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Initial Mapping Report

INTELLECTUAL OUTPUT O1

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1 Summary of key findings

This study was undertaken by the academic partners within the ASD-EAST project (the University of Zagreb, the Pedagogical University of Krakow, Autism Macedonia Blue Firefly and the University of Northampton during autumn/winter of 2018-19.

The study was undertaken gathering both quantitative survey data and qualitative focus group data, gathered from both mainstream and special education teachers.

The **quantitative dataset** comprises data from 294 teachers:

- 103 (35%) from Croatia,
- 73 (25%) from North Macedonia,
- 118 (40%) from Poland.

One hundred and thirty-seven (47%) worked in mainstream schools, while 157 (53%) worked in special education systems.

The **qualitative dataset** comprised of participant from six focus groups, one with teachers from mainstream schools and one with teachers from specialised settings in each country.

Previous training

Analysis of the dataset revealed that there were differences in both initial and further training about ASD, both between countries and between mainstream and special school teachers.

In general, mainstream teachers had received less training.

Characteristics of autism

Teachers held a wide range of views regarding the characteristics of autism, with many significant differences regarding characteristics and behaviours.

This identifies a need for consistent training.

Attitudinal differences

Responses to attitudinal questions revealed that there were differences in attitude towards both the nature of autism and the needs and potential of children with autism between the three countries.

There were also statistically significant differences between mainstream and special school teachers.

In general, mainstream teachers were more likely to hold incorrect beliefs – such as that children could ‘grow out’ of ASD.

They were also more likely to hold pessimistic views regarding the education of children with ASD, whilst downplaying the importance of specialised approaches.

Knowledge about methods used in autism

Analysis identified a very low level of previous training – or perceived competence – in any methods. Special school teachers reported slightly higher levels of training and competence than mainstream teachers, but this remained extremely low.

Extent of use of different methods

Despite the low levels of training and perceived competence, the majority of these approaches were in use within the three countries.



There was a higher use of established approaches in ASD in special schools than in mainstream schools. In many mainstream schools, ASD-specific approaches were never used. This suggests that many teachers are using specific approaches either without training or without feeling competent in their use.

Teachers' confidence

More than half of all teachers were confident in only two of 22 identified domains of working. Special education teachers were generally more confident than their mainstream counterparts in working with autism. More than 50% of mainstream teachers did not express confidence in any of the 22 domains, while more than 50% of special educators were confident in only six of the 22 domains. Croatian teachers were more confident overall.

Teachers' training needs

There was high agreement (almost 90%) that teachers would benefit from training. Training with regard to theoretical information was identified as least important, but was still seen as relevant by more than half of teachers. Practical strategies, particularly those relevant to teachers' own settings were identified as of high importance, as was supervision and the acquisition of tools and resources. Teachers expressed a strong desire to undertake self-experiential learning.

Challenges in supporting students with ASD

Challenges specialist teachers faced in their work with children with ASD were similar in all three countries. Both in mainstream and special settings, specialist teachers felt the main issue is managing students' challenging behaviour. Teachers in mainstream schools found it difficult to adapt lessons and the classroom environment. They also felt a lack of clear criteria or guidance for inclusion of students with ASD into mainstream classrooms. Teachers in special settings perceived addressing the complex needs of their students as the main challenge in their work, followed by the difficulty to adapt the physical environment of their schools and classrooms to suit these complex needs.

Across settings and countries, specialist teachers found it difficult to collaborate with parents and to communicate about their expectations and involvement in the educational process.

Collaborating with other professionals presented a challenge too. Specialist teachers felt under pressure from high workload and carrying the responsibility for inclusion of students with ASD in mainstream classroom and felt unsupported by class teachers and teaching assistants due to their lack of knowledge and understanding. Specialist teachers in special settings mentioned that communication with medical doctors and psychologists is insufficient not providing them with enough necessary information about the needs of children with ASD.

Training needs of specialist teachers

Teachers reflected their need of further training in specific intervention areas, mainly in addressing challenging behaviour, communication and social skills, and sensory needs of children with ASD. Mainstream teachers would like to learn how to use strategies in the classroom, adapt and individualise their teaching. Teachers in special settings were interested in methods or interventions focusing on specific areas of need of their students.



Participants in all focus groups identified their need to improve communication and collaboration with parents and other professionals.



2 Introduction

Autism Spectrum Disorder (ASD) is a lifelong condition affecting approximately 1% of the population (Baird *et al.*, 2006). ASD impacts all aspects of the individual's experience, including how they learn (Dawson *et al.*, 2008). Children and young people with ASD share common education needs with all others, and are entitled to appropriate education. However, they have specific and special needs regarding the characteristic difficulties in autism related to communication, social understanding, inflexibility and sensory processing issues. Education has been identified as a key intervention for this group, and meaningful access to effective education is crucial (Simpson *et al.*, 2011).

Due to the diverse nature of the autism spectrum, there is no single educational intervention that is effective or appropriate for all, and therefore teachers need a range of skills and strategies (Iovannone *et al.*, 2003). However, many teachers do not have access to appropriate training (Morrier *et al.*, 2011). Providing such education is challenging in all settings. Research has identified that educational provision for children with ASD is unequal and inequitable, and that while there are pockets of good practice there are also significant challenges (Charman *et al.*, 2011; Jones *et al.*, 2008; Daly & Ring, 2016). Problems exist regarding the skills, knowledge and expertise of educators working with these children across the range of educational settings, including both special and mainstream education, with training being fragmented and often not informed by research (Marshall & Goodall, 2015; Sekušak-Galešev *et al.*, 2015). There is also a lack of evidence regarding the impact of providing training regarding ASD on teachers' subsequent practice (Alexander *et al.*, 2015).

Autism awareness is patchy and often poor across Europe in general and within Central/Eastern Europe & the Balkans in particular (Ombudsman of the Republic of Macedonia, 2015; Suchowierska & Walczak, 2013; Trnka & Skočić Mihić, 2012). A particular need for support has been identified within Eastern Europe and the Balkans (Bukvić, 2014; Starczewska *et al.*, 2011; Trajkovski, 2017). While there is undoubted good practice in some settings, there are also significant training and developmental needs.

2.1 Autism Spectrum Disorders: Empowering and Supporting Teachers (ASD-EAST)

ASD-EAST was therefore established to address this shortfall, and to focus on developing appropriate training to support effective teaching to ensure the inclusion of learners with ASD within this region. Funding was obtained from the European Commission's Erasmus+ programme, and the two-year project commenced in September 2018, with the aim of empowering specialist educators in three countries (Croatia, Poland and the Republic of North Macedonia) to support effective inclusion of children with ASD in education, by providing these educators with appropriate skills, knowledge, strategies and locally-appropriate training.

This project supports the implementation of national education policy within these countries such as Croatia's National Strategy for Education Science and Technology (2014), the Macedonian Laws on Primary and Secondary Education (1995) and Poland's Law on School Education (2016) and the Provisions Introducing the Law on School Education (2016). In addition, it addresses pan-European policy and goals such as Empowering Teachers to Promote Inclusive Education (European Agency for Special Needs and Inclusive Education, 2015) and Inclusive Education for Learners with Disabilities (European Parliament, 2017).

The ASD-EAST project unites a partnership of schools, academics and governmental/non-governmental organisations from Belgium, Croatia, North Macedonia, Poland and the United Kingdom to:

- undertake an initial mapping exercise, identifying both country-specific and Europe-wide good practice, as well as areas needing development with regard to the effective educational inclusion of children with ASD (with a specific focus on Croatia, North Macedonia and Poland)



- develop locally appropriate training and materials for specialist educators to support the educational inclusion of children with ASD (in both special education and mainstream/inclusive settings),
- use these materials to pilot the training with specialist educators from both special and mainstream across Croatia, North Macedonia and Poland,
- evaluate the appropriateness of the materials and the impact of the training on teachers' skills and subsequent practice,
- share the programme and materials with stakeholders (both within these three countries and more broadly across Europe) and to make recommendations to policy-makers with the intention of improving teacher-training in ASD in the longer term.



3 Methodology

This overall project is being carried out utilising a collaborative, action-based and stakeholder-empowering methodology, and is being undertaken in four overlapping phases:

- Phase I: Mapping activity (9/2018-3/2019)
- Phase II: Development of curriculum, programme and materials (1/2019 – 9/2019)
- Phase III: Training activity and evaluation (10/2019 – 3/2020)
- Phase IV: Dissemination and development of policy recommendations (2/2020-8/2020)

3.1 Evaluation methodology

The training materials and the training process will be evaluated using a combined process and outcome evaluation methodology (Royse *et al.*, 2016). This will include the use of both quantitative and qualitative methods.

3.1.1 Quantitative methods

Twenty specialist teachers from mainstream/inclusive schools, and twenty teachers from special schools in each of the three countries will participate in training events in October/November 2019 – a total of six training events and 120 participants. Participants will be self-selecting. Pre-, post- and 3-month follow-up questionnaires will be distributed to all participants, gathering demographic data, data on knowledge and skills regarding ASD, data on their expectations of the training (pre-training) and on what they have learned, their competence and confidence (post-training/follow-up) and implementation (follow-up).

3.1.2 Qualitative methods

Dimensional sampling will be used to identify four or five participants per training (n = 24-30) to be interviewed three months after the training. Through interviews data will be collected regarding their understanding of autism and the education of children with autism, how they understand/conceptualise inclusion, their experience of the training and the impact (if any) of the training. Focus groups of local training teams in each of the three countries will also be held, to gather data regarding trainers' experiences, their views regarding the content and process and differentiation of the training and their perceptions regarding the participants' experiences/benefits for participants.



4 Review of the Literature regarding teachers' training needs

4.1 Introduction

Challenging behaviour of students on with autism spectrum disorders (ASD) has presented an issue for inclusive education across different countries. Identifying students as being on the autism spectrum may present the first step in promoting their inclusion in education due to the realisation that behaviour is a result of unfulfilled needs. Therefore, understanding individual needs of students with autism in terms of the requirement for clarity of language, structure, visual cues or sensory appropriate physical environment can make a difference in successful implementation of inclusive education. To provide high-quality education to all students and meet their needs appropriately, teachers in mainstream and special schools need to be supported by collaborative work with other professionals as well as by being provided with tailored trainings that can build their skills in teaching students with ASD.

To identify the areas of need for development a literature review of existing teacher training programmes oriented on teaching students with ASD was conducted. There is limited research from the local context analysing teacher training needs. Therefore, the focus of the literature review was broadened to include experience from a wide range of countries.

This mapping report is then relevant to both country-specific and EU-wide strengths, challenges, barriers and opportunities regarding educator training regarding autism and good practice regarding the provision of teacher training. Countries of Eastern/Central Europe and the Balkans tend to follow the development of Western Europe and the United States, especially with regard to adopting intervention programmes. Exploring research results from the UK, the US and other countries, can therefore be helpful in analysing the training needs of teachers also for the local context.

4.2 Method of undertaking the literature review

Existing research studies were analysed from different perspectives, which are discussed below. Key messages are identified in TABLE 1.

4.2.1 Focus of the research or models of teacher trainings based on their conceptual paradigm

a) rights-based – focusing mainly attitudes, knowledge and practices

Literature reviewed from this perspective comprised: APPGA, 2017; Bond *et al.*, 2016; Busby *et al.*, 2012; Charman *et al.*, 2011; Humphrey & Symes, 2013; Jordan *et al.*, 2001; Loiacono & Valenti, 2010; McCabe, 2008; Morewood *et al.*, 2011; Morrier *et al.*, 2011; Scheuermann *et al.*, 2003; Symes & Humphrey, 2011b; Stahmer *et al.*, 2015; Wermer *et al.*, 2018).

b) needs-based

Busby *et al.*, 2012; Charman *et al.*, 2011; Helps *et al.*, 1999; Jennett *et al.*, 2003; Jones *et al.*, 2009; Ravet, 2018; Scheuermann *et al.*, 2003; Symes & Humphrey, 2011a.

c) specific approaches or methods

Downs & Downs, 2012; Jennett *et al.*, 2003; Lerman *et al.*, 2008; Leblanc *et al.*, 2009; Loicono & Valenti, 2010; Lobredo, 2017; Probst & Leppert, 2008.



4.2.2 Content of teacher trainings provided and evaluated

Charman *et al.*, 2011; Fortuna & Ince, 2013; Howley & Preece, 2013; McCabe, 2008; Morrier *et al.*, 2011.

4.2.3 Form of training

Busby *et al.*, 2012; Downs & Downs, 2012; Helps *et al.*, 1999; Lerman *et al.*, 2008; McCabe, 2008; Probst & Leppert, 2008; Ravet, 2018).

4.3 Attitudes, knowledge and practices

Inclusion of students with ASD in education in terms of supporting their participation through meeting their needs starts with raising awareness, improving knowledge and having inclusive attitudes.

Despite generally positive attitudes of teachers, some challenges were identified in teachers' confidence in teaching students with ASD. Key findings of the Autism Education Trust report in the United Kingdom (Charman *et al.*, 2011) reflected that schools had high ambitions and aspirations for students with ASD, were interested in hearing the students' voice and invested time into establishing good relationships with their students. Good practice also included individualised and adapted curriculum, focusing on social, emotional and communication needs. Teachers were highly trained, motivated and dedicated, which confirms similar findings of McCabe (2008) from a research in Autism Institute in China reporting on highly qualified, enthusiastic and knowledgeable teachers who valued further teacher education. Similarly, Humphrey and Symes (2013) identified strong willingness to develop knowledge and expertise in secondary teachers in the UK.

Training for all staff was a priority as schools felt they played an important role in raising awareness in their communities.

"Schools went further than individualising and adapting the curriculum for each pupil. They saw the need for a unique 'autism curriculum', which captured not only children's learning needs but also sought to address the social, emotional and communication needs of children and young people with autism, and to nurture their independence and well-being." (Charman et al., p. 6)

However, the need for a specific autism curriculum may suggest that teachers felt educating students with ASD required an expert approach. This was found by Busby *et al.* (2012) amongst teachers in the USA who believed that teaching children with ASD was a specialized process requiring highly specialized skills and qualities. Loiacano and Valenti (2010) discovered that American teachers were not prepared to teach students with ASD in inclusive classrooms.

Busby *et al.* (2012) also recorded a lack of knowledge and skills of teachers to include children with ASD. According to the findings of Morrier *et al.* (2011) most teachers in the USA received a full-day or a half-day training, less than 15% received college or university training, and less than 5% were trained in evidence-based practices in teaching students with ASD. An identified need was to raise awareness of teachers about available effective curriculum and teaching strategies (Scheuermann *et al.*, 2003). In comparison, in the United Kingdom, one in four teachers received training during university, eight in ten received some training afterwards (APGA, 2017). However, training for teachers was fragmented, and often not evidence-based or informed (Bennett, 2013). Analysis of initial teacher trainings in the UK revealed that both students and tutors have basic autism awareness, but little knowledge and understanding of teaching strategies for students with ASD (Ravet, 2018). Mainstream teachers lacked knowledge more than specialized



professionals and they were unaware of what training was available (Helps *et al.*, 1999). Less than five in ten teachers felt confident supporting students with ASD (APPGA, 2017).

Jennett *et al.* (2003) recognized that it is training that leads to improved self-efficacy of teachers and even prevents burn-out, because as Busby *et al.* (2012) described, teachers' perception of their self-efficacy means their ability to accept challenges. With the requirement to implement evidence-based interventions in education, research into the fidelity of their use was conducted. Teachers can learn to apply evidence-based strategies, with highly structured strategies being easier to learn. However, they do require extensive training, coaching and time to reach and maintain moderate procedural implementation fidelity especially for more naturalistic strategies (Stahmer *et al.*, 2015). Downs and Downs (2012) presented similar results noting that trainings must be supplemented by performance feedback with the need to focus on the ability to correctly use the learned procedures.

Commitment to or understanding of the underlying theoretical orientation of their teaching approach through becoming confident in the use of a specific strategy raises teachers' self-efficacy (Jennett *et al.*, 2003). For example, training of teachers in ABA led towards increased perceptions and knowledge of ASD and evidence-based practice, reduced stress and anxiety of teachers when integrating children with ASD into mainstream classrooms, increased knowledge of how to access professional support and resources to meet the needs of students with ASD (Leblanc *et al.*, 2009). However, according to Scheuermann *et al.* (2003) teachers need specialized skills in multiple approaches, because being trained and then applying one approach only carries a risk of a belief that one approach will work for all. Moreover, it may clash with the approach of the family. Jones *et al.* (2009) similarly recommended the use of more than one educational intervention approach.

Employment of teaching assistants represents a supportive strategy in inclusive education of students with ASD. However, Symes and Humphrey (2011b) discovered that many teaching assistants in the UK had no experience of ASD. The amount of training received varied and most importantly, generic training about ASD was not helpful. Wermer *et al.* (2018) proved that paraprofessionals/teaching assistants can be trained by classroom teachers in the implementation of evidence-based practices to promote use of alternative/augmentative communication, which supports the idea of knowledge and expertise sharing in inclusive education. The ability of teaching assistants to effectively include students with ASD is influenced by access to expertise, communication with school and teaching staff awareness of ASD (Symes & Humphrey, 2011a).

4.4 Content of trainings

Existing teacher trainings in ASD are often focused on one specific approach, mainly:

- ABA – *Applied Behavioral Analysis* (Leblanc *et al.*, 2009; Loiacono & Valenti, 2010)
- combination of ABA and TEACCH – *Treatment and Education of Autistic and Related Communication Handicapped Children* (Jennett *et al.*, 2003)
- TEACCH (Probst & Leppert, 2008)
- DDT – *Discrete Trial Teaching* (Downs & Downs, 2012).

Other trainings focused on techniques for managing behaviour of students with ASD, similarly following behavioural approaches (Lerman *et al.*, 2008). An exception was a programme described by Robledo (2017) focused on teacher training to support literacy skills of students with ASD through building student-teacher relationships and understanding individual students. The content of more general ASD teacher trainings focused on ASD relevant theories and knowledge, child development, games, music/movement, fine motor activities, ABA, DDT (McCabe, 2008), knowledge about autism, in-school use of Inclusion Development Programme materials in mainstream school, TEACCH, PECS, sensory integration, and behavioural management techniques (Charman *et al.*, 2011), interpersonal



relationship interventions, skill-based interventions, cognitive strategies, physiological, biological, neurological interventions, other interventions and model programmes (Morrier *et al.*, 2011).

Howley and Preece (2013) discussed that it is important to shift focus on diversity rather than impairment, partnership of schools and families and providing support for teachers in challenging areas such as behaviour and creating structure using TEACCH, peer support, and support strategies for transitions. In terms of improving access to curriculum for students with ASD, Fortuna and Ince (2013) recommended training teachers in differentiating lesson objectives, content and teaching styles such as introducing kinaesthetic, visual teaching, and auditory teaching, as well as supporting student group work. They also considered important to plan teaching assistant support. Jordan *et al.* (2001) emphasized the need to support students with ASD in transitions (from home to school, one class to another) and in less structured 'free-play' sessions rather than (as in other cases of special need) in formal lessons.

Teacher training needs reflect the areas they perceive as most challenging in their teaching practice. A need for understanding ASD was identified as well as the need to know how to work with children with ASD in a group of children with mixed abilities (Helps *et al.*, 1999). More information regarding the process, procedures and practices for teacher and family collaboration for effective inclusion for perceived as one of the training needs of teachers (Busby *et al.*, 2012). Teachers perceived communication as the most problematic impairment and the most difficult needs of students with ASD to manage were displaying of inappropriate emotions, heightened anxiety and poor turn-taking skills (Humphrey & Symes, 2013).

The report by Guldberg *et al.* (2017) from a teacher training project Transform Autism Education in the UK, Greece and Italy emphasized that training processes should be based on the trainees' specific interests and knowledge, 'learning by doing' approach with flexible strategies, and culturally and contextually relevant content.

4.5 Forms of training

Conducted teacher trainings reported on in published research studies included various forms of delivery.

- Short-term in-service trainings were evaluated as lacking comprehensive understanding and therefore resulting in need for additional support and supervision post-training (Downs & Downs, 2012).
- Lectures, discussions, role play, modelling and practice with feedback provided a variety of experience (Lerman *et al.*, 2008).
- Hands on instruction in the classroom, modelling and discussion, and respecting the views and experiences of all teachers were perceived as important factors in effective teacher preparation (McCabe, 2008).
- Video and slide presentations, exercises in creating structured teaching material (e.g. daily schedules, work systems), and group discussions provided teachers with practical skills (Probst & Leppert, 2008).

In terms of the forms of training, teachers wished for more case and field-based experience with examples of good practice, as well as access to current research and best practice teaching strategies.

- **Goal-oriented activities** were requested to learn how to support inclusion (Busby *et al.*, 2012) with practical advice and support regarding behaviour management and teaching methods (Helps *et al.*, 1999).
- **Case studies** were identified as essential teaching tools in initial teacher training (Ravet, 2018) with particular importance for rural areas due to low availability of quality experiences in inclusive settings (Busby *et al.*, 2012).
- **Working alongside** trained specialists, learning by observation and '**hands on**' experience was identified as a useful strategy also by more experienced teachers (Helps *et al.*, 1999).



- Some teachers found it helpful to undertake **visits to schools** which catered specifically for children with autism (Helps *et al.*, 1999).
- **Videos** were considered useful too (Ravet, 2018).

TABLE 1 Key messages from the literature

THEMES	CHALLENGES	NEEDS OF TEACHERS	GOOD PRACTICE IN SCHOOLS
Teachers knowledge, skills and confidence in teaching students with ASD	Lack of knowledge and skills to include children (Busby <i>et al.</i> , 2012)	<p>Need for deeper understanding for mainstream teachers (Helps <i>et al.</i>, 1999)</p> <p>More case studies and field-based experience in teacher trainings (Busby <i>et al.</i>, 2012)</p> <p>Access to best practice strategies and current research (Busby <i>et al.</i>, 2012)</p> <p>Culturally and contextually relevant content and form of training (Guldberg <i>et al.</i>, 2017)</p>	<p>Highly qualified and enthusiastic teachers (McCabe, 2008)</p> <p>Understanding the underlying theoretical orientation of the teaching approach increases teachers' self-efficacy (Jennett <i>et al.</i>, 2003)</p> <p>Teachers were listening to the students' voices (Charman <i>et al.</i>, 2011)</p> <p>Staff were trained and motivated (Charman <i>et al.</i>, 2011)</p> <p>Focus on diversity rather than impairment (Howley & Preece, 2013)</p> <p>Understanding individual students (Robledo, 2017)</p>
Collaboration with other teachers	Collaboration with other teachers is time consuming and difficult (Busby <i>et al.</i> , 2012)	Need to raise awareness of teachers about available effective curriculum and teaching strategies (Scheuermann <i>et al.</i> , 2003)	<p>Positive relationships between upper level staff and new teachers, based on mutual understanding and respect (McCabe, 2008)</p> <p>Having a central agent of change (coordinator) who supports sharing of successful implementation of inclusive practice (Morewood <i>et al.</i>, 2011)</p>
Collaboration with other professionals	<p>Problematic licensure and lack of special educators in the US (Scheuermann <i>et al.</i>, 2003)</p> <p>Teaching assistants had little experience of ASD and generic</p>	Need of specific ASD training for teaching assistants (Symes & Humphrey, 2011b)	<p>Involvement of early specialist intervention (Jordan <i>et al.</i>, 2001)</p> <p>Joint working with specialist health practitioners (Charman <i>et al.</i>, 2011)</p>



	training was not helpful (Symes & Humphrey, 2011b)		<p>Communication of teaching assistants with school (Symes & Humphrey, 2011a)</p> <p>Teachers as trainers of teaching assistants (Wermer <i>et al.</i>, 2018)</p>
Collaboration with families	<p>Collaboration with parents is time consuming and difficult (Busby <i>et al.</i>, 2012)</p>	<p>More information regarding the process, procedures and practices for teacher and family collaboration for effective inclusion (Busby <i>et al.</i>, 2012)</p>	<p>Involvement of parents/carers (Jordan <i>et al.</i>, 2001)</p> <p>Schools should produce materials which describe their practice and share them with parents (Jones <i>et al.</i>, 2009)</p> <p>Providing information for parents in decision making, e.g. in school selection (Jones <i>et al.</i>, 2009)</p> <p>Partnerships with families, reciprocal communication, additional support for vulnerable families (Charman <i>et al.</i>, 2011)</p>
Communication and social skills of students with ASD	<p>Communication perceived as the most problematic impairment (Humphrey & Symes, 2013)</p> <p>Poor turn-taking skills of students with ASD present a challenge for teachers (Humphrey & Symes, 2013)</p>	<p>'Autism curriculum' to include social, emotional and communication skills (Charman <i>et al.</i>, 2011)</p>	<p>Focus on communication (Jordan <i>et al.</i>, 2001)</p> <p>Access to the academic curriculum in ways that do not depend on social or communicative skills (Jordan <i>et al.</i>, 2001)</p> <p>Systematic and structured teaching of key developmental skills, such as imitation and joint attention (Jordan <i>et al.</i>, 2001)</p> <p>Enabling social interaction and play skills, but remembering to teach social understanding, not just make children conform (Jordan <i>et al.</i>, 2001)</p>
Managing challenging behaviour of students with ASD	<p>Behaviours of children with ASD are atypical, complex, potentially disruptive of general education classroom (Busby <i>et al.</i>, 2012)</p>	<p>Teachers need skills in multiple approaches (Scheuermann <i>et al.</i>, 2003)</p> <p>Training all teachers in ABA (Loiacano & Valenti, 2010)</p>	<p>Functional approach to managing behaviour, that recognises the reasons behind the behaviour (Jordan <i>et al.</i>, 2001)</p>



	Inappropriate emotions, heightened anxiety (Humphrey & Symes, 2013)	DDT training must be supplemented by performance feedback (Downs & Downs, 2012) Training across a full range of skills needed (Downs & Downs, 2012)	More than one intervention approach is needed (Jones <i>et al.</i> , 2009) Peer-mediated interventions and multi-component social skills interventions in education provided most evidence (Bond <i>et al.</i> , 2016)
Adaptations and modifications	Individual plans – extensive, redundant, not skilled to write them and implement them (Busby <i>et al.</i> , 2012)	How to work with children with mixed abilities (Helps <i>et al.</i> , 1999) Knowledge and understanding of teaching strategies (Ravet, 2018)	Spatial and temporal structuring of environment through TEACCH (Probst & Leppert, 2008) Supporting transitions to new classes (Jones <i>et al.</i> , 2009) Meeting individual needs of students (Jones <i>et al.</i> , 2009) Teachers provide individualized and adapted curriculum (Charman <i>et al.</i> , 2011) Saturation model in mainstream education – developing school environment (Morewood <i>et al.</i> , 2011)



5 Review of existing practice

Current practice of inclusive and special needs education in Eastern Europe and the Balkans is largely influenced by the development of inclusive education in Europe as well as the historical context of the special needs educator professions across different countries. In our project we focus on the development of teacher education in Poland, Croatia and North Macedonia. All three countries have been impacted by 'defectology', which caused that disabilities and therefore also supportive approaches are viewed from a medical model perspective. The perception is that children with disabilities, including children with autism, need specialist interventions. On one hand, the strength of this approach was in the expertise that was offered in the special schools. On the other hand, it presents a challenge in the current developments towards more inclusive practice in education based on the social model of understanding disability, because it requires all teachers to be prepared to work with all students.

These historical influences and developments are reflected in the practice of teacher trainings. There is a larger number of hours or specialised courses about ASD offered to special educators in their initial and further training compared to 'regular' teachers, even though all teachers might be teaching students with ASD. Especially in Poland, where the legislation has recently changed, inclusive education has become the required form of schooling.

In contrast, United Kingdom has been following a social model with the focus on needs of all students, in which inclusion is understood as providing the most suitable form of schooling so that education can promote participation of pupils and empowers them.

5.1 Review of ASD teacher training in Croatia

The education system in Croatia consists of mainstream and special schools. Children may attend nurseries and kindergartens from 1-6 years old. At the age of 7 they enter primary school. There are several options for children with ASD.

The settings available are:

- a mainstream class
- a partially mainstream, partially special class
- a special class
- an upbringing and education group.

Students with ASD may follow one of these educational programs:

- a mainstream program with individualized procedures
- a mainstream program with adjustments of content and individualized procedures
- a special program with individualized procedures
- a special program for gaining competencies in life skills with individualized procedures.

Challenges that were identified in the education of students with ASD include lack of criteria for inclusion in different programs and no transition planning. Mainstream teachers often lack knowledge and skills to work with students with ASD and they receive no support or supervision. This causes fear and lack of motivation to learn. Teaching assistants have different educational backgrounds, some received a short generic education about ASD. They too get no support or supervision. Despite low expertise they are often the ones who create adjustments and individualize procedures, and they are often the only school staff who communicate with the child with ASD.

Special education teachers who are part of a school team may have had 240 hours of training in ASD, but if they studied more than 5 years ago, they might have a lack of knowledge about methods and strategies used for children without intellectual disabilities as there is no compulsory lifelong learning about ASD after university studies.



Quality of inclusion depends mainly on individual motivation, effort and good will of persons working with a child not on systematic and planned support.

TABLE 2 Overview of university training about ASD in Croatia

UNDERGRADUATE COURSE	GRADUATE COURSES IN INCLUSIVE EDUCATION AND REHABILITATION	OTHER COURSES
Development of persons with autism spectrum disorders (60 hrs) Teaching methods for children with ASD (60 hrs) Behavioural approach to teaching (45 hrs)	Program planning and intervention for children with ASD (60 hrs) Program planning and intervention for adults with ASD (60 hrs)	Program planning and intervention for children with ASD

(Source: ERF, 2019)

Further teacher trainings in ASD are provided by several providers: CZA, ERF, Agency for education and upbringing, and the Ministry of science, education and sports. They offer a general training about the characteristics of students with ASD and suitable teaching strategies. More specific trainings are oriented on specific approaches such as ABA or sensory integration. Trainings are adjusted to the needs of the institution or school with focus on specific support to pupils with ASD in mainstream schools.

Challenges identified in the training programmes in Croatia include:

- questionable quality of practical experience within university training
- lack of topics with specific strategies for ASD support in mainstream schools
- lack of competence of mainstream teachers
- different competencies of specialist teachers
- dedication to one approach.

5.2 Review of ASD teacher training in Poland

Initial teacher training in Poland for special pedagogues includes 90 hours of a more general course on how to work with children with ASD and another 90-hour course of ABA. For teachers preparing for teaching in mainstream schools or professionals in early childhood intervention, there is a compulsory 90-hour ASD-specific course.

There are several trainings in Poland offered as further education for professionals working with children with ASD. Pedagogical University in Krakow provides a 300-hour postgraduate course for teachers who wish to work with children with ASD. Short-term trainings (5-15 hours) are provided by psychological and pedagogical counselling centres or private institutions under the authority of the Ministry of National Education. A training for educators called 'ABC of autism' answers questions about autism that teachers might have, mainly from observation of behaviour such as aggressive behaviour or limited interaction with other children. It aims to fight low awareness of autism by overcoming myths and providing facts.

Further trainings specialise mainly on strategies of managing behaviour through motivation and reinforcement. Teachers can also learn about social skills trainings, AAC, or collaboration with psychiatrists. Another training presents information about ASD in girls. A very practical training for teachers helps them to write an 'Individual Educational



Therapeutic Programme'. A very specialised training is offered to professionals who work with non-verbal students to learn how to support their communication. In another training, professionals and parents can learn how to support children with ASD in self-care and activities of daily living.

The identified strengths of further teacher training in Poland are that the courses usually have a low number of participants which allows for consultation time with the trainers even by e-mail with very specific questions. The weaknesses are seen in the fact that teachers have to pay for their further education by themselves and sometimes need to travel for the courses because they are not offered locally (and travel is not subsidised). Another downside is that if there are not enough participants registered, the courses might get cancelled which presents a barrier in further education.

5.3 Review of ASD teacher training in the Republic of North Macedonia

Since 2018/2019 the university trainings in North Macedonia offer an elective course at the Institute of Special Education and Rehabilitation in the third year of the undergraduate studies. On the graduate level, an introductory course is offered for students of Autism and Intellectual disabilities programme. However, not all students continue to the graduate level.

The challenges include a lack of translated literature in the local language, which means that students refer mainly to one (Serbian) author. During the course students visit non-governmental organisations for autism providing them with practical experience. The issue is that these centres have established their own curricula which have not been evaluated, so there is no quality control of the taught methods.

The Bureau for Development of Education with the financial aid from UNICEF offers trainings under the '*Strengthening the Capacities of Schools for Inclusive Education*' project. The trainings are focused on characteristic of all disabilities, individual education plans and future implementation of International classification of functionality. The issue is that the trainings are implemented by teachers who do not have adequate education; students with ASD are just mentioned with no specific practical advice for teachers provided.

Non-governmental and private organisations provide trainings as well. Provision currently includes:

- Inclusive education of children with ASD and intellectual disabilities (Introduction of ASD) provided by KDS – Center for the Education of Personnel
- Use of assistive technology (Introduction of ASD) provided by Open the Windows
- 10 different 4-hour courses provided by Blue Firefly.

Courses organised by Blue Firefly are focused on inclusive strategies for classrooms explaining ASD, inclusion, sensory needs, visual supports and other adaptations of teaching. Teachers can learn how to support social interactions, and further enhance their competences in developing verbal and non-verbal communication skills of their students. More advanced trainings are also offered in the areas of visual strategies, managing challenging behaviour, and understanding sensory needs. Specific trainings focus on different stages of child development (pre-school and adolescence), or challenging situations such as visiting a dentist or managing meal times and sleep.

As courses of further education are funded by individuals, they are mostly attended by teachers (not special education teachers) causing discontinuity of education and fragmented knowledge.



5.4 Summary of strengths and challenges in ASD teacher trainings

The identified strengths of teacher training regarding ASD, and the challenges facing each country, are identified in TABLE 3 below.

TABLE 3 Summary of strengths and challenges in ASD teacher trainings

	NORTH MACEDONIA	POLAND	CROATIA
STRENGTHS	<ul style="list-style-type: none"> - elective course offered at the university - more opportunities on graduate level - variety of courses offered by private companies and NGOs 	<ul style="list-style-type: none"> - compulsory university courses include up to 180 hours of ASD training for specialist teachers - diversity of further trainings provided by the university and private organisations 	<ul style="list-style-type: none"> - university courses offered to specialist teachers (up to 240 hours)
CHALLENGES	<ul style="list-style-type: none"> - few teachers continue onto graduate level - government provided course of further education is not specific to ASD - cost of trainings 	<ul style="list-style-type: none"> - cost of trainings - teachers need to travel far for trainings 	<ul style="list-style-type: none"> - the quality of practical experience as part of training - strategies for mainstream schools - one approach trap - no compulsory further training



6 Survey of teachers

In this section of the report, we outline and discuss the survey undertaken with teachers from Croatia, North Macedonia and Poland.

All percentages are rounded to whole numbers in the text; the original calculations – with decimal points – are retained in the tables.

6.1 Methods

6.1.1 Data collection tools

To gather data from practicing teachers a structured questionnaire was developed in autumn 2018 by academic partners from Autism Macedonia Blue Firefly, the Pedagogical University of Krakow, the University of Zagreb and the University of Northampton (*see appendix 1*). This tool collected data regarding teachers' knowledge and understanding of ASD, their attitudes towards different types of educational approaches in ASD (and the extent to which they are used), their confidence in addressing the educational needs of such children, and their evaluation of their own training needs.

The tool – and all accompanying information for participants – was submitted to the University of Northampton's ethical review processes, and received ethical approval in November 2018. The tool was piloted within Croatia, North Macedonia and Poland in November 2018.

6.1.2 Sample

The questionnaire was distributed to teachers between November 2018 and February 2019. Distribution was undertaken as follows.

- *Croatia*: 180 questionnaires were distributed and 129 were returned (72% response rate). After data cleansing, 103 questionnaires were identified as usable: 35 from mainstream settings and 68 from special schools.
- *North Macedonia*: One hundred questionnaires were distributed, and 81 were returned (81% response rate). After data cleansing, 73 questionnaires were identified as usable: 28 from mainstream schools and 45 from special schools.
- *Poland*: 280 questionnaires were distributed and 140 were returned (50% response rate). After data cleansing, 118 questionnaires were identified as usable: 94 from mainstream schools and 24 from special schools.

In total 560 questionnaires were distributed and 340 were returned (61% response rate). The total sample after data cleansing – to remove educators from outside the primary age range or who completed the questionnaire incorrectly – comprised 294 teachers: 103 (35%) from Croatia, 73 (25%) from North Macedonia and 118 (40%) from Poland. One hundred and thirty-seven (47%) worked in mainstream schools, while 157 (53%) worked in special education systems.

a) Gender and age of respondents

The overwhelming majority of teachers (n = 277; 94%) were female. Age distribution was as follows:

- 20-35 years: n = 121 (41%)
- 36-50 years: n = 130 (44%)
- 51-65 years: n = 41 (14%)



b) Location of respondents

The majority of respondents worked in large urban settings of over 100,000 (n = 220; 75%). Fifty-five respondents (18%) worked in smaller towns, while just 19 (6.5%) worked in rural schools.

c) Respondents' roles

In just under half of the sample, the respondent identified as the main teacher in the classroom (n = 138; 47%). Forty-five respondents (15%) identified as an assistant teacher; 79 (27%) as a subject teacher; and 23 (8%) as a special needs coordinator. Three respondents (1%) undertook mixed teaching and therapeutic roles.

d) Respondents' level of education

Almost 80% of respondents (n = 234) were educated to Masters Degree level or above, with the remaining 20% holding a Bachelor's degree. However, there was variation between the three countries here.

- *Croatia*: in Croatia, 102 (99%) of respondents held at least a Masters' degree.
- *North Macedonia*: here just 20 respondents (27%) held a Masters' degree or higher, with the majority (n = 53; 73%) educated to degree level.
- *Poland*: here 112 (95%) were educated to Master' level or above.

6.2 Results

6.2.1 Previous training regarding ASD

a) Access to training

Respondents were asked about previous training they had received regarding autism, both during their university education and beyond. A third (n = 98; 33%) stated that they had received no training – the majority of these were from Poland, where most respondents were from mainstream settings. Croatian respondents, most of whom worked in special education settings, reported the greatest level of training (see

TABLE 4).

b) Differences regarding university training

Analysis of training received using Chi-Square revealed significant differences ($\chi^2 = 31.463$; $p = 0.000$) between mainstream and specialist teachers with regard training about ASD during their university studies. Cross-tabulation identified that specialist teachers from mainstream system had the highest response rate to the category "*no training during university studies*". In each of the four other categories, specialist teachers from within the special system also identified a higher level of training.

Chi-Square also revealed significant differences between the three countries regarding the levels of training about ASD provided during respondents' university studies ($\chi^2 = 173.989$; $p = 0.000$), with Croatian respondents reporting the highest levels of training.



TABLE 4 Training about ASD while at university

TRAINING RECEIVED	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
None	98	33,3	26	35,6	68	57,6	4	3,9
Yes, it was included in some courses (less than 14 hours)	83	28,2	36	49,3	37	31,4	10	9,7
Yes, as a separate course (15-60 hours)	43	14,6	5	6,8	4	3,4	34	33,0
Yes, two or three courses (61-180 hours)	45	15,3	4	5,5	3	2,5	38	36,9
Yes, four or more courses or as a whole university programme focused on ASD (181-300 hours)	23	7,8	0	0,0	6	5,1	17	16,5
Total	292	99,3	71	97,3	118	100	103	100,0

c) Differences regarding further training

With regard to further training, just under half (n = 130; 44%) had received no further training since then other than their own reading (see TABLE 5). Training opportunities seemed most frequently accessed in Croatia, with Macedonian teachers having least access to training.

Again, Chi-Square analysis identified significant differences regarding further training in ASD between those working within special education and those in mainstream schools ($\chi^2 = 52.467$; $p = 0.000$). The table of the cross-tabulations shows that. The lowest presentations of the categories “longer trainings (1 year or more)” have specialist teachers from mainstream system as well as the highest presentations of the category “I studied by myself”. Specialist teachers from within mainstream system reported significantly fewer further training opportunities than those within special education.

TABLE 5 Further training undertaken

FURTHER TRAINING	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
No	42	14,3	17	23,3	23	19,5	2	1,9
No, but I studied it by myself	88	29,9	26	35,6	30	25,4	32	31,1
One training for a few hours	20	6,8	6	8,2	10	8,5	4	3,9
One training 1 to 3 days in duration	49	16,7	20	27,4	10	8,5	19	18,4
Several trainings 1 to 3 days in duration	46	15,6	2	2,7	10	8,5	34	33,0



Longer trainings (1 year or more)	15	5,1	0	0,0	3	2,5	12	11,7
Total	260	88,4	71	97,3	86	72,9	103	100,0

d) Content of training

The majority of teachers across all three countries reported that they had received training with regard to the theory about ASD (see

TABLE 6); this was over 80% in Croatia, falling to just over 60% in the other two countries. Fewer teachers had received training with regard to teaching strategies (just under 60% in total, see TABLE 7) with a smaller percentage again (just over 40%, see TABLE 8) reporting practical experience whilst training.

TABLE 6 Training regarding theory

TRAINING: THEORY ABOUT ASD	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
NO	88	29,9	28	38,4	44	37,3	16	15,5
YES	205	69,7	45	61,6	74	62,7	86	83,5
Total	293	99,7	73	100,0	118	100,0	102	99,0

TABLE 7 Training regarding teaching and intervention methods

TRAINING: TEACHING AND INTERVENTION METHODS	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
NO	123	41,8	34	46,6	67	56,8	22	21,4
YES	169	57,5	39	53,4	51	43,2	79	76,7
Total	292	99,3	73	100,0	118	100,0	101	98,1

TABLE 8 Practical experience while training

TRAINING: PRACTICAL EXPERIENCE	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
NO	167	56,8	49	67,1	71	60,2	47	45,6
YES	125	42,5	24	32,9	47	39,8	54	52,4
Total	292	99,3	73	100,0	118	100,0	101	98,1

6.2.2 Experience working with learners with ASD

There was wide variation within the sample regarding teachers' experience of working with learners with ASD. While in total 17% of respondents (n = 51) had no experience, this is due to the 47 Polish teachers (40% of the total Polish



sample) who responded in this way^{1,2}. Only four Croatian and Macedonian teachers had no experience. Those teachers who had worked in the field of autism were generally experienced, with almost 20% having 6-10 years experience, and a similar percentage having worked in the field for more than 10 years (see TABLE 9).

TABLE 9 Experience with learners with ASD

EXPERIENCE	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
No experience	51	17,3	1	1,4	47	39,8	3	2,9
Less than 1 year	34	11,6	5	6,8	20	16,9	9	8,7
1-5 years	94	32,0	27	37,0	22	18,6	45	43,7
6-10 years	56	19,0	18	24,7	18	15,3	20	19,4
More than 10 years	58	19,7	22	30,1	11	9,3	25	24,3
Total	293	99,7	73	100,0	118	100,0	102	99,0

6.2.3 Attitudes and knowledge regarding ASD

a) Characteristics of ASD

Respondents from the three countries were asked their opinions about a number of statements regarding the characteristics of individuals with ASD (See TABLE 10). There was a wide variation in the answers given by the respondents from the three countries – and also within the three countries.

Chi-square analysis identified statistically significant differences between responses from the three countries to the statements. For example, with regard to just some of the statements in the table:

- 'Children with ASD prefer to be alone': $\chi^2 = 44.719$; $p = 0.000$
- 'Children with ASD are good at remembering facts': $\chi^2 = 79.470$; $p = 0.000$.
- 'Children with ASD find it hard to work with others in groups': $\chi^2 = 32.229$; $p = 0.000$.

This demonstrates the breadth of experience and understanding both within and between countries, as well as the wide range of children with ASD with whom the respondents may have worked.

¹ Only three respondents from Poland had no experience of working with ASD, no training at university or no further training. These were teaching assistants (Ivana Lessner Listiakova).

² Following the most recent reform of the Polish inclusive education system (Dz.U. 2018 poz. 1457 – Polish Official Journal 2018 no 1457)), all teachers in inclusive schools will be responsible for children with special educational needs and disabilities. However, children with autism may have a supporting teaching assistant. In practice, this will occur if the child's parents request this additional support from the local government for the next school year. In practice, there are very few educators in mainstream schools who are experienced in teaching/supporting children with ASD; most of these are still working within special schools or centres (Joanna Kossewska).



TABLE 10 Knowledge regarding characteristics of children with ASD

KNOWLEDGE REGARDING ASD	ALL			NORTH MACEDONIA			POLAND			CROATIA		
	Applies to no one or to few	Applies to most or to all	I don't know	Applies to no one or to few	Applies to most or to all	I don't know	Applies to no one or to few	Applies to most or to all	I don't know	Applies to no one or to few	Applies to most or to all	I don't know
a) Children with ASD prefer to be alone	99 33,7%	144 49%	47 16%	24 32,9%	44 60,3%	3 4,1%	24 20,3%	75 63,6%	19 16,1%	51 49,5%	25 24,3%	25 24,3%
b) Children with ASD are good communicators	200 68%	55 18,7%	36 12,2%	58 79,5%	14 19,2%	0	74 62,7%	29 24,6%	15 12,7%	68 66%	12 11,7%	21 20,4%
c) Children with ASD are good at remembering facts	106 36,1%	138 46,9%	44 15%	28 38,4%	37 50,7%	2 2,7%	13 11%	82 69,5%	23 19,5%	65 63,1%	19 18,4%	19 18,4%
d) Children with ASD find it hard to work in a group with others	57 19,4%	200 68%	36 12,2%	16 21,9	56 76,7	0	9 7,6%	91 77,1%	18 15,3%	32 31,1%	53 51,5%	18 17,5%
e) Children with ASD show repetitive behaviours (e.g., rocking, jumping, hand flapping)	34 11,6%	228 77,6%	30 10,2%	7 9,6%	64 87,7%	0	4 3,4%	96 81,4%	18 15,3%	23 22,3%	68 66%	12 11,7%
f) Children with ASD have a good understanding of language	171 58,2%	81 27,6%	42 14,3%	42 57,5%	28 38,4%	3 4,1%	64 54,2%	37 31,4%	17 14,4%	65 63,1%	16 15,5%	22 21,4%
g) Children with ASD are good at focusing on detail	109 37,1%	137 46,6%	45 15,3%	21 28,8%	49 67,1%	2 2,7%	45 38,1%	47 39,8%	24 20,3%	43 41,7%	41 39,8%	19 18,4%
h) Children with ASD interpret language literally	40 13,6%	207 70,4%	45 15,3%	18 24,7%	46 63%	7 9,6%	5 4,2%	89 75,4%	24 20,3%	17 16,5%	72 69,9	14 13,6%
i) Children with ASD can have extreme sensory sensitivities (e.g. sound, vision)	53 18%	211 71,8%	28 9,5%	17 23,3%	54 74%	0	8 68%	95 80,5%	15 12,7%	17 16,5%	72 69,9%	14 3,6%
j) Children with ASD cannot make eye contact	100 34%	156 53,1%	37 12,6%	30 41,1%	43 58,9%	0	13 11%	86 72,9%	19 16,1%	57 65%	27 26,2%	18 17,5%
k) Children with ASD do not want friends	132 44,9%	113 38,4%	47 16%	39 53,4%	25 34,2%	8 11%	26 22%	74 62,7%	18 15,3%	67 65%	14 1,6%	21 20,4%
l) Children with ASD love using	74 25,2%	134 45,6%	85 28,9%	12 16,4%	56 76,7%	4 5,5%	22 18,6%	42 35,6%	54 45,8%	40 38,8%	36 35%	27 26,2%



computers												
m) Children with ASD are good at mathematics and science	171 58,2%	66 22,4%	56 19%	51 69,9%	12 16,4%	9 12,3%	49 41,5%	49 41,5%	20 16,9%	71 68,9%	5 4,9%	27 26,2%
n) Children with ASD are aggressive	192 65,3%	57 19,4%	45 15,3%	64 87,7%	9 12,3%	0	54 45,8%	37 31,4%	27 22,9%	74 71,8%	11 10,7%	18 17,5%
o) Children with ASD have obsessions	119 40,5%	125 42,5%	50 17%	31 42,5%	40 54,8%	2 2,7%	28 23,7%	62 52,5%	28 23,7%	60 58,3%	23 22,3%	20 19,4%
p) Children with ASD are in a world of their own	96 32,7%	144 49%	53 18%	17 23,3%	52 71,2%	4 5,5%	30 25,4%	61 51,7%	27 22,9%	49 47,6%	31 30,1%	22 21,4%
q) Children with ASD make inappropriate comments and interrupt in lessons	167 56,8%	71 24,1%	55 18,7%	54 74%	19 26%	0	36 30,5%	47 39,8%	35 29,7%	77 74,8%	5 4,9%	20 19,4%
r) Children with ASD do not have any emotions	211 71,8%	49 16,7%	34 11,6%	63 86,3%	9 12,3%	1 1,4%	65 55,1%	29 24,6%	24 20,3%	83 80,6%	11 10,7%	9 8,7%
s) Children with ASD do not understand other people's feelings	101 34,4%	156 53,1%	34 11,6%	36 49,3%	31 42,5%	4 5,5%	22 18,6%	78 66,1%	18 15,3%	43 41,7%	47 45,6%	12 11,7%
t) Children with ASD dislike change	45 15,3%	215 73,1%	34 11,6%	14 19,2%	59 80,8%	0	13 11%	87 73,7%	18 15,3%	18 17,5%	69 67%	16 15,5%

b) Attitudes towards children with ASD

Participants were asked to identify their attitudes towards children with ASD by responding to a number of Likert Scale statements (see TABLE 11). The responses identified that most participants:

- agreed that children with ASD would benefit from early childhood intervention
- agreed that children with ASD could not be cured but could be helped to have a better life
- needed specialist educational approaches
- benefited from interacting and playing with their neurotypical peers
- could succeed academically
- may have special gifts and talents
- may have challenging behaviours.

TABLE 11 Attitudinal statements: comparison of responses by country

	ALL	NORTH MACEDONIA	POLAND	CROATIA
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AGREE/DISAGREE WITH THE STATEMENT	Disagree	Agree	I don't know	Disagree	Agree	I don't know	Disagree	Agree	I don't know	Disagree	Agree	I don't know
a) Children with ASD benefit from early medical/pharmacological intervention	89 30,3%	103 35%	100 34%	6 8,2%	45 61,6%	21 28,8%	62 52,5%	21 17,8%	35 29,7%	21 20,4%	37 35,9%	44 42,7%
b) Children with ASD benefit from early intervention	5 1,7%	269 91,5%	20 6,8%	1 1,4%	71 97,3%	1 1,4%	1 0,8%	104 88,1%	13 11%	3 2,9%	94 91,3%	6 5,8%
c) Children with ASD benefit from early educational intervention	23 7,8%	253 86,1%	16 5,4%	3 4,1%	67 91,8%	1 1,4%	9 7,6%	99 83,9%	10 8,5%	11 10,7%	87 84,5%	5 4,9%
d) ASD can be cured	193 65,6%	38 12,9%	60 20,4%	39 53,4%	15 20,5%	16 21,9%	76 64,4%	8 6,8%	34 28,8%	78 75,7%	15 14,6%	10 9,7%
e) ASD cannot be cured but children can be helped to have a better life	12 4,1%	253 86,1%	27 9,2%	3 4,1%	60 82,2%	8 11%	7 5,9%	97 82,2%	14 11,9%	2 1,9%	96 93,2%	5 4,9%
f) Children with ASD are incapable of being educated alongside their mainstream peers	106 36,1%	143 48,6%	45 15,3%	23 31,5%	39 53,4%	11 15,1%	66 55,9%	29 24,6%	23 19,5%	17 16,5%	75 72,8%	11 10,7%
g) All children with ASD need specialist educational approaches	42 14,3%	224 76,2%	258,5%	12 16,4%	53 72,6%	5 6,8%	17 14,4%	88 74,6%	13 11%	13 12,6%	83 80,6%	7 6,8%
h) Children with ASD need to be educated in special schools	51 17,3%	197 67%	46 15,6%	14 19,2%	50 68,5%	9 12,3%	32 17,1%	60 50,8%	26 22%	5 4,9%	87 84,5%	11 10,7%
i) Children with ASD can be educated alongside their mainstream peers	44 15%	216 73,5%	32 10,9%	10 13,7%	51 69,9%	10 13,7%	28 23,7%	77 65,3%	13 11%	6 5,8%	88 85,4%	9 8,7%
j) Children with ASD benefit from playing with their mainstream peers	22 7,5%	234 79,6%	38 12,9%	2 2,7%	66 90,4%	5 6,8%	11 9,3%	90 76,3%	17 14,4%	9 8,7%	78 75,7%	16 15,5%
k) Children can grow out of ASD	176 59,9%	77 26,2%	41 13,9%	30 41,1%	33 45,2%	10 13,7%	66 55,9%	29 24,6%	23 19,5%	80 77,7%	15 14,6%	8 7,8%
l) Children with ASD can be academically successful	20 6,8%	228 77,6%	45 15,3%	6 8,2%	52 71,2%	14 19,2%	7 5,9%	91 77,1%	20 16,9%	7 6,8%	85 82,5%	11 10,7%
m) Children with ASD can have special gifts and talents	9 3,1%	263 89,5%	22 7,5%	3 4,1%	66 90,4%	4 5,5%	4 3,4%	105 89,0%	9 7,6%	2 1,9%	92 89,3%	9 8,7%
n) Children with ASD can	16	256	18	6	59	4	2	107	9	8	90	5



have challenging behaviour	5,4%	87,1%	6,1%	8,2%	80,8%	5,5%	1,7%	90,7%	7,6%	7,8%	87,4%	4,9%
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c) Differences between responses by country

There were a number of statements where Chi-Square analysis of the responses demonstrated a statistically significant level of variation between respondents from the three different countries. These are as follows:

- *'Children with ASD benefit from early medical/Pharmalogical intervention'*. Macedonian teachers were far more positive towards early interventions of these types than their Polish and Croatian counterparts ($\chi^2 = 62.704$; $p = 0.000$).
- *'ASD can be cured'*. Over 20% of Macedonian teachers thought ASD could be cured, as compared with fewer than 7% of Polish teachers, or 15% of Croatian teachers ($\chi^2 = 20.083$; $p = 0.000$).
- *'Children with ASD are incapable of being educated alongside their mainstream peers'*. Almost three-quarters of Croatian teachers ($n = 75$; 73%) and over half of the Macedonian teachers ($n = 39$; 53%) agreed with this statement; by contrast, only a quarter of Polish teachers ($n = 29$; 25%) held this view ($\chi^2 = 53.831$; $p = 0.000$).
- *'Children with ASD need to be educated in special schools'*. There was variation between all three countries here. While just under 20% of both Macedonian and Polish teachers disagreed with this statement (19.2% and 17.1% respectively), almost 70% of Macedonians agreed, compared to just 51% of the Poles. By contrast, fewer than 5% of Croatian teachers disagreed, with almost 85% agreeing that such children needed to be educated in special schools ($\chi^2 = 30.426$; $p = 0.000$).
- *'Children with ASD can be educated alongside their mainstream peers'*. Again, there is variation between the countries. Croatian teachers are the most positive, with 85% agreeing; and almost 70% of Macedonian teachers also agree. While the number of Polish teachers agreeing is not dissimilar (65%), these teachers are more sceptical, with almost 24% disagreeing ($\chi^2 = 15.942$; $p = 0.003$).
- *'Children can grow out of ASD'*. Macedonian teachers appear to have the most belief in the possibilities of a cure for ASD, with 45% holding this belief, compared to 25% of Polish teachers and 15% of Croatians ($\chi^2 = 30.993$, $p = 0.000$).

d) Differences between responses between mainstream and special school teachers

Significant differences of attitude towards children with ASD were identified between teachers from mainstream settings ($n = 137$; 47% of respondents) and those from special educational settings ($n = 157$; 53%).³

In summary, these differences are as follows (See TABLE 12):

- Teachers from mainstream schools are less sure regarding the benefits of early intervention ($\chi^2 = 15.143$; $p = 0.001$).

³ Further analysis of the differences of perspective between mainstream and special educators has also been undertaken for each country. However, this is not discussed within this report.



- Teachers from mainstream schools are less sure regarding the benefits of early educational intervention to children with ASD ($\chi^2 = 15.520$; $p = 0.001$).
- Teachers from mainstream settings are more pessimistic and uncertain that children with ASD can be helped to have a better life. However, it should be noted that those who are positive still comprise 78% of these teachers ($\chi^2 = 20.355$; $p = 0.000$).
- Teachers from mainstream settings are much more pessimistic regarding the ability of children with ASD to be educated alongside their mainstream peers. Only just over a third of mainstream teachers agree (34%), compared to 66% of special educators ($\chi^2 = 29.993$; $p = 0.000$).
- Mainstream teachers are less convinced than their special education colleagues about the need for specialist approaches – 20% of mainstream respondents disagree, whereas 85% of special school teachers consider them necessary ($\chi^2 = 15.006$; $p = 0.001$).
- Far fewer mainstream teachers feel that children with ASD need to be educated in special school than their counterparts in the special education system. However, it should be noted that 53% of them still felt that such children needed to be educated in special schools, while 22% were unsure ($\chi^2 = 30.672$; $p = 0.000$).
- At the same time, many teachers in mainstream schools held the somewhat contradictory view that children with ASD could be educated alongside their mainstream peers. Only 8% of mainstream teachers disagreed, compared to 24% of special educators ($\chi^2 = 15.387$; $p = 0.000$).
- A third of mainstream teachers believed children could grow out of ASD, compared to 19% of special educators ($\chi^2 = 27.240$; $p = 0.000$).
- Finally, mainstream teachers were less optimistic that children with ASD could be academically successful; this view was held by 71% of mainstream teachers, compared to 85% of special school teachers ($\chi^2 = 9.570$; $p = 0.008$).

TABLE 12 Attitudinal statements: comparison of responses by educational setting

ALL COUNTRIES AGREE/DISAGREE* WITH THE STATEMENT	MAINSTREAM			SPECIAL		
	Disagree	Agree	I don't know	Disagree	Agree	I don't know
a) Children with ASD benefit from early medical/pharmacological intervention	48 30,6%	50 31,8%	59 37,6%	41 29,9%	53 38,7%	41 29,9%
b) Children with ASD benefit from early intervention	2 1,3%	136 86,6%	19 12,1%	3 2,2%	133 97,15	1 0,7%
c) Children with ASD benefit from early	14 8,9%	127 80,9%	16 10,2%	9 6,6%	126 92%	0



educational intervention						
d) ASD can be cured	94 59,9%	23 14,65%	39 24,8%	99 72,3%	15 19,9%	21 15,3%
e) ASD cannot be cured but children can be helped to have a better life	11 7%	123 78,3%	23 14,6%	1 0,7%	130 94,9%	4 2,9%
f) Children with ASD are incapable of being educated alongside their mainstream peers	74 47,1%	53 33,8%	30 19,15%	32 23,4%	90 65,7%	15 10,9%
g) All children with ASD need specialist educational approaches	31 19,7%	107 68,2%	19 12,1%	11 8%	117 85,4%	6 4,4%
h) Children with ASD need to be educated in special schools	40 25,5%	83 52,9%	34 21,7%	11 8%	114 83,2%	12 8,8%
i) Children with ASD can be educated alongside their mainstream peers	12 7,6%	124 79%	21 13,4%	32 23,4%	92 67,2%	11 8%
j) Children with ASD benefit from playing with their mainstream peers	11 7%	121 77,1%	25 15,9%	11 8%	113 82,5%	13 9,5%
k) Children can grow out of ASD	73 46,5%	51 32,5%	33 21%	103 75,2%	26 19%	8 5,8%
l) Children with ASD can be academically successful	16 10,2%	112 71,3%	29 18,5%	4 2,9%	116 84,7%	16 11,7%
m) Children with ASD can have special gifts and talents	6 3,8%	136 86,6%	15 9,6%	3 2,2%	127 92,7%	7 5,1%
n) Children with ASD can have challenging behaviour	11 7%	132 84,1%	14 8,9%	5 3,6%	124 90,5%	4 2,9%

6.2.4 Knowledge about methods of working with ASD

Respondents were asked about their levels of knowledge regarding a number of approaches that may typically be used with children with ASD. In particular they were asked to identify whether they:

- had previously received training in any of these methods
- whether they felt competent in using these methods.

The results with regard to all participants from the three different countries are shown in TABLE 13: all categories where 15% or more of respondents answered positively are highlighted in yellow. This identifies that across the sample there was a very low level of previous training – or perceived competence – in any methods.

- 15% of all participants (and 24% of the Croatian participants) had received training in augmentative and alternative communication (AAC) methods, such as signing or PECS. However only 8% of the whole sample (11% of Croatian teachers) felt competent in using the approaches.
- Polish teachers reported receiving training in speech therapy (20%), child-oriented approaches (25%) and expressive art approaches (16%). However, much lower numbers expressed feeling competent.
- There was low overall training in typically-used approaches such as structured teaching (TEACCH) – 11% had received training, 7% felt competent in its use; Social Stories – 11% had received training, 5% felt competent in its use; or Applied Behaviour Analysis – 8% had received training, 5% felt competent in its use.

- There were even lower levels of awareness and competence with regard to group approaches such as social skills groups – 8% had received training, 4% felt competent; or peer-mediated learning – where only 3% had received training or felt competent.

TABLE 13 Knowledge regarding methods of working with ASD: by country

KNOWLEDGE ABOUT DIFFERENT METHODS	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	Received training	Competent in use	Received training	Competent in use	Received training	Competent in use	Received training	Competent in use
a) Sensory-based approaches	32 (10,9%)	20 (6,8%)	7 (9,6%)	7 (9,6%)	13 (11%)	10 (8,5%)	12 (11,7%)	3 (2,9%)
b) Applied Behaviour Analysis (ABA)	24 (8,2%)	15 (5,1%)	5 (6,8%)	7 (9,6%)	14 (11,9%)	6 (5,1%)	5 (4,9%)	2 (1,9%)
c) Structured Teaching/TEACCH	26 (8,8%)	19 (6,5%)	0 (0%)	4 (5,5%)	13 (11,0%)	6 (5,1%)	13 (12,6%)	9 (8,7%)
d) Social Stories	31 (10,5%)	15 (5,1%)	4 (5,5%)	3 (4,1%)	16 (3,6%)	6 (5,1%)	11 (10,7%)	6 (5,8%)
e) AAC: e.g. signing, PECS	44 (15,00%)	24 (8,2%)	3 (4,1%)	8 (11%)	16 (13,6%)	5 (4,2%)	25 (24,3%)	11 (10,7%)
f) Special Diets	11 (3,7%)	10 (3,4%)	3 (4,1%)	3 (4,1%)	7 (5,9%)	6 (5,1%)	1 (1,0%)	1 (1,0%)
g) Drug/medication interventions	15 (5,1%)	2 (0,7%)	2 (2,7%)	2 (2,7%)	11 (9,3%)	0 (0%)	2 (1,9%)	0 (0%)
h) Occupational Therapy	16 (5,4%)	16 (5,4%)	2 (2,7%)	5 (6,8%)	9 (7,6%)	7 (5,9%)	5 (4,9%)	4 (3,9%)
i) Speech Therapy	31 (10,5%)	7 (2,4%)	1 (1,4%)	3 (4,1%)	23 (19,5%)	0 (0%)	7 (6,8%)	4 (3,9%)
j) Child-oriented approaches	37 (12,6%)	7 (2,4%)	1 (1,4%)	3 (4,1%)	29 (24,6%)	3 (2,5%)	7 (6,8%)	1 (1,0%)
k) Expressive (art) approaches – e.g. music, art, drama therapy)	33 (11,2%)	22 (7,5%)	1 (1,4%)	7 (9,6%)	19 (16,1%)	13 (11,0%)	13 (12,6%)	2 (1,9%)
l) Social Skills Groups	22 (7,5%)	12 (4,1%)	0 (0%)	3 (4,1%)	15 (12,7%)	9 (7,6%)	7 (6,8%)	0 (0%)
m) Peer Support / Peer-mediated learning	10 (3,4%)	10 (3,4%)	0 (0%)	2 (2,7%)	4 (3,4%)	7 (5,9%)	6 (5,8%)	1 (1,0%)

Comparison was also undertaken regarding the knowledge held and competence felt about methods by mainstream and special school teachers (see TABLE 14).⁴

This identified that:

⁴ Again, further analysis of the differences of perspective between mainstream and special educators has also been undertaken for each country. However, for the sake of brevity, this is not discussed within this report.



- There were very low reported levels of training and competence among mainstream teachers.
- Few mainstream teachers had received training in specific approaches (the largest number was in child-oriented approaches – 13%) and no more than 6% of mainstream teachers felt competent in any approach.
- Special school teachers reported slightly higher training and competence, but confidence levels were again very low.
- The most positively reported area was AAC, where 21% of teachers reported training, and 16% felt competent. With regard to the other methods identified, 5-13% of teachers had received training and competence levels were similar.

TABLE 14 Knowledge regarding methods of working with ASD: mainstream and special settings

ALL COUNTRIES KNOWLEDGE ABOUT METHODS	MAINSTREAM		SPECIAL	
	Received training	Competent in use	Received training	Competent in use
a) Sensory-based approaches	16 10,2%	5 3,2%	16 11,7%	15 10,9%
b) Applied Behaviour Analysis (ABA)	9 5,7%	1 0,6%	15 10,9%	14 10,2%
c) Structured Teaching/TEACCH	8 5,1%	0	18 13,1%	19 13,9%
d) Social Stories	13 8,3%	1 0,6%	18 13,1%	14 10,2%
e) AAC: e.g. signing, PECS	15 9,6%	2 1,3%	29 21,2%	22 16,1%
f) Special Diets	9 5,7%	4 2,5%	2 1,5%	6 4,4%
g) Drug/medication interventions	8 5,1%	0	7 5,1%	2 1,5%
h) Occupational Therapy	8 5,1%	9 5,7%	8 5,8%	7 5,1%
i) Speech Therapy	16 10,2%	2 1,3%	15 10,9%	5 3,6%
j) Child-oriented approaches:	21 13,4%	1 0,6%	16 11,7%	6 4,4%
k) Expressive (art) approaches – e.g. music, art, drama therapy)	17 10,8%	8 5,1%	16 11,7%	14 10,2%
l) Social Skills Groups	9 5,7%	5 3,2%	13 9,5%	7 5,1%
m) Peer Support / Peer-mediated learning	5 3,2%	4 2,5%	5 3,6%	6 4,4%



6.2.5 Extent of use of different methods

Despite the low levels of reported training experience and competence, many of these methods of working with children with ASD were nonetheless in use – either frequently or daily – in all of the three countries. In TABLE 15 and TABLE 16 below, yellow is used to identify frequency levels of more than 15% of the sample, while green indicates frequency of more than 50%.

Scrutiny of TABLE 15, which shows use across the three countries identifies that:

- Teachers report the use of all of the approaches at least sometimes across all countries with the exception of special diets in Poland.
- However, many approaches are identified as never used across a significant number of settings.
- Teachers in Macedonia report using structured teaching, Social Stories and expressive approaches in more than 50% of settings.
- Teachers in Croatia report using Social Stories, AAC, expressive and peer-mediated approaches in more than 50% of settings.

Given the low levels of training and confidence in their own competence, this suggests that teachers are in many cases working unconfidently and perhaps incorrectly.

TABLE 15 Use of different methods: by country

EXTENT OF USE OF DIFFERENT METHODS	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
a) Sensory-based approaches								
Never	59	20,1	14	19,2	42	35,6	3	2,9
Sometimes	109	37,1	29	39,7	31	26,3	49	47,6
Every day	122	41,5	30	41,1	45	38,1	47	45,6
b) Applied Behaviour Analysis (ABA)								
Never	113	38,4	16	21,9	75	63,6	22	21,4
Sometimes	120	40,8	42	57,5	31	26,3	47	45,6
Every day	60	20,4	14	19,2	12	10,2	34	33,0
c) Structured Teaching/TEACCH								
Never	102	34,7	19	26,0	72	61,0	11	10,7
Sometimes	109	37,1	46	63,0	22	18,6	41	39,8
Every day	82	27,9	7	9,6	24	20,3	51	49,5
d) Social Stories								
Never	87	29,6	19	26,0	51	43,2	17	16,5



<i>Sometimes</i>	133	45,2	44	60,3	29	24,6	60	58,3
<i>Every day</i>	72	24,5	9	12,3	38	32,2	25	24,3
e) AAC: e.g. signing, PECS								
<i>Never</i>	86	29,3	11	15,1	64	54,2	11	10,7
<i>Sometimes</i>	93	31,6	34	46,6	26	22,0	33	32,0
<i>Every day</i>	114	38,8	27	37,0	28	23,7	59	57,3
f) Special Diets								
<i>Never</i>	204	69,4	50	68,5	91	77,1	63	61,2
<i>Sometimes</i>	65	22,1	16	21,9	14	11,9	35	34,0
<i>Every day</i>	22	7,5	5	6,8	13	11,0	4	3,9
g) Drug/medication interventions								
<i>Never</i>	190	64,6	52	71,2	89	75,4	49	47,6
<i>Sometimes</i>	79	26,9	12	16,4	20	16,9	47	45,6
<i>Every day</i>	21	7,1	6	8,2	9	7,6	6	5,8
h) Occupational Therapy								
<i>Never</i>	127	43,2	20	27,4	70	59,3	37	35,9
<i>Sometimes</i>	88	29,9	29	39,7	22	18,6	37	35,9
<i>Every day</i>	76	25,9	21	28,8	26	22,0	29	28,2
i) Speech Therapy								
<i>Never</i>	125	42,5	24	32,9	64	54,2	37	35,9
<i>Sometimes</i>	39	13,3	32	43,8	34	28,8	35	34,0
<i>Every day</i>	62	21,1	15	20,5	20	16,9	31	30,1
j) Child-oriented approaches:								
<i>Never</i>	136	46,3	32	43,8	72	61,0	32	31,1
<i>Sometimes</i>	31	10,5	30	41,1	32	27,1	41	39,8
<i>Every day</i>	72	24,5	7	9,6	14	11,9	28	27,2
k) Expressive (art) approaches – e.g. music, art, drama therapy)								
<i>Never</i>	85	28,9	11	15,1	53	44,9	21	20,4
<i>Sometimes</i>	128	43,5	42	57,5	32	27,1	54	52,4
<i>Every day</i>	76	25,9	16	21,9	33	28,0	27	26,2
l) Social Skills Groups								
<i>Never</i>	118	40,1	27	37,0	56	47,5	35	34,0
<i>Sometimes</i>	130	44,2	33	45,2	42	35,6	55	53,4
<i>Every day</i>	40	13,6	10	13,7	20	16,9	10	9,7
m) Peer Support / Peer-mediated learning								
<i>Never</i>	115	39,1	23	31,5	53	44,9	39	37,9
<i>Sometimes</i>	136	46,3	28	38,4	55	46,6	53	51,5
<i>Every day</i>	35	11,9	15	20,5	10	8,5	10	9,7



Analysis comparing mainstream and special settings has been undertaken (see TABLE 16).⁵
This identifies that:

- The majority of approaches were never used at all in a significant number of settings.
- There is a higher use of these specific approaches across special settings than in mainstream schools.
- None of approaches identified are used sometimes or daily within more than 50% of mainstream settings.
- Many established approaches in ASD are never used by mainstream respondents, e.g. sensory-based approaches (31%), ABA (50%), structured teaching (49%), Social Stories (40%) or AAC (45%).
- All of the identified approaches are used in at least 22% of special settings and generally much more.
- Sensory-based approaches and AAC are used by the majority of special educators on a daily basis (despite only 16% or fewer feeling competent in their use).

Again, this suggests that across both mainstream and special settings, teachers may be working beyond their competence.

TABLE 16 Use of different methods: mainstream and special settings

ALL COUNTRIES EXTENT OF USE OF METHODS	MAINSTREAM			SPECIAL		
	Never	Sometimes	Every day	Never	Sometimes	Every day
a) Sensory-based approaches	49 31,2%	59 37,6%	46 29,3%	10 7,3%	50 36,5%	76 55,5%
b) Applied Behaviour Analysis (ABA)	78 49,7%	61 38,9%	18 11,5%	35 25,5%	59 43,1%	42 30,7%
c) Structured Teaching/TEACCH	77 49%	59 37,6%	21 13,4%	25 18,2%	50 36,5%	61 44,5%
d) Social Stories	63 40,1%	61 38,9%	33 21%	24 17,5%	72 52,6%	39 28,5%
e) AAC: e.g. signing, PECS	70 44,6%	55 35%	32 20,4%	16 11,7%	38 27,7%	82 59,9%
f) Special Diets	108 68,8%	35 22,3%	13 8,3%	96 70,1%	30 21,9%	9 6,6%
g) Drug/medication interventions	115 73,2%	37 23,6%	5 3,2%	75 54,7%	42 30,7%	16 11,7%
h) Occupational Therapy	89 56,7%	40 25,5%	28 17,8%	38 27,7%	48 35%	48 35%
i) Speech Therapy	81 51,6%	58 36,9%	18 11,5%	44 32,1%	43 31,4%	48 35%
j) Child-oriented approaches:	88	45	19	48	58	30

⁵ Further analysis of the differences of perspective between mainstream and special educators has also been undertaken for each country. However, for the sake of brevity, this is not discussed within this report.



	56,1%	28,7%	12,1%	35%	42,3%	21,9%
k) Expressive (art) approaches – e.g. music, art, drama therapy)	67 42,7%	59 37,6%	29 18,5%	18 13,1%	69 50,4%	47 34,3%
l) Social Skills Groups	69 43,9%	67 42,7%	17 10,8%	49 35,8%	63 46%	23 16,8%
m) Peer Support / Peer-mediated learning	67 42,7%	61 38,9%	24 15,3%	48 35%	75 54,7%	11 8%

6.2.6 Teachers' confidence in supporting children with ASD

Teachers were asked to report on their confidence in supporting children with ASD across a number of different domains. Again, in TABLE 17 and TABLE 18 below, yellow is used to identify frequency levels of more than 15% of the sample, while green indicates frequency of more than 50%. Analysis of the responses (see Table 15) identified that:

- More than 50% of teachers expressed confidence in only two of the 22 domains: working collaboratively (57%) and establishing routines (51%).
- In other areas, between 31% and 48% of teachers identified that they were confident in supporting children.
- The areas in which teachers felt least confident were managing anxiety (31%), supporting turn-taking (33%), supporting children's sensory needs (36%), responding to tantrums and inappropriate emotions (37%) and understanding autism (39%).
- Teachers within Croatia expressed the highest levels of confidence across all areas.

TABLE 17 Teachers confidence in supporting children with ASD: by country

CONFIDENCE IN SUPPORTING CHILDREN WITH ASD	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
1. Understanding causes of autism								
<i>Unconfident</i>	86	29,3	22	30,1	41	34,7	23	22,3
<i>Confident</i>	115	39,1	13	17,8	47	39,8	55	53,4
<i>I don't know</i>	86	29,3	34	46,6	30	25,4	22	21,4
2. Understanding the child's perspective								
<i>Unconfident</i>	85	28,9	16	21,9	52	44,1	17	16,5
<i>Confident</i>	140	47,6	29	39,7	45	38,1	66	64,1
<i>I don't know</i>	67	22,8	26	35,6	21	17,8	20	19,4
3. Working in partnership with families of children with ASD								
<i>Unconfident</i>	73	24,8	18	24,7	42	35,6	13	12,6
<i>Confident</i>	142	48,3	32	43,8	41	34,7	69	67,0
<i>I don't know</i>	79	26,9	23	31,5	35	29,7	21	20,4



4. Working collaboratively / Cooperating with teachers and other professionals working with children with ASD								
<i>Unconfident</i>	51	17,3	6	8,2	39	33,1	6	5,8
<i>Confident</i>	166	56,5	31	42,5	52	44,1	83	80,6
<i>I don't know</i>	74	25,2	33	45,2	27	22,9	14	13,6
5. Supporting receptive communication of children with ASD								
<i>Unconfident</i>	60	20,4	14	19,2	34	28,8	12	11,7
<i>Confident</i>	133	45,2	24	32,9	45	38,1	64	62,1
<i>I don't know</i>	99	33,7	33	45,2	39	33,1	27	26,2
6. Supporting understanding of body language / facial expression								
<i>Unconfident</i>	66	22,4	11	15,1	40	33,9	15	14,6
<i>Confident</i>	134	45,6	32	43,8	37	31,4	65	63,1
<i>I don't know</i>	94	32,0	30	41,1	41	34,7	23	22,3
7. Supporting spontaneous expressive communication								
<i>Unconfident</i>	76	25,9	16	21,9	45	38,1	15	14,6
<i>Confident</i>	123	41,8	27	37,0	33	28,0	63	61,2
<i>I don't know</i>	91	31,0	28	38,4	40	33,9	23	22,3
8. Supporting interaction with adults								
<i>Unconfident</i>	76	25,9	17	23,3	47	39,8	12	11,7
<i>Confident</i>	121	41,2	19	26,0	39	33,1	63	61,2
<i>I don't know</i>	96	32,7	36	49,3	32	27,1	28	27,2
9. Supporting peer relationships								
<i>Unconfident</i>	74	25,2	15	20,5	48	40,7	11	10,7
<i>Confident</i>	131	44,6	23	31,5	46	39,0	62	60,2
<i>I don't know</i>	88	29,9	34	46,6	24	20,3	30	29,1
10. Supporting social understanding								
<i>Unconfident</i>	79	26,9	16	21,9	53	44,9	10	9,7
<i>Confident</i>	123	41,8	20	27,4	42	35,6	61	59,2
<i>I don't know</i>	89	30,3	34	46,6	23	19,5	32	31,1
11. Managing challenging behaviour								
<i>Unconfident</i>	87	29,6	14	19,2	52	44,1	21	20,4
<i>Confident</i>	122	41,5	26	35,6	35	29,7	61	59,2
<i>I don't know</i>	84	28,6	33	45,2	30	25,4	21	20,4
12. Supporting learning and accessing the curriculum								
<i>Unconfident</i>	63	21,4	7	9,6	44	37,3	12	11,7
<i>Confident</i>	139	47,3	23	31,5	42	35,6	74	71,8
<i>I don't know</i>	91	31,0	43	58,9	32	27,1	16	15,5



13. Establishing routines								
<i>Unconfident</i>	47	16,0	10	13,7	32	27,1	5	4,9
<i>Confident</i>	149	50,7	28	38,4	49	41,5	72	69,9
<i>I don't know</i>	95	32,3	33	45,2	37	31,4	25	24,3
14. Supporting transitions (dealing with change)								
<i>Unconfident</i>	77	26,2	17	23,3	42	35,6	18	17,5
<i>Confident</i>	126	42,9	26	35,6	39	33,1	61	59,2
<i>I don't know</i>	89	30,3	29	39,7	37	31,4	23	22,3
15. Understanding, managing, and utilising special interests								
<i>Unconfident</i>	77	26,2	15	20,5	44	37,3	18	17,5
<i>Confident</i>	126	42,9	27	37,0	39	33,1	60	58,3
<i>I don't know</i>	89	30,3	30	41,1	35	29,7	24	23,3
16. Expecting / Preparing for / Responding to rigid or literal thinking								
<i>Unconfident</i>	68	23,1	14	19,2	40	33,9	14	13,6
<i>Confident</i>	120	40,8	22	30,1	39	33,1	59	57,3
<i>I don't know</i>	104	35,4	36	49,3	39	33,1	29	28,2
17. Supporting sensory needs								
<i>Unconfident</i>	87	29,6	14	19,2	55	46,6	18	17,5
<i>Confident</i>	105	35,7	28	38,4	18	15,3	59	57,3
<i>I don't know</i>	100	34,0	30	41,1	45	38,1	25	24,3
18. Supporting motor skills								
<i>Unconfident</i>	78	26,5	16	21,9	49	41,5	13	12,6
<i>Confident</i>	121	41,2	28	38,4	26	22,0	67	65,0
<i>I don't know</i>	93	31,6	28	38,4	43	36,4	22	21,4
19. Supporting turn-taking								
<i>Unconfident</i>	84	28,6	16	21,9	46	39,0	22	21,4
<i>Confident</i>	96	32,7	25	34,2	25	21,2	46	44,7
<i>I don't know</i>	111	37,8	31	42,5	46	39,0	34	33,0
20. Accommodating to the preference of working/playing alone								
<i>Unconfident</i>	78	26,5	15	20,5	47	39,8	16	15,5
<i>Confident</i>	128	43,5	29	39,7	33	28,0	66	64,1
<i>I don't know</i>	86	29,3	29	39,7	38	32,2	19	18,4
21. Managing / Responding to high levels of anxiety								
<i>Unconfident</i>	113	38,4	25	34,2	48	40,7	40	38,8
<i>Confident</i>	91	31,0	26	35,6	29	24,6	36	35,0
<i>I don't know</i>	89	30,3	22	30,1	41	34,7	26	25,2
22. Responding to displaying inappropriate emotions (e.g. tantrums)								
<i>Unconfident</i>	102	34,7	19	26,0	53	44,9	30	29,1



<i>Confident</i>	107	36,4	29	39,7	28	23,7	50	48,5
<i>I don't know</i>	84	28,6	25	34,2	37	31,4	22	21,4

Analysis of the responses of mainstream and special education teachers identified that special school teachers are generally more confident than their mainstream colleagues (TABLE 18).

More than 50% of mainstream teachers did not express confidence in any of the 22 domains, while more than 50% of special educators were confident in only six of the 22 domains.

The only area where more than 40% of mainstream teachers expressed confidence was in working collaboratively with others. Mainstream teachers' confidence across other areas was generally between 30-40%, with teachers least confident in the following areas:

- Supporting turn-taking (23% expressed confidence)
- Managing anxiety (26%)
- Responding to emotions/tantrums (26%)
- Supporting spontaneous expressive communication (27%)
- Supporting sensory needs (27%)

Though more confident than their mainstream colleagues, fewer than half of teachers expressed confidence in the following areas:

- Managing anxiety (37%)
- Supporting turn-taking (44%)
- Supporting sensory needs (47%).
- Managing challenging behaviour (48%)
- Understanding the causes of autism (49%)
- Responding to emotions/tantrums (49%).

TABLE 18 Teachers' confidence in supporting children with autism: mainstream and special settings

ALL COUNTRIES CONFIDENCE IN SUPPORTING CHILDREN WITH ASD	MAINSTREAM			SPECIAL		
	Unconfident	Confident	I don't know	Unconfident	Confident	I don't know
1. Understanding causes of autism	54 34,4%	48 30,6%	53 33,1%	32 23,4%	67 48,9%	34 24,8%
2. Understanding the child's perspective	64 40,8%	55 35%	37 23,6%	21 15,3%	85 62%	30 21,9%
3. Working in partnership with families of children with ASD	48 30,6%	56 35,7%	53 33,8%	25 18,2%	86 62,8%	26 19%
4. Working collaboratively / Cooperating with teachers and other professionals working with children with ASD	39 24,8%	72 45,9%	45 28,7%	12 8,8%	94 68,6%	28 20,4%
5. Supporting receptive communication of children with ASD	40 25,5%	58 36,9%	59 37,6%	20 14,6%	75 54,7%	40 29,2%
6. Supporting understanding of body language / facial	48	50	59	18	84	35



expression	30,6%	31,8%	37,6%	13,1%	61,3%	25,5%
7. Supporting spontaneous expressive communication	54 34,4%	42 26,8%	59 37,6%	22 16,1%	81 59,1%	32 23,4%
8. Supporting interaction with adults	50 31,8%	50 31,8%	57 36,3%	26 19%	71 51,8%	39 28,5%
9. Supporting peer relationships	49 31,2%	58 36,9%	50 31,8%	25 18,2%	73 53,3%	38 27,7%
10. Supporting social understanding	51 32,5%	53 33,8%	53 33,8%	28 20,4%	70 51,1%	3 26,3%
11. Managing challenging behaviour	49 31,2%	56 35,7%	51 32,5%	38 27,7%	66 48,2%	33 24,1%
12. Supporting learning and accessing the curriculum	44 28%	62 39,5%	51 32,5%	19 13,9%	77 56,2%	40 29,2%
13. Establishing routines	40 25,5%	59 37,6%	57 36,3%	7 5,1%	90 65,7%	37 27%
14. Supporting transitions (dealing with change)	49 31,2%	51 31,2%	57 36,3%	28 20,4%	75 54,7%	32 23,4%
15. Understanding, managing, and utilising special interests	50 31,8%	52 33,1%	55 35%	27 19,7%	74 54%	34 24,8%
16. Expecting / Preparing for / Responding to rigid or literal thinking	42 26,8%	48 30,6%	67 42,7%	26 19%	72 52,6%	37 27%
17. Supporting sensory needs	49 31,2%	41 26,1%	67 42,7%	38 27,7%	64 46,7%	33 24,1%
18. Supporting motor skills	47 29,9%	47 29,9%	62 39,5%	30 21,9%	74 54%	31 22,6%
19. Supporting turn-taking	51 32,5%	36 22,9%	69 43,9%	33 24,1%	60 43,8%	42 30,7%
20. Accommodating to the preference of working/playing alone	54 34,4%	48 30,6%	55 35%	24 17,5%	80 58,4%	31 22,6%
21. Managing / Responding to high levels of anxiety	67 42,7%	40 25,5%	50 31,8%	46 33,6%	51 37,2%	39 28,5%
22. Responding to displaying inappropriate emotions (e.g. tantrums)	60 38,2%	41 26,1%	56 35,7%	42 30,7%	66 48,2%	28 20,4%

The data were further interrogated to identify differences in confidence between mainstream and special education teachers within each country (see TABLE 19 -21).

North Macedonia

The areas where North Macedonian **mainstream teachers** expressed the lowest levels of confidence (< 30%) were:

- Understanding the causes of autism (18%)
- Supporting social understanding (21%)
- Supporting transitions (21%)
- Supporting learning and accessing the curriculum (25%)
- Responding to rigid thinking (25%)
- Understanding the child's perspective (29%)
- Supporting receptive communication (29%)
- Supporting expressive communication (29%)
- Supporting interaction with adults (29%)
- Managing challenging behaviour (29%).



North Macedonian **special education teachers** expressed least confidence (< 30%) in the following domains.

- Understanding the causes of autism (18%)
- Supporting interaction with adults (25%).

Poland

The areas where Polish **mainstream teachers** expressed the lowest levels of confidence (< 30%) were:

- Supporting sensory needs (16%)
- Supporting turn-taking (20%)
- Managing child's anxiety (21%)
- Responding to emotions/tantrums (21%)
- Supporting motor skills (22%)
- Supporting spontaneous expressive communication (23%)
- Accommodating child's preferences of being/playing alone (26%)
- Working in partnership with families (27%)
- Supporting understanding of body language/facial expression (27%)
- Supporting interaction with adults (29%)
- Understanding, managing and utilising special interests (29%)
- Responding to literal thinking (29%).

Polish **special education teachers** expressed least confidence (< 30%) in the following domains.

- Managing challenging behaviour (8%)
- Supporting sensory needs (13%)
- Supporting learning and accessing the curriculum (21%)
- Supporting motor skills (21%)
- Supporting turn-taking (25%).

Croatia

Croatian **mainstream** expressed confidence levels below 30% with regard to only one area:

- Supporting turn-taking (20%).

Croatian **special school teachers** did not express confidence levels below 30% in any of the identified areas. The area where special school teachers expressed least confidence was in managing anxiety (37%).

TABLE 19 Mainstream and special school teachers' confidence: North Macedonia

NORTH MACEDONIA CONFIDENCE IN SUPPORTING CHILDREN WITH ASD	MAINSTREAM			SPECIAL		
	Unconfident	Confident	I don't know	Unconfident	Confident	I don't know
Understanding causes of autism	10 35,7%	5 17,9%	13 46,4%	12 26,7%	8 17,8%	21 46,7%
Understanding the child's perspective	10 35,7%	8 28,6%	9 32,1%	6 13,3%	21 46,8%	17 37,8%
Working in partnership with families of children with ASD	7 25%	12 42,9%	9 32,1%	11 24,4%	20 44,4%	14 31,1%



Working collaboratively / Cooperating with teachers and other professionals working with children with ASD	3 10,7%	12 42,9%	13 46,4%	3 6,7%	19 42,2%	20 44,4%
Supporting receptive communication of children with ASD	8 28,6%	8 28,6%	12 42,9%	6 13,3%	16 35,6%	21 46,7%
Supporting understanding of body language / facial expression	7 25%	9 32,1%	12 42,9%	4 8,9%	23 51,1%	18 40%
Supporting spontaneous expressive communication	8 28,6%	8 28,6%	12 42,9%	8 17,8%	19 42,2%	16 35,6%
Supporting interaction with adults	8 28,6%	8 28,6%	12 42,9%	9 20%	11 24,4%	24 53,3%
Supporting peer relationships	7 25%	9 32,1%	12 42,9%	8 17,8%	14 31,1%	22 48,9%
Supporting social understanding	8 28,6%	6 21,4%	14 50%	8 17,8%	14 31,1%	20 44,4%
Managing challenging behaviour	8 28,6%	8 28,6%	12 42,9%	6 13,3%	18 40%	21 46,7%
Supporting learning and accessing the curriculum	4 14,3%	7 25%	17 60,7%	3 6,7%	16 35,6%	26 57,8%
Establishing routines	4 14,3%	9 32,1%	15 53,6%	6 13,3%	19 42,2%	18 40%
Supporting transitions (dealing with change)	8 28,6%	6 21,4%	14 50%	9 20%	20 44,4%	15 33,3%
Understanding, managing, and utilizing special interests	8 28,6%	9 32,1%	11 39,3%	7 15,5%	18 40%	19 42,2%
Expecting / Preparing for / Responding to rigid or literal thinking	7 25%	7 25%	14 50%	7 15,6%	15 33,3%	22 48,9%
Supporting sensory needs	7 25%	11 39,3%	10 35,7%	7 15,6%	17 37,8%	20 44,4%
Supporting motor skills	7 25%	11 39,3%	10 35,7%	9 20%	17 37,8%	18 40%
Supporting turn-taking	7 25%	10 35,7%	11 39,3%	9 20%	15 33,3%	20 44,4%
Accommodating to the preference of working/playing alone	7 25%	8 28,6%	13 46,4%	8 17,8%	21 46,7%	16 35,6%
Managing / Responding to high levels of anxiety	12 42,9%	9 32,1%	7 25%	13 28,9%	17 37,8%	15 33,3%
Responding to displaying inappropriate emotions (e.g. tantrums)	11 39,3%	9 32,1%	8 28,6%	8 17,8%	20 44,4%	17 37,8%

TABLE 20 Mainstream and special school teachers' confidence: Poland

POLAND CONFIDENCE IN SUPPORTING CHILDREN WITH ASD	MAINSTREAM			SPECIAL		
	Unconfident	Confident	I don't know	Unconfident	Confident	I don't know
Understanding causes of autism	33 35,1%	31 33%	30 31,9%	8 33,3%	16 66,7%	0
Understanding the child's perspective	44 46,8%	29 30,9%	21 22,3%	8 33,3%	16 66,7%	0
Working in partnership with families of children with ASD	34	25	35	8	16	0



	36,2%	26,6%	7,2%	33,3%	66,7%	
Working collaboratively / Cooperating with teachers and other professionals working with children with ASD	31 33%	36 38,3%	26 27,7%	8 33,3%	16 66,7%	0
Supporting receptive communication of children with ASD	26 27,7%	33 35,1%	35 37,2%	8 33,3%	12 50%	4 16,7%
Supporting understanding of body language / facial expression	32 34%	25 26,6%	37 39,4%	8 33,3%	12 50%	4 16,7%
Supporting spontaneous expressive communication	37 39,4%	21 22,3%	36 38,3%	8 33,3%	12 50%	4 16,7%
Supporting interaction with adults	35 37,2%	27 28,7%	32 34%	12 50%	12 50%	0
Supporting peer relationships	36 38,3%	34 36,2%	24 25,5%	12 50%	12 50%	0
Supporting social understanding	38 40,4%	33 35,1%	23 24,5%	15 62,5%	9 37,5%	0
Managing challenging behaviour	30 31,9%	33 35,1%	30 31,9%	22 91,7%	2 8,3%	0
Supporting learning and accessing the curriculum	33 35,1%	37 39,4%	24 25,5%	11 45,8%	5 20,8%	8 33,3%
Establishing routines	32 34%	33 35,1%	28 29,8%	16 66,7%	8 33,3%	0
Supporting transitions (dealing with change)	30 31,9%	31 33%	33 35,1%	12 50%	8 33,3%	4 16,7%
Understanding, managing, and utilizing special interests	32 34%	27 28,7%	35 37,2%	12 50%	12 50%	0
Expecting / Preparing for / Responding to rigid or literal thinking	8 29,8%	27 28,7%	38 41,5%	12 50%	12 50%	0
Supporting sensory needs	36 38,3%	5 16%	43 45,7%	19 79,2%	3 12,5%	2 8,3%
Supporting motor skills	33 35,1%	21 22,3%	39 41,5%	15 62,5%	5 20,8%	4 16,7%
Supporting turn-taking	34 36,2%	19 20,2%	40 42,6%	12 50%	6 25%	6 25%
Accommodating to the preference of working/playing alone	36 38,3%	24 25,5%	34 36,2%	11 45,8%	9 37,5%	4 16,7%
Managing / Responding to high levels of anxiety	37 39,4%	20 21,3%	37 39,4%	11 45,8%	9 37,5%	4 16,7%
Responding to displaying inappropriate emotions (e.g. tantrums)	37 39,4%	20 21,3%	37 39,4%	16 66,7%	8 33,3%	0

TABLE 21 Mainstream and special school teacher' confidence: Croatia

CROATIA CONFIDENCE IN SUPPORTING CHILDREN WITH ASD	MAINSTREAM			SPECIAL		
	Unconfident	Confident	I don't know	Unconfident	Confident	I don't know
Understanding causes of autism	11 31,4%	12 34,3%	9 25,7%	12 17,6%	43 63,2%	13 19,1%



Understanding the child's perspective	10 28,6%	18 51,4%	7 20%	7 10,3%	48 70,6%	13 19,1%
Working in partnership with families of children with ASD	7 20%	19 54,3%	9 25,7%	6 8,8%	50 73,5%	12 17,6%
Working collaboratively / Cooperating with teachers and other professionals working with children with ASD	5 14,3%	24 68,6%	6 17,1%	1 1,5%	59 86,8%	8 11,8%
Supporting receptive communication of children with ASD	6 17,1%	17 48,6%	12 34,3%	6 8,8%	47 69,1%	15 22,1%
Supporting understanding of body language / facial expression	9 25,7%	16 45,7%	10 28,6%	6 8,8%	49 72,1%	13 19,1%
Supporting spontaneous expressive communication	9 25,7%	13 37,1%	11 31,4%	6 8,8%	50 73,5%	12 17,6%
Supporting interaction with adults	7 20%	15 42,9%	13 37,1%	5 7,4%	48 70,6%	15 22,1%
Supporting peer relationships	6 17,1%	15 42,9%	14 40%	5 7,4%	47 69,1%	16 23,5%
Supporting social understanding	5 14,3%	14 40%	16 45,7%	5 7,4%	47 69,1%	16 23,5%
Managing challenging behaviour	11 31,4%	15 42,9%	9 25,7%	10 14,7%	46 67,6%	12 17,6%
Supporting learning and accessing the curriculum	7 20%	18 51,4%	10 28,6%	5 7,4%	56 82,4%	6 8,8%
Establishing routines	4 11,4%	17 48,6%	14 40%	1 1,5%	55 80,9%	11 16,2%
Supporting transitions (dealing with change)	11 31,4%	14 40%	10 28,6%	7 10,3%	47 69,1%	13 19,1%
Understanding, managing, and utilizing special interests	10 28,6%	16 45,7%	9 25,7%	8 11,8%	44 64,7%	15 22,1%
Expecting / Preparing for / Responding to rigid or literal thinking	7 20%	14 40%	14 40%	7 10,3%	45 66,2%	15 22,1%
Supporting sensory needs	6 17,1%	15 42,9%	14 40%	12 17,6%	44 64,7%	11 16,2%
Supporting motor skills	7 20%	15 42,9%	13 37,1%	6 8,8%	52 76,5%	9 13,2%
Supporting turn-taking	10 28,6%	7 20%	18 51,4%	12 17,6%	39 57,4%	16 23,5%
Accommodating to the preference of working/playing alone	11 31,4%	16 45,7%	8 22,9%	5 7,4%	50 73,5%	11 16,2%
Managing / Responding to high levels of anxiety	18 51,4%	11 31,4%	6 17,1%	22 32,4%	25 36,8%	20 29,4%
Responding to displaying inappropriate emotions (e.g. tantrums)	12 34,3%	12 34,3%	11 31,4%	18 26,5%	38 55,9%	11 16,2%

6.2.7 Teachers' training needs

There was high agreement that teachers would benefit from training (n = 261; 89%). Support for training was highest in North Macedonia (96%) and lowest in Poland (83%) (see TABLE 22).



With regard to what training should comprise (see TABLE 23), training with regard to theoretical information was identified as least important, but was still seen as relevant by more than half of teachers. This is supported by the low levels of confidence regarding e.g. the causes of autism identified above. Practical strategies, particularly those relevant to teachers' own settings were identified as of high importance, as was supervision and the acquisition of tools and resources. Teachers expressed a strong desire to undertake self-experiential learning.

TABLE 22 Teachers who feel they would benefit from training

BENEFIT FROM TRAINING	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
Yes	261	88,8	69	94,5	98	83,1	94	91,3
No	5	1,7	2	2,7	2	1,7	1	1,0
I don't know	26	8,8	2	2,7	18	15,3	6	5,8

TABLE 23 Areas of training identified as important

RELEVANT AREAS OF TRAINING	ALL		NORTH MACEDONIA		POLAND		CROATIA	
	N	%	N	%	N	%	N	%
Theoretical information	156	53,1	37	50,7	69	58,5	50	48,5
Practical strategies in general	245	83,3	63	86,3	94	79,7	88	85,4
Practical strategies relevant to my setting	254	86,4	64	87,7	93	78,8	97	94,2
Supervision	242	82,3	58	79,5	95	80,5	89	86,4
Self-experiential training	263	89,5	64	87,7	97	82,2	102	99,0
Tools and resources	247	84,0	62	84,9	91	77,1	94	91,3



7 Focus groups

7.1 Methods

A focus group interview protocol was developed to consult with groups of teachers from both mainstream and special educational settings. This tool was also submitted for ethical approval by the University of Northampton and piloted within Croatia, North Macedonia and Poland in November 2018.

Two focus groups were conducted in each country, one comprising of specialist teachers from mainstream settings and another one involving specialist teachers from the special education system.

- *Croatia:* The mainstream system focus group comprised three Special Needs Coordinators in mainstream schools. Two participants had working experience with children with ASD for 15 years and one participant has got 5 years of working experience. The special education system focus group comprised four special education teachers who with children with ASD in a special system with experience in ASD of between 2-15 years.
- *North Macedonia:* Participants of focus groups in North Macedonia were as follows. The mainstream focus group comprised five special education teachers from mainstream schools with 2-8 years' experience of working with children with ASD. The special education focus group comprised six special education teachers, with 10-30 years' experience.
- *Poland:* Two focus groups were conducted in Poland. One comprised of 12 teachers of an integrated school in Cracow (4 primary school teachers, 4 teachers of particular subjects and 4 special teachers who cooperate with main teachers). The second focus group consisted of 30 teachers of children with ASD currently undertaking postgraduate studies in Cracow.

Research questions for the qualitative data were focused on getting insight into **issues and challenges** that specialist teachers experience during their work with children with ASD; **methods they use in their work** with children with ASD and **type of support** that **specialist teachers need** to support their work with children with ASD.

The results from qualitative data highlight the themes that are connected mainly with the challenges in working with children with ASD and the needs of specialist teachers for different types of support. These themes seem to be very important for the specialist teachers who were participants of the focus groups.

7.2 Results from focus groups in mainstream settings

7.2.1 Challenges in working with children with ASD and collaboration with others

The focus group participants experienced **challenges in their work with children with ASD** that relate to:

- specific intervention areas
- methods they use in working with children
- ways of supporting communication and social interactions of children
- organization of work activities during lessons and individualization of lessons
- and school environment organization.

Additionally, they experienced **challenges in collaboration with others**, specifically relating to challenges in:



- collaboration with teachers
- collaboration with other professionals, especially teaching assistants
- collaboration with parents of children with ASD.

In the first research question we were interested in finding out “What kind of issues and challenges do specialist teachers experience during their work with children with ASD?” The key issues and challenges are briefly presented in

TABLE 24 below, and further described in detail including direct quotes of participants, which establish the base for credibility in qualitative data analysis.

TABLE 24 Issues and challenges that specialist teachers experience during their work with children with ASD in Croatia, North Macedonia and Poland

THEME: CHALLENGES IN THE WORK OF SPECIALIST TEACHERS	
SUBTHEME: CHALLENGES IN WORKING WITH CHILDREN	
Intervention areas	Managing challenging behaviour (CRO, MAC, POL)
Methods to use	What methods to use in mainstream classes (CRO, MAC)
No clear criteria for inclusion	What child to include/or to not include in mainstream school (CRO)
	How to provide necessary kind of support in mainstream settings (MAC, CRO)
Organization and individualisation of lessons	Adapting lessons to the activity rhythm and child's needs (POL)
	Assessment of the educational process (POL)
	Including children with ASD in group-work activities (POL)
School environment organization	Non-adaptive school facilities and lack of quiet places (POL)
	High number of students in the classes (POL)
	Non-adaptive classroom environment regarding sensory needs (POL)
SUBTHEME: CHALLENGES IN COLLABORATION WITH OTHERS	
Collaboration with teachers	Need for teacher education/training (CRO, MAC, POL)
	How to prepare teachers to include children (CRO, POL)
	Teachers are under pressure (MAC)
	All responsibility for inclusion placed on SENCOs (MAC)
	High workload of SENCOs (CRO, MAC)
	Lack of teachers' preparation to work with children with ASD and unwillingness to take actions to raise their qualification (POL)
Collaboration with different professionals	Insufficient diagnostic and therapeutic skills of professionals (POL)
	Lack of ASD knowledge of school leadership (POL)
Collaboration with teaching assistants	Need for education/training of teaching assistants (MAC, CRO)
Collaboration with parents	High influence of parents on decision making (CRO, MAC)
	Parents are unrealistic and have high expectations (MAC)
	Lack of parents' engagement in the process of education and rehabilitation (POL)



a) Challenges in working with children with ASD in mainstream settings

Within intervention areas participants emphasized the **challenge in managing children's challenging behaviour**:

"Concretely, in my case, challenging behaviour, I think that this is the challenge for all of us. Mainly the teachers can't cope with this and they experience it as much more stressful then it really is." (Q1 CRO)

"I cannot handle because the child is constantly strolling in the classroom. If I try to catch him by the hand and sit him, he hits me." (Q1 MAC)

"The child is upset if the children laugh, he thinks they laugh at him and he turns into an aggressive character from a film. Teachers are afraid of him." (Q4 MAC)

"The problems I face are: aggression towards peers (beating, pushing, kicking), verbal aggression towards the teacher, self-aggression, screaming, howling, munching during the lesson, loud echolalias, sudden outbursts of anger." (Q12 POL)

In methods to use participants shared how they **do not have clear idea what methods to use in mainstream classes** to support individuals because children have very different needs.

"Well as I am in mainstream settings...there are more and more children on the spectrum that are integrated in. Now, there is a problem, I've had three of them till now, of course they are totally different." (Q3 CRO)

"I cannot apply anything; he is not in a special school. For each method special conditions are needed. I think." (Q6 MAC)

The participants also mentioned that the fact that children with ASD in mainstream settings have such diverse needs for support relates also to the fact that are **no clear criteria for the inclusion** of children with ASD in mainstream settings:

"We don't have criteria for the inclusion into mainstream settings. That means, a child could be nonverbal and without any alternative augmentative communication system developed but included into the mainstream system, or the child doesn't have the system for understanding communication and to communicate." (Q5 CRO)

"...we have to react as professionals and have clear criteria as specialist teachers, so that we can say which child can be included into mainstreams system, and which one cannot." (Q6 CRO)

Specialists teachers also noted that they ask themselves **what child to include/or not into mainstream settings** because some children have lower adaptive skills and are not independent so they really need a higher level of constant support and that **it is hard to provide this kind of support in the mainstream settings**.

"We have children who do not have any educational skills. They do not know how to go to the bathroom alone. I cannot do anything with them in that environment." (Q7 MAC)



“What is the line or boundary below which we can’t go and include a child into the mainstream system. This is the key question; what would be the benefit for the child and what would limit her/him, to what extent they will go into regressive forms of behaviour.” (Q4 CRO)

Another perceived **challenge in supporting the child** is the fact that some specialist teachers do not know **how to organize and individualise lessons**. They emphasized that the issue relates to the process of **adapting lessons to the activity rhythm and child’s needs**:

“Children with autism often cannot survive quietly for 45 minutes, they start many other activities, usually go around the classroom. You have to adapt to their individual rhythm.” (Q1 POL)

“Yes, but it is impossible in the classroom, especially if you do not have a supporting teacher. Besides, even his presence does not stop the child from running, for example. Suddenly, he stands up and begins to run around.” (Q2 POL)

Also identified were issues relating to the **assessment of students’ performance** –

“The issue of assessment is problematic. Students do not always understand why a student with ASD is treated individually.” (Q3 POL)

– and the fact that **group work is difficult for the child with ASD**.

“Some students with ASD find it difficult to work in a group that involves brainstorming. Pupils are happy with ideas, agree with each other or not. The intensity of noise during such a lesson is greater, which causes irritability and outbursts of anger in students with ASD. Although I do not force them to work in a group and let them do their own tasks.” (Q4 POL)

When participants talked about issues regarding **school environment organization**, they emphasized the problems in **non-adaptive school buildings and facilities and the lack of quiet places**:

“There is also problem with space. There is usually no place where the child can calm down, rest.” (Q7 POL)

“Usually all rooms and offices are occupied and there is no room [for anything], let alone create a place for individual work.” (Q8 POL)

The **number of students in the classes** presents another challenge:

“However, schools should be adapted in-house. Reduce the number of people in classes where there are students with autism up to a maximum of fifteen, increase the space in classes so that you can work not only at the desk.” (Q9 POL)

A further challenge could be the **non-adaptive classroom environment regarding sensory needs**:



“However, the problem for students may be an excess of stimuli. Especially the ringtones can be a very disturbing element.” (Q10 POL)

“Children are sometimes afraid to enter the room at all. I wonder what such an ideal learning space should be. Certainly, typical schools do not meet the conditions. Excessive stimuli..., bells, etc.” (Q11 POL)

“Too much noise in the PE lesson – loud cheering, dribbling balls, etc., can lead to a squeaking, screaming, running out of lessons, crying. A lot of diversity and variability of emerging situations is difficult to understand for a child with ASD.” (Q12 POL)

b) Challenges in working with others in mainstream settings

Participants also recognized the **challenges in collaboration with others**, specifically in their experience in collaboration with teachers, parents and teaching assistants.

Talking about the **challenges in collaboration with teachers**, they emphasized that there is a great **need for teachers’ education/training** because teachers do not have a clear idea or knowledge of how to support children with ASD in mainstream classes.

“The worst problem, generally, is that...we have to explain every single part, in case of schedule for example, so visual support for the child and some changes of schedule that happen...I mean, we have to teach that teacher how to use this.” (Q6 CRO)

“...the huge problem is that teachers don’t understand us at all, you can tell her once, twice or more...this is the key problem in mainstream school, SENCO is responsible for everything...” (Q7 CRO)

“Teachers often also have a misconception about autism and attribute a set of difficult behaviours to all children. In addition, for example, my management believes that I have gone unnecessarily to study in the field of autism, it is better to end ‘specialist’ pedagogy.” (Q5 POL)

A concern was expressed in the issue of **how to prepare teachers to include children** into the education process.

“The work with teachers is the biggest problem. How to prepare them? How to teach them? What’s the appropriate approach to the child and how to integrate children in the class so that they could feel comfortable, and that the other children feel safe and accept the child.” (Q8 CRO)

“... it is also difficult for me that my student does not finish his activities, but he would like to repeat it all the time. Besides, I often cannot arouse his interest in what I have prepared for him. He comes with his idea, a story to tell and it is difficult for him to stop his own activities.” (Q6 POL)

Teachers are **under pressure** because they have too many obligations and have no knowledge or skills.

“Yes, teachers need to be educated. But I do not even know if they will accept it. They have many children in the class and many requests from the ministry. They do not want additional pressure.” (Q8 MAC)

All provision of support for children is then placed on the **role of the SENCO in the mainstream settings**:



"We, the special educators, it is the hardest for us. It's hard to get around." (Q9 MAC)

Following these identified challenges of teachers of feelings of low competence in supporting students and being overwhelmed, specialist teachers mentioned that they have to consequently **prepare all materials for teachers to work with children with ASD.**

"A particular problem is the teachers in the subject teaching (from the 6th grade upwards). They have resistance because of the complex program they teach. They complain: We do not have conditions and materials for working with those children." (Q10 MAC)

"Still, we have a problem when we have to prepare all the materials, even teachers got the instructions how to do it and we have showed them visual support materials, and pictures and so on, but they didn't do this because this is some extra engagement for them." (Q9 CRO)

Moreover, the participants emphasized the **lack of teachers' preparation to work with students with ASD and their unwillingness to take actions to raise qualifications in this area.**

"However, the lack of knowledge is still a problem. If the teachers have a bit of intuition, that is something, at least. I work in a public school and unfortunately, I notice that for many people the solution to the problem would be simply to get rid of the problem, not to gain knowledge and skills." (Q17 POL)

Other professionals as well as school leadership play a very important role in the implementation of quality support for children with ASD, which was recognised by the participants pointing out **insufficient assessment and intervention skills of professionals.**

"Barriers are also often created by directors who, in accordance with the spirit of integration, accept a child, but do not understand their needs. Responsibility for the student's education then usually falls on the shoulders of the only specialist who happens to be at school and is supposed to know everything, of course." (Q18 POL)

The lack of knowledge of school leaders presented an issue as well.

"We try to work in teams, but a good team must be created by qualified specialists, and most of us are just at the stage of learning the basics." (Q14 POL)

"A good assessment is important, and these skills are usually lacking even for special educators." (Q15 POL)

"Teachers are often throwing children into the office because they cannot cope with them in class." (Q16 POL)

Challenges in collaboration with parents are related to **parents' high influence on decision making** for inclusion of a child into the mainstream settings. That they visit all different professionals until they achieve what they consider best for their child.



“What is a huge problem is that parents will go from one professional to another, till they get what they want. On the other hand, professionals are not equal in suggestions and can react differently. Inclusion is strongly promoted from the faculty level for every child, and that is why this could become a huge problem.” (Q11 CRO)

“In our country, children are enrolled at the request of the parent. If he is a businessman or on some function, all pressures are made for the child.” (Q11 MAC)

Some **parents may have unrealistic expectations** of the child.

“There are unrealistic parents, we cannot settle with them at all.” (Q12 MAC)

“Parents may require the child to participate in various extra-curricular activities. It bothered him...” (Q13 MAC)

Participants also reported **lack of parental engagement in the process of education and rehabilitation**.

“I just miss teamwork like that with my parents. I rather feel the constant pressure of their expectations than help.” (Q19 POL)

“Parents often transfer all responsibility to the school. We are supposed to know what to do. However, they do not introduce our proposals into the home environment.” (Q20 POL)

The issue in collaboration with others is also connected with **experiences in working with teaching assistants** in mainstream classes. Lack of knowledge and a **need for their education/training** in the field of ASD have been identified as main challenges. If teaching assistants have any knowledge, it is very basic without practical skills of how to organize or provide support.

“The same is for the lack of the education of teaching assistants... that assistant, she didn’t pass any kind of education, not only basic one; even this one is just on minimum of the basic knowledge...Even with that basic training, we are now focusing on the problem with the teaching assistants, but definitely they are not ready for this area of support. We had such a hard period last year in our unit because they didn’t have any knowledge.” (Q13 CRO)

“The new regulations allow to employ anybody as an assistant. They do not know anything. Perhaps some of them do harm.” (Q14 MAC)

7.2.2 Type of support specialist teachers need to support their work with children with ASD

Challenges which were described in the previous section indicate some of the needs of specialist teachers. However, in this section, training needs perceived by the specialist teachers themselves are discussed. When we asked the participants about the type of support they need to facilitate their work with children with ASD they expressed the need for:

- **specific methods in working** with children including **methods they use** and recommend as helpful



- **knowledge and skills regarding specific intervention areas**
- **support to have better communication and useful collaboration with teachers and teaching assistants as well as with parents of the children.**

In the second research question we were interested in finding out: **“What type of support specialist teachers need to support their work with children with ASD?”**

Key issues and challenges identified in the mainstream system are briefly presented in TABLE 25 below, and further described in detail including direct quotes of participants establishing the base for credibility in qualitative data analysis.

TABLE 25 Type of support that specialist teachers from mainstream system need to support their work with children with ASD in Croatia, North Macedonia and Poland

THEME: TYPE OF SUPPORT SPECIALIST TEACHERS NEED TO SUPPORT CHILD WITH ASD	
SUBTHEME: NEEDS FOR SPECIFIC METHODS IN WORK	
Strategies for teaching and evaluation (MAC)	
Individualization of teaching methods (CRO)	
Adaptation to child’s needs and functioning (POL)	Adapt the content and methods to address cognitive styles
Specific methods (POL)	Autogenic training
	Sensory integration
	Visual supports
Methods specialist teachers use and recommend as helpful (POL)	Cognitive-behavioral method
	Aggression replacement training
	Relaxation and storytelling
SUBTHEME: NEEDS IN SPECIFIC INTERVENTION AREAS	
Strategies for dealing with challenging behaviors (CRO, MAC, POL)	
Strategies for teaching social skills (CRO, POL)	
Strategies to provide inclusion in group activities (MAC)	
Strategies to create individualized plans (POL)	
SUBTHEME: NEEDS IN COLLABORATION WITH OTHERS	
Whole-school approach / Holistic and coherent approach for working with children with ASD (POL)	
Strategies for communication with parents (MAC, CRO)	
How to include parents in development of programme for child (POL)	
Strategies for collaboration with teachers	Counselling teachers how to work with the child (CRO)
	Teacher’s participation in the development of the programme for child (POL)

a) Needs for specific methods in work

Participants need skills and knowledge regarding **strategies for teaching and evaluation.**



"We need training, we do not know anything about these children. We do not know how to evaluate them, and we often ask for the best grades for them." (Q15 MAC)

"We need methods for monitoring and evaluation. We made some, but they do not always work." (Q16 MAC)

Specialist teachers would like to learn **how to individualize the teaching methods** for children with ASD.

"How to make an individualization and how to prepare the materials, I miss that kind of knowledge." (Q15 CRO)

Participants also mentioned that it is very important to have a **holistic and coherent approach for working with children with ASD**.

"It is necessary to act in a coherent way, so in a given institution children should be managed in accordance with one behavioural approach, for example; and this requires everyone to have at least the basics." (Q21 POL)

"However, knowledge is changing about this group of people and teachers working with students with ASD should be able to train as part of a regular cycle with access to new methods and ways of working." (Q22 POL)

"If a child with autism or any other disability is to appear at school, trainings for the whole team should take place. A good solution would be a meeting with teachers – specialists, therapists, who would guide thinking about a given disability." (Q23 POL)

In addition, participants mentioned the **methods they use themselves and which they recommend as useful**, such as **cognitive-behavioural methods, aggression replacement training, and relaxation and storytelling with young children**.

"I often work with the cognitive-behavioural method, I apply elements of social skills training in a group form. Students concentrate on getting to know their feelings, recognizing them and practicing behaviour in difficult situations. They learn how to react to their own and other emotions, how to communicate with other people and cooperate in a group." (Q24 POL)

"I also recommend aggression replacement training." (Q25 POL)

"I often use relaxation as well as fairy-tale therapy because I work with younger children." (Q27 POL)

Some specialist teachers identified their training needs very specifically, for example to learn about **visual support**:

"I would like to participate in a training that would show me how to use visualization." (Q31 POL)

They emphasized the **willingness to learn some new methods** –

"I would like to learn Schultz's autogenic training." (Q28 POL)



– and **to improve the skills** in some methods which they are familiar with such as **sensory integration**.

"I would like to improve my knowledge and skills in the field of sensory integration. Maybe not necessarily the entire course, but at least some elements that would help me organize the educational environment better." (Q29 POL)

They considered important to make **adaptations according to the child's needs and functioning** through **adaptation of the content and methods of delivery based on the specifics of cognitive functioning** of a child with ASD in a mainstream classroom.

"I think it is also very important to think about how knowledge should be presented, having a person with autism in the class who takes everything literally. In religion, the lady said that the woman must have children, because it is related to her role and opens her way to heaven. After the lesson, Paulina asked me if I had children and when she learned that I did not, she said that I had to do something quickly because I would go to hell. She still had some more time, but I have to hurry up. She was really terrified." (Q35 POL)

b) Needs in specific intervention area

When specialist teachers talked about needs for knowledge and skills in specific intervention areas, first of all they mentioned **strategies for dealing with challenging behaviours** as this is very important to them.

"Alright, challenging behaviour, this means some concrete strategies." (Q16 CRO)

"We need to know how to deal with children when they are stressed in a mainstream school. I do not know how to deal with others around, it is difficult to explain it to teachers." (Q16 MAC)

"[The teacher] applies a behavioural method. The student must know exactly what is approved in his behaviour and what he must work on." (Q26 POL)

"I'm interested in techniques to deal with difficult behaviours, especially with anger." (Q30 POL)

Another identified area of training need were **strategies for learning social skills**.

"Social Skills Training – this is absolutely necessary knowledge for the teacher, as well as the basics of sensory integration. A basic course in both would be necessary for all teachers." (Q33 POL)

"...connected with the social strategies...how can we approach a child." (Q17 CRO)

Focus group participants also emphasized the need for **strategies to enhance inclusion of students in group activities**:

"How to involve the child in group activities, in group sport, [when he/she] does not manage even with my support." (Q20 MAC)

They wanted to improve their skills in how to **create an individualized plan** for a child:



“Yes, but the course is not enough, you have to act consistently. There is no idea how. We do not develop such joint action plans.” (Q34 POL)

c) Needs in collaboration with others

Participants recognised their need for **strategies for communicating with parents** because collaboration with them presents a big issue for the quality of support that children can receive.

“As long as the parents are the main decision makers, we cannot do anything.” (Q21 MAC)

Moreover, they emphasized that specialist teachers need to **include parents in the development of work programmes** for the child because they play a very important role in the process of supporting the child.

“Parents’ participation in creating a student’s programme is necessary. I think that they have to choose goals, because then they will also be important for them.” (Q36 POL)

Participants also mentioned the need for support in **collaborating with teachers** regarding **advising teachers how to work with children with ASD**.

“This means, to have this part connected with collaboration with teachers and with parents, and about those specific methods. And that we advise teachers on how to work with the children in which way.” (Q19 CRO)

Teachers’ participation in the development of the programmes for the child was identified as another training need area.

“Lack of preparation of teachers and often the feeling that they lack the competences means that they do not engage in creating programmes, because as they say they ‘adapt’, but then you have to accept responsibility for the implementation of the programme and it turns out that only the special educator is responsible.” (Q37 POL)

7.2.3 Summary of focus group data from mainstream settings

The findings from focus group reflect mainly the challenges that specialist teachers experience in their work with children with ASD which are related to dealing with challenging behaviour of the child and managing it, lack of education of teachers and teaching assistants, as well as other professionals, which impacts on the low level of quality of support for children with ASD in mainstream settings.

a) Skills and strategies.

Participants mentioned that they do not know what methods to use in the mainstream system and how to use them. They also feel that they lack skills in how to adapt lessons, make individualizations and conduct assessment. Participants are interested in learning new methods as well as improving their skills in methods they are already familiar with, mentioning specific methods such as autogenic training, sensory integration or visual support systems. When participants talked about their needs for support in working with children with ASD they emphasized as the most important to improve their knowledge and skills in how to teach children, how to evaluate their achievement



and how to individualise and adapt lessons. When they provide support for the child, they think it should be holistic and coherent within the setting, so that they could support all relevant areas for the child's well-being.

b) Environment.

Environmental conditions in mainstream settings are not adapted to the needs of children with ASD. There is a lack of quiet spaces for calming down, classes are too big with too many distractors opposing the child's sensory needs.

c) Criteria for inclusion and decision-making.

Besides that, clear criteria for inclusion of children with ASD in mainstream settings are missing, resulting in the parents being the ones who influence the decision-making for inclusion even if the child is not ready for a mainstream setting. On one hand, some parents are not involved enough in the process of supporting the child, and on the other hand, some of them are unrealistic, have high expectation of their children, and place demands on teachers and professionals. Thus, collaboration with teachers and parents presents a real challenge for specialist teachers.

d) Teaching assistants.

Teaching assistants who should be a useful support in the mainstream settings also need education and training to improve their skills in the field. These are the reasons why most of the specialised or adapted activities in mainstream settings depend on the SENCOs, who are expected to prepare all the materials for the teachers and to organise support for the child, as they are considered and perceived as the only responsible and competent staff for these tasks.

e) Specific challenges. They feel they need support in managing challenges in specific intervention areas, such as strategies for dealing with challenging behaviour, supporting social skills, or more in general, enhancing the quality of inclusion in mainstream settings. They would like to build their skills to motivate teachers to support children with ASD through effective counselling processes including peer-training of how to provide support, develop programmes and work with children with ASD. Developing good communication skills for collaboration with parents was identified as a very important need, so that specialist teachers could include parents more successfully in the support provided for children and in the development of their individualised programmes.

7.3 Results from focus groups in special schools

7.3.1 Challenges in work with child and collaboration with others

The focus group participants experienced **challenges in working with children with ASD** that are, similarly to mainstream settings, related to **specific intervention areas, communication and social interactions** of children. Furthermore, challenges in the special system are related to the **complex needs of children with ASD**, and to the need for **organization of education and learning environment** for children in the special system.

Furthermore, participants from the special system experienced **challenges in collaboration with others** and that specifically means that they perceived challenges in **collaboration with other professionals** and in **collaboration with parents** of children with ASD in the special system.

In the first research question we were interested in finding out **“What kind of issues and challenges specialist teachers experience during their work with children with ASD?”** and those key issues and challenges from the special system are briefly presented in TABLE 26 below.



TABLE 26 Issues and challenges that specialist teachers from special schools experience during their work with children with ASD in Croatia, North Macedonia and Poland

CHALLENGES IN WORK OF SPECIALIST TEACHERS	
THEME: CHALLENGES IN WORKING WITH CHILDREN	
Intervention areas	Managing challenging behaviour (CRO, MAC)
	Complex needs of children requiring support (CRO, POL)
	Communication and social interactions (POL)
Organization of education (POL)	Lack of opportunity for children to learn in natural situations
	Expanding and modifying behavioural schemes
Organization of learning environment (POL)	Non-adaptive buildings and facilities, lack of quiet spaces
	Non-adaptive classroom environment regarding sensory needs
The problem of choosing the right method (POL)	
THEME: CHALLENGES IN COLLABORATION WITH OTHERS	
Collaboration with other professionals (POL)	Cooperation with medical doctors (POL)
	Cooperation with psychological centres and clinics (POL)
Collaboration with parents	Parents are unrealistic and have high expectations (MAC)
	Cooperation towards goal achievement (POL)
	How to involve and motivate parents (POL)

Specialist teachers from the special system emphasized, as did teachers in mainstream settings, that regarding intervention areas they consider difficult to **manage challenging behaviour of children with ASD**.

"Children are very tough and quickly get upset." (Q1 MAC)

"We have aggressive children, we are not trained to deal with them." (Q2 MAC)

"All day we calm the children down and we cannot do anything else." (Q3 MAC)

"How to protect other children from an aggressive child." (Q4 MAC)

"I have a problem with children's challenging behaviour, I would say in the most cases, children develop aggression during support or if we don't meet their needs instantly their behaviour is going to become aggressive like beating themselves, both auto-aggression and aggression." (Q1 CRO)

Specialist teachers also emphasized that challenges in intervention areas relate to **complex child's needs for support**:

"I agree, and this is where the diagnosis comes from. In the case of "pure" autism, there is already a problem with a good interdisciplinary diagnosis, and when we have a complex disability, the matter is even more complicated." (Q7 POL)

"I feel these problems too." (Q8 POL)



"In my concrete case there is one girl, besides the ASD diagnosis she has got cancer on hypophysis, and she is in puberty ...she has got such a strong and fast hand movement, that hurts me just when I look at her ... she has got such strong willingness for the movement so this cannot be explained." (Q2 CRO)

Complex needs are challenging especially because specialist teachers are not sure about the reason of the behaviours and they not know how to deal with them or how to prevent them. Specialist teachers from the Polish special system emphasized that their **challenge in work with child is communication and social interactions** of the child. The biggest issues regarding communication and social interactions for them are **child's anxiety in social interactions**.

"Their difficulties in dealing with others is a difficulty for us also as a human being. Sometimes I think I just feel sorry for them. They do not have friends, but also what will happen in the future." (Q1 POL)

"Yes, you are right. They achieve small social skills, but do not overcome that barrier that allows them to function well. Perhaps overcoming fear is an option." (Q2 POL)

Teachers wondered **how to create possibilities for children to establish contacts and to learn about social interactions**.

"I agree that for us it is not only a problem, but a challenge. What to do to overcome these fears in the child?" (Q3 POL)

"Now I think that the child's resource is in this difficult situation but the willingness to contact, and the challenge to facilitate the child's contact. In this way, they can only teach each other." (Q4 POL)

Some other challenges in direct work with children from the Polish focus group related to **organization of education for the child** such as **providing opportunities to learn in natural situations** and transferring knowledge from the classroom into everyday activities.

"Most of the difficulties result from the inability to teach behaviour in a specific situation, in real life. We are used to working with abstract pictures and stories at schools. Pictures could be. But later you have to go out with this new skill to people and real-life situations." (Q9 POL)

"One should start with [changing the parental] refusals. We teach something at school, and then we show parents how to move it home. But usually they are not willing to cooperate in the process of transforming the theoretical school knowledge to more practical exercises at home. And that's impossible. School is to be at school." (Q10 POL)

Another area of challenges in Polish special schools included **organization of the learning environment** which was perceived as a non-adaptive classroom environment regarding sensory needs of children with ASD.

"My students have big problems with the processing of stimuli, most of them also have a diagnosis of intellectual disability. Although the school seems adapted, we get lost the excess of everything." (Q12 POL)

"I believe children must be desensitized. There is no world, no sounds, so you have to prepare them." (Q13 POL)



“It is crucial to introduce gradual elements rather than throwing the child into chaos.” (Q14 POL)

Furthermore, the challenge for the specialist teachers in Polish special system relates also to the problem of **choosing the right method in working** with a child which means that every child needs some special implementation of certain method and that specialist teachers have to have education in the field but also a lot of practical experience.

“And I think that there are no ideal methods for children with autism. You must choose what is best for your child, simply. It is also important that the person using the method knows it not only from books but has undergone appropriate training and deepened their skills in this area.” (Q25 POL)

“I agree with you. I am a therapist of the biofeedback method and I use it in the therapy of children with ASD, but I do not assume that it works for all and that it is a cure for everything. Sometimes I manage to stabilize the activity of fast waves and in cooperation with an SI therapist to overcome the problem with hyperactivity, and sometimes nothing goes at all.” (Q26 POL)

Furthermore, the reported **challenges in collaboration with others in the special system** are based on the experiences in collaboration with parents of children with ASD and with other professionals.

When specialist teachers discussed the **challenges in collaboration with other professionals**, they mentioned the challenges in collaboration with psychological centres and clinics in Polish special system, regarding the **diagnosis process** and **sharing documents and ideas about the child**.

“Diagnoses are often imprecise or incomplete. It's difficult to start a job based on it.” (Q17 POL)

“Our contacts with clinics are limited to the exchange of documents, and these should be joint actions, ideas, solutions.” (Q18 POL)

Collaboration with medical doctors feels insufficient too.

“Many students remain after the care of not only neurologists, but also psychiatrists. Cooperation with them is almost non-existent, and it is necessary to, for example, to design a therapy, or to know what the effects of drugs may be.” (Q16 POL)

Challenges in collaboration with parents are related to **parents' motivation to participate actively** in supporting their child together with the specialist teachers.

“However, I miss cooperation with my parents. They are involved when the children are small, and then usually their enthusiasm passes.” (Q19 POL)

“I will say that they often even bother you. They do something their own way, or they just do not want to continue their exercise. It is difficult to even encourage them. They develop some patterns and stick to it.” (Q20 POL)

“I also think that parents of older children are more difficult to get involved. They get used to, for example, some non-functional scheme and are afraid of change. How to motivate them to cooperate, to [encourage their] willingness to act. However, I miss a family care system.” (Q21 POL)



Also, it is challenging when **parents are not cooperative** and have personal **unrealistic expectations** from the child and from the professionals.

“Very often parents don’t want to listen to professionals. As parents they want the best for their child and they know best what is good for them, but professionals have some other perception about what would be best for the child and look at this from another point of view.” (Q3 CRO)

“We have many unrealistic parents and we cannot fight them. In our country they are always right.” (Q5 MAC)

7.3.2 Type of support specialist teachers need to support their work with children with ASD

Participants were talking about their **needs for specific methods in work** to support children with ASD and about needs for better **knowledge and skills regarding specific intervention areas** as well as needs to develop better **collaboration with parents** of the children with ASD and with **other professionals**.

In the second research question we were interested in finding out **“What type of support specialist teachers need to support their work with children with ASD?”** and the type of support they recognized as mostly needed are presented in TABLE 27 below.

TABLE 27 Type of support that specialist teachers from special system need to support their work with children with ASD in Croatia, North Macedonia and Poland

TYPE OF SUPPORT SPECIALIST TEACHERS NEED TO SUPPORT CHILD WITH ASD	
THEME: NEEDS FOR SPECIFIC METHODS IN WORK	
Strategies for ABA (MAC, CRO, POL)	
Strategies for assistive technology (MAC, CRO, POL)	
Strategies for a sensory-based approach (MAC, CRO, POL)	
THEME: NEEDS IN SPECIFIC INTERVENTION AREAS	
Strategies for managing challenging behaviours (CRO, MAC, POL)	
Strategies for supporting social understanding and social skills (CRO, MAC, POL)	
Prevention of organically conditioned behaviour (CRO)	
Strategies for assessment of learning (POL)	
THEME: NEEDS IN COLLABORATION WITH OTHERS	
Collaboration with parents	Strategies for communication with parents (MAC, CRO)
	Training for parents (POL)
	Parental engagement in work related to organizing school environment for the child (POL)
Collaboration with other professionals (POL, CRO)	Supervision and support groups (POL)
	Regular meetings of different professionals (POL)



a) Needs for specific methods in work

Participants from the special system in all countries recognised they need skills and knowledge regarding **specific methods emphasising ABA as the most needed approach.**

"We need all kinds of trainings because only a small group of colleagues were on some training. We need ABA, TEACCH, PECS and everything else that can help." (Q1 MAC)

"and the best would be if we will have the education about ABA, we really need it." (Q4 CRO)

"I am considering taking a course in behavioural therapy, because I have children who have been in a kindergarten and they function well. I think that continuation would be advisable." (Q22 POL)

They also expressed the need to learn strategies using **assistive technology.**

"Implementation of assistive technology, which we tried to include in our regular work activities. I think that we really need this, especially those who work in centres and have made some small steps." (Q5 CRO)

"I think it is important to know the methods of alternative communication and how to implement it." (Q23 POL)

"You should try PECS. I recommend it to everyone. I use it and it works great. Children quickly catch the rules, and when they feel they can communicate, they quickly learn new words and use them in a given situation." (Q24 POL)

Some specialist teachers discussed the use of **sensory based approaches.**

"I mentioned that it would be useful to have, when we are talking about child that has got aggressive behaviour, maybe their sensory needs. That kind of education that is connected with sensory integration, this would be very useful." (Q4 CRO)

"People with ASD have problems with sensory processing. I do not know one that would not have. I know many special educators who do not know how to act." (Q30 POL)

b) Needs in specific intervention areas

When participants mentioned the **needs for knowledge and skills in specific intervention areas**, they have emphasized **strategies for dealing with challenging behaviours.**

"You have mentioned already that part connected with challenging behaviours, and that you would like to hear more about that, what else would be useful for you to be included into the education." (Q5 CRO)

"We need all kinds of training. 50% of children are autistic and everyone in school needs to be trained." (Q7 MAC)

Teachers asked for **strategies for supporting social skills.**



“Yes, some methods to encourage social skills, definitely, we got that – social stories already”. (Q6 CRO)

“Social training should appear very early and it must also be conducted in natural social situations. All therapists should also be prepared for it, and the school should also establish common strategies for action and solutions in this area.” (Q29 POL)

For some specialist teachers it was important to have **strategies for the student’s assessment**.

“How to involve the child in group activities, in group sport, [he/she] does not manage even with my support.” (Q20 MAC)

Ideas were also required regarding how to **prevent and deal with the child’s inherent behaviour** and how to support children in such cases.

“Well, that specific part is when something is inherent and how to react in that situation, actually how to approach and prevent that part.” (Q2 CRO)

“However, in case of that boy, I think that this is more like some other problem, those organically conditioned, which goes then into motoric movements and after in aggression and so on.” (Q7 CRO)

c) Needs in collaboration with others

Participants from special system need **strategies for collaboration with parents** in sense of **strategies for development of communication with parents**.

“They [parent] try to replace something that we didn’t manage to support. Yes, something like that, so we need some education how become closer to them and how to do it that they understand our perspective.” (Q8 CRO)

“Parents ask us to lie that children are great, that they know great mathematics.” (Q9 MAC)

“It is impossible to them to cope with them.” (Q10 MAC)

“We really need help how to communicate with parents.” (Q11 MAC)

Participants suggested **training for parents** in form of ‘school’ for parents.

“I think that regular workshops for parents are a good solution for a good cooperation. Such kind of school for parents.” (Q33 POL)

“Unfortunately, they do not always want to follow our recommendations at home, or they do things that break down the therapy, which is why I agree with the training.” (Q34 POL)

Specialist teachers wished for **parental engagement in work related to organizing the school environment for the children**, because they perceived it as important that parents support the child’s needs actively.



"I miss my parents' involvement. I think that they should join the preparation of help, or even organize class space. Joint actions build joint responsibility." (Q35 POL)

They also emphasized that specialist teachers need to **have a good collaboration with other professionals** especially in case of need for **supervision** in their work **and support groups**.

"There is a lack of a supervisor, an expert who would be able to pilot certain activities - professionally. Such a telephone call to an expert would sometimes be enough." (Q36 POL)

"Good cooperation also means the need to appeal to a group that has similar experience." (Q37 POL)

7.3.3 Summary of focus group data from special settings

The findings from focus group in special system represent mainly challenges in dealing with challenging behaviour of the child and managing this, in communication and specific context from the special system is dealing with complex child's needs, especially in cases when specialist teachers are not sure about the cause of the behaviour and how to prevent and support the inherent behaviour of the child.

a) Organisation of learning

Participants also mentioned problems in organisation of the learning of the child as well as the problem of organisation of the environment. On one hand, specialist teachers believe that children should learn in every day context, which means also at home, but on the other hand, they feel that parents would need to be actively involved and work on the same goals for the child. The challenge extends to collaboration with the specialist teachers who do not have enough education about the right interventions and methods, which sometimes means that they do not work continuously and in a structured way on supporting the child's needs.

b) Collaboration

Collaboration with parents can present a challenge for specialist teachers because they feel parents are not actively involved in the educational process, however, they often have unrealistic and sometimes very high expectations from the child and from the specialists. This makes a lot of difficulties in collaboration and specialist teachers would like to learn how to motivate parents to work together with them actively on the same goals for the child.

When participants mentioned the challenge in collaboration with other professionals. they emphasized the need for sharing the knowledge and experience about the child from the diagnosis assessment process through the creation of individual support for the child. Especially, collaboration with medical doctors and psychologists is perceived as a challenge.

c) Specific methods

When participants from the special system talked about their needs for the support to work with children with ASD they emphasized the need for the specific methods in work such as ABA, assistive technology and sensory based



approaches, because they felt they needed to modify challenging behaviour of children and then create appropriate support for individuals based on their needs.

d) Specific intervention areas

Specialist teachers need support to deal with challenges regarding specific intervention areas, such as strategies for managing challenging behaviour of the child and strategies for supporting social skills as well as strategies for assessment of child's abilities and knowledge. This presents a major issue in the special system specifically, where children have got complex needs. Professionals then need adequate competences and knowledge about how to prevent organically conditioned behaviour of children and how to provide necessary support.

e) Communication

For participants from the special system it was seen as very important to develop good communication skills for collaboration with parents so that they could include them into the support for the child. They also emphasized that it is very important for parents to be included into some education/training programmes. They consider very important that parents become actively involved in the process of supporting the child based on sharing ideas and information with the specialist teachers and appreciating their professional expertise. Moreover, participants from the special system need supervision in their work and regular meeting with the colleagues and some other professionals. They feel it would empower them in dealing with challenges in their work with children and also would provide opportunities for sharing of experience, thoughts and emotions.



8 Conclusions

Key challenges and training needs of specialist teachers working with children with ASD in Croatia, North Macedonia and Poland were identified and discussed in this mapping report. Based on the literature review, review of existing practice, results from quantitative data collected through questionnaires and qualitative data gathered in focus groups several areas of need in supporting competence and empowering specialist teachers in mainstream and special schools were discovered.

The main challenge described by specialist teachers in all three countries and across different settings was managing challenging behaviour of students with ASD. In mainstream schools, teachers were interested in promoting social skills of students with ASD and their interactions with peers, as well as adjusting the environment to their sensory needs. In special school, teachers perceived issues with responding to students' complex needs causing challenging behaviour.

Regarding the attitudes of specialist teachers about education of students with ASD, 79% of teachers from mainstream schools and 67% of teachers from special schools believed that children with ASD can be educated with the peers in mainstream schools. This shows that there is potential for achieving higher rates of successful inclusion, however, there is room for improvement of attitudes which can be achieved by supporting the confidence of teachers working with children with ASD in their competences to teach in inclusive schools or to provide specialist support for students with complex needs in specialised settings.

In general, according to the questionnaire, specialist teachers working in special settings received more training about working with children with ASD than specialist teachers in mainstream schools, which reflects the offer of training courses reported on in the review of practice. Interestingly, despite the existing trainings in Poland, more than half of specialist teachers said they had received no training about ASD at the university. Few opportunities for training and upskilling and the difficulty to access training locally were mentioned in the review of practice, and are mirrored in the findings from questionnaires with low levels of confidence of teachers in the use of support strategies for children with ASD. More than 50% of mainstream teachers did not express confidence in any of the 22 domains, while more than 50% of special educators were confident in only six of the 22 domains. Teachers from Croatia felt more competent than teachers in the other countries.

Teachers in all three countries expressed the need and interest to receive training in specific methods. This links to the findings of other research studies (Jennett *et al.*, 2003), confirming that higher levels of education and training of teachers improves their self-efficacy and confidence in teaching students with ASD.

Collaboration with parents and other professionals has emerged as a key theme across settings and countries. Communication with parents of children with ASD has been reiterated in focus groups as an issue for mainstream teachers and for special school teachers too. Teachers expected parents to cooperate with them in supporting the child's learning at home and complained about parents not following their advice, having high or unrealistic expectations and persisting on their ideas about the child's education. The need to improve teachers' skills to communicate with parents was emphasised.

Collaboration with other teachers created a challenge for mainstream specialist teachers who felt strong pressure of having sole responsibility for the inclusion process and for supporting students with ASD in their school. It was difficult for specialist teachers to collaborate with class teachers and teaching assistants due to low understanding of ASD and methods of teaching of mainstream teachers, as well as due to their attitude of shifting responsibility to the specialist teachers. In special schools the challenge of collaborating with other professionals was mainly expressed as barriers



in communicating with medical doctors (psychiatrists, neurologists) and psychologists about the results of the diagnosis assessment process and the lack of recommendations of how to address the complex needs of their students with ASD.

Due to specialist teachers feeling high pressure stemming from their role, lack of confidence in adapting and modifying teaching methods and environments, struggles in collaboration with parents and colleagues, they expressed their need for further training, including hands on practical experience, opportunities for supervision or sharing of experience and knowledge amongst the community of specialist teachers.

The **ASD-EAST training curriculum** was designed to as a respond to the needs of specialist teachers in Croatia, North Macedonia and Poland to improve the skills and enhance competences for working with students with ASD in mainstream and special settings (TABLE 28).

TABLE 28 Responding to teachers' needs in the ASD-EAST curriculum

Identified challenges and training needs	Response in the ASD-EAST training curriculum
Managing challenging behaviour	=> Module 6 Managing challenging behaviour => Modules 1-5 explain how understanding and meeting the needs of children with ASD may prevent challenging behaviour
Low confidence in applying strategies for working with children with ASD	=> Improved practical skills and raised understanding of specialist teachers will enhance their competences and feelings of self-efficacy, serving as prevention against burn-out and fulfilling the perceived need for supervision by experts
Collaboration with parents and other professionals	=> Each module contains practical tips on how to communicate the learned strategies with parents, teachers and teaching assistants => Improved knowledge and understanding of strategies for working with children with ASD will raise the skills of specialist teachers in communicating the significance and application of these strategies

Summary of key findings from the initial mapping exercise focused on the training needs of specialist teachers in Croatia, North Macedonia and Poland revealed some challenges that teachers face in their practice as well as areas with potential for positive change towards educational inclusion of students with ASD in mainstream and special schools. The curriculum and training materials that are developed in the ASD-EAST project aim to address the challenges and identified needs through raising knowledge, understanding and practical skills of specialist teachers. To respond to the needs of teachers adequately, the curriculum contains parts that are specific for mainstream or special settings, allowing for modified application depending on the local context of each country.



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