

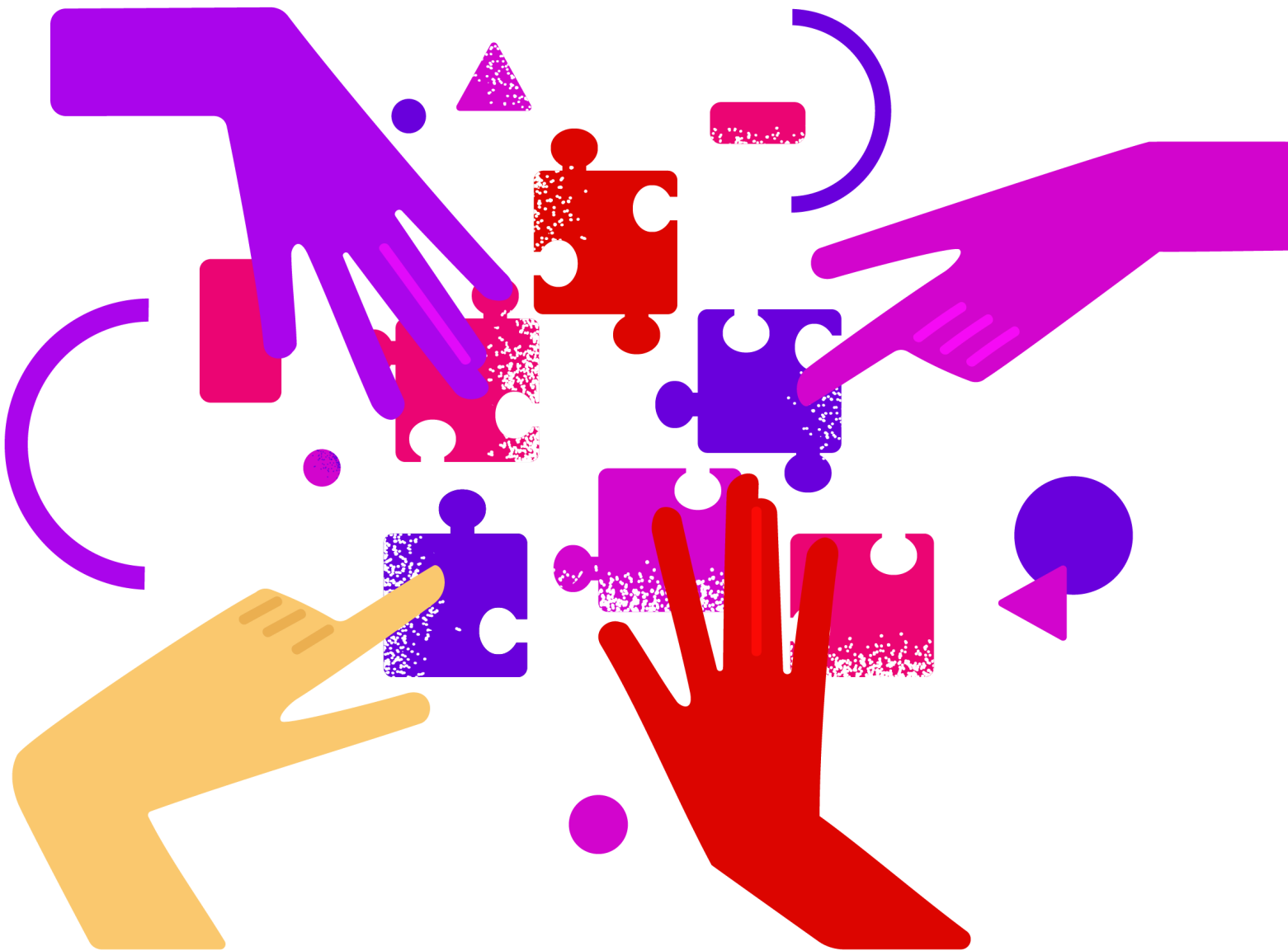


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# TUA - Internal Handbook





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## Contents

Partners	1
Author	1
1. Introduction	4
2. The needs of young people with ASD and DS	5
2.1 Needs of young people with ASD	5
Needs of young people with DS	9
3. Pedagogical Methodologies	14
3.1 Pedagogical methodologies adapted to young people with ASD	14
3.2 ABA Methodology	14
3.3 Verbal Behavior (VB) Therapy	17
3.4 PECS Methodology	18
3.5 TEACCH Methodology	20
3.6 Task Analysis and Self-Monitoring	25
3.7 Peer-mediated instruction and Intervention	26
3.8 Visual supports for developing literacy skills and Four-principles methodology for literacy skills development	29
3.9 Visual Learning and Multisensory Learning	31
3.10 Self-pacing and peer tutoring	33
4. Activities for Development	34
4.1 Art therapy	35
4.2 Storytelling	37
4.3 Photovoice activities	44
4.4 Collaborating on a group activity and discussion	45
4.5 Dancing and movement activities	47
4.6 Photography projects and exhibitions	49
4.7 Creating of Zines, Books and Comics	51
4.8 Artistic activities	52



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4.9 Activities that include toys and objects	54
5. Conclusion	55
References	57



## 1. Introduction

This Handbook explores the needs of young people with Autism Spectrum Disorder (ASD) and Down's syndrome (DS) in the areas of self-orientation, self-reflection, self-expression, and the expression of emotions through art. It also delves into pedagogical methodologies tailored to their unique characteristics and analyzes the artistic and/or soft skill development-oriented activities designed specifically for individuals with ASD and DS. Understanding and addressing these needs are vital for promoting their personal growth, social integration, and overall well-being. By examining the challenges they face in these domains and exploring effective approaches, this chapter aims to provide insights into how to support and empower young people with ASD and DS on their developmental journey.

ASD and DS are two conditions that can significantly impact the lives of individuals who are diagnosed with them. Young people with ASD often experience difficulties in social interaction, communication, and repetitive behaviors, while those with DS face cognitive and physical challenges. These conditions influence their ability to navigate the world and establish a sense of self and personal identity. Thus, it is crucial to identify and address their specific needs in the areas of self-orientation, self-reflection, self-expression, and the expression of emotions through art.

To meet the diverse needs of young people with ASD and DS, various pedagogical methodologies have been adapted. These methodologies take into account their cognitive, sensory, and social characteristics to create inclusive learning environments. By providing individualized support and employing strategies such as visual aids, structured routines, and sensory integration, educators can facilitate their learning and development.

Moreover, the Handbook examines artistic and/or soft skill development-oriented activities designed specifically for individuals with ASD and DS. These activities focus on nurturing their artistic talents, enhancing communication skills, and fostering emotional expression. By engaging in dance, music, drama, or visual arts, young people with ASD and DS can improve their social interaction, motor skills, self-confidence, and emotional well-being.

By addressing the needs of young people with ASD and DS in self-orientation, self-reflection, self-expression, and artistic development, educators, caregivers, and society as a whole can create inclusive environments that promote their growth,



well-being, and participation in society. Understanding the unique challenges they face and implementing tailored interventions and activities can empower these individuals to lead fulfilling lives, discover their talents, and contribute to their communities.

## 2. The needs of young people with ASD and DS

### 2.1 Needs of young people with ASD

- Needs that young people with ASD's have for self-orientation, self-reflection and self-expression, one of each. And the needs for the expression of emotions through art.

This chapter explores the essential needs of young people with ASD in the areas of self-orientation, self-reflection, self-expression, and the utilization of art as a medium for emotional expression.

Self-orientation is described by partners as the ability of an individual with ASD to understand and establish their own identity, interests and goals. It also embeds the basic beliefs and feelings that the individual has about itself in different environments.

The needs identified by partner-countries regarding self-orientation are various. To begin with, it has been found that young people with autism spectrum disorder find difficulties in developing a sense of identity, recognising their strengths and weaknesses, formulating their values, interests and goals. As one teenager with autism has mentioned: "I do not know who I am, I cannot communicate my inner self with those I want to. I am unable to communicate on a deeper level" (Attwood, Garnett). From the above excerpt it is evident that the difficulties that young people with ASD experience in self-orientation also influence their self-expression and thus their communication skills (Huang A., Hughes T., Sutton L., Lawrence M., Chen



X., Ji Z., Zeleke W., 2017). Thus, there is a great need for supporting these individuals to develop a sense of identity and belonging as well as to identify and explore their strengths and weaknesses, values, interests, and goals. Moreover, it is important to encourage them to work on themselves and how they feel about themselves, to build their self-identity and enhance their personal talents and strengths. Last but not least, it is also important to create more opportunities for these individuals to explore and discover their selves. In order to achieve this, it is vital that they are involved in the design of any activity implemented to reach the above-mentioned goals.

Self-reflection is described by partners as a mental process that an individual undergoes in order to contemplate, introspect and examine their thoughts, emotions and experiences as well as the ability to evaluate their behaviour, attitudes and desires.

Self-reflection poses challenges for young people with ASD, especially in terms of emotional regulation and social skills. According to research, young people with ASD find difficulties in understanding and managing their feelings, thoughts and attitudes. They also find it challenging recalling memories from the past and remembering details (Costa H. M., Purser H. R. M., Passolunghi, 2015, Happe, 2003, Grawemeyer, Johnson, Brosnan, 2015). Those findings described above have an impact not only on their personality (self-esteem) but also on their social skills. It is thus of crucial importance to be supported in order to develop a better understanding and management of their emotions, reflections and behaviours. To enable adults with ASD to effectively self-reflect, it is crucial to develop competent skills that rely less on verbal communication. Alternative means of teaching self-reflection skills should be considered to cater to the diverse communication abilities of individuals with ASD. A key aspect is helping them make sense of their own identity and exploring how autism shapes their sense of self. This process



involves growing self-awareness, understanding oneself, and finding purpose, ultimately leading to greater authenticity. Developing emotional intelligence is also vital, as it empowers individuals with ASD to recognize and regulate their emotions. Additionally, enabling executive function skills supports better organization, planning, and decision-making. To address these needs, adults with ASD require support in understanding and regulating their emotions, along with tools and strategies to manage anxiety and stress. Guidance in developing social skills and comprehending social cues are also essential for fostering positive relationships. By addressing these multidimensional needs, individuals with ASD can enhance their self-reflection abilities and achieve a stronger sense of self.

Self-expression for young people with ASD refers to their ability to effectively and meaningfully communicate their thoughts and feelings. It encompasses the need to communicate and interact without relying solely on the support of their family or immediate circle. It involves expressing their thoughts and emotions through words, choices, and actions, allowing them to convey their authentic selves. Self-expression also entails the ability to communicate thoughts, feelings, and ideas in a manner that is both genuine and significant. It encompasses the importance of expressing one's feelings and needs through various methods, approaches, and tools, tailored to the individual's unique communication style.

Thus, it is crucial to support them through activities that help cultivate their communication skills, as this not only enhances their self-esteem but also fosters the development of their social abilities. They require assistance in developing both verbal and non-verbal communication skills, along with opportunities to express themselves through their own interests and strengths. Creating a safe and supportive environment that encourages experimentation with self-expression is essential. By promoting confidence in oral communication and proposing alternatives to overcome communication difficulties, young people with ASD can





learn to effectively and appropriately express their wants, needs, thoughts, and feelings. Additionally, it is crucial to address their self-esteem, as research indicates that youth with ASD tend to have lower self-esteem compared to their neurotypical peers. All in all, by fostering self-expression, young people with ASD can develop their own voice, be heard, and connect with others on a deeper level, enabling them to actively participate in society and lead more fulfilling lives.

Expression of emotions through art refers to the utilization of artistic mediums by young people with ASD as a safe and effective means to express their inner world indirectly. It involves using creative skills and artistic expression as a method to communicate, regulate, and give form to their emotions. By engaging in the process of artistic creation, individuals with ASD can tap into their creativity, allowing them to effectively convey their feelings and needs in a way that may be challenging through traditional verbal communication. Art serves as a powerful tool for expressing emotions, fostering self-expression, and providing a platform for the unique expression of their thoughts and experiences.

Expression of emotions through art offers a valuable avenue for young people with ASD to navigate and cope with negative emotions, including stress, anxiety, and depression. Research has shown that individuals with ASD are more vulnerable to experiencing these emotions than their typically developing peers (Cachia, Anderson, Moore, 2016, Defilippis 2018). Art activities provide a healthy and impactful way for individuals with ASD to address these emotional challenges. Art, known for its effectiveness in dealing with negative emotions, harnesses the power of these emotions as a resource for artistic expression. For young people with ASD, who may struggle with verbal communication of emotions, art becomes a non-verbal creative outlet to explore and communicate their feelings. By engaging in art, individuals with ASD can regulate their sensory input and express their emotions and thoughts in a way that transcends traditional verbal or written



means. Access to art materials, resources, and opportunities for artistic expression and exploration is crucial to support their emotional well-being and overall development. Additionally, the visual processing strengths often seen in individuals with ASD make visual art therapy a promising approach, enabling them to identify and express their emotions, while fostering flexibility, self-esteem, and social communicative behavior. Through art, individuals with ASD find a safe and expressive space to navigate their emotions, fostering personal growth, and enhancing their social and emotional well-being.

## Needs of young people with DS

- Needs that young people with DS's have for self-orientation, self-reflection and self-expression, one of each. And the needs for the expression of emotions through art.

This chapter focuses on the needs of young people with DS in the domains of self-orientation, self-reflection, self-expression, and the expression of emotions through art. It also explores the challenges they may face in these areas and highlights the importance of tailored support and interventions to foster their growth and development.

Self-orientation for young people with DS encompasses the ability to develop a positive self-image, self-esteem, and a sense of personal identity, despite the significant impact of societal stigma on their self-concept. It involves understanding and internalizing one's own beliefs, feelings, strengths, weaknesses, values, interests, and goals. Self-orientation is the awareness and recognition of one's identity in various environments, as individuals with Down's syndrome navigate their understanding of themselves and their place in the world. It



encompasses the process of shaping a self-concept that promotes self-acceptance, self-confidence, and a positive outlook on personal identity, despite the challenges posed by external perceptions and societal biases.

Supporting self-orientation in young people with DS entails addressing their needs to develop a positive self-image, a sense of personal identity, and self-esteem. In a study of self-awareness among 77 children with DS using interviews, standardized tests, and photographs, over half were considered to have some level of self-awareness about their diagnosis but 13% refused to talk about their condition during their interviews. The authors identified one particular difficulty in determining self-concept in this population - only children with DS who had a mental age of 8 years or more were capable of making relative social comparisons and forming complex social categories of their disability. Therefore, mental age may affect individuals with DS ability to form a self-concept and affect the assessment of their self-concept due to limited language skills or mental ability. (Saha S, Doran E, Osann Ke, Hom C, Movsesyan N, Rosa Dd, Tournay A, Lott It., 2014). Thus, it is crucial to provide opportunities and experiences that enable them to understand their strengths, interests, and abilities. Creating an environment where they feel valued by others and promoting self-confidence are essential components of this process. Additionally, it is important to recognize and support their exploration of their strengths and weaknesses, identity, values, interests, and goals. However, assessing self-concept in this population can be challenging, as individuals with DS may have varying levels of self-awareness, influenced by factors such as mental age and language skills. Tailoring interventions and support to their specific cognitive abilities and providing appropriate tools for self-expression and self-reflection are essential for facilitating their journey of self-orientation and nurturing a positive self-concept.



Self-reflection in young people with DS is defined by the partners as the ability to examine their thoughts, feelings, and behaviors and understand their connection to others and the world around them. It involves developing self-awareness, introspection, and critical thinking skills. During self-reflection, individuals with DS engage in the process of evaluating their own thoughts, feelings, and behaviors, engaging in introspection and self-evaluation. While their experience of self-reflection may differ from typically developing peers, they also engage in serious thought and evaluation of their behaviors, thoughts, attitudes, motivations, and desires. It encompasses the awareness that young people with DS have of their own feelings, thoughts, and attitudes, allowing them to reflect upon their distinctive characteristics and gain insights into themselves.

The identified needs in self-reflection in young people with DS highlight the importance of the development of their self-awareness, self-evaluation, and self-regulation skills. By reflecting on their own feelings, behaviors, and thoughts, they can gain insights into their strengths and weaknesses, understand their learning styles, and cultivate a growth mindset. Self-reflection plays a crucial role in helping them monitor their progress towards personal goals and develop self-regulation skills. However, individuals with DS may face challenges in engaging in complex self-reflection due to their intellectual disability, particularly in abstract thinking and language processing. Therefore, providing appropriate support becomes essential to facilitate their self-reflection process. Additionally, while there is limited research on emotional knowledge in young people with DS (Pochon R., Touchet C., Ibernou L., 2017), studies have shown that they may experience difficulties in recognizing and managing emotions, which can impact their interpersonal relationships (Roch M., Pesciarelli F., Leo I., 2020). It is important to support them in further developing their emotional and social skills. Furthermore, individuals with DS have varying levels of self-concept and self-esteem, with positive views of themselves in domains such as academic



competence, physical abilities, and social acceptance. Providing opportunities for self-reflection can contribute to enhancing their self-concept and fostering positive self-esteem.

Self-expression refers to the ability of young people with Down's syndrome to effectively communicate their thoughts, feelings, and ideas using diverse forms of expression and tools, such as speech, writing, and artistic mediums. It involves conveying their thoughts and emotions through various modes of communication, utilizing unique methods like gestures, facial expressions, and body language. Self-expression plays a vital role in enabling individuals diagnosed with DS to articulate their thoughts and feelings in a meaningful and effective manner.

Supporting the self-expression of young people with DS is crucial to their development and well-being as it enables them to develop their own voice, establish their identity, build relationships, and cope with emotional difficulties. They have a need to communicate their thoughts, feelings, and ideas effectively and meaningfully, and to express themselves creatively. Thus, it is important to promote confidence in oral communication and provide diverse and alternative methods for communication to accommodate their unique abilities and perspectives. Self-expression also plays a significant role in fostering stronger social connections and relationships. Therefore, creating a safe and inclusive environment that encourages and facilitates their creative and social expression is essential. Furthermore, individuals with DS tend to exhibit phonological errors leading to poor speech intelligibility and insecurity. Factors such as apraxia of speech, dysarthria, and voice quality may further impact speech intelligibility. Consequently, this may affect productive language performance, contributing to the discrepancy between expressive and receptive language levels in individuals with DS. Therefore, it is essential to provide support and intervention to improve their expressive communication skills, addressing both their phonological



challenges and overall speech intelligibility. This support is necessary to ensure that young people with DS can express themselves meaningfully and effectively, while avoiding potential marginalization.

Expression of emotions through art for people with DS can be defined as the utilization of artistic activities them to safely and creatively express and communicate their emotions. It involves engaging in various forms of art that provide a non-threatening and supportive environment for them to explore and convey their inner world. Art becomes a powerful tool for individuals diagnosed with DS to express their range of emotions, thoughts, and experiences. Through their creative skills, they can effectively express their feelings and needs, offering an indirect yet meaningful outlet for self-expression.

When it comes to the existing needs for the expression of emotions through art for people with DS, more opportunities and activities as well as different artistic means of expression are highlighted. By exploring different forms of artistic expression, individuals with DS can familiarize themselves with art and the multiple benefits it offers for self-expression. Creative expression through the arts holds particular significance for individuals with DS due to challenges they may face in expressing themselves through spoken language. While verbal communication may be difficult, the arts provide a powerful medium for them to eloquently convey their emotions, whether through dance, movement, or painting. Additionally, creative arts serve as a "voice" for many individuals who struggle to express their feelings through words, allowing them to tap into their empathic nature and effectively express emotions in forms such as dance and drama.

In conclusion, supporting the self-orientation, self-reflection, self-expression, and the expression of emotions through art is of paramount importance for young people with DS. By addressing these needs, individuals with DS can develop a



positive self-concept, gain insights into their strengths and weaknesses, and navigate their emotions effectively. Tailoring interventions to their cognitive abilities and providing diverse communication tools and artistic mediums are essential for fostering their growth and well-being. Moreover, creating a safe and inclusive environment that encourages self-expression and artistic exploration enables them to develop their own voice, establish meaningful connections, and cope with emotional challenges. Through these efforts, young people with DS can lead fulfilling lives and actively contribute to society, while challenging societal stigmas and biases associated with their condition.

## 3. Pedagogical Methodologies

### 3.1 Pedagogical methodologies adapted to young people with ASD

The chapter explores various methodologies used to support individuals with ASD in their development and communication. These methodologies, including Applied Behavior Analysis (ABA), Verbal Behavior (VB) therapy, Picture Exchange Communication System (PECS), TEACCH, and the SCERTS Model, offer structured approaches tailored to the specific needs of individuals with ASD. Additionally, visual supports and music therapy are discussed as effective pedagogical methodologies for individuals on the autism spectrum. By addressing key areas such as social communication, self-expression, emotional regulation, and individualized support, these methodologies aim to enhance the overall well-being and quality of life for individuals with ASD.

### 3.2 ABA Methodology





To begin with, most partners (Greece, Cyprus, Belgium) refer to the methodology of Applied Behavior Analysis (ABA) as a methodology adapted to the specific target groups. The ABA methodology aims to improve socially significant behaviors and facilitate the acquisition of new skills. It is grounded in the principles of operant conditioning and utilizes various techniques, such as positive reinforcement, prompting, and shaping, to teach and reinforce positive behaviors while reducing negative ones. ABA breaks down all skills into individual steps or elements. Trainees are provided with repeated opportunities to learn and practice these skills in a variety of situations, receiving ample positive reinforcement. The goals of the intervention, as well as the specific type of instructions and reinforcement used, are tailored to the strengths and needs of each individual.

Originally developed by psychologist Ole Ivar Lovaas in the 1960s, ABA has evolved over time as our understanding of autism has increased. It utilizes positive reinforcement of behavior to teach and promote social skills, communication abilities, learning and academic skills, as well as self-care habits. ABA is specifically designed as a teaching method for children with ASD. It operates on the principle that appropriate behaviors, including speech, academics, and life skills, can be developed using scientific principles. The methodology recognizes that children are more likely to repeat behaviors or responses that are rewarded, while behaviors without rewards are less likely to continue. Through intensive reinforcement, behaviors are rewarded initially, and over time, the reinforcement is gradually reduced, enabling the child to learn without constant rewards.

Research supports the effectiveness of ABA for children with autism. One of the most well-known forms of ABA is Discrete Trial Training (DTT), where skills are broken down into the smallest tasks and taught individually. Discrete trials are used to teach various skills, including eye contact, imitation, fine motor skills, self-help, academics, language, and conversation. Students begin by learning small





skills and gradually progress to more complex ones as each smaller skill is mastered.

By implementing ABA as a methodology to target young people with ASD, significant improvements can be expected in various areas. These include communication skills, social skills, and academic performance. ABA interventions can lead to progress in physical, psychological, mental, social, and behavioral aspects. Additionally, when combined with music therapy, ABA can specifically target the core deficits of ASD, such as social exchange and communication. Music therapy provides a framework for learning how to engage in a shared experience, practice turn-taking, and regulate emotions. Furthermore, ABA has the potential to bring about important enhancements in social interaction, communication, and self-control skills among young people with ASD. It can also contribute to the development of self-care skills, play skills, and the ability to manage their own behavior. Furthermore, ABA interventions have the potential to reduce challenging behaviors like inattention, aggression, and screaming. However, it is important to note that while ABA can help autistic children develop independence, it should not be used to make them "mask" their autism or force them to conform to social norms. The focus should be on supporting their individual needs and promoting their overall well-being.

The ABA methodology targets several needs of individuals with ASD and addresses them in the following ways:

1. Self-Orientation: ABA helps individuals with ASD learn and follow daily routines and schedules, providing them with a sense of structure and orientation in their lives.



2. Self-Expression: ABA teaches young people with ASD effective ways to communicate their wants and needs, allowing them to express themselves more confidently and effectively.
3. Self-Reflection: ABA encourages individuals to reflect on their own behavior and make positive changes. By promoting self-awareness and self-reflection, ABA helps individuals with ASD develop a better understanding of themselves and their actions.

Additionally, when combined with music therapy, ABA can further address the needs of self-expression and expression of emotions through art. Music therapy allows individuals to express and process their emotions through music, explore their experiences and self-knowledge, enhance sociability, and utilize their creativity. Overall, by meeting these needs, ABA supports individuals with ASD in finding ease in new situations, improving their social skills, enhancing self-esteem, and developing decision-making skills.

### 3.3 Verbal Behavior (VB) Therapy

Verbal Behavior (VB) therapy is a methodology that focuses on teaching communication and language skills to individuals with ASD. It is grounded in the principles of ABA and the theories of behaviorist B.F. Skinner. VB therapy emphasizes the functional use of language by connecting words with their purposes, teaching individuals that words can help them obtain desired objects or results. VB therapy and classic ABA use similar techniques when working with children, and VB methods can be combined with an ABA program to work towards communication goals. It goes beyond labeling words and teaches the reasons why we use words and how they are useful in making requests and conveying ideas.



Language in VB therapy is classified into different types, known as "operants," each serving a different function. The therapy focuses on four-word types:

1. Mand: a request, such as saying "cookie," to ask for a cookie.
2. Tact: a comment used to share an experience or draw attention, such as "airplane" to point out an airplane.
3. Intraverbal: a word used to respond or answer a question, such as "where do you go to school?" "Castle Park elementary".
4. Echoic: a repeated, or echoed, word, such as "cookie?" "cookie!" This is important as imitating will help the student learn.

The implementation of Verbal Behavior therapy can yield several benefits for individuals with ASD:

1. Language Acquisition: For young children, VB therapy aids in the early stages of language learning, helping them develop their verbal communication skills.
2. Improved Verbal Communication: Older students with delayed or disordered language can benefit from VB therapy by improving their ability to communicate verbally.
3. Enhanced Communication for Non-Verbal Individuals: VB therapy can assist children and adults who use sign language, visual supports, or other forms of assisted communication to express their feelings, needs, and desires more effectively.

By focusing on communication skills, VB therapy helps individuals with ASD find ease in new situations. It enables them to communicate with others who share the same experiences, facilitating social interactions and reducing anxiety. Through



improved communication abilities, individuals become more self-aware and are better equipped to handle new situations decisively.

### 3.4 PECS Methodology

Another methodology mentioned by Greece is the Picture Exchange Communication System (PECS). The PECS methodology is a communication system designed to assist individuals with ASD in expressing their wants and needs. The system utilizes pictures as a visual aid to facilitate communication. The implementation of PECS involves a series of stages, starting with basic requests and progressing to more complex forms of communication, such as commenting and asking questions. Through PECS, individuals are taught to exchange a picture card for a desired item or activity, gradually developing the ability to construct sentences using picture cards.

The implementation of PECS can yield significant improvements in communication and social skills for individuals with ASD. By using visual aids, PECS provides a structured and accessible means of communication, empowering individuals to effectively express their wants and needs. This contributes to their overall self-expression and enhances their ability to interact with others and participate in social interactions.

PECS specifically targets the need for self-expression by equipping individuals with ASD with a practical method to communicate their wants and needs. By using picture cards, individuals are able to convey their desires in a clear and understandable way. This addresses the challenges individuals with ASD may face in verbal communication and enables them to effectively express themselves.

Furthermore, PECS supports the need for self-reflection by encouraging individuals to reflect on their own communication abilities and make positive changes. As



individuals progress through the stages of PECS, they become more aware of their communication skills, fostering self-reflection and prompting them to improve and refine their communication abilities.

In summary, the implementation of the PECS methodology provides individuals with ASD the means to communicate their wants and needs effectively. It enhances self-expression by utilizing visual aids, supports self-reflection by encouraging individuals to assess their communication abilities, and ultimately promotes significant improvements in communication and social skills.

### 3.5 TEACCH Methodology

The TEACCH (Treatment and Education of Autistic and Communication-related Handicapped Children) methodology indicated by Italy, is designed to support individuals diagnosed with ASD by providing a structured learning environment. The methodology aims to promote autonomy and comprehension in individuals with ASD. It recognizes the need for individualized support throughout their entire lives and emphasizes the importance of conducting personalized assessments to identify each individual's emerging competencies and develop a structured learning environment that facilitates the learning process.

The TEACCH methodology is built upon three main pillars:

1. **Spatial Planning:** Creating dedicated spaces for specific activities allows individuals with ASD to better understand their environment. The use of visual landmarks helps them navigate and comprehend their surroundings effectively.
2. **Structuring of Time:** This pillar enables individuals to grasp the concept of time and establish a sense of routine. Visual timetables are highly recommended to plan upcoming activities, help individuals understand



- changes, reduce anxiety, and provide information about the nature and duration of each activity. The format of the timetable and the visual supports used should be individualized based on each person's level of comprehension.
3. Structuring Through Work Routine: Creating an environment that promotes the repetition of behaviors and allows for anticipation reduces stress, anxiety, and facilitates the learning process. Each activity or new skill is detailed on a visual support, presented in a sequential manner (task by task), to ensure clear understanding of what needs to be done. Organizing the workspace also contributes to a structured work routine.

By implementing the TEACCH methodology, several results are expected:

1. Higher Understanding: The structured environment and visual supports help individuals with ASD better understand what tasks or activities they need to complete.
2. Reduction of Stress and Anxiety: Clear expectations and a predictable environment help individuals anticipate what is to come, reducing stress and anxiety.

The TEACCH methodology effectively targets the need for autonomy in individuals with ASD by implementing a three-fold structuring approach focusing on space, time, and the repetition of behaviors. It recognizes the importance of individualized support and provides a framework for creating a structured learning environment tailored to the specific needs of each individual.

### SCERTS Model

Belgium reports the SCERTS Model which is a research-based educational approach and multidisciplinary framework that aims to support young people with



ASD in becoming competent and confident social communicators and active listeners, with the active cooperation of their supportive circle, including their families, teachers, and therapists.

The SCERTS Model addresses the core challenges faced by individuals with ASD by focusing on three key areas:

1. **Social Communication:** The SCERTS Model aims to develop spontaneous, functional communication, emotional expression, and the ability to establish secure and trusting relationships. It focuses on building competence in social interaction and communication skills.
2. **Emotional Regulation:** This aspect of the model emphasizes the development of the ability to maintain a well-regulated emotional state, enabling individuals to cope with everyday stress and be more available for learning and interacting with others.
3. **Transactional Support:** The SCERTS Model emphasizes the development and implementation of support strategies to help partners respond to the person's needs and interests. It includes modifying the environment and providing tools to enhance learning and social participation. The model recognizes the importance of teamwork among professionals involved in supporting individuals with ASD.

By implementing the SCERTS Model, significant improvements can be expected in various areas for young people with ASD, including social skills, communication abilities, emotional regulation, and self-regulation skills. The model provides specific plans and strategies to offer educational and emotional support to families, fostering collaboration and teamwork among professionals.



Overall, the SCERTS Model targets the need for self-expression in young people with ASD by providing them with the means to effectively communicate their wants and needs. It addresses the core challenges of social communication, emotional regulation, and transactional support, with the goal of enhancing social interaction, communication skills, and emotional well-being for individuals with ASD.

### **Visual Supports & Music Therapy:**

Finally, visual supports and music therapy are also reported By Greece and Cyprus as pedagogical methodologies adapted to young people with ASD. Visual supports are an effective methodology for individuals diagnosed with autism, as they tend to be more responsive to information presented visually and in a step-by-step fashion. Visual schedules, which can include videos, drawings, symbols, photographs, and more, are used to show individuals what is expected of them and guide them through tasks. They have been successfully employed from early childhood to adulthood to facilitate the process of explaining activities and tasks.

Research has shown that visual schedules that incorporate pictures, videos, or both, are more successful in promoting understanding compared to those that rely solely on text or line drawings. By utilizing visual supports to convey instructions, this methodology targets the need for individuals with autism to have an alternative to auditory instruction. It helps them better comprehend activity instructions and enhances their ability to engage in tasks.

On the other hand, music therapy is a clinical intervention that utilizes music to achieve individualized goals through a therapeutic relationship with a qualified music therapist. It has been extensively researched and has shown positive results in physical, psychological, mental, social, and behavioral areas. In the context of





ASD, music therapy specifically addresses the basic deficits of the disorder, namely social exchange and communication.

Music therapy provides a framework within which individuals can learn how to be part of a common story, have a shared focus with others, accomplish turn-taking, and regulate emotions. It targets the needs of self-reflection, self-expression, and the expression of emotions through art. Through the music therapy process, individuals can express and process emotions through music, explore their experiences and self-knowledge, improve sociability, and tap into their creativity. By addressing these needs, music therapy supports individuals with ASD in developing a greater sense of self-awareness, emotional regulation, and social interaction. It provides them with a means of expression that goes beyond verbal communication, allowing for a deeper exploration of their inner world and personal experiences.

In summary, visual supports and music therapy are valuable methodologies that cater to the unique needs of individuals with autism. Visual supports provide a visual and structured approach to instructions, enhancing understanding and task completion. Music therapy utilizes the power of music to foster self-reflection, self-expression, and emotional exploration, leading to progress in various areas of development. These methodologies play crucial roles in supporting individuals with autism in their journey of growth, communication, and self-discovery.

In conclusion, the methodologies discussed in this chapter offer valuable approaches to support individuals with ASD in their journey towards growth, communication, and self-discovery. Applied Behavior Analysis (ABA), Verbal Behavior (VB) therapy, Picture Exchange Communication System (PECS), TEACCH, the SCERTS Model, as well as visual supports and music therapy, provide structured frameworks that address the unique needs of individuals with ASD. By



focusing on social communication, self-expression, emotional regulation, and individualized support, these methodologies foster progress in various areas of development. Ultimately, they contribute to the overall well-being and quality of life for individuals with ASD, enabling them to navigate the world with increased confidence, independence, and meaningful connections with others

- Pedagogical methodologies adapted to young people with DS

In this chapter, various pedagogical methodologies aimed at supporting individuals with DS in their learning and development are explained. These methodologies address the specific needs and challenges faced by individuals with DS, including self-orientation, self-expression, emotional expression, and literacy skills development. By implementing these methodologies, educators and caregivers can create inclusive and tailored learning experiences that empower individuals with DS to thrive and reach their full potential. The methodologies discussed are various and each methodology offers unique strategies and approaches to cater to the diverse learning modalities and needs of individuals with DS, fostering their independence, social integration, and overall quality of life.

### 3.6 Task Analysis and Self-Monitoring

The first methodology proposed, is task Analysis and Self-Monitoring which focuses on breaking down complex tasks into smaller, more manageable steps, and teaching individuals how to monitor their own progress towards completing each step. By implementing this methodology, the targeted need for self-orientation is addressed by providing individuals with a clear understanding of the steps involved in a task and how to approach each one. Additionally, this methodology targets the need for self-reflection by teaching individuals to



self-monitor, allowing them to reflect on their progress towards completing a task and adjust their approach accordingly.

The implementation of Task Analysis and Self-Monitoring is expected to yield several positive outcomes. One of the anticipated results is improved task completion rates. By breaking down tasks into smaller steps, individuals with ASD or other developmental conditions can better comprehend and execute each component, leading to higher rates of successful task completion. Another expected outcome is increased independence. By acquiring the skills to self-monitor their progress and adjust their approach, individuals become more self-reliant and capable of completing tasks on their own. This increased independence empowers individuals to participate more actively in their daily lives, enhancing their overall autonomy and self-confidence. A relevant study conducted by Valentini et al. (2016) demonstrated the effectiveness of Task Analysis and Self-Monitoring interventions in improving independence and life skills for young adults with Down's syndrome. The study found that by implementing this methodology, individuals showed significant progress in completing daily living skills such as dressing and grooming independently. This research reinforces the potential of Task Analysis and Self-Monitoring to target specific needs and facilitate skill development, promoting greater independence and quality of life for individuals with developmental conditions.

In summary, Task Analysis and Self-Monitoring methodology offers a systematic approach to support individuals with ASD or other developmental conditions in accomplishing tasks. The expected outcomes include improved task completion rates and increased independence, as demonstrated by research focusing on individuals with Down's syndrome. By implementing this methodology, individuals can gain essential life skills, enhance their independence, and improve their overall quality of life.



### 3.7 Peer-mediated instruction and Intervention

Another methodology proposed is Peer-Mediated Instruction and Intervention, a methodology that involves pairing individuals with Down's Syndrome with typically developing peers to facilitate learning and social interactions. The typically developing peers are taught specific strategies to support the learning and social needs of their peers with Down's Syndrome. This approach recognizes the importance of social connections and the role of peer support in promoting the development and social integration of individuals with Down's Syndrome.

The primary target of this methodology is the need for self-expression, as individuals with Down's Syndrome may face challenges in social communication and expressing themselves in social situations. By pairing them with typically developing peers, they are provided with opportunities to practice and improve their social communication skills in a supportive and inclusive environment. Through the guidance and assistance of their peers, individuals with Down's Syndrome can develop effective communication strategies, enhance their social interactions, and strengthen their overall socialization skills.

The expected results from implementing Peer-Mediated Instruction and Intervention include improved social communication and socialization skills for individuals with Down's Syndrome. A study conducted by Lopata et Al. (2017) found that peer-mediated interventions led to significant improvements in social communication skills and increased social interactions among individuals with Down's Syndrome. By actively engaging with their typically developing peers, individuals with Down's Syndrome can enhance their ability to initiate and maintain conversations, interpret nonverbal cues, and navigate social situations more effectively.



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The implementation of Peer-Mediated Instruction and Intervention addresses the unique needs of individuals with Down's Syndrome by fostering a supportive social environment that encourages their active participation and learning. It recognizes the value of peer relationships and leverages the strengths of typically developing peers to provide personalized support and guidance. By promoting social inclusion and facilitating positive social experiences, this methodology empowers individuals with Down's Syndrome to improve their social skills, forge meaningful connections, and enhance their overall quality of life.

### **Art-based therapy and Music-based learning**

The pedagogical methodologies proposed by Cyprus for young people with DS incorporate more artistic methods such as the use of art and music as a learning and therapy method.

In the first place, art-based therapy is a pedagogical methodology that utilizes various art forms such as drawing, painting, sculpture, and collage to support individuals with Down syndrome in expressing themselves, communicating their emotions, and developing social and emotional skills. This form of therapy can be tailored to meet the specific needs of young people with Down syndrome and has the potential to enhance their fine motor skills, sensory awareness, and cognitive abilities. Additionally, art therapy fosters creativity and imagination, allowing individuals to engage in a pleasurable and meaningful creative process. By providing a non-threatening environment and socially acceptable means of self-expression, art therapy also improves social skills and problem-solving abilities. This methodology addresses the needs of self-expression and emotional expression by facilitating the communication and artistic exploration of young people with Down syndrome through various art forms.



On the other hand, music-based learning is a powerful pedagogical methodology for individuals with DS, utilizing the transformative nature of music for learning and development. This approach involves activities such as singing, playing musical instruments, and engaging in rhythm and movement exercises. Music-based learning can significantly contribute to the development of communication skills, social skills, and cognitive abilities among young people with DS. Through music, individuals can experience positive effects on motor development, communication development, cognitive development, and social-emotional development. This methodology improves communication and socialization skills, as well as fine and gross motor skills. Moreover, music-based learning supports emotional regulation and self-expression, aiding individuals in their emotional development. By addressing the needs of self-orientation, self-expression, and emotional expression, music-based learning provides a fun and engaging way for young people with Down syndrome to acquire knowledge, explore new concepts, and effectively communicate their emotions.

In summary, both art-based therapy and music-based learning are valuable methodologies to support individuals with DS. Art therapy promotes self-expression and emotional communication through various art forms, while music-based learning enhances communication skills, socialization, cognitive abilities, and emotional development through engaging musical activities. By targeting these specific needs, these methodologies create meaningful and inclusive learning experiences, enabling individuals with DS to thrive and reach their full potential.

### 3.8 Visual supports for developing literacy skills and Four-principles methodology for literacy skills development



The methodologies analysed above both focus on the development of literacy skills for individuals with DS.

The first methodology refers to Visual Supports for Developing Literacy Skills. For individuals with DS, visual supports play a crucial role in developing literacy skills. Studies on cognitive and learning processes in individuals with DS have revealed strengths in visual processing and clear deficits in verbal processing. Therefore, instructional approaches for teaching reading and other subjects should incorporate visual learning strategies. Visual demonstrations, drawings, and illustrations can be effectively used to enhance understanding and recall of higher-level words and ideas. By coupling verbally-based instructions with visual supports, individuals with DS experience improved levels of engagement and comprehension, leading to enhanced learning outcomes. This methodology targets the need to rely on alternative methods of communication, such as visual imagery, to transmit knowledge and cater to the specific learning needs of individuals diagnosed with Down Syndrome.

The second methodology proposed is the Four-Principles Methodology for Literacy Skills Development. The University of Queensland has developed a post-school literacy program specifically designed for young adults with DS. This program follows a methodology based on four key principles:

1. **Authentic Activities:** The activities are connected to the participants' daily life context, making them meaningful and relevant. For example, organizing a social event, writing grocery lists, sending an email to a peer, or writing and practicing a speech for a birthday celebration. By focusing on real-life scenarios, the program aims to enhance the participants' literacy skills in practical and applicable ways.





2. **Genuine Outcomes and Real Audience:** The learners' work within the program has tangible and authentic outcomes. As part of the project, participants publish a newsletter that is mailed to local schools, community centers, and educational institutions. This approach provides learners with a sense of purpose and an opportunity to showcase their skills to a real audience.
3. **Personalized and Socially Purposeful Learning Activities:** The teaching and learning activities are shaped around the participants' personal interests and social purposes for using literacy. Periodically setting personal goals and interests, the program tailors activities to align with the learners' individual preferences. This personalized approach fosters engagement and motivation while promoting the development of literacy skills.
4. **Integration of Digital Tools:** The methodology encompasses the use of digital tools to enable the development of contemporary skills. By incorporating technology, learners gain exposure to modern literacy practices and acquire digital literacy competencies that are increasingly essential in today's world.

By employing this methodology, learners with DS benefit from higher levels of involvement and engagement in their literacy development. The program targets a broad range of literacy skills, including contemporary literacy skills, ensuring that participants are equipped with the necessary competencies for their personal growth and societal integration. This methodology places individuals at the center of the learning process, acknowledges their unique interests, and creates genuine learning opportunities with real-world applications.

Both methodologies emphasize the importance of individualized approaches and meaningful contexts in supporting the literacy development of individuals with DS. By utilizing visual supports and integrating personal interests, real-world





applications, and digital tools, these methodologies aim to empower individuals with DS to become confident and proficient readers and writers. The implementation of these methodologies targets the specific needs of individuals with DS by enhancing their learning experiences and equipping them with the necessary skills for personal growth and societal integration.

### 3.9 Visual Learning and Multisensory Learning

The methodologies of visual learning and multisensory learning focus on the unique learning modalities and needs of students with DS. Students with DS often have strong visual learning capabilities, and teaching reading and other subjects should prioritize visual learning approaches. Visual demonstrations, pictures, and illustrations can effectively support instruction in various curriculum areas. Materials specifically designed for the learning strengths and needs of students with DS, such as visually-based mathematics materials, can be utilized. Tactile demonstrations and activities also appeal to many students with DS. Professionals can enhance learning by pairing pictures with spoken words, providing visual cues, using kinesthetic reinforcement, employing color coding and highlighting, and utilizing visual practices to compensate for memory difficulties.

Incorporating small illustrations against difficult words in the margins, as research suggests that individuals with DS learn better when information is visually illustrated. These results cater to the needs of individuals with DS by providing visual accommodations and supports to enhance their learning experiences and compensate for specific challenges. By utilizing visual tools, individuals with DS can acquire knowledge, improve social inclusion, enhance self-esteem, and effectively communicate their needs and experiences to others within their communities.



Multisensory learning, which encompasses sight, sound, touch, smell, and taste, has been found to be particularly beneficial for young people with DS. Research indicates that they often learn best through hands-on, experiential learning and are visual learners who benefit from visual presentations of information. Using visual schedules, calendars, and incorporating multiple sensory modalities in teaching curricula can enhance their information processing and retention.

The results expected from implementing multisensory learning include improvements in self-regulation, communication, and social skills of young people with DS. By engaging multiple senses in the learning process, this methodology targets the needs for self-orientation and self-reflection in young people with DS, facilitating more effective learning experiences and promoting their overall development.

Overall, these methodologies offer valuable strategies to optimize learning outcomes and promote the overall development of students with DS. The implementation of multisensory learning, which involves engaging multiple senses in the learning process, particularly benefits young people with DS. By incorporating visual schedules, calendars, and employing various sensory modalities, educators can facilitate improvements in self-regulation, communication, and social skills, addressing the specific needs for self-orientation and self-reflection in this population.

### 3.10 Self-pacing and peer tutoring

Self-pacing is a methodology that allows children with DS to have the freedom to take their time in getting acclimated to a project, eliminating the frustration that may arise from feeling rushed. It also grants them the flexibility to switch to another task if they find it difficult to concentrate and come back to the previous



task when they feel more focused. Allowing students with DS ample time to process language and respond is beneficial for their comprehension of information.

The expected results of implementing self-pacing include learning one letter or a new sound over a week, offering additional help by asking students to repeat what they have learned at the end of a lesson or during peer work. This methodology acknowledges that individuals with DS may have slower processing speeds and develop rigid behavioral patterns as a way to maintain order and control. By providing them with the autonomy to self-pace their tasks, it caters to their need for managing their own speed and fosters a sense of self-control.

This methodology targets the needs of individuals with DS by facilitating their learning capacity and enhancing their comprehension of the world. It provides an alternate way of communication, even non-verbally, and promotes self-awareness and self-esteem by expanding their overall knowledge. By becoming equal members of their society and community through increased understanding and participation, individuals with DS can develop a stronger sense of self and actively contribute to their communities.

On the other hand, peer tutoring is a methodology that involves the co-existence of young people with DS and typically developing peers, creating a beneficial learning experience for both parties. This approach promotes social interaction, cooperation, and shared learning experiences. The results of implementing peer tutoring can lead to significant improvements in the social, communication, emotional, and self-regulation skills of young people with DS.

The needs addressed by peer tutoring include self-orientation and self-expression. By engaging in social interaction with their peers, individuals with DS have



opportunities for self-discovery, self-expression, and the development of social skills. Peer tutoring provides a supportive environment where they can learn from and with their peers, fostering personal growth and enhancing their ability to navigate social interactions effectively.

In summary, the methodologies of self-pacing and peer tutoring address the unique needs of individuals with DS. Self-pacing allows for personalized learning experiences, promoting comprehension, self-control, and self-esteem, whereas peer tutoring fosters social interaction, cooperation, and the development of social and communication skills. Both methodologies contribute to the overall growth and development of individuals with DS, empowering them to participate fully in society and express themselves confidently.

## 4. Activities for Development

- Artistic and/or soft skill development-oriented activities for young people with ASD

This chapter explores various artistic and soft skill development-oriented activities for young people with ASD. These activities aim to provide opportunities for self-expression, communication, social interaction, and personal growth. The chapter highlights mainly artistic approaches for engaging young people with ASD in creative and expressive endeavors. By fostering artistic and soft skill development, these activities promote self-confidence, self-awareness, social-emotional competencies, and overall well-being.

### 4.1 Art therapy



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Art therapy, reported from Greece, Italy and Cyprus, is a creative and expressive activity that can greatly benefit young people with ASD by providing a means of non-verbal communication and self-expression. Through music, drama, visual arts, or dance, art therapy enables individuals with ASD to express themselves creatively and develop their communication skills. It offers a safe and non-threatening environment for them to communicate their feelings, thoughts, and emotions. Additionally, art therapy helps in the development of fine motor skills and improves focus and attention. The target group for art therapy includes children, teenagers, and young people with ASD.

The learning objectives of art therapy for young people with ASD are multifaceted. It aims to increase their tolerance for unpleasant stimuli and channel self-stimulating behaviors into creative play. Art therapy also encourages individuals with autism to tolerate various sensory experiences that they would typically avoid, such as different textures or smells. Furthermore, art therapy facilitates enhanced communication through creative expression, improves imagination and abstract thinking, fosters the ability to see others' perspectives, promotes sensory integration, and enhances emotional and sensory regulation. It also helps in the development of visual/spatial skills and offers a pathway for children with ASD to express their feelings and impressions of the world.

One example of an art therapy activity is the weekly lunchtime gathering held by the Montreal Museum of Fine Arts for young adults with ASD. This activity focuses on exploring different pairs of emotions, such as joy and sadness, in an informal setting that promotes prosocial exchanges and group cohesion. The activity unfolds in four steps: psychoeducation, gallery visit, art therapy, and closing. During the psychoeducation session, participants discuss how various events influence emotional reactions and share personal experiences related to the given pair of emotions. In the gallery visit, participants view selected artworks



representing the emotions and make their own spontaneous selections, explaining their choices using personal reflections. In the art therapy phase, participants express their emotions through line, colors, and shapes, using various materials. They then share their work with the group, including any reflections or experiences related to the theme of the day. The closing step involves providing information about the upcoming theme and addressing questions and reflections from the participants.

The target group for this specific art therapy activity is young adults aged 18-24 with ASD level 1, which indicates the mildest form of autism involving difficulties in initiating social interactions and organization/planning difficulties that can hinder independence. The learning objectives for this group include exploring various emotional states and means of expressing them, encouraging social interaction and reducing social isolation, familiarizing participants with the museum, and forging connections with other young adults. The activity utilizes the museum's collection as a platform to discuss emotions and provides an opportunity for participants to communicate their feelings and thoughts through art therapy. The competences developed include self-expression, emotional expression, interpersonal communication, increased capacity to explore and express different emotions, familiarity with the museum, the possibility to connect with other young adults, and the ability to discuss emotions effectively.

Another artistic activity reported by Greece is the Colour Inspo activity. Color Inspo for young people with ASD is a creative and engaging approach that utilizes art materials and activities to facilitate self-expression and emotional exploration through colors. This therapeutic intervention is specifically designed to cater to the unique characteristics and needs of individuals with ASD.



In summary, art therapy serves as a valuable artistic and soft skill development-oriented activity for young people with ASD. It provides a means of non-verbal communication and self-expression, promotes various learning objectives such as emotional exploration, social interaction, and familiarity with artistic mediums. Art therapy helps individuals with ASD develop competences in self-expression, emotional regulation, interpersonal communication, and the ability to discuss emotions effectively.

## 4.2 Storytelling

Storytelling, which is proposed by Italy and Belgium, is an artistic and soft skill development-oriented activity for young people with ASD. It involves recounting personal experiences, listening to others' accounts, providing explanations, and describing thoughts and actions. Storytelling typically takes place in groups, where participants actively engage with the storyteller and contribute to the narrative. It has a social nature and allows the storyteller to experience the beneficial effects of a supportive environment, enhancing their psychological well-being.

One example of a storytelling activity described by Italy is the "Telling My Story in the Gallery" project, which aimed to enable young women living on the autism spectrum to share their autobiographical narratives during creative visual arts sessions. Through visual art making, the project provided a means for self-expression, exploration, and reflection on their individuality. Art therapy techniques were used to facilitate the creation of narratives that helped these women in their self-discovery, particularly in relation to their identity associated with autism. The project emphasized empowering the women by showcasing their strengths rather than focusing on perceived flaws related to autism.



Another example reported by Belgium is Social Stories, developed by Carol Grey in 1990, which are personalized and illustrated stories that can be used with young people who face intellectual and emotional challenges. They serve as a tool for teaching individuals how to navigate social situations, master social skills, handle problem behaviors, and learn specific tasks or routines. Social Stories are particularly beneficial for children with ASD and can help improve their social and emotional skills.

Generally, the target group for storytelling activities would typically include individuals within the autism spectrum. The specific age range and characteristics of the target group can vary depending on the context and goals of the activity. However, these activities are generally designed to cater to the needs and interests of children, teenagers, and young adults who are on the autism spectrum and may benefit from the development of artistic and soft skills, such as self-expression, communication, self-confidence, and self-awareness.

Learning objectives for young people with ASD engaging in storytelling activities may include:

1. Organizing and producing personal artwork: Participants learn to create visual representations of their stories, expressing their ideas and experiences through art.
2. Making personal choices about pieces to include in the artwork: Participants develop decision-making skills by selecting specific elements of their story to represent visually.
3. Telling a cohesive story: Participants learn to structure their narratives and present their experiences in a logical and engaging manner.





4. Understanding their own sense of self: Through the process of storytelling, participants reflect on their experiences, ideas, and feelings, fostering self-awareness and self-discovery.
5. Improve their social and emotional skills as well as further develop their self-regulation skills.

The competences developed through storytelling activities for young people with ASD include:

1. Self-expression: Participants enhance their ability to communicate and express themselves, both verbally and non-verbally, through storytelling and visual art.
2. Self-confidence: Engaging in storytelling activities can boost participants' self-confidence, as they share their stories and receive support and validation from others.
3. Self-awareness: Storytelling encourages introspection and reflection, helping participants develop a deeper understanding of themselves and their experiences.
4. Improved narrative language skills: Participants enhance their ability to structure and express their stories effectively.
5. Enhanced social and emotional skills: Engaging in storytelling helps develop empathy, perspective-taking, and emotional

It's important to consider some precautions when engaging in storytelling activities with young people with ASD. Stories should be shared with sensitivity, as they have the potential to harm others or trigger troubling emotions, especially when relating to mental health. Not all details should be shared with everyone, and storytellers should be conscious of the impact their stories may have on others. Applying content warnings can be useful to allow listeners to make informed choices about



their engagement with the stories. Additionally, youth with ASD may require preparation, debriefing, and ongoing support after engaging in public storytelling to ensure their well-being.

### **Role playing and theatre classes**

Role playing and theatre classes are mentioned by Greece, Belgium and Cyprus as highly beneficial artistic activities for young people with ASD. These activities provide a safe and inclusive environment where individuals can explore their creativity, improve communication skills, develop social-emotional competencies, and enhance self-expression.

To begin with, theatre classes provide a safe space for youth with ASD to learn and experiment with new behaviors, make mistakes, learn from them, form meaningful relationships, and develop critical communication skills applicable to daily life activities. Theatre activities offer valuable opportunities for socialization and generalizing learned skills. Acting involves conveying how a character feels and thinks, making it useful for teaching emotional recognition, expression, non-verbal behavior, gestures, listening skills, eye contact, and strategies to handle social situations.

One theatre activity mentioned is the Image Theatre. Image Theatre involves the use of still images to explore abstract concepts such as relationships and emotions, as well as realistic situations. It allows participants, both those confident with drama and those with little or no experience, to engage without the need to memorize lines or perform in front of others. Techniques like image-staging, sculpturing, and slow-motion race can be used to explore feelings and experiences. The learning objectives of Image Theatre include safely practicing physical interactions, exploring creativity and imagination, creating and



reading emotions, learning turn-taking, and expression. Creativity, linguistic skills, communication skills, social skills, and imagination are some of the competences developed through Image Theatre. It enables the exploration of issues, attitudes, and emotions in a creative and imaginative way, without stress or pressure.

Theatre classes aim to cultivate empathy, improve social and emotional skills, enhance self-esteem and peer communication, and decrease negative feelings that individuals may experience. The competences developed include social-emotional skills, self-expression skills, participation skills, and initiation of communication.

Another theatre activity mentioned is the Role-playing job interviews which is specifically designed to address the social challenges individuals with ASD may face when interacting with potential employers. Through one-on-one coaching and role-playing, participants can practice job interviews and receive feedback. This activity helps improve soft skills required for job interviews, such as formal communication, accepting feedback, and adapting communication skills to different contexts.

The learning objectives of role-playing job interviews include communicating in a more formal way as well as the encouragement of individuals with ASD in finding and maintaining a job. The expected results include the enhancement of communication skills, the ability to adapt communication to different contexts, and the development of social interaction skills based on the specific place and space.

Moreover, structured play activity in which an adult provides resources, initiates play, or joins in with children's play to offer direction or guidelines is also reported. It involves providing clear guidelines about what to do, when to do it, and has a clear endpoint. For children with ASD, structured play activities are particularly



beneficial as they reduce the number of play scenario options that can overwhelm them. This type of play allows children with ASD to understand the steps, skills, activities, or ideas required to reach the end goal of the activity. It also provides opportunities for them to interact with other children, communicate, and learn important skills such as sharing, taking turns, and interacting with peers.

In structured play activities, the learning objectives for children with ASD include developing play skills such as sharing, taking turns, and interacting with other children. Through these activities, they also work on improving their communication skills, both verbal and non-verbal. The structured nature of the play provides a supportive environment for children with ASD to learn and practice these essential skills. By participating in structured play, children with ASD can acquire competences related to social interaction, communication, and collaboration with peers, which are important for their overall development and social inclusion.

Finally, teatroexpression for young people with ASD is a specialized activity that aims to support their social and emotional development through role-playing and improvisation. This form of therapy provides a safe and creative space for individuals to express their thoughts, emotions, and experiences. By engaging in theatrical activities, young people with ASD can enhance their social skills, communication abilities, and self-expression.

The competences developed through teatroexpression are analysed above:

1. Social Competence: Teatroexpression enables young people with ASD to develop social skills, such as initiating and maintaining conversations, understanding social cues, cooperating in group settings, and demonstrating empathy.



2. Communication Competence: Participants can enhance their verbal and non-verbal communication skills, including expressive and receptive language abilities, articulation, body language, and understanding non-literal language.
3. Emotional Competence: The activity supports the development of emotional awareness, regulation, and expression. Participants can learn to identify and understand their own emotions and those of others, as well as develop strategies for managing and expressing emotions in a constructive manner.
4. Creative Competence: Teatroexpression nurtures creativity by encouraging participants to explore different characters, situations, and emotions. It fosters imaginative thinking, improvisation skills, and the ability to think outside the box.

In summary, teatroexpression is a specialized activity for young people with ASD, focusing on improving social skills, communication abilities, and self-expression. Through role-playing and improvisation, participants can develop social, communication, emotional, and creative competences, providing them with valuable tools to navigate social interactions and express themselves more effectively.

The theatre activities described above are specifically designed for two distinct target groups: children, teenagers, young people, and adults with ASD, and youth with ASD who may experience social interaction and emotional difficulties. Both target groups can greatly benefit from participating in these activities. For individuals with ASD, engaging in theatre activities provides a unique opportunity to develop various skills, such as social interaction, communication, emotional expression, and creativity. By creating a safe and inclusive environment, these activities cater to the specific needs and challenges faced by individuals on the autism spectrum. Moreover, theatre classes offer a supportive space for youth



with ASD to explore new behaviors, establish meaningful relationships, and enhance critical communication skills applicable to their everyday lives. By focusing on the distinct characteristics and challenges of these target groups, theatre activities can provide valuable developmental and therapeutic benefits for individuals with ASD.

In summary, role playing and theatre classes activities offer young people with ASD the opportunity to develop artistic and soft skills while addressing their specific needs and challenges. These activities aim to enhance communication, social-emotional competencies, self-expression, and adaptability, empowering individuals with ASD to thrive in various social and professional contexts.

### 4.3 Photovoice activities

Photovoice activities are artistic and soft skill development-oriented activities that can benefit young people with ASD. The target group characteristics for these activities vary depending on the specific project or research, but generally encompass young people with ASD of different ages and abilities. The learning objectives and competencies developed through photography projects and photovoice activities are as follows:

Photovoice is an artistic activity implemented as part of a research project on the expression of strengths in young adults with autism. It enables young adults with ASD to explore their strengths by using images as a medium to initiate discussions about themselves. In one specific photovoice project, eleven young adults with ASD were asked to capture their own experiences of growing up on the spectrum through images. The focus was do inon highlighting their special interests that promoted a healthy outlook, skills and activities that evoked pride, and reframing ASD as unique rather than a disadvantage. Group photo discussions, individual



photo interviews, and a photo exhibit were organized to facilitate the expression and recognition of strengths. The outcome of the project showed that photovoice was highly effective in assisting young adults in the spectrum in recognizing and expressing their strengths. The project also demonstrated that self-generated stories and visuals offer a creative and effective means of communication for young adults with ASD. The competences developed through photovoice activities include self-expression, self-confidence, self-awareness, and the identification of areas in their physical and mental lives where they can thrive and experience a higher quality of life.

In summary, photovoice activities provide young people with ASD the opportunity to develop artistic and soft skills while focusing on their specific needs and strengths. These activities aim to enhance visual literacy, communication, self-expression, self-confidence, and self-awareness. By engaging in photovoice, young people with ASD can discover and showcase their talents, express their unique perspectives, and promote a positive outlook on their experiences.

#### 4.4 Collaborating on a group activity and discussion

Collaborating on a group activity involves individuals with ASD working together with others towards a common goal. In a workplace setting, building relationships and effective collaboration with co-workers are crucial skills. Collaborative and teamwork activities can be implemented to enhance these skills. One approach is to encourage people with ASD to form study groups or work on group projects with classmates, which helps improve their teamwork abilities. Another suggestion is to engage in group activities outside of an educational or professional setting, such as planning a graduation party together with friends. This provides an opportunity for individuals with ASD to practice collaboration, decision-making, and problem-solving skills within a social context. By simulating various social





interactions, from simple greetings to resolving conflicts, individuals with ASD can learn how to navigate different social situations effectively.

The learning objectives for collaborating on a group activity include:

1. Developing the ability to maintain a conversation within a group setting.
2. Improving the focus on what is being said by others during discussions.
3. Enhancing the ability to actively participate in a discussion, contribute ideas, and listen to others.

By engaging in collaborative group activities, individuals with ASD can expect to acquire and maintain employment by demonstrating effective teamwork and collaboration skills, establish friendly relationships with co-workers, fostering a positive and inclusive work environment, as well as develop the capacity to collaborate on common projects, contribute their skills and ideas to achieve shared objectives.

In addition to collaborating on a group activity, it is crucial to incorporate discussion activities that allow individuals with ASD to reflect on their cooperative and teamwork experiences. Following a group task or project, providing a structured discussion session can help participants process their interactions, achievements, and challenges. This reflection process allows individuals to identify their strengths and areas for improvement when working collaboratively. Facilitators can guide the discussion by asking open-ended questions, encouraging participants to express their thoughts, feelings, and insights gained from the experience. Reflection activities promote self-awareness, self-evaluation, and the development of metacognitive skills. They also enable individuals with ASD to recognize their contributions, value the perspectives of others, and enhance their overall cooperative and teamwork abilities.

In summary, both collaborating on a group activity and engaging in reflection discussions after cooperation and teamwork provide valuable opportunities for individuals with ASD to develop essential social and communication skills. By actively participating in group settings, individuals with ASD can acquire collaboration skills, improve interpersonal communication, and contribute to





shared projects. Through reflection activities, they can further enhance their self-awareness, evaluate their teamwork experiences, and continue to improve their cooperative abilities.

- Artistic and/or soft skill development-oriented activities for young people with DS

Engaging in meaningful activities is essential for the artistic and soft skills development of young people with DS. These activities not only cater to their unique needs but also provide opportunities for self-expression, creativity, and personal growth. In this chapter a range of activities that have proven to be beneficial for individuals with DS will be presented. From dancing and movement activities that enhance physical fitness and social-emotional skills, to photography projects that develop visual literacy and self-esteem, to creating zines, books, and comics that promote self-expression and literacy skills – these activities offer young people with DS the chance to thrive and reach their full potential. Additionally, artistic activities that boost social, communication, as well as activities involving toys and objects that facilitate motor skill development, are also presented.

## 4.5 Dancing and movement activities

Dancing and movement activities for young people with DS are mentioned by Greece, Cyprus and Belgium as activities that offer numerous benefits and contribute to their physical, cognitive, social, and emotional development. These activities cater to the unique characteristics and needs of individuals with DS, providing them with opportunities for self-expression, creativity, and personal growth.

Dancing and movement activities for young people with DS encompass various aspects of their development. Firstly, physical fitness is a key objective, as



engaging in these activities improves physical coordination, posture, balance, and overall fitness (Kang et al., 2016). By promoting a healthy and active lifestyle, these activities contribute to enhancing physical well-being. Secondly, dancing and movement activities aim to develop creativity and self-expression in individuals with DS. Through dance, they are provided with a platform to express themselves creatively and artistically, exploring a diverse range of movement vocabulary (Chodorow, 2003). Another important learning objective is the development of communication skills. Dancing and movement activities offer individuals with DS a means to express their thoughts, feelings, and experiences, ultimately improving their ability to communicate effectively (Crisan, 2020; Sacks & Buckley, 2003). Through dance, they can communicate non-verbally, enhancing their expressive abilities. Furthermore, dance and movement activities contribute to the development of social-emotional skills in young people with DS. By participating in group activities and performances, they improve their social interactions, teamwork, and emotional awareness (Crisan, 2020; Sacks & Buckley, 2003). These activities provide a supportive environment for them to engage with others and develop important social-emotional competencies. Finally, dancing and movement activities have been found to enhance cognitive functioning in individuals with DS (Kang et al., 2016). Through stimulating cognitive processes such as memory, attention, sequencing, and problem-solving, these activities support cognitive development and provide cognitive benefits.

Regarding the specific examples mentioned, the movement class is an activity reported by Greece which is designed to promote physical fitness, creativity, and self-expression through movement. It targets young people with DS who may have limited opportunities to engage in physical activity and creative expression. The objectives include promoting physical fitness and well-being, as well as developing creativity and self-expression. Additionally, dance and movement activities reported by Cyprus also involve the use of expressive movement and dance to



engage individuals with DS in personal integration and growth. Generally, dancing lessons have been found to improve physical coordination, posture, balance, social and emotional abilities, and cognitive functioning in individuals with DS (Kang et al., 2016; Chodorow, 2003). They also help build identity, self-worth, confidence, and improve communication and social skills (Crisan, 2020; Sacks & Buckley, 2003).

Finally, hippotherapy is reported by Belgium as another moving activity. More precisely, hippotherapy or therapeutic horse-riding has shown multiple benefits for young people with DS, including improvements in mental, social, physical, and behavioral abilities (Klimberg, 2002; Masri, 2020; Costa et al., 2017). It enhances balance, motor coordination, muscle strength, spatial awareness, and self-regulation skills. Hippotherapy also helps individuals with DS develop trust, confidence, and self-image.

In summary, dancing, movement classes, and horse-riding activities offer a range of benefits to young people with DS. These activities promote physical fitness, creativity, self-expression, communication skills, social-emotional development, and cognitive functioning. They provide a supportive and inclusive environment where individuals with DS can express themselves, build confidence, and develop various skills that contribute to their overall well-being and quality of life.

## 4.6 Photography projects and exhibitions

The photography project for young people with DS involves teaching them the basics of photography, including camera usage, composition, and framing techniques. This activity is designed for young individuals of different ages and abilities. The main learning objective of the project is to develop their photography skills and increase their visual literacy. By participating in the project, young people



with DS have the opportunity to develop competences such as visual communication, creativity, and technical proficiency. The expected outcomes of the project include an increased sense of accomplishment, enhanced self-esteem, and the creation of a portfolio of photographs.

One specific example of a photography project is the "A Day in the Life: Photo-Essay and Exhibition" activity organized as part of the University of Queensland post-school program for young adults with DS. The activity lasted for a four-week period and focused on capturing the daily experiences of the participants. The planning stage involved brainstorming activities and locations, selecting pictures, and answering questions about the sequencing of their day. The participants had to organize their photos into a sequence and plan their time effectively. In the photoshoot stage, learners followed their plans and took the intended photos, with staff members monitoring their progress. Scaffolds were provided to assist participants in writing their own photo essays, which were eventually shared with peers. The essays were then transformed into a photographic exhibition accessible to the public.

This photography project catered to young adults diagnosed with DS who had diverse levels of independence. The project aimed to develop various skills and competences, including literacy skills, communication skills, planning skills, orientation skills, the ability to write and communicate one's own narrative, the ability to plan and execute a project, the ability to use a photo camera, and the ability to orient oneself using a map. By engaging in this activity, participants had the opportunity to develop these skills while expressing their own perspectives and experiences through photography.

Overall, the photography projects and exhibitions mentioned above provide young people with DS the opportunity to learn and develop photography skills, increase



their visual literacy, and express their creativity. These activities contribute to the participants' personal growth, self-esteem, and sense of accomplishment. Additionally, the projects promote the development of various competences such as visual communication, planning, and orientation skills. By sharing their work through exhibitions, participants also have the chance to engage with the public and showcase their unique perspectives.

## 4.7 Creating of Zines, Books and Comics

Creating zines, books, and comics for young people with Down's Syndrome are activities reported by Italy and Cyprus as they can have numerous benefits. These activities provide opportunities for self-expression and creativity, allowing individuals to share their thoughts, emotions, and personal stories. By engaging in these projects, young people with DS can develop their literacy skills, both in terms of reading and writing. They also learn to use creative skills to express themselves visually through drawing, photography, and design. These activities promote a sense of empowerment, as individuals have the chance to make their voices heard and share their perspectives with others.

First of all, creating zines is the self-produced, self-circulated underground publications that incorporate various forms of media such as text, photographs, comics, and drawings. These zines are a powerful medium for design-based self-expression and allow artists, including individuals with DS, to express their thoughts and emotions through design. Zines offer a flexible and inclusive platform that promotes representation for marginalized groups, giving them a space to speak out and be heard. The objective of creating zines is to express oneself through design, promoting creativity and self-expression.



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Moreover, the "All About Me - Personalised Book" activity proposed by the UK Down's Syndrome Association involves designing and producing a book in which the individual becomes the main protagonist. This personalized book includes photographs that hold personal significance to the individual, allowing them to tell their own story and share their life experiences. Through this activity, individuals with DS can further develop their literacy skills and engage in creative writing and illustrating, using the book as a medium for self-expression.

Finally, the Comic Strip Conversations, created by Carol Grey, provide a visual representation of conversations using stick figures, symbols, and colors to represent social interactions and emotions. These conversations help individuals, particularly those with DS who may struggle with communication and social interactions, understand and navigate social situations more effectively. By visually presenting different elements of a conversation, Comic Strip Conversations make abstract aspects of social communication more concrete and easier to comprehend. This activity fosters the development of social and emotional skills, self-regulation, narrative language skills, sequencing, and self-control.

In summary, creating zines, books, and comics for young people with DS offers a range of benefits. These activities promote self-expression, creativity, and literacy skills. They provide a platform for individuals to share their perspectives, experiences, and emotions, fostering a sense of empowerment and self-esteem. Through the creation of these visual mediums, young people with DS can develop various competences such as narrative language skills, sequencing, self-control, and social and emotional skills. These activities enhance communication, promote self-awareness, and contribute to the overall growth and development of individuals with Down's Syndrome.

## 4.8 Artistic activities





Other activities proposed are artistic activities, such as drama/theatre activities and art classes, which also offer numerous benefits for young people with DS. In drama/theatre activities, individuals can develop their social and communication skills while expressing themselves and interacting with others in a creative and positive manner. These activities also contribute to boosting confidence and self-esteem, as well as developing artistic and soft skills. Learning objectives of drama/theatre activities include language skills, memory development, communication skills, self-expression, cooperation skills, and creativity. The target group characteristics for these activities are young people with DS who can benefit from creative self-expression, interaction, collaboration, and the development of language, communication, and creativity skills.

Art classes provide an opportunity for young people, especially those with DS, to express their thoughts, interests, and understanding of the world through visual art. Visual art serves as a nonverbal form of communication, allowing children to communicate their perspectives without relying on verbal articulation. Engaging in art classes can enhance communication and give children with disabilities a sense of pride and self-esteem as they create something they are proud of. These classes also offer sensory experiences, encouraging exploration and learning through different textures, smells, and sights. The learning objectives of art classes for young people with DS include communication skills, social skills, emotional skills, concentration, creativity, and fine motor skills. These activities aim to facilitate communication, encourage self-expression, and provide a supportive environment for young people to develop their artistic skills.

In summary, drama/theatre activities and art classes provide valuable opportunities for young people with DS to enhance their social, communication, and artistic skills. These activities promote self-expression, collaboration, and interaction with others. Drama/theatre activities focus on developing language,





communication, self-expression, cooperation, and creativity skills. Art classes foster communication, social skills, emotional skills, concentration, creativity, and fine motor skills. Both activities create an environment where young people with DS can express themselves, develop their artistic abilities, and thrive in a supportive and inclusive setting.

## 4.9 Activities that include toys and objects

Finally, activities that include toys and objects can be highly beneficial for young people with DS. These activities help them explore their environment and develop essential skills. Particularly, by attaching Velcro strips to various objects, individuals with DS can experiment with them and improve their fine and gross motor skills. The delay in developing these skills often requires additional support and motivational opportunities for exploration. By highlighting objects in the room using tape, children are more likely to engage with and comprehend their use and utility. The learning objectives of these activities include analyzing and comprehending the environment, understanding the use of different objects, adapting to different environments, and comprehending the way objects function. The target group characteristics for these activities are young people with DS who encounter difficulties in exploring space and objects.

Another activity involves hiding toys and objects partially, then fully, and revealing them to the child. This activity helps children with DS develop the concept of object permanence. Initially, children believe that objects cease to exist when they are out of sight. Understanding the continued existence of objects is a significant developmental milestone. Children with DS may require encouragement and opportunities to experience objects disappearing and being returned, as well as watching and searching for hidden objects. By hiding and revealing objects suddenly, children can better grasp the concept that objects exist even when not





seen. The learning objectives of this activity include understanding the existence of objects, locating different objects, comprehending the existence of objects in space, and comprehending diverse spaces.

Furthermore, introducing toys that have interactive features, such as buttons that light up, make sounds, or pop up, is another beneficial activity for young people with DS. Through playing with these toys, children learn about cause and effect. They understand that their actions produce certain effects, such as producing sounds or triggering movements. Learning about cause and effect is a fundamental skill, and children with DS may grasp this concept at a slower pace due to their delayed motor skills. By introducing toys that produce noises or have interactive features, children can understand that different objects and actions have specific effects. The learning objectives of this activity include comprehension of the relation between cause and effect, analytical skills, and comprehension of the function of different objects and the effect of actions.

In summary, activities that include toys and objects offer valuable opportunities for young people with DS to develop motor skills, comprehend object permanence, and understand cause and effect relationships. These activities target specific learning objectives and help individuals with DS enhance their analytical skills, comprehension, and exploration abilities.

## 5. Conclusion

Taking all the above into consideration, all countries have identified specific needs that young people with ASD have for self-orientation, self-reflection, self-expression, and for the expression of emotions through art. Generally, despite Italy not reporting any needs for young people with DS in self-reflection, partner countries have reported similar needs, with the most common being the need for these people to understand better and explore their feelings and themselves. Moreover, partner countries also emphasized the importance of acknowledging the beliefs, strengths, weaknesses,



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values, interests, and goals of these people as well as the importance of encouraging them to express these feelings. Furthermore, all partner countries proposed specific pedagogical methodologies for both target groups. Regarding the pedagogical processes adapted to young people with ASD, Applied Behavior Analysis (ABA) is reported by most partner countries to improve socially significant behaviors and facilitate the acquisition of new skills. Verbal Behavior (VB) therapy, Picture Exchange Communication System (PECS), TEACCH, and the SCERTS are also methods partners report for the specific target group. On the other hand, for young people with DS, various and diverse pedagogical methodologies were proposed by partners, such as task analysis and self-monitoring, art-based therapy and music-based learning, visual and multisensory learning, as well as self-pacing and peer tutoring. Lastly, when proposing artistic and/or soft skill development-oriented activities for young people with ASD and DS, partners focused on creative activities to target the specific needs of both target groups and help individuals with ABA and DS enhance their skills. In other words, artistic activities such as role-playing games, dancing and movement, photography, and the use of images and creation of books, zines, and magazines are some of the activities proposed. All in all, it is clear that partner countries involved have effectively identified the specific needs of young people with Autism Spectrum Disorder (ASD) and Down Syndrome (DS) and have proposed corresponding pedagogical methodologies. These methodologies are designed to address the identified needs and promote the development of self-orientation, self-reflection, self-expression, and the expression of emotions through art in individuals with ASD and DS.





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