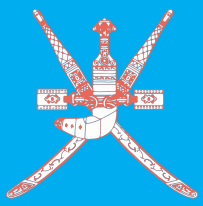

Sultanate Of Oman
Ministry Of Education

Ten-Year Autism Strategy and Five-Year Autism Action Plan for Children with ASD

Situation Analysis on Inclusive Education and Children with Autism in the Sultanate of Oman

CONTENTS

Acknowledgement

We have been able to complete this work with contributions from various parents of children with autism spectrum disorders and professionals working in the field of special needs in the Sultanate of Oman. Acknowledgements are also due to the contribution made by representatives from governmental and non-governmental organisations concerned with the cause of autism and disability in the country. Special acknowledgements for the support provided by Dr. Hamood Khalfan Al Harthi, under-secretary of the Ministry of Education for Education & Curricula, Janab Asaayda Dr Shariffa K Al-Said, Educational Expert in the Ministry of Education, and all the representatives of the Omani Autistic Society. The work would not have been commissioned or completed without the support of Mr. Osama Makkawi, UNICEF representative to the Sultanate of Oman, Ms. Shununa Al Habsi, government project officer, Ministry of Education and Ms. Izdihar Al Sulaimani, government project officer, Ministry of Social Development.

Executive Summary

- The University of Northampton (UK) has developed the Ten-Year Autism Strategy and Five Year Action Plan focusing on children from their birth until the age of 16 on behalf of UNICEF (Oman).
- Their purpose is to set out how health, educational and rehabilitation provision for children with autism spectrum disorders (ASD) can be developed within the Sultanate of Oman.
- The Ten-Year Strategy provides guiding principles and aims whereas the Five-Year Action Plan sets out measurable actions and outcomes which will help to realise the principles set out in the Strategy.
- Both the Strategy and Action Plan are aligned to the articles of the UN Convention on the Rights of People with Disabilities, the Convention on the Rights of the Child and the Sultanate of Oman's Child Law.
- They result from a short period of intensive data-collection and consultations with key colleagues within Oman.
- The Research Team from the University of Northampton comprised Dr Prithvi Perepa, Dr Marie Howley, Dr David Preece, Dr Brenna Farrow, Professor Richard Rose, and Professor Philip Garner.
- A Literature Review and a Diagnostic Report were submitted as a separate part of a compendium of outputs to UNICEF.
- The present document comprises three sections and a set of appendices.
- Section 1 presents an overview of the Oman country context, within which both the Ten-Year Autism Strategy and Five Year Action Plan will operate. It also outlines the research procedure used.
- Details of the Ten-Year Autism Strategy are provided in Section 2. This comprises seven themes identified as a result of data analysis, together with twelve strategic priorities.
- Section 3 provides the Five-Year Action Plan, in which the steps required to achieve the priorities identified are described.
- The Action Plan sketches the potential actions, outputs, responsibilities and timelines to enable the overall goals to be achieved.
- Attention has been directed to considering how the Strategy and Plan might inform wider developments in special and inclusive education in Oman.

Section 1: Introduction

1.0 Introduction

Autism spectrum disorder (ASD) is a life-long developmental disorder, which impacts primarily three areas of social interaction, communication and repetitive and restricted behaviours activities and interests. The presentation of ASD varies along a continuum from mild, requiring minimal support to severe and requiring substantial support. Likewise, levels of ability vary along a continuum ranging from average to above average intelligence, to those with mild, moderate and severe intellectual disability. Due to this broad spectrum, the impact of ASD varies from person to person and from family to family (see Appendix 1 for an overview of ASD). A wide range of diagnostic labels such as Asperger syndrome and autism are used to describe the specific sub-categories of the continuum by certain professionals. This document uses 'autism spectrum disorders' or 'autism spectrum' to represent the whole continuum of needs, unless specific terminology was used by participants in the data gathering process.

Research evidence suggests that providing appropriate timely services will have a significant impact on the outcomes for the individual with ASD and their families. For example, in a large scale study conducted by Cimera et al., (2013) they found that having early support with transition services towards the end of school age helped more young people with ASD to access employment. The Ten-Year Autism Strategy and Five-Year Action Plan have been developed to improve provision and services for individuals with ASD and their families in the Sultanate of Oman (henceforth referred to as Oman). It is believed that investing in such services will have a long-term economic benefit for the Sultanate as well as enabling the Government to meet its commitments under the UN Convention on the Rights of Persons with Disabilities (UNCRPD), Law on the Care and Rehabilitation of the Disabled (2008) and the Child Law (2014). They focus upon key themes which are recognised as vital to effective service delivery, and include: leadership and collaboration; awareness and understanding of ASD; screening and diagnostic services; early intervention; educational provision and practice for individuals with ASD, services and support for families.

The Autism Strategy and Action Plan have been developed as a collaborative consultation between the University of Northampton, United Kingdom, representatives from Government of Oman's departments, private organisations and non-governmental organisations (NGO) and the UNICEF (Oman) Country Office. They contain inputs from various sources, including an early intervention centre, schools, rehabilitation centres, parent groups, and colleagues from Sultan Qaboos University (Oman) and University of Nizwa (Oman). Feedback was also sought from representatives of various departments on the final draft of the Strategy and Action Plan (see Appendix 2 for list of contributors).

1.1 Background and Context

The increasing recognition of disabilities in Oman, with the placing of disability at the forefront of social policy and definitions of disability, provides the context for the development of this Autism Strategy and Action Plan. Oman was one of the first Middle-Eastern countries to advocate integration of children with 'special educational needs' (Al-Lamki and Ohlinn, 1992). Developments towards Education for All goals, identified in the Dakar Framework for Action (UNESCO, 2000) include: school building programmes; development of curricular, pedagogy and assessment practices; development of early childhood care and education provision. Development has been underpinned by an acceptance of the UNESCO (2005, p.13) definition of inclusion as:

a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education.

The Government of Oman signed the UNCRPD which informed the Children with Disabilities Care and Rehabilitation Act (OCDCRA) issued in 1996 and revised in 2008 as the Law on the Care and Rehabilitation of the Disabled. These have also contributed towards changes in the Omani rehabilitation provision, with clear indications of continuing commitment to inclusion in this act. For example, Article 24 clearly states that 'educational opportunities should be offered equally to pupils with disabilities within an inclusive education system' (The Ministry of Social Development, 2008 cited in Emam and Al-Bahrani, 2014). The Royal Decree 63/2008 established the rights of persons with disabilities to (amongst its other considerations): 'educational services commensurate with their sensory, physical and mental capabilities'; vocational rehabilitation; full participation in social, cultural and athletic activities. This reflects the commitment that 'Education in Oman is, therefore, considered to be a fundamental right of all citizens'.

However, major challenges in Oman to achieving the purpose and objective of the Convention on the Rights of Persons with Disabilities are identified by UNICEF (2010) and Al- Balushi et al., (2011). These include, for example, lack of a national action plan, limited early identification and diagnostic tools, lack of training, and limited services outside major cities. These correlate with challenges identified by Omani researchers in relation to ASD (Al-Farsi et al., 2011; Al-Sharbati et al., 2015). Moreover, whilst the Law on the Care and Rehabilitation of the Disabled is explicit in relation to some types of disability, others are not specified, and in relation to the focus of the development of this Autism Strategy and Action Plan, notably ASD (UNICEF, 2010).

It is within this context that research was commissioned by UNICEF and conducted by the University of Northampton in order to develop a Ten year Autism Strategy and a Five Year Action Plan.

1.2 Research Scope and Approach

The scoping exercise for developing the Strategy and Action Plan included a preliminary visit to Oman by the representatives from University of Northampton; this involved meeting with key stakeholders in order to establish a clear context for the work to be undertaken. A detailed literature review was also conducted in order to present an overview of current theory, provision and practice for children with ASD. This was followed by a further visit to gather data from various provinces within the Sultanate. The research study adopted a mixed-methods approach, all of which were scrutinised and approved by the Research Ethics Committee of the University of Northampton.

1.3 Data Collection

A variety of data collection approaches were used to gather the views of parents of children with ASD and professionals working in the fields of education, social development and health from across the Sultanate. Questionnaires were sent to professionals (such as teachers, speech therapists, behaviour therapists) working in schools and rehabilitation centres. A total of 46 completed questionnaires were received. 37 interviews and focus groups were conducted (with parents, parents support groups representatives, teachers, special education supervisors, principals, professionals working in rehabilitation centres, managers of rehabilitation centres, doctors, early intervention team representative and lecturers at universities). 14 school and rehabilitation centres visits were undertaken which included classroom observations to understand the current practice in regular classrooms, inclusive classrooms for a variety of special needs and in specialist centres for ASD. Discussions were also held with representatives from the Ministry of Education, Directorate of Educational Programmes (Special Education) and Directorate for Persons with Disabilities Affairs.


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Section 2: Development of the Sultanate of Oman Autism Strategy

2.0 Introduction

The Sultanate of Oman Autism Strategy has been developed to take account of the Omani national context of achievements and priorities for people with disabilities and their families, including: developments towards Education for All goals, identified in the Dakar Framework for Action (UNESCO, 2000); acceptance of the UNESCO (2005, p.13) definition of inclusion; the Children with Disabilities Care and Rehabilitation Act (OCDCRA) (2008); the Convention on the Rights of Persons with Disabilities which led to the Disabled Persons Welfare and Rehabilitation Act (2008) and which reflect the commitment that 'Education in Oman is, therefore, considered to be a fundamental right of all citizens'. Contextual challenges to achieving the purpose and objective of the Convention on the Rights of Persons with Disabilities (UNICEF, 2010) also need to be considered, particularly in relation to the lack of a clear strategy and the omission of ASD from Welfare and Care of Persons with Disability Law (see 1.1). However, the recently passed Child law (2014) states that every child has a right to education, which should now cover children with ASD as well.

The Autism Strategy is founded upon 7 key themes, identified from the research findings:

- **Leadership and Collaboration**
- **ASD Awareness**
- **Family Experiences**
- **Diagnostic Services and Early Intervention**
- **Access to Services**
- **Training**
- **Educational Provision and Practice**

Each theme correlates with strategic priorities which emerged from the research. Existing knowledge and understanding in relation to each theme is presented, followed by a review of achievements and identification of barriers which, together, inform the formulation of thematic strategic priorities. Following this section, the Five-Year Action Plan for the implementation and monitoring of the Autism Strategy is presented. The order of the strategic priorities does not represent the importance associated to them. It is considered that all these strategic priorities are equally important.

2.1 Vision and Values

Our vision is for the Sultanate of Oman to lead the way in the Arab world in the area ASD by committing to develop appropriate services for all children with ASD and their families so that they are included in the society and have a better quality of life.

This strategy is based on core values which are informed by the Islamic creed and ethics of Omani society, the Royal Decree 63/2008, the Sultanate of Oman's Child Law, the United Nations Convention on the Rights of Persons with Disabilities, and the Convention on the Rights of the Child. These values are;

- **Dignity;**
- **Right to education;**
- **Full and effective participation and inclusion in society;**
- **Equality of opportunity and non-discriminatory practice; and**
- **Accessibility.**

2.2 Aim and Objective

This Strategy aims to ensure that the services commissioned and / or provided by the Government of the Sultanate of Oman for children with ASD and their families will develop in such a way that they:

- **Promote awareness and better understanding of the challenges faced by children with ASD and their families;**
- **Support children with ASD and their families to access the services they need;**
- **Encourage social inclusion of children with ASD; and**
- **Provide services and approaches which are evidence-based and evidence-informed.**

Objectives are to…

- **Support the development of an inclusive and effective range of services for children with ASD and their families;**
- **develop a co-operative and integrated approach to the planning, commissioning and management of services within Governmental organisations and across the private and voluntary sectors;**
- **develop realistic plans of action which are achievable and can be monitored and evaluated;**
- **and ensure that an appropriate, sustainable and affordable implementation infrastructure is put in place following the publication of the Strategy and Action Plan.**

2.3 Autism Strategy Themes

Theme 1: Strategic Leadership and Collaboration

Strategic Priority 1

Develop a multi-disciplinary National Autism Strategy Development Group (NASDG) and establish 11 Provincial Autism Reference Groups (PARG).

This Autism Strategy has been developed as a collaborative approach. This collaborative approach should continue in order to launch and implement the Autism Strategy.

The establishment of strategic leadership and multidisciplinary collaboration is central to the implementation of this Autism Strategy. There is presently confusion in Oman regarding which departments are responsible for services for individuals with ASD and their families. For example:

« I felt lost sometimes as to where I should go. There is a major confusion. Every time we are called for meetings and people from Ministry of Health or Education or Social Development and me presenting the issues around diagnosis. I don't know whom I should talk to because every ministry says the responsibility is with the other person. (Interview response, Paediatrican)

There is a need for multidisciplinary collaboration at ministerial level in order to oversee the Autism Strategy and to progress action plans. Article 7 of the UNCRPD requires government to ensure that children with disabilities have the same human rights on an equal basis with other children. This should apply equally to those children who have ASD and their families. In particular, the inclusion of ASD in relevant legislation is essential to ensuring that services for individuals and families are developed which meet the diverse range of needs and which promote positive attitudes towards people with ASD in Omani society.

A multi-disciplinary 'National Autism Strategy Development Group' (NASDG) needs to be convened on a long-term basis in order to steer and monitor progress towards actions. This development group should comprise key representatives from Ministries of Education, Social Development, Health, NGOs, parent groups and academics from higher education in order to ensure that the strategy meets the needs of individuals with ASD and their families.

Provincial Autism Reference Groups (PARG) should also be established in each of the eleven provinces in order to implement the Autism Strategy in relation to the provincial context. These groups also need to be collaborative and include key stakeholders from statutory agencies, voluntary and community organisations and families, working together to deliver best possible outcomes for children with ASD.

In order to achieve effective leadership of the implementation and monitoring of the Autism Strategy as well as the development of a national and provincial collaborative approach, it is important to develop local expertise which can be facilitated by employing advisers/consultants from abroad with specialized knowledge and experience in ASD.

Theme 2: ASD Awareness

Strategic Priority 2

Increase awareness and understanding of ASD among the general public through national, provincial and local community awareness campaigns.

Strategic Priority 3

Work in partnership with government departments, early years centre, schools, rehabilitation centres, higher education institutes, health settings and families to provide access to awareness training which will support the development of services for people with ASD and their families.

ASD awareness has developed internationally with campaigns such as World Autism Awareness Day which aims to 'improve the quality of life of children and adults, who are affected by ASD, so they can lead full and meaningful lives' (United Nations, 2015, online). Awareness of the needs, difficulties and abilities of children with ASD, together with awareness of the impact for families, is essential in order to develop a society in which children with ASD and their families can thrive, learn and fully participate in all aspects of life. This is also in line with article 15 in the Child Law which states that all sectors in the society should be provided information about the child's health.

Current awareness and understanding of ASD in Oman is limited. Firstly, lack of awareness of ASD prevalence means that the extent of needs in each province is not known. Moreover, awareness of the full spectrum of needs is also limited. This results in a lack of availability of services other than in major cities.

Secondly, limited awareness of the key features of ASD and a lack of understanding of the impact for parents gives rise to negative attitudes among the general public. Consequently, negative attitudes create barriers in everyday life for individuals with ASD and their families. For example, during our interview one parent explained:

« *One thing is that our community has no understanding. Once I was travelling with my son because he is hyperactive and he started moving and the lady behind was so angry and upset that she was going to beat him. I said that he is autistic. She said I don't know what you mean by autism. Of course now there is the Oman Autistic Society and we are trying hard even in the media, but there is still no awareness of what exactly autism is… (Interview response, Parent)*

Thirdly, limited awareness of features of ASD is also apparent among professionals. Whilst some professionals (teachers for example) are aware of some of the key features, there is a lack of awareness of the spectrum or range of needs and abilities (Frith, 2008), resulting in misconceptions.

Whilst there is a lack of awareness of ASD in the wider society, progress has been made, as illustrated by one parent's view:

« *Last year there was almost no knowledge or awareness about the subject but this year there is improvement. Before people did not know anything about their cases and treated them very badly, but now people have information which they got through media. (Interview response, Parent)*

This Autism Strategy seeks therefore to build upon the progress which has been made by prioritising the development of ASD awareness. This priority aligns with Article 8 of the UNCRPD, in that it aims to raise awareness of ASD throughout society, to combat stereotypes and prejudices and to promote positive attitudes towards people with ASD and their families.

The key actions in relation to the theme of 'ASD awareness' are therefore to:

- **Commission and plan for delivery of ASD awareness campaigns nationally, provincially and locally.**
- **Develop knowledge and understanding of ASD among key professionals in each province, in order for them to provide access to awareness training for frontline staff in education, social development and health.**

For the development of a national and provincial collaborative approach it is important to develop local expertise which can be facilitated by employing advisers/ consultants from abroad with specialist knowledge and experience in ASD.

Theme 3: Family Experiences

Strategic Priority 4

Develop knowledge and understanding of ASD through parent training and post-diagnostic support.

Strategic Priority 5

Provide access to local services parents, from early identification, diagnosis, early intervention, education and/ or rehabilitation.

The impact of ASD upon children with ASD and their families creates barriers which preclude their inclusion in many aspects of Omani society. Articles 7 and 19 of the UNCRPD and article 15 in the Child Law indicate the importance of families in the care of children with disabilities, but also that some will need additional support in order to ensure their rights are protected. The nature and complexity of ASD means that children and their families require additional support. For example, a professional explains:

« *The impact is that children with ASD are often secluded and stay at home. They don't benefit and their situation instead of improving gets worse.*

This Oman Autism Strategy includes therefore the development of support and services for families of children with ASD in order to promote their inclusion in all aspects of everyday life.

Two strategic priorities are identified in order to develop the support which families identify is needed. These priorities relate to equipping parents with knowledge and understanding of ASD from the earliest possible stage (early identification and diagnosis) and to provide support for families through providing access to services which promote best outcomes for them and their children.

Training for parents at a local level is essential in developing knowledge and understanding and in providing follow-up post diagnosis support. A lack of knowledge of ASD results in parental confusion and misconceptions, often compounded by lack of knowledge of professionals and lack of availability of services. For example:

« *We discovered that our child has autism when he was 1 ½ years old but we did not know where to go. We knew nothing. To go to hospital it is a six month waiting for the appointment to see them and then they test him and then they send to somewhere in Europe and at that time you think that your child is young and now you discover he is seven and it is too late. (Interview response, Parent)*

« *I took my child to a doctor who had no idea what was wrong with him. He (the doctor) said 'he is just spoilt'. I went to Jordan and then to Saudi and only then came to know that there is a centre at Sultan Qaboos University Hospital. He was late in getting a diagnosis. My son has been diagnosed with mild autism. (Interview response, Parent)*

Training for parents to provide support and strategies for helping their children is a key priority. This requires the development of local expertise in ASD in order for training programmes to be delivered and evaluated. A pilot training programme needs to be developed and evaluated, in consultation with internal and external ASD specialists, in order to develop a programme which can be delivered locally.

Access to ASD services is essential to support families from the point where they identify their earliest concerns about their child's development, through to services which ensure that children are included in learning in an environment which is able to meet their needs. This will require capacity building at provincial levels in order to develop appropriate services. This is a long term priority likely to require external consultancy in order to build regional expertise which is essential for the development of services.

Families have also commented on the financial implications while accessing specialist services. As this parent illustrates;

« *All the centres are very expensive they cost 10 or 15 Rials per session. There is a new centre here by the way. They have specialists from outside. It is good that they are here but it still comes at a high cost. We had a meeting there and for each child it comes to something like 370-400 Rials per month. Can you imagine?*

It is recommended that a review of the current financial support provided to parents who have a child with ASD should be undertaken.

Theme 4: Diagnostic Service

Strategic Priority 6
Develop a clear ASD diagnostic pathway.

Identification of early signs of ASD and a clear and accessible diagnostic process is essential for providing support for children and families; moreover, early identification can provide access to early interventions. Research shows that intervention from an early age shows promise in terms of increasing functioning and quality of life (e.g., Dawson et al., 2010; Eldevik et al., 2012; Welterlin et al., 2012). Healthcare has been considered as an important aspect of child care in Oman and every child's right to the highest possible level of health care and early diagnosis of their disabilities have been ensured in article 14 and 15 of the Child Law. This strategic priority is concerned therefore with developing a clear ASD diagnostic pathway which provides:

- **Identification of early signs;**
- **referral to appropriate diagnostic service;**
- **diagnosis;**
- **clear sign-posting to post-diagnostic information and services.**

Existing diagnostic procedures in Oman are limited to two diagnostic centres in Muscat. A variety of screening and diagnostic tools are currently used, with some Arabic versions and the recent development by Klein et al., (2015) who have adapted M-CHAT to minimise cultural ambiguity and developed it as a mobile application in Arabic is a move in the right direction. However, whilst there is clearly some knowledge and expertise in this area, limitations are acknowledged by professionals, including problems in relation to referring families to services, for example:

« *So I give a full report about the diagnosis and their intellectual abilities with recommendations. However, as a rehabilitation centre I am not equipped to go to the school or to send people home and to apply whatever interventions the child should have. So the only route is to use a list of all the rehabilitation centres in Oman, where I think the Ministry of Social Development is paying all the fees, even though they are private. This is helping. Maybe people are thinking that we are not doing anything, but compared to 2011 we are really going in the right direction, I would say. But it is still very deficient because not many places in Oman have this. (Interview response, Paediatrician)*

Parents also report barriers to diagnosis, including limited availability of diagnostic services, as can be seen from the following extracts from interviews with them.

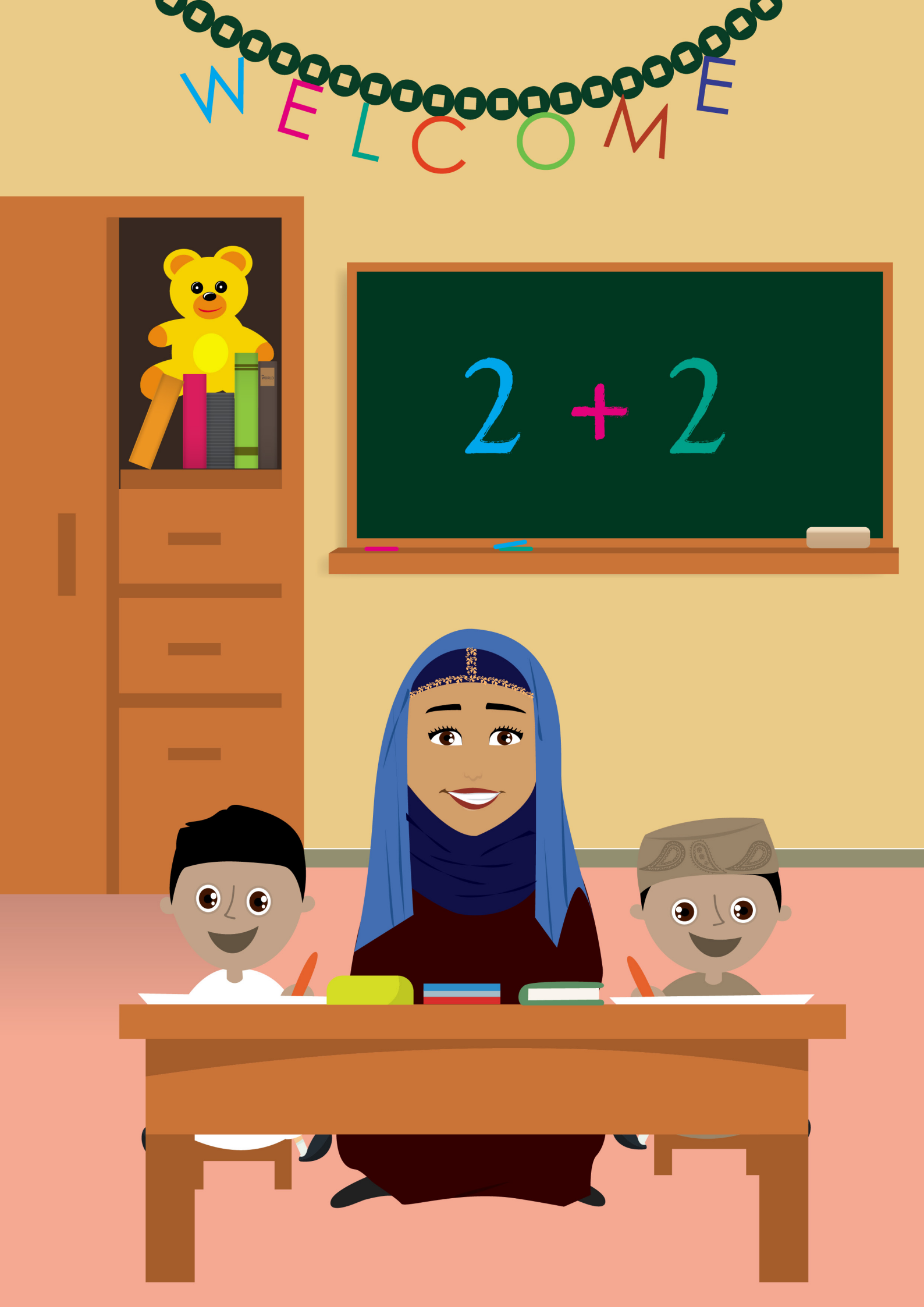
« *The first part of suffering for parents is the diagnosis. We either get an inaccurate diagnosis or no diagnosis at all. In many cases it is not clear whether it is autism or not. Most of the doctors in the Ministry of Health do not have enough knowledge about autism.*

My child was taken to a doctor for two years and he could not diagnose autism. He was a paediatrician and he didn't know what autism is. He said this child is different I don't know how to deal with him.

Some parents travel to other countries in Gulf, Asia and Europe in their efforts to seek diagnosis, adding to their financial burden.

Nevertheless, there has been progress in this area and professionals are aware of areas for development, for example:

« *From my side I wish I would have a full team to conduct multi-disciplinary assessments. I do have a speech therapist, I do have an occupational therapist and a psychologist in the team. But as I told you, I don't think the referrals are enough, although our waiting list used to be 1 and ½ years but now we are down to 4-5 months waiting list. But I don't think the screening part is….. we have a major problem. (Interview response, Paediatrician).*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Development of a clear diagnostic pathway is required in order to ensure that children and families receive early support. An agreed ASD diagnostic pathway needs to be established in every province, with a clear referral process. This pathway needs to be made publicly available, for example on an ASD specific website for Oman (see action plan, action 2.3) with clear signposting for families seeking help.

Theme 5: Access to Services

Strategic Priority 7

Identify the prevalence of ASD in each province of Oman, from early childhood to end of school age.

Strategic Priority 8

Develop a range of services from diagnosis and through all phases of education and rehabilitation in every province across Oman.

There is limited awareness of the prevalence of ASD in Oman. The only prevalence study conducted in the country suggests a figure of 1.4 for every 10,000 (Al-Farsi et al., 2011) which is significantly below the prevalence rate compared to other Gulf states such as UAE where it is suggested to be 58 for every 10,000 (Eapen et al., 2007). It is possible that these low prevalence rates are related to levels of awareness, availability of and access to services. It is important to conduct an initial prevalence study followed by establishing on-going data collection procedures so that services are developed according to needs. The health-card system suggested in article 18 of the Child Law will be a good procedure to keep on-going records of the prevalence of ASD in the country. As a parent suggested during our research:

« *There should be serious studies conducted to assess the needs and centres should be opened proportionate to the need. There are large numbers of children with special needs and autism, so the centres should be proportionate.*

It is essential for systems to be in place in order to gather data and monitor the development of services. Establishing systems and processes for identifying accurate prevalence rates and service needs in each province will enable the Government to be pro-active in its approach. (Interview response, Parent)

Along with this there is a need to establish localised services in each province which includes a diagnostic centre, early intervention centre, inclusive classrooms and governmental rehabilitation centres. This need has been identified not only by the parents but also professionals as this early years practitioner states:

« *We should have centres in the regions where services can be provided because it's devastating for families. I think that uprooting and moving a whole family to Muscat to attend a centre like us is devastating. Last year, I had about five families who uprooted themselves and rented houses ... just to enter our centre, because we won't accept anybody who lives far away. (Interview response, Early Years Professional)*

While there is an increase in the number of private rehabilitation centres for ASD being established in the main cities across Oman; localised services will reduce the physical and financial burden which is being experienced by some of the families as well as providing more career options for Omani professionals trained in the field.

Whilst the development of educational and rehabilitation provision is a clearly identified need, by both professionals and parents, such provision needs to be developed with the holistic needs of the family in mind. Support services to help the whole family, such as awareness workshops for siblings and grandparents and access to local support groups will also have a positive impact on the wellbeing of the children with ASD and their family members.

Theme 6: Training

Strategic Priority 9:

Develop advanced training, qualifications and continuing professional development for education and social development professionals.

There are a limited number of professionals who have an understanding of ASD and how to support children with ASD in Oman. Professionals working in the field tend to have a basic understanding of the core features of severe ASD but may not have a good understanding of the wide range of the spectrum. For example, in our survey 74% of respondents (mainly specialists in the field) stated that they felt children with ASD did not want friends. While this could be true for some children with ASD, this is certainly not the case for everyone with the condition. Limited knowledge of ASD amongst teachers was also reported in previous studies conducted in Oman (such as Al-Sharbati et al., 2015).

The need for qualified professionals who have up to date knowledge in the field of ASD and inclusion has been suggested by both the parents and professionals. Parents also suggested that they see a direct connection between teachers' skills and future opportunities for inclusion of their children in ordinary schools. As this father argues;

« *Inclusion should be in many schools but they need training. I would like to see specialised centres and more training for teachers. Maybe training sessions in foreign countries for parents and teachers.*

and as this professional comments;

« *The most important thing is to have more and more qualified people to deal with autism. Qualified teachers and qualified personnel… 1 year at least of training in preparation.*

While it is important to develop advance qualifications in autism, it is possible to take a more creative approach too while developing these programmes. One potentially effective strategy could be to begin by establishing shared knowledge and understanding of inclusive and special education, before specialising in various disabilities including ASD as suggested by this academic:

« *I can see that we should start with a powerful programme which starts from a bachelors and leads to specialization in different areas for example autism, inclusion, gifted, so everybody can, so the market won't be saturated and all the majors will be there.*

It is also necessarily that on-going professional development opportunities are provided to professionals who are already working in the field. This will keep them abreast of the latest developments in research and practice and will provide them with opportunities to share examples of good practice. This will also provide opportunities for teachers and other professionals to reflect on the views held by some professionals regarding the appropriateness of including children with ASD in ordinary schools. For example a teacher in a cycle 2 school suggested that;

« *Children with autism should not be included in schools, they should go to specialised centres. They can be included or involved with normal children but not in normal government schools.*

When opportunities for continual professional development are provided it should be possible to promote more positive attitudes towards the inclusion of children with ASD.

Theme 7: Education Provision and Practice

Strategic Priority 10
Develop a range of provisions to meet the needs of children across the ASD spectrum.

Strategic Priority 11
Research and develop evidence-based and evidence-informed, locally applicable good practice for children across the ASD spectrum.

Strategic Priority 12
Develop provisions for children with a variety of special education needs based on the learning from this work.

The Government of Oman has set up a number of rehabilitation centres and inclusion classrooms in ordinary schools for children with a variety of disabilities. However, there is no such provision for children with ASD. In fact, it has been reported to us both by the parents and teachers that children with ASD are not accepted in ordinary schools. As this parent states;

« *If a child has autism it is almost impossible to be accepted in inclusion classes. While it is easier to have children with mental disabilities accepted. I have been told by the Ministry of Education…. and a teacher explained: There are no specialists in autism. No specialised teachers. Ministry of Education do not provide for classrooms for children with autism. Often they are identified after 7 years so at that age he wouldn't be accepted in schools any more.*

This seems contradictory to the Governmental position which states that all children should have access to education including pre-school education and this has been reconfirmed in the recent Child Law (articles 30, 32, and 36).

The research shows there is positive attitude amongst teachers and a willingness to provide appropriate educational experiences for children with ASD. A distinction is made between what teachers say is 'social inclusion' and 'real inclusion'. This distinction relates to providing social integration opportunities and access to curriculum and learning. For example:

« *ASD student needs a special classroom environment which is different from that which is appropriate for regular or other children with mental disabilities. Mainstreaming is easy for music or sports, but for academics they all need to be together.*

The activities are with the regular students… but the academics part is with the specialist teachers. (Interview response, Teacher)

Some teachers also argued that:

« *If the child is capable of learning they should be accepted in normal classes rather than inclusion classes. (Interview response, Teacher)*

Social integration is an important step towards inclusion and some teachers are aware of the benefits:

« *It protects them from total isolation. They manage to interact and see other students, okay, so they would be protected from total isolation. It gets them out of the circle they are living in…they participate with other children… their vocabulary will improve. The dialogue will become more diverse and rich. They make friends. (Interview response, Teacher)*

Increased general awareness of ASD could encourage the other children attending the schools and their parents to be more welcoming of children with ASD in ordinary schools. Having early diagnosis and intervention could also facilitate the possibility of children with ASD being accepted into inclusive classrooms.

Teachers were also aware that while inclusion classes (with social integration) or full inclusion is appropriate for some children, there is a need for specialist centres to meet the needs of other children. There are a growing number of private organisations which are offering specialist ASD centres. However, the geographical location and financial costs involved makes access difficult.

« *My child is at home and not at a school. There is no governmental centre in Oman that specialises in such cases. Most of the specialised centres are private centres and are situated in Muscat. I had to leave my wife and job to go to UAE to get services for my child.*

It is important therefore to develop a range of provision which meets the needs of all children with ASD in each province of Oman.

Awareness of what constitutes 'good practice' in ASD education is very limited. There is no particular strategy or intervention which meets the needs of all children with ASD. A report commissioned by the Autism Education Trust in England (2008) indicates:

« *Given the diversity within the spectrum and between individuals, there is no single educational intervention that is useful for all children on the autism spectrum, and there is no single intervention that would on its own be sufficient to meet all the needs of a particular child on the autism spectrum. (Jones et al., p. 14)*

The range of practices currently implemented in Oman is limited although there is a desire to learn. When asked about ASD and good practice, a teacher said:

« *I think we can't answer this question, there are other countries who have experience in this field, so I think we should see what they have. (Interview response, Teacher)*

This reflects the need for research to identify practices which are evidence-based and evidence-informed (Mesibov and Shea, 2011) and which can be applied meaningfully in the Omani context. Research about disabilities that informs planning and provision has also been stated as an important aspect of provision for children with disabilities in article 53 of the Child Law. Academic research, together with opportunities for training and observations in schools where good practice is established, are needed in order to develop ASD good practice in all types of provision for children with ASD. This research would enable professionals to agree on principles of ASD good practice in Oman (see Appendix 3).

It is likely that by establishing professional development opportunities for professionals to collaboratively reflect upon their practices in order to identify good practices, services can be improved. It will also help in extending similar services to children with a range of disabilities in Oman. What is considered 'good practice' in ASD education is also good practice for children with other special educational needs and disabilities. Lessons can be learned therefore from the implementation of these strategic priorities which can be applied in the broader context. Such an approach would improve outcomes not only for children with ASD and their families, but also for all children with disabilities. Finally, many 'specialist' approaches to educate children with ASD have become embedded as part of inclusive practice for all children (Rose and Howley, 2007) and thus implementation of good practice in ASD should also help to promote inclusive practice in all settings. In summary, Jordan (2008, p. 14) argues that ***'Understanding and getting it right for children with ASD can be a way of getting it right for everyone'.***


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Section 3: Implementation of the Sultanate of Oman Autism Strategy

Five-Year Action Plan

3.1 Introduction to the Action Plan

A Five-Year action plan (2016-2021) has been suggested to initiate the implementation of the Sultanate of Oman's Ten-Year Autism Strategy. Before this can be implemented, specific responsibilities which each ministry is leading or contributing to need to be agreed. The Autism Strategy will require an annual progress review and re-setting of actions. It will be necessary to break-down some of these actions further at ministry or departmental level. A further action plan (2021-2026) will be required to achieve the other strategic priorities and to implement all the recommendations. Each theme represented in the Autism Strategy is addressed through a set of actions, outputs and outcomes. The potential benefits of successful implementation of each action are identified. Responsibilities, including monitoring and reporting are indicated, together with a time-scale for deliverables. As with any action plan, some steps are pre-requisites for others and the timeline represents this sequence of actions. However, it is likely that these need to be reviewed during the process of implementation based on the progress made and any other issues and priorities which might arise.

The Autism Strategy Action Plan Road-Map summarises the **themes**, **strategic priorities**, projected **outputs** and **timescale**.

3.2 Autism Strategy Action Plan Road-Map

Themes, Strategic Priorities, Outputs and Time-Scale

Year 1	Year 2	Year 3	Year 4	Year 5	Year 5-10
THEME 1: LEADERSHIP AND COLABORATION					
SP1 (a –d)					
SP1 (e –f)					
THEME 2: ASD AWARENESS					
SP2 (a)	SP2 (b) SP2 (c, d)				
	SP3 (a, c) SP3 (b)		SP3 (d)		
THEME 3: FAMILY EXPERIENCES					
	SP4 (a, b)	SP4 (c,d,e)	SP4 (f)		
	SP5 (a, c)	SP5 (d, e) SP5 (b)			
THEME 4: DIAGNOSTIC SERVICES					
SP6 (a)	SPC (b)	SP6 (c, d)			
THEME 5: ACCESS TO SERVICES					
SP7 (a, b, c)					
		SP8 (a) SP8 (b)		SP8 (c)	
THEME 6: TRAINING					
SP9 (a)	SP9 (b, c)	SP9 (h,i)	SP9 (d,f, j)	SP9 (e, g)	
THEME 7: EDUCATIONAL PROVISION AND PRACTICE					
SP10 (a)	SP10 (b, c)		SP10 (e)	SP10 (d)	
	SP11 (a)				
	SP11 (b)				
		SP11 (c)			
					SP12 (a,b,c,d)

SP= Strategic priority; SP numbers match numbered priorities in the action plan; letter(s) match outputs for each SP; arrows indicate SP start and finish

3.2.1 Important Goalposts for Delivery of the Strategy

Number of Years	Targets achieved
2 years	● NASDG and PARG are in place. ● Design an awareness campaign related to all target groups including peers. ● A centre in each province is started to facilitate diagnosis in each province. ● Prevalence study of autism is completed.
5 years	● A well-structured rehabilitation centre, schoolearly interven tion, and diagnostic services with full-fledged trained professionals are established in every province. ● First cohort of trained teachers is ready to work with children in schools and rehabilitation centres. ● An assessment of the impact of awareness campaigns is undertaken.
10 years	● All children with ASD will have a place in a school and their families will have a range of services. ● Full inclusion for children with ASD in educational and community settings would be a reality with appropriate support mechanisms and a procedure for on-going evaluation.

THEME 1: LEADERSHIP AND COLLABORATION

STRATEGIC PRIORITY 1

Establish a multi-disciplinary National Autism Strategy Development Group (NASDG) and establish 11 Provincial Autism Reference Groups (PARG)

Action	Output	Outcome	Benefits	Responsibilities
1.1 Identify NASDG representatives from: • Education • Social development, • Health • Higher education institutes • Research Council • NGOs • Education Council • Parent groups	• Members identified at national level by the executive department in each Ministry. • Protocols for working together developed. • Aims/Objectives & Timetable confirmed	• Securely establish NASDG • Implementation struc tures developed • Arrangements in place to monitor progress on implementation.	• Successful establishment of NASDG • Successful implementation of the National Autism Strategy and Action Plan • Successful Establishment of PASRGs • **Government:** clear and transparent policy direction for Autism in Oman • **Professionals:** career advancement opportunities across the Sultanate; training & professional development • **Families and children:** increased access to services locally;	• Ministry of Education • Ministry or Health • Ministry of Social Development • Ministry of Manpower
1.2 Identify representatives for 11 Provincial Autism Reference Groups (PARG)	• Protocols for PARGs established			• NASDG
1.3 NASDG to oversee implementation & monitoring of the Autism strategy and actions.	• 2 reports per annum provided to the Ministries of Education, Health and Social development (Timing TBA) • Evidence for good practice and local services is gathered on a regular basis.	• Visible National implementation strategy. • Align implementation strategy to actions undertaken by PARGs.		• NASDG

THEME 2: AUTISM AWARENESS

STRATEGIC PRIORITY 2

Increase awareness and understanding of ASD among the general public through national, regional and local community awareness campaigns.

Action	Output	Outcome	Benefits	Responsibilities
2.1 Commission and plan for delivery of ASD awareness campaign via NASDG nationally and in each province.	• Structures developed and funding secured to develop a public ASD awareness campaign.	• General public is more aware of ASD.	• Promotion of opportunities to include children with ASD in ordinary schools and community activities • Increases in educational and social progress of children with ASD • Increased potential for community participation to raise funds for future work/ research	• NASDG
2.2 Disseminate plan & agree actions with PARGs	• Public awareness campaign initiated through: media; parent and community groups; schools & rehabilitation centres and Higher education institutes	• Mainstream teachers aware of ASD in regular schools		• PARG
2.3 Develop an ASD-specific website for Oman (see Appendix 5)	• Content of website developed and agreed by NASDG (to include information & resources for parents, teachers and other professionals) • Commission web-development & agree sustainability plan	• Fully accessible website available to stakeholders	• Professionals and parents have access to a regularly updated e-resource geared to end-user needs	• NASDG

STRATEGIC PRIORITY 3

Work in partnership with a range of stakeholders to provide access to awareness training which will support the development of services for children with ASD and their families.

Action	Output	Outcome	Benefits	Responsibilities
3.1 Develop knowledge and understanding of ASD among key professionals in each province, in order for them to provide access to awareness training for frontline staff in education, social development, health and manpower.	• Identify professionals who have good ASD knowledge (either from Oman or buy external professionals). • Develop a web-based awareness training programme to be rolled out to all frontline professionals. • Procedures in place to make the training mandatory for all frontline government employees. • Incentives offered to professionals working in private organisations and religious leaders (such as ASD aware organisation mark) to complete the training.	• All frontline professionals have basic understanding of the features of ASD and how to support an individual on the autism spectrum.	• Professionals will feel more confident to interact/ work with children on the autism spectrum and their families. • Children and families will have access to a wider range of services.	• PARG

THEME 3: FAMILY EXPERIENCES

STRATEGIC PRIORITY 4

Develop knowledge and understanding of ASD through parent training and post-diagnostic support.

Action	Output	Outcome	Benefits	Responsibilities
4.1 NASDG to coordinate development of ASD training for parents and post-diagnostic support services.	• Agree content of training programme • Identify Provincial participants using PARGs • Agree mode of delivery (including a pilot) & frequency • Develop experienced trainers in each Province • Information on training available on website (including course content) • Continue to build on local parent support groups and develop post-diagnostic support	• Training programme developed • List of participants from Provinces agreed • Trainers recruited for 8 Provinces • Trainers supported by interaction with NASDG	• Parents will have access to accurate information on ASD and how to support their child. • Professionals will have more career opportunities. • Parents will feel more confident in supporting their children. • Children could make good progress by having consistent approaches at home and in school. • Parents of children with ASD will be empowered to act proactively on behalf of their child. • Parents benefit from e-learning opportunities (cost effectiveness)	• NASDG • PASRG
4.2 Identify Omani professionals, or commission professionals from abroad, to develop the programme.				
4.3 PARG to support training programme by disseminating information				
4.4 Recruitment exercise for appropriately qualified trainers				
4.5 Use ASD website to support training activity				

STRATEGIC PRIORITY 5

Access to local services from early intervention, diagnosis, to education and/ or rehabilitation

Action	Output	Outcome	Benefits	Responsibilities
5.1 Develop joined-up timely support services to meet the needs of children with ASD and their families.	• Support provision for children with ASD and their families is planned and agreed in each province. • Information regarding local intervention support placed on ASD website and is also accessible by telephone via a hotline number. • Informal support groups and services are developed for the whole family- parents, siblings, and grandparents.	• Training programme developed • List of participants from Provinces agreed • Trainers recruited for 8 Provinces • Trainers supported by interaction with NASDG	• Children with ASD and their families will be able to access appropriate services locally. • Needs of children with ASD will be met efficiently and in a fit-for-purpose manner.	• NASDG
5.2 Financial procedures to support families are reviewed.	• NASDG coordinates a review of existing financial support provision for families of children with ASD • Review the existing financial support provision for families to access appropriate services.	• Report produced and delivered to Oman Government		• NASDG • Ministry of Social Development

THEME 4: DIAGNOSTIC SERVICES

STRATEGIC PRIORITY 6

Develop a clear ASD diagnostic pathway.

Action	Output	Outcome	Benefits	Responsibilities
6.1 Establish multidisciplinary diagnostic services and support in each province.	• Adapt an agreed range of existing screening and diagnostic tools for use in an Omani context.	• Improvements made in referral systems from identification to assessment / diagnosis of ASD.	• Families will be able to access appropriate diagnosis locally without having to travel to Muscat or abroad for getting a diagnosis. • A core group of ASD specialist professionals will be established in every province.	• NASDG
6.2 Recruit a specified number of lead professionals to undertake ASD training	• Train at least four professionals from a variety of backgrounds (such as speech therapist, psychologist, paediatrician) in every province in ASD and at least one of the current diagnostic tools (such as ADI-R and ADOS).			
6.3 Enable general paediatricians to have access to ASD awareness materials	• All paediatricians to be circulated with ASD awareness materials, sufficient to use at least one of the available screening tools.			
6.3 Construct a clear diagnostic pathway	• Clear procedures are developed to cover the diagnostic pathway from initial consultation to post-diagnostic support.			

THEME 5: ACCESS TO SERVICES

STRATEGIC PRIORITY 7

Identify the prevalence of ASD in each province of the Sultanate, from early childhood to end of school age.

Action	Output	Outcome	Benefits	Responsibilities
7.1 NASDG to prepare research brief & protocol for study entitled 'Incidence of ASD in children in Oman	• Structures established and protocols in place for the collection, recording and reporting of the incidence of ASD.	• Scope of needs of children with ASD identified from early years to end of school age to inform development of services in each province	• Accurate data regarding the number of children with ASD in the Sultanate made available to key stakeholders. • Data will aid strategy development & service delivery to meet the needs of individuals with ASD and their family members.	• NASDG
7.2 NASDG to commission research study	• Research undertaken & analysed and Research Report produced. • Statistical data shared with relevant government departments to aid joint planning and delivery of services as appropriate.			• University/ies

STRATEGIC PRIORITY 8

Develop a range of services from diagnosis to through all phases of education and rehabilitation in every province across the Sultanate.

Action	Output	Outcome	Benefits	Responsibilities
8.1 Provide joined-up timely support services to meet the needs of people with ASD.	• Set up at least one early years centre, diagnostic centre, inclusive class in ordinary school and rehabilitation centre in each province.	• Effective ASD support, training programmes and research and information for early years, schools, rehabilitation centres is provided.	• A variety of career options can be opened up for professionals. • People with ASD and their family members will have access to appropriate services locally.	• NASDG, University/ies and Ministries
8.2 Build the capacity of early intervention, schools and/ or rehabilitation centres to meet effectively the needs of children with ASD.	• Effective ASD support, training programmes and research and information for all services is provided. • Experience from the initial settings is shared and new centres are started as appropriate.			

THEME 6: TRAINING

STRATEGIC PRIORITY 9

Develop advanced training, qualifications and continuing professional development for education and social development professionals.

Action	Output	Outcome	Benefits	Responsibilities
9.1 NASDG to utilise gap analysis, research data and literature review to scope the optimum model for delivery of training & Professional Development	• Report of training and model of delivery • Provide scholarships to professionals who want to pursue postgraduate studies (at masters level or doctoral level) in the field of ASD or related topics (e.g. SLT, OT).	• Availability of qualified professionals to develop post-graduate opportunities in ASD and related topics. • Developing cadre of trained & well-informed professionals in the field of ASD. • Establishing networks of support and 'communities of learning' in ASD across Oman.	• Trained Omani professionals who have a good understanding of ASD in the country context. • Resident group of professionals with understanding of the latest knowledge in the field of ASD and inclusion. • Children with ASD and their families are able to get consistent support from local professionals.	• NASDG • NASDG / Universities, Identified university/ies • Identified university/ies, Independent organisations with ASD specialization. • NASDG/PARG/University/ies
9.2 Establish a timetable of meetings with universities to discuss inputs to initial training courses at undergraduate level	• Commission universities to develop bachelor level qualifications in ASD and related fields. • Deliver bachelor degrees in ASD and related fields.			
9.3 Develop advanced training programmes for professionals in all the related fields.	• Quality-assured programme of training in all fields of ASD secured • HE institutes to embed general autism awareness information in all teacher training courses. • Develop and deliver postgraduate qualifications in ASD and related topics.			
9.4 Develop on-going continuing professional development programmes for professionals to keep them abreast of the current knowledge and research.	• Universities or professional organisations to develop continuing professional training opportunities (with and without a qualification) and including e-learning offer for those already working in the field. • Share information of good practice via the website or through a professional journal. • Organise regular provincial, national or Gulf regional and international conferences which provide professionals to network and share good practice.			

THEME 7: EDUCATIONAL PROVISION AND PRACTICE

STRATEGIC PRIORITY 10

Develop a range of provision to meet the needs of children across the autism spectrum.

Action	Output	Outcome	Benefits	Responsibilities
10.1 PARG to produce a report on the provision for children with ASD in each province. **10.2** Build the capacity of schools and rehabilitation centres to meet the needs of children across the autism spectrum. **10.3** Establish a range of supports in Provinces throughout Oman	• Produce report on Provincial capacity to meet the needs of autistic children • Establish a national multi-disciplinary centre and identify one school setting and one rehabilitation centre to develop ASD support in each province (pilot). • Provide additional training and resources required to enhance the provision. • Develop additional educational and rehabilitation services based on the experiences from these • Develop national protocols of good autism practice.	• Report on Provincial provision for ASD • A range of appropriate services are available for children with ASD. • Families of children with ASD can access educational advice in each province.	• Alignment with UNCRDC and UNCRC • Deeper understanding of Provincial capacity to aid strategy formulation and policy development • Greater sense of confidence by parents that needs will be met in local areas • Cost-effective support made available	• NASDG • PARG • Ministries

STRATEGIC PRIORITY 11

Research and develop evidence-based and evidence-informed, locally applicable good practice for children across the ASD spectrum.

Action	Output	Outcome	Benefits	Responsibilities
10.1 Agree a set of research themes and a timetable for a series of studies (2016-2020). **10.2** Commission evidence-based and evidence-informed research in ASD education. **10.3** Build on long-term training programme by providing opportunities to visit external providers to observe examples of good practice.	• Series of thematic research reports including on suitable curriculum for students with ASD. • Evaluation of ASD interventions and their applicability for the range of needs across the autism spectrum • Development of an 'ASD toolbox' which has a range of strategies and methods of working with children with ASD which will be made available to all services and families.	• A range of interventions to meet the range of needs of children on the autism spectrum.	• Development of inclusive practice for all children.	• NASDG • PARG • Ministries

STRATEGIC PRIORITY 12

Develop provision for children with a variety of special education needs based on the learning from this work.

Action	Output	Outcome	Benefits	Responsibilities
10.1 Apply knowledge and experience gained from strategic priority 11 to enhance provision and practice for all children, including those with a variety of special educational needs and disabilities. **10.3** Apply knowledge and experience gained from priority 11 to promote inclusive practices for all children, regardless of setting.	• Evaluation of ASD interventions and their applicability for children with a range of special needs and disabilities. • Open up training opportunities to those who work with children with other special needs & disabilities. • Dissemination and application of good practice in ASD to wider range of special needs. • Dissemination and application of good practice in ASD to promote inclusive practice.	• Development of a range of interventions to promote inclusive practice for all children, including those with special education and disabilities.	• Development of inclusive practice for all children.	• NASDG • PARG • Ministries

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Appendices

Appendix 1: An Overview of the Nature of Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a life-long developmental disorder, which impacts primarily three areas of social interaction, communication and repetitive and restricted behaviours activities and interests. The presentation of ASD varies along a continuum from mild, requiring minimal support to severe and requiring substantial support. Likewise, levels of ability vary along a continuum ranging from average to above average intelligence, to those with mild, moderate and severe intellectual disability. Autism can also co-exist with other conditions (such as Down syndrome or epilepsy). Due to this broad spectrum, the impact of ASD varies from person to person and from family to family.

The core characteristics of Autism Spectrum Disorder (ASD) are clearly defined in the American Psychiatric Association (2013) 'Diagnostic and Statistical Manual of Mental Disorders' (DSM-5) (see Table1). Variance in severity levels is also included in DSM 5 (table 2). The diagnostic criteria, together with varying severity levels reflect a heterogeneous disorder, hence the term spectrum. Frith (2008) summarises 'autism spectrum':

What is meant by this spectrum? Actually it hides a vast array of 'autisms'. All the autisms originate from birth, and all affect the developing brain. However, their effect on the developing mind can be very different. Consequently there is a vastly different range of behaviours. (Frith, 2008)

Table 1: DSM-5 Diagnostic criteria for Autism Spectrum Disorder (APA, 2013)

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive):

1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):

1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat food every day).
3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g, strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest).
4. Hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

Table 2: DSM-5 Autism Severity Levels

Level 3 "Requiring very substantial support"	
Social Communication Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.	Restricted, repetitive behaviors, activities and interests Inflexibility of behavior, extreme difficulty coping with change, or other restricted/repetitive behaviors markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action.
Level 2 "Requiring substantial support"	
Social Communication Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and how has markedly odd nonverbal communication.	Restricted, repetitive behaviors, activities and interests Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.
Level 1 "Requiring support"	
Social Communication Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful.	Restricted, repetitive behaviors, activities and interests Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.

A continuum of needs indicates that education for children with autism must take into account the heterogeneous nature of autism. Inclusion, whether partial or full, will depend in part upon the nature of strengths and needs of each individual child, as well as upon school ethos, educators' knowledge and attitudes and expertise in implementing a range of 'autism friendly' practices which meet diverse strengths and needs (Charman et al., 2011).

The following case scenarios illustrate the variation of autism in individuals:

Mohamad is 11 years old and attends a unit for children with autism in a mainstream school. Mohamad was diagnosed with autism at age seven. Mohamad has a number of core characteristics of autism including:

- He has some good expressive language but he does not always understand what people say to him unless the language used is concise
- He tends to talk repeatedly about his favourite topics and does not listen to the responses of others
- He interacts with adults and children, but usually on his own terms
- He has one friend but gets upset if this friend plays with other children
- He needs others to initiate interactions, then he will try to join in
- He has some narrow, strong interests which dominate his thinking; for example his current interest is in aeroplanes
- He has some repetitive behaviours, such as hand-flapping when he is excited or upset

Mohamad has some lessons in the unit and integrates into the main school for social activities and for some lessons. He has support from a teaching assistant when he joins mainstream lessons. He is a friendly boy who is liked by his peers; one of his peers from the mainstream class is his 'buddy' at outside play-times. Mohamad's parents are pleased with his progress and have noticed that he is interacting more with his siblings at home.

Badar is four years old and currently being assessed for autism. He has displayed early signs of autism, first noticed by his parents. These include:

- Lack of early interaction with his parents, including lack of joint attention
- He had a vocabulary of approximately 50 words which he then lost from the age of three; he no longer speaks
- He communicates through behaviours and by pulling his parents to what he wants, for example, he pulls his parents to the TV to ask for it to be switched on
- His play is repetitive and he lines up toy cars and bricks for long periods of time
- He relies on routines and screams if unexpected changes happen during his day
- He has repetitive motor mannerisms such as jumping and rocking
- He ignores the other children in the early years setting, preferring to line up toys or sprinkle sand

Badar's parents report that he is showing more behaviours which are difficult to cope with at home and they find it increasingly difficult to take him out in the community.

Psychology assessments also show that Badar has severe cognitive delay; he is unable to match or sort objects, he does not recognise pictures, letters or numbers and he cannot match colours or shapes. He can complete inset puzzles very quickly, although will re-do the same puzzle repeatedly and cry if it is taken away. A multi-disciplinary assessment is in progress and professionals suspect that Badar has severe autism with severe learning difficulties.

Aisha is 14 and has a diagnosis of Asperger syndrome. She attends a mainstream school and is fully included. Aisha is a quiet and extremely well-behaved student. Asperger syndrome affects Aisha in the following ways:

- She has excellent expressive language, although interprets what people say to her literally
- She has difficulties with social conversations and prefers to talk with adults rather than her peers
- Aisha finds it difficult to understand her peers sometimes and is not able to see things from their points of view
- She is an avid collector of factual information and her memory for facts is very good
- Aisha has lots of anxieties, especially in relation to social situations; this can cause her to cry or to become withdrawn
- She is hyper-sensitive to some sounds which can feel painful to her, but has ways to manage this independently
- Sam has excellent attention to detail and her accuracy in some subjects is a particular strength

Aisha studies hard and always completes homework on time; she is expected to achieve highly in her examinations. She has a best friend who she tends to always sit with and she has recently begun to attend social skills classes to develop her confidence.

Appendix 2: List of Contributors

The following participants contributed at the consultation workshop and provided feedback on the draft Strategy and Action plan.

Name	Title	Organisation/Department
Ahmad Tabook	Technical member	Directorate General of the Governorate of Dhofar (Salalah) /Ministry of Education
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Khalid AlMalki	Teacher	Royal Court/ Oman Society for Autism
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Appendix 3: Principles of Autism Good Practice

Principles of autism good practice have been identified in other autism strategies and through research. The following indicators of autism good practice are informed by:

- The Scottish Strategy for Autism, available from: http://www.autismstrategyscotland.org.uk/)
- Research, for example Autism Education Trust research, available from: http://www autismeducationtrust.org.uk/good-practice/good%20practice%20report.aspx)
- Literature, for example Guldberg (2010)

These principles are indicators of autism good practice and illustrate how similar principles can be developed through implementation of the Oman Autism Strategy:

- Leadership and development of an Autism Strategy to ensure that the rights of people with autism are upheld and protected through relevant legislation and to ensure that the needs of individuals with autism and their families are identified and met
- Clear diagnostic pathway to ensure identification, diagnosis and intervention
- Multidisciplinary collaboration to develop integrated services for children and families
- Building positive relationships and strong partnerships with families
- Access to training and continuing professional development to develop expertise and to
- Knowing and responding to the unique child, their difficulties and strengths
- Development of 'enabling environments' which take into account the difficulties and strengths of autism and to ensure that meaningful learning can take place
- Educational interventions built on understanding autism and knowledge and understanding of the needs of individual children – a 'toolbox' approach
- Recognition of the benefits of inclusion, in schools and in the local community
- High aspirations for all children

Appendix 4: Definitions

Diagnostic pathway: The procedures/ steps which lead to a getting a diagnosis for a specific condition (jn this case autism spectrum disorders).

Disability: A long-term physical, mental, intellectual, or sensory impairment which in interaction with various barriers may hinder the full and effective participation of the individual in society on an equal basis with others.

Evidence-based approach: Approaches which have been tested through carefully designed, experimental studies.

Evidence-informed approach: Approaches which are informed by teachers' analyses of professional experience

Frontline staff: A professional who comes in direct contact with children and their families.

Inclusion: For this strategy, inclusion is concerned with all children and young people with ASD in the Sultanate of Oman. The aim of inclusion is to provide opportunities for these individuals to be access mainstream settings which allow them to participate and achieve according to their abilities.

Inclusive classroom: In Oman this means a classroom within an ordinary school where children with disabilities are taught all the academic subjects by special educators with social integration for non-academic subjects such as music, art or physical education.

Learning support assistant: A professional who helps the students learning within an educational setting

National Autism Strategy Development Group (NASDG): A multi-disciplinary group which will oversee the development of autism services and implement of the Autism strategy nationally within the Sultanate of Oman.

Multi-disciplinary work: Professionals from different organisations and specialization working collaboratively along with individuals with autism and their family members.

Provincial Autism Reference Group (PARG): A multi-disciplinary group similar to NASDG which is responsible for the Autism strategy within each province and reports to the NASDG.

Rehabilitation: A process aiming at enabling persons with disability to reach and maintain their optimal physical, sensory, intellectual, psychological and social functional levels. Rehabilitation provides disabled people with the tools they need to attain independence and self-determination.

Special needs: A generic term used to refer to all children who need additional support in their learning.

Appendix 5: Pilot schools for developing services (SP 10)

The pilot early year centres, first cycle schools and rehabilitation centres in each province will be selected by the NASDG following similar procedures which were used to select the centres for learning disabilties. In addition, the schools and centres will be selected where the staff have received training in autism (SP 9). Children attending these settings should be of the same age as other children accessing these settings (upto the end of first cycle). All the students who currently have a diagnosis of ASD should be the priority for accessing these pilot settings.

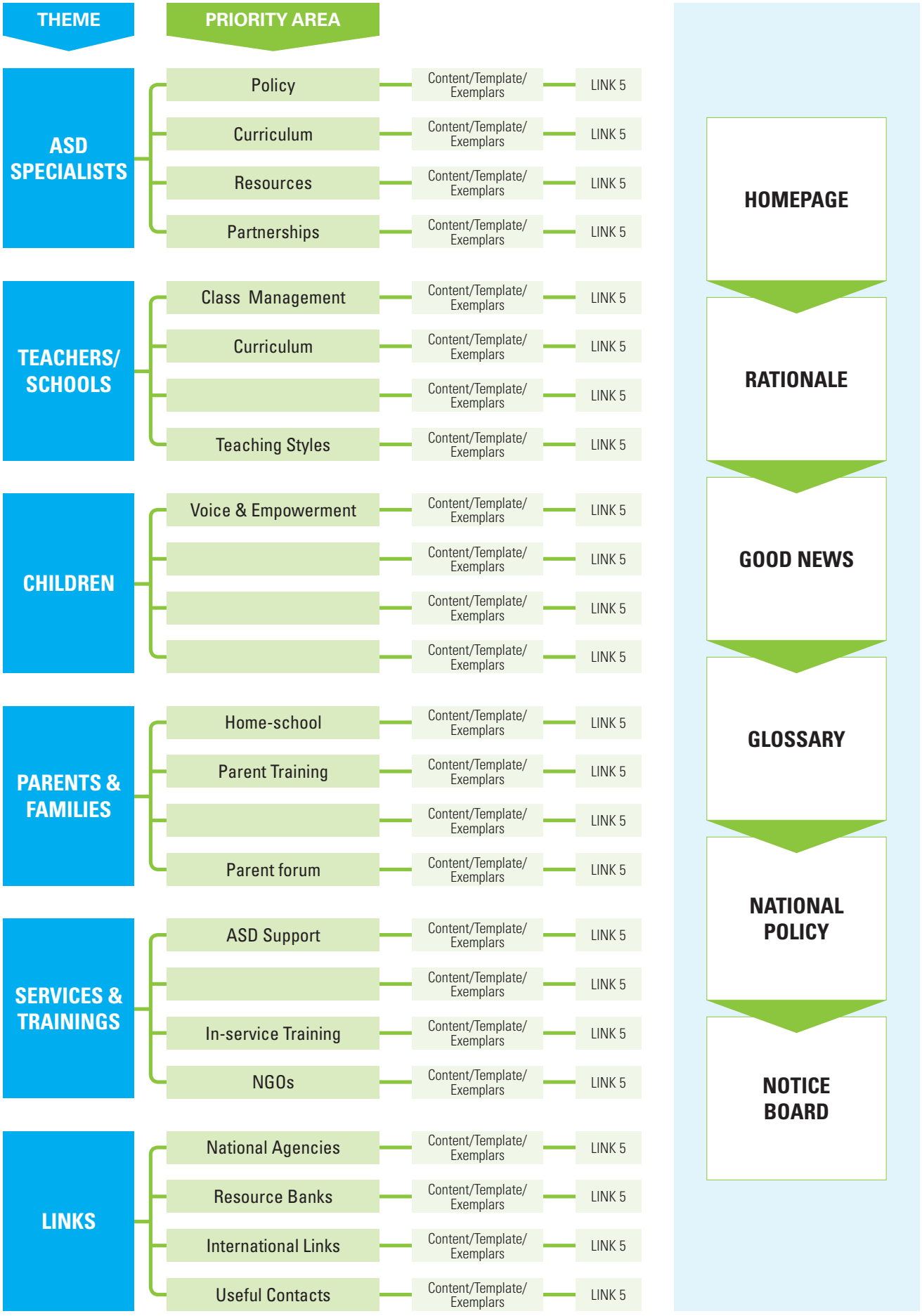
It is suggested that each setting should have a lead professional who will oversee the provision for all the children with ASD in that setting. All the children should have access to appropriate services such as special needs teachers, learning support assistants, speech and language therapists and psychologists who can provide support with behaviour management. It would be ideal if the non-teaching professionals are employed at provincial level so that they can offer similar support to a range of settings (early years centre, mainstream school and rehabilitation centres). When the inclusive provision is rolled out to more schools, a centralised team of ASD advisory teachers would also be required.

Suggested school selection criteria:

The specific criteria have to be developed by the NASDG along with the PARGs so that it is reflective of the country needs. The following criteria are suggested for guidance purpose only.

- Rehabilitation centres will provide services to children and young people with ASD levels 2 and 3 according to DSM 5 severity levels and children with ASD severity level 1 will be admitted to the inclusive classrooms in mainstream schools.
- Difficulty in following some of the curriculum areas, which need specialist support.
- Students attending the rehabilitation centre or the mainstream schools with ASD may need to be taught in a different way.

Appendix 6: Autism Website Example Template



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