learning Difficulties, Moderate/Severe/Profound Learning Difficulties, Ahlstrom Syndrome, Autism, Epilepsy, Hearing Impairment, Physical Difficulties, ASD, Physical Impairment, Acquired Brain Injury, Norries Syndrome, Bilateral Microphthalmia, Cohen Syndrome.
Note: examples of combinations of the above included: No Functional Vision with Physical Impairment, Communication Difficulties (Selective Mutism), Severe Learning Difficulties; No functional vision, Underdevelopment of the optic nerve with Developmental Delay, Septo-Optic Dysplasia.	

b) Staff

The total number of members of staff was 9, out of which 2 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff qualifications

Qualifications	N	%
Bachelor degree	2	22.22
QTVI	1	11.11
*Postgraduate Diploma	1	11.11
*Postgraduate Certificate in Education	1	11.11
*Masters	3	33.33
*Others	1	11.11
Total	9	100
*In combination with other qualifications in the list		

Table 5: Staff roles

Roles	N	%
Deputy Head	1	11.1
Early Years Leader	1	11.1
Class Teacher	7	77.8
Total	9	100

Table 6: Staff years of experience

Years of experience	N	%
<1	0	0
1 – 5	1	11.1
6 – 10	0	0
11 – 15	3	33.3
>15	5	55.6
Total	9	100

Table 7

Specific Training on assessing communication	
SEN	Complex needs
QTS	In house training

c) Organisation of provision

- 1. Adult pupil ratio:** 6 pupils / 3 adults.
- 2. Classroom organisation:**
 - **Size of groups/factors for grouping together:** depends on the children conditions, behaviour, their equipment, and the personal space they need. Some furniture is moved around (e.g. eating tables) and tools are stored in cupboards and boxes to optimise the room space. Some resources are in fixed locations to create certainty.
 - **Approach/resources relevant to communication:** strategies are defined depending on the pupils' characteristics and needs (e.g. whereas they are verbal or not, type of learning difficulties they may have). Expose the students to everyday objects and events, inviting them to explore the world instead of waiting for the world to come to them. Processes to define strategies on communication include: observation of structured activities, according to the curriculum goals; progress reports; tactile tools; trying and error, observation and repetition; team meetings.
- 3. Subjects taught:** life skills and motor skills following the stepping on curriculum (which can be adapted according the student needs). The curriculum covers the following areas: communication and interaction; exploring, ordering the world (maths, ICT and sciences); physical development; social emotional development; creative development; knowing and understanding the world.

- 4. Special interventions:** being out and about in the community; going out to the playground; swimming; music therapy; tactile schedules.

Special Resources: sensory wall.

5. A typical day:

- Arrival greetings.
- Individual work focused on fine motor skills and calming down.
- Morning circle.
- Classroom peering and body protection from things around in the environment.
- Break, snacks and music.
- Session (e.g. sensitive story).
- Lunch queue and lunch.
- Personal hygiene.
- Relaxing and lesson introduction.
- Session.

Coming back home routine.

3.2.2.6 Vignette 6: St Barnabas School, Cyprus



The establishment of the school in 1929 marked the beginning of the provision of special education in Cyprus. St Barnabas School is the only educational institution of its kind in Cyprus. Their services include:

1. Special education for children with Visual Impairment (VI)
2. Support services for students with VI attending mainstream educational settings
3. Support services for VI students who attend Higher Education Institutions in Cyprus and abroad
4. Environmental audits
5. An Early Intervention Programme for children with VI and their families
6. School for parents
7. A unit for children with VI and additional disabilities
8. Programme of education for persons with deaf-blindness
9. Support services for employed persons with VI
10. Cooperation with other institutions and organisations (i.e. The Department of Antiquities, The National Theatre of Cyprus) regarding the accessibility and material adaptations for persons with VI

The unit for children with VI and additional disabilities was the focus of this case study.

a) Pupils

At the time of the research, the school had 7 MDVI pupils enrolled. We have summarised their age range, gender and type of disabilities in Tables 1, 2 and 3.

Table 1: Pupils age

Age range	N	%
03 - 04	1	14.3
05 - 06	1	14.3
07 - 08	2	28.6
09 -10	2	28.6
19 - 20	1	14.3
Total	7	100

Table 2: Pupils gender

Gender	N	%
Female	2	28.6
Male	5	71.4
Total	7	100

Table 3: description of type of VI and other disabilities

Type of VI	Other known disabilities
CVI	Cerebral palsy (Spastic Quadriplegia), Deaf blindness
OVI	Retinopathy of Prematurity, microcephaly, developmental delay, Mowat Wilson Syndrome, Colobomas, Blind (due to brain tumour), specific learning disabilities
Note: examples of combinations of the above included: OVI with Blind (due to brain tumor), specific learning disabilities; CVI Cerebral palsy (Spastic Quadriplegia), Deafblindness	

b) Staff

The total number of members of staff was 9, out of which 1 had special training in communication. We summarised their roles, qualifications, years of experience and specific training in Tables 4, 5, 6 and 7.

Table 4: Staff roles

Roles	N	%
Educator of the VI (MDVI)	1	11.11
Educator of the deaf and VI	1	11.11
* Special Physical Education Teacher	1	11.11
*Occupational therapist	2	22.22
*Physical Therapist	2	22.22
*Music Therapist	1	11.11
*Speech and Language Therapist	1	11.11
Total	9	100
**Appointed every September for one school year. It is difficult to secure consistency as often a different therapist is appointed.		

Table 5: Staff qualifications

Qualifications	N	%
Bachelor degree	8	88.9
Masters	1	11.1
Total	9	100

Table 6: Staff years of experience

Years of experience	N	%
<1	0	0
1 – 5	3	33.33
6 – 10	1	11.11
11 – 15	2	22.22
>15	3	33.33
Total	9	100

Table 7

Specific Training on assessing communication
AAC systems
Use of symbols and signs
Teaching Moon to students with MDVI

c) Organisation of provision

1. **Adult pupil ratio:** 1 pupil / 1 adult.
2. **Classroom organisation:**
 - **Size of groups/factors for grouping together:** students are placed in groups based on their age and abilities. Currently there are 3 groups: group 1 (ages 3-8), group 2 (ages 9-14) and group three (ages 15-21).
 - **Approach relevant to communication:** finding a communication strategy suitable for children both at school and at home, considering factors such as child age, motor, language and cognitive skills. Resources to implement the strategy must be available both at school and home. Parents' feedback taken into consideration, as often their expectations are more ambitious than those of professionals. There is no formal strategy for assessing communication, assessment is carried out informally, following the own developed communication strategies to be used with MDVI students. Communication strategies are outlined in the students IEP; recommendations are based on staff teaching and academic experience; the strategy is implemented and unofficially evaluated while reviewed with rest of IEP.

- **Resources relevant to communication:** Aroma diffusers, textures and surfaces for representation of the day, wall talking calendar, objects of reference, calendar boards, switches (Big Mack, Little Mack, Step by Step), talking albums (serves as home school communication book), computers, iPad (sound Board application with switches).
- 3. **Subjects taught:** Morning Routine, Individual lessons with a teacher of the VI or MDVI (work on objectives in all areas of development from students' IEP); Special physical education; Swimming / hydrotherapy; Physiotherapy; Occupational therapy; Music therapy; Speech and language therapy; Orientation and mobility; Sensory integration and vision stimulation; Community outreach programme.
- 4. **Special interventions/services:** two special programmes additional to the MDVI unit: 1) support services for children who attend other educational settings (i.e. special schools for children with multiple disabilities, units within a regular school, regular classroom in an inclusive school) or b) stay at home (approx. 80 students).
-early intervention programme for children 0 – 3 years old (currently 5 students): frequent visits to a child's home or monthly visits to the School for the Blind. The programme team consists of the social worker, the psychologist and a teacher of VI.
Special Resources: augmentative communication devices, snoezelen multi-sensory environment and therapy rooms for speech and language, music therapy, occupational therapy and physiotherapy. Play area, gym and swimming facilities.
- 5. **A typical day:** it starts at 07:45, ends at 13:05, and is divided into 7 40min sessions.
 - Session 1: arrival of students, students take their seats.
 - Session 2: "morning routine" with use of switches, objects of reference, symbols and signs, session includes: roll call, good morning songs, calendar, current events.
 - Sessions 3– 6: each student own individual programme that includes: individual lessons with a teacher of the VI or MDVI (work on objectives from IEP); special physical education; swimming; physiotherapy; occupational therapy; music therapy; speech and language therapy; orientation and mobility; sensory integration and vision stimulation; community outreach.
 - Session Seven: lunch break. There are also three short breaks during the school day. A twenty-minutes-long break for breakfast, a fifteen-minutes-long break for snack and a ten-minute-break before lunch for cleaning.

4.0 Appendices

4.1 Appendix 1. Templates for scoping phase: mapping the literature

Policies

Policy name	Summary description	Context where it applies	Implications for MDVI	Full reference

Practices

Practice name	Summary description	Context where it is used	Implications for MDVI	Full reference

Research

Research focus	Research questions	Research methodology	Main findings/Implications for MDVI	Full reference

4.2 Appendix 2. Protocol for systematic literature review

Protocol for systematic review of literature on *policies, practices and research*

Focus 1: scoping policies in relation to Multiple Disability and Visual Impairment (MDVI)

Activity: identification of national, regional, and local policies in relation to MDVI

Keywords: policy, MDVI, multiply disabled, multisensory impairment, dual sensory impairment

Focus 2: mapping practices in relation to communication

Activities: identification of practices from literature/web

Keywords: practices, strategies, methods, communication, MDVI, multiply disabled, multisensory impairment, dual sensory impairment

Focus 3: review existing research

Activities: literature review on MDVI and assessment of communication methods and tools, challenges and needs, including review of EU programmes and research on inclusion of MDVI

Keywords: assessment of communication, tools, methods, strategies, challenges, needs, MDVI, multiply disabled, multisensory impairment, dual sensory impairment

4.3 Appendix 3. Templates for situation analysis: case studies in schools

IO1/TASK 2: situation analysis

Research Aim 1: Description of the school context

a) Data on pupils enrolled



1. Country:

2. School name:

3. Number of current pupils with VI and additional disabilities:

4. Please enter the following data for each of the currently enrolled pupils:

Please note that the number of pupils to give information about must be the same than the number reported in question 3.

Thank you

Pupil #	Age	Gender	Type of disabilities
1			
2			
3			

IO1/TASK 2: situation analysis

Research Aim 1: Description of the school context

b) Data on teaching staff



1. Country:

2. School name:

3. Number of current teaching staff:

4. Please enter the following data for each of the currently enrolled pupils:

Please note that the number of staff to give information about must be the same than the number reported in question 3.

Thank you

Member #	Role	Professional qualifications	Years of teaching experience	Any specific training on assessing communication? If so, please describe
1				
2				
3				

IO1/TASK 2: situation analysis

Research Aim 1: Description of the school context

c) Data on organisation provision



1. Country:

2. School name:

3. Adult pupil ratio:	
4. Classroom organisation:	E.g. size of groups, factors for grouping together, resources relevant to communication
5. Subjects taught:	
6. Special interventions:	
7. A typical day in one classroom:	

4.4 Appendix 4. Semi-structured interview schedule for interviews with school staff

1. What are the needs of children with VI and additional disabilities in relation to communication?
2. What strategies do you currently use to assess communication?
3. What strategies work best and why?
4. What are the biggest challenges and why?
5. Any other thoughts?