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**Special Needs and Inclusive Education**

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**Summary**

This thesis examines the idea that inclusive education will be part of general education if modern methods practice it. According to the research, there are some weak students or those with special education needs (SEN) or learning disabilities (LD) in each class. If they study in a mass school among normally developing peers, this will contribute to their normal development and their further success.

The thesis contains five chapters. The first deals with the theory of learning differences, the next two with inclusive practices in heterogeneous classes, and the fifth is a general conclusion. The second is about the Theoretical Framework of learning differences. It revises such LDs as dyslexia, dysgraphia, attention deficit hyperactivity disorder (ADHD), and autistic spectrum disorder (ASD). It deals with the hypothesis of what causes such diseases and the range of approaches to struggling children. In the third chapter, there is an investigation of social problems that might cause physical and mental disorders in typically developing kids. Therefore, it revises some ideas for preventing and dealing with them.  The fourth one modifies the hypothesis that some children show phenomenal abilities despite SEN. The fifth chapter compares the research results done on different groups of students. Thus, due to their experiences, the thesis researches the ways of developing inclusive practices in heterogeneous classes and the further hypothesis that show how important it is for kids to grow in a good social environment.

The thesis shows that the theory applies to developing reading in dyslexic children, keeping ADHD students interested and motivated, and finding new ways of teaching students with ASD. Generally, LDs are characterized by heterogeneity. Future research should consider the diverse nature of inclusive practices and attempt to explain the diversity of teaching in SEN schools and classes.

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**Cheers:**

To all my postgraduate colleagues

To all the staff of Beit Ekstein Rupin high school

To the Ministry of Education in Israel

To the teachers' organizations: TESOL, IATEFL, and ETAI

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**Introduction**

This thesis suggests exploring new and effective ways of teaching schoolchildren with SEN and LD. Although kids suffering from dyslexia and other LD are generally characterized, each child is different and remedial teachers need to teach each one following their personal needs. "One child may struggle with reading and spelling, while another loves books but can't understand math. Still, another child may have difficulty understanding what others are saying or communicating out loud. The problems are very different, but they are all learning disorders." (Gina Kemp, 2022)

Personality formation occurs throughout life and is significantly influenced by the social environment, which, among other things, launches programs laid down by nature. On the one hand, the human agent changes the world by creating systems. And on the other hand, the surrounding world or the social environment is directly involved in the development of a person's personality: it sets his interests and horizons and forms "pictures of the world" and skills. A person can use the positive influence of the social environment on his development and eliminate its harmful effects, or he can go with the flow, following social stereotypes.

The social environment is a system of relations, ideas, and values ​​that contribute to the child's development and personality formation. It includes the national culture, the social circle, and educational background. Parents, friends, teachers, advertising, TV, social networks, and many more factors form a child’s personality. Thus, a Pacific Island, an African village, a Russian hinterland, a Ukrainian town under the bombs, a capital of an American state, or a European metropolis have created different people. Their interests, views of the world, skills, needs, and desires differ entirely. The knowledge of civilization comes to a person from the social environment. Nevertheless, a person consumes this knowledge consciously and unconsciously. The influence of the social environment is usually not noticed.

Communicating in a social environment, the child learns the norms and values ​​of society, develops personal goals and a model of behavior, and determines the criteria for evaluating his actions and the actions of those around him.  The development and upbringing of the child depend on the social environment. The foundations of behavior and attitudes or values run in the family, but the school and staff play an essential role in education. The child goes through a critical stage in forming his "I." It is typical for him to imitate persons significant to him and adopt those attitudes characteristic of a particular youth subculture. School, friends, television, and social networking play an essential role in education, forming specific behavior patterns. The social environment can influence the child both positively and negatively. The degree of influence of the social environment depends on the authority of others and the child himself.

Nowadays, the world faces many social problems in the third decade of the twenty-first century. Why do they still exist? What are their effects? How do they influence young kids and teenagers, especially those with LD? The latter are liable to have emotional, psychological, and social problems that worsen because of contemporary social issues. LD kids are prone to anxiety, depression, behavioral disorders, low self-esteem, and social isolation (Zaher Accariya, 2016). What can educators and psychologists do about them?

For the last three decades, technological education in Israel has offered a range of educational frameworks, including English as a Foreign Language (EFL) courses, designed to meet the needs of both low-achievers and high-achievers. As an English Coordinator in Israel's school for LDs, I can see that such schools implement the methodology proposed by the National Association for people with SEN, and most lessons use educational technology (ET). Kids use their devices, for instance, mobile phones and tablets, or teachers conduct frontal classes with the help of smart boards. During the coronavirus pandemic, teaching foreign languages with the help of ET has made learning more effective and dynamic.

ET has many advantages for developing the four EFL learners' language skills, such as listening comprehension, reading comprehension, speaking, and writing. Dyslexia is one of the most common LDs that makes reading and other learning skills difficult. Special lessons and methods can correct their learning ability and develop necessary skills. Such technology is also helpful for people with mental health problems, "including dementia and autism, and people with gradual functional decline. Accessibility for learning technology is a benefit for everyone." (Vasquez, 2022). They can have help from computer technology and other ET devices with self-checking tasks. Due to them, students improve their spelling and enhance their listening and reading comprehension skills. It makes them decipher the information much better. "These are images that graphically represent concepts and information. Typically, pictures, photos, and illustrations. The text alternative should be at least a short description of the image's essential information" (Vasquez, 2022).

Assistive technology (AT) helps or maintains an individual’s skills. It can be anything, for instance, instructional technology teachers use during the lessons. Thus, computer-based mapping, cellphones or iPads, or calculators are examples of AT and specifically designed devices, such as text-to-speech and speech-to-text. In other words, the definition of assistive technology can leave one with two questions: “What isn’t assistive technology?” and “When is something assistive technology?” (Smith, 2004).

AT is also supposed to enhance learning in people with other disabilities. Moreover, it can also be helpful to prevent people with intellectual disabilities or senility from getting lost. Furthermore, some SEN people have invented different AT devices for other SEN ones. Thus, in the 19th century, Louis Braille invented a system for the blind that enabled them to read with their fingers. Moreover, in 2015 Amit Saban, one of our alumni, invented a unique GPS for Israeli Defense Force (IDF) some years ago to find Israeli soldiers and prevent them from being kidnapped. (Yakov, 2015).

**Chapter 1: General analysis of LD.**

1. **What is the difference between special education needs and learning disabilities?**

Although SEN and LD are synonyms and people often confuse them, some differences exist. Thus, kids with SEN cannot study in a regular class and require a more individual approach and additional special educational support. (McCall, 2021).

The research claims that kids with SEN have such problems as:

* Communication challenges
* Learning challenges
* Physical disabilities
* Emotional or mental disorders
* Behavioral disorders
* Intellectual giftedness

"Learning disabilities or learning disorders are umbrella terms for a wide variety of learning problems." (Gina Kemp, 2022). Thus, students diagnosed with LD have a significant gap between their actual academic achievements and their peers' expected achievements, according to their age the class level. They have one or more following disorders:

* Dyslexia
* Dysgraphia
* Dyscalculia
* Aphasia or dysphasia
* Auditory processing disorder
* Visual processing disorder.

Each child is different and needs to be taught according to their abilities and learning styles. Nevertheless, children with SEN and LD can succeed in school, get a higher education, and even become famous successful people if diagnosed as early as possible. Indeed, they all want to learn and do well in school, and they can succeed if they get an appropriate individual curriculum.

**1.2. Psychology of learning**.

Childhood is the time for learning. Most children are curious, and they look forward to learning something new. Psychologists often define [learning](https://www.verywellmind.com/what-is-learning-2795332) as a relatively permanent change in behavior due to experience. "Before children learn to read, they already possess knowledge about meaning and articulation of words used frequently in everyday life." (Fawcett, 1994). The psychology of learning focuses on various topics related to how people learn and interact with their environment (Cherry, 2021).

Learning is a process that each human being practices since birth. Babies and young kids explore their surroundings. Due to curiosity, they learn new things and get all the necessary skills. When they start speaking, they rapidly increase their vocabulary. " At age one, children recognize about 50 words; by age three, they recognize about 1,000 words; and by age five, they recognize at least 10,000 words" ([Shipley & McAfee, 2015](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5400288/#R58)). At the same time, they learn letters, and step by step, they start reading, counting, and writing. In many countries, kids are supposed to gain these skills before they go to school. Nowadays, many kids gain forenamed skills due to using electronic devices.

According to the research, although kids' vocabulary is much smaller than adults', their lexical processing is remarkably similar. Multiple practices, such as communication with parents, kindergarten teachers, peers, and others, enable young kids to quickly and accurately recognize familiar words. It also makes learning new words easier and other aspects of language acquisition. Nevertheless, learning difficulties (LD) make this process slower and lead to limited vocabulary. As a result, children get low grades at school which often causes problems in their future life. Therefore, modern research offers many ways to enable remedial teachers to help their students overcome LD and do well at school. They are supposed to use positive reinforcement, which is the key to the behavioral learning theory. They use classroom management techniques to involve struggling students in classroom activities and make them interested and motivated.

**1.3 Behaviorism and cognitivism as ways of teaching.**

Behaviorism and cognitivism can explain the learning process of human beings. In the early twentieth century, John B. Watson and B. F. Skinner developed the behaviorist approach. Jean Piaget developed the cognitive theory. "Behaviorism is key for educators because it impacts how students react and behave in the classroom, suggesting teachers can directly influence how students behave" (Cherry, 2021).

Learning strategies are supposed to facilitate the active learning process. Teachers instruct their students to learn and use the learned skills to do different tasks and succeed. Success for LD students requires a focus on individual achievement, progress, and learning. Therefore, each struggling student needs specific, directed, individualized and intensive remedial instruction.

Children can memorize hundreds of words, but when it comes to reading tasks, they often need clarification on what they are reading. According to S.Shaywitz, they are supposed to learn the alphabetic code and how it works. Connecting letters and sounds and decoding words that contain specific letters enable them to decode new words. While average school children do it quite well, LD students face serious problems. A child, who breaks the phonetic code slowly, will miss much of the reading practice essential for building fluency and vocabulary. Therefore, his acquiring comprehension skills become weaker and weaker, and he gains much less knowledge of the world around him than kids of his age. So, it is essential to recognize learning difficulties in primary school so that special lessons and methods can correct the ability to learn and develop the necessary skills. Otherwise, schoolchildren will have more and more difficulties.

According to B. Watson, behaviors can be measured, trained, and changed. Behaviorism is a particular approach to psychology: it combines philosophy, methodology, and theory elements. In the classroom, for instance, it is practiced via a range of specific repetitive actions, learning and using a foreign language, EFL in particular, and correcting mistakes. This type of teaching is called the audio-lingual method. It means "using choral chanting of key phrases, dialogues, and immediate correction, primarily if you teach children at risk or those who struggle to read" (Shaywitz, 2003, p.262).

Watson's theory of behaviorism is that consciousness cannot be observed nor controlled via scientific methods. He suggested that psychology should focus on predicting and controlling observable behavior. Therefore, learning is a change in observable behavior. (Bekki Brau, 2018). "Observational learning is sometimes called shaping, modeling, and vicarious reinforcement. While it can take place at any point in life, it tends to be the most common during childhood". (Cherry, 2021). Since an individual's behavior changes through different actions that form all the necessary reflections, parents and educators have to direct kids to reward good habits and discourage bad habits. It is vital to teaching LD kids with dyslexia, dysgraphia, dyscalculia, ADD, ADHD, ASD, and other disorders, who are often mistreated and misunderstood by their parents. Moreover, they often misbehave, shout, tease their co-students and answer back to teachers, who wonder what they have done wrong. Parents also do not understand their kids, get angry and punish them and feel guilty later, especially when their children do worse and worse at school and even quit it.

How does the behavior change? Here are some examples:

* A child has made an effort and did very well in the classroom. The teacher praises them and gives them a small treat, a candy. It is a positive reinforcement that works well because it is motivating. Moreover, other kids observe it and try to study and behave better. (Ackerman, 2019).
* A child hits a classmate, and the teacher punishes him or uses negative reinforcement (Cherry, 2021). Other kids learn from observing this interaction that they should not hit others.
* Parents read a lot, and in this way, they show an example to their kids that reading is exciting and valuable. It works much better than forcing them to read.
* A child has made progress in learning and started getting higher grades. He compares his recent experience with the previous one and becomes involved in learning. He becomes motivated to study more and more for the result, not for the prizes, because he finds high grades as the best award for his effort.

School children with dyslexia and other LD need success-oriented materials corresponding to their knowledge level. They also need a highly structured, cumulative, and phonic-based program that supposes multi-sensory teaching techniques and cognitive learning.

**1.4. Theory of constructivism**

Young children develop their learning skills and thinking abilities by interacting with other kids, adults, and the physical world. The so-called accurate perception is a feature of human perception that occurs early (Vygotsky, 1978). Knowledge is a construction that appears based on previous knowledge and experience. Children do not just passively assimilate knowledge but independently build it as they get to know the world around them and comprehend this experience. Therefore, constructivism is a direction in the psychology and philosophy of education, the main idea of ​​which is how people construct knowledge.

Constructivism is a vital learning theory used by educators to help their students learn. It is essential to understand how teachers can apply constructivism inside their classrooms to create a unique learning environment for students. In schools for kids with special education needs (SEN), teachers must create a dyslexia-friendly atmosphere so that students with learning disabilities (LD) will feel accepted and motivated.

In constructivist classrooms, the teacher creates a collaborative environment where students are actively involved in their learning. Teachers are more facilitators of learning than actual instructors. Teachers must understand students' preexisting conceptions and understanding, then work to incorporate knowledge within those areas. Teachers will also need to adjust their teaching to match the learner’s level of performance.  Nevertheless, it is argued that not all teaching techniques based on constructivism are efficient and effective for all learners. Therefore, sometimes teachers do not follow this theory and use different methods suitable for their students.

"There is a critical need to develop more adequate models for the learning process." (Novak, 2003). For a traditional teacher, a student is an empty vessel that can be filled with any information. On the other hand, the constructivist teacher tries to create conditions in which the student will look for answers to his questions. As a result, he will build new knowledge on his own — or rather, make it into his existing ideas about the world, formed by previous experience. Since each person's experience is unique, the knowledge that one student will gain will differ from that of another. Furthermore, it also means that developing new materials is impossible without internal changes.

In contrast to traditional teachers in the 19th and 20th centuries, nowadays, more and more educators accept constructivism. They focus on students' questions and interests and create the program based on their students' knowledge. Remedial teachers provide their students with interactive learning and conduct student-centered lessons following the individual program created for each one. Furthermore, teachers dialogue with LD students to help them construct their knowledge and encourage them to work primarily in groups. It is also crucial to prevent them from getting frustrated and giving up studying.

One of the founders of constructivism is the Swiss psychologist Jean Piaget, who studied the child's psyche. His theory of cognitive development suggests that intelligence changes as children grow. A child's cognitive development is not just about picking up knowledge. The child has to construct a mental model of the world.

Piaget identified the following stages of the intellectual development of the child:

* Sensorimotor stage (birth to 2 years)
* Preoperational stage (2 to 7 years)
* Concrete operational stage (7 to 11 years)
* Formal operational stage (age 12 and up)

(McLeod, 2022).

Abstract thinking, for example, as scientists found out, appears in children no earlier than 12 years old, which means that before this age, it is pointless to teach them geometry.

Piaget rejected the idea that prevailed at the beginning of the 20th century: knowledge is a passive reflection of external, objective reality. Instead, he proposed learning as a dynamic process of progressive adaptation to reality, during which students create and test their hypotheses about the world. Vygotsky claimed that the central moment for the whole psychology of learning is the opportunity to rise to the highest level of intellectual capabilities in cooperation. Learning means getting specific skills from something easy to more challenging. Thus, children first learn what they can do on their own, and later they learn something new, what they are interested to know in cooperation with the teacher’s guidance. In addition, what the children can do today in collaboration, they will be able to do tomorrow on their own. "As children are allowed to stretch their skills and knowledge, often by observing someone slightly more advanced than they are, they can progressively extend the zone of proximal development" (Cherry, 2022).

Principles of constructivism:

1. Knowledge means getting different skills.
2. People like to learn following their learning styles and ways. Some are auditory learners, some are visual, and some are kinesthetic
3. Learning is an active process.

Learning is a social activity. Social constructivism acknowledges the uniqueness and complexity of the learner and emphasizes the importance of involving each individual in the process of active learning. (McLeod, 2019)

1. Learning is contextual knowledge that is personal. It is crucial to consider the learner's background and culture throughout the learning process. Learning exists in the mind.
2. Motivation is key to learning. By exploring, experiencing, and completing challenging tasks successfully, students get motivated to do more complicated and challenging ones. It is called the zone of proximal development (ZPD). (Vygotsky, 1978).

Despite many scientific studies indicating that constructivist methods improve the quality of learning, this approach also has many opponents. Among the shortcomings of this methodology, they note the insufficient structure of the educational process, the complexity of implementation in practice, and the risk of group thinking in cooperative learning. Critics believe that for some students it is vital that learning is strictly structured. Research shows, for example, that traditional teaching is beneficial for students with advanced needs and for preparing for tests. On the other hand, constructivism suggests a more relaxed pace - without a clear trajectory, with spontaneous discussions, often without assessing knowledge (McLeod, 2019). As a result, students' knowledge may not meet standardized requirements. However, this is a problem of the education system rather than constructivism.

Nevertheless, constructivism and learner-centered lessons are suitable in SEN schools. To make classes more relaxed for LD students, the teacher needs to plan lessons more carefully than the traditional approach, which requires additional off-hours. Moreover, to involve as many LD students as possible in the discussion, more time is needed for the lesson. A student-centered lesson is a creation by the teacher of a warm, creative atmosphere, the constant appeal to the subjective experience of schoolchildren as the experience of their life activity. (McCartny, 2015). Working with personal experience in the classroom involves using various forms of communication that promote genuine cooperation between the teacher and students, aimed at a joint analysis of the learning process. As a carrier of subjective experience personally significant to him, the student should be able to make the most of it and not just unconditionally accept (learn) everything that the teacher says.

On the one hand, constructivism works well to make lessons student-centered; on the other hand, it could work better sometimes. Mainly because of its lack of structure. (Matthews, 2012). Thus, in SEN classes, teachers have to prepare some plans for the same lessons to prevent discipline problems and other unexpected and challenging situations. When LD students complain they have "a challenging day" or "no power to study," the lesson is destroyed. Thus, to keep them in class, the teacher has to work following the situation. Even so, some crucial topics have yet to be taught and postponed for better days.

**Chapter 2: Theoretical Framework of LD.**

The theoretical part of the thesis examines the idea that distinct subtypes can characterize LD, and each of them requires an individual approach. SEN schools usually have up to eight students in each class. Their needs and problems differ, so each requires a personal program. Thus, their tasks and practices during the lesson are not the same. Therefore, following the research, the lesson is planned and taught following the students' needs. The practical part of this thesis deals with modern methods and ways to make each class student-centered and allow each SEN student to study in the atmosphere of learning autonomy. Although they study together in a group, the teacher needs to work individually with each of them, and they learn to work independently. To prevent giving up studies and discipline problems and to deal with the forenamed problems, a remedial teacher should have one or two lesson plans in store. Learning strategies are supposed to facilitate the active learning process. Teachers and students always learn something new and use the learned skills to succeed in new tasks. Thus, students learn new grammar constructions, and teachers learn to be their facilitators. Since this thesis deals with teaching LD students English as a foreign language (EFL), it researches the learning process in the light of psycholinguistics.

Psycholinguistics, or psychology of language, is the study of mental aspects of language and speech. This discipline investigates and describes psychological processes that make it possible for humans to master and use language. It primarily concerns how language is represented and processed in the brain. Psycholinguistic research investigates the cognitive processes, such as perception, memory, and thinking, involved in the everyday use of language, for instance, understanding a lecture, reading a book, writing a letter, and holding a conversation (Nordquist, 2019).

Success for LD students requires a focus on individual achievement, progress, and learning. Therefore, each struggling student needs specific, directed, individualized and intensive remedial instruction. To create a successful teaching program, homeroom teachers and school psychologists must know the general background of each child. They do it according to the history of the family, medical records, the psychologist and psychiatrist's conclusions, and the child's personal needs, problems, likes, and dislikes. It is possible to teach kids with different disorders in the same class. Thus, some have dyslexia, some have ADHD, and some have ASD. It is challenging, so their teachers must create a dyslexia-friendly atmosphere in the classroom and find an individual approach for each student. No child left behind.

**2.1. Where do learning difficulties come from?**

There are two types of children's mental health problems: internalizing behavioral and externalizing behavioral ones. The first is depression and its consequences. The main signs of depression are melancholy, anxious or indifferent mood, and reduced self-esteem. Children can also lose interest in life and usual activities, have inadequate guilt, pessimism, impaired concentration, fatigue or lack of energy, sleep and appetite disorders, and suicidal tendencies. As a result, they might have cardiovascular diseases and other somatic problems. The second is aggression and antisocial behavior, manifesting in vagrancy, theft, fighting, and disturbing peace. In general, "children with mental health problems are also at risk of later psychopathologic conditions." (Xue, 2005).

In general, the causes of teenage aggression are numerous. The child's attitude to the rules and norms of behavior in society is formed due to the evaluative perspective of a significant adult. The personalities of teenagers depend not only on their families, friends, neighborhoods, mass media, and the Internet. The psychological climate at school and in the classroom is also vital to their mental health. The significant roles in quality

preventive measures played by schools. The ability of the teachers and school administration to recognize the aggressive behavior of schoolchildren on time and prevent it is crucial. Moreover, the work of psychological services to identify antisocial behavior among teenagers can help. However, the opposite is often observed

when teachers and psychologists interact not enough with students on a personal level. It needs to understand better the relationships developed in a teenage team. (Mastergeorge, 2014).

**2.2. Psycholinguistic approach to learning difficulties**

Psycholinguistics or psychology of language is the study of mental aspects of language and speech. This discipline investigates and describes psychological processes that make it possible for humans to master and use language. It primarily concerns how language is represented and processed in the brain. Psycholinguistic research investigates the cognitive processes, such as perception, memory, and thinking, involved in the common use of language, for instance, understanding a lecture, reading a book, writing a letter, and holding a conversation (Nordquist, 2019). In light of the forenamed, it suggests modern methods that enable kids with learning disabilities (LD) to perceive, store and reproduce information.

Our working memory (WM), or short-term memory, helps us hold and use information. It is a cognitive process that enables us to listen, remember, follow instructions and formulate answers while being asked questions. It includes verbal and visual-spatial short-term memory stores. Verbal short-term memory holds information that can be expressed in numbers, words, and sentences. Visual-spatial short-term memory holds images, pictures, and information about location in space. It also has a component that helps us resist distractions and remain focused when engaged in a task (Smith-Spark, 2007).

"Motor learning, and classical conditioning of motor responses, in particular, has been consistently linked to cerebellar function in humans" (Nicolson & Fawcett, 2008, p.125). The latter is based directly on the mainstream cognitive theory, which suggests automaticity as a major requirement for skilled performance. The process of automatization is slow in dyslexic children because WM deficits make it extremely difficult to synthesize information while reading. Reading a paragraph requires a person's WM to hold on to each letter, the sound associated with each letter, the words that letters build, and the sentences constructed from those words. The reader needs to hold on to this information long enough to put the sentences together and comprehend the text. This demand overwhelms a dyslexic person’s WM (Smith-Spark, 2007).  As a result, LD students get low grades although they do not have a lower mentality capacity or an IQ compared to regular children.

How language is studied in LD classes in Israel.

English as a foreign language is highly complex for Hebrew speakers. Nevertheless, most children learn it quickly and easily due to computer games and films without translation. LD students might speak English fluently but need help in the classroom because they often get distracted. Moreover, problems with WM and deficits in the phonological process cause misspellings and misunderstandings of instructions and tasks. (Nicolson& Fawcett, 2008, p.47). As a result, students get frustrated and give up.

The research in neuroscience and psychology suggests that when LD students enjoy learning, it enhances their short-term memory, stimulates their long-term memory to keep the information, and makes them interested and focused. They get motivated to speak English when they understand films, songs, and computer games. In addition, the educational process succeeds when they get good grades and achieve their learning targets. Thus, in my classes, many non-readers play table games or online ones, which helps me to avoid discipline problems. Usually, I use flashcards that enable them to connect letter patterns with associated sounds. When this stage is over, they connect specific letters with objects in the flashcards and pictures. In this way, they enlarge their vocabulary and start speaking step by step. Since they have poor verbal WM, I have to repeat such games but diversify the classroom activities. Initially, they give short answers while being asked, but later they try to describe what they see in the pictures. At the same time, I give them spelling, vocabulary, sentence-structure games, and short texts to enhance their cognitive processes and develop reading comprehension skills.

**2.3. Dyslexia and ADHD.**

Dyslexia is one of the most common LDs, and it often comes together with ADHD. That is why hyperactive, distractible, and struggling children must be identified and diagnosed in primary school, as soon as possible. In this case they will have an opportunity to get special lessons and methods that can correct their learning ability and develop other necessary skills. Despite LDs, many dyslexic kids are very good at music, art, and computer technology. Therefore, for the last three decades, the latter has become very popular and made a real breakthrough in education in both regular and LD classes. Audio-video activities make lessons much more exciting than the traditional ones because they catch the students' attention and  provoke their interest in learning. Besides, it is also a sort of learning autonomy that makes each student busy and motivated. Since kids with LDs have difficulties in reading and spelling, they can have a real help from self-correcting exercises provided by ET. Moreover, ET makes them understand the information much better. In addition, it is successfully used on the final exams in the range of the countries including Israel. (Koifman, 2015).

\* Dyslexia is a **neurobiological** disorder that affects the development of both decoding (written word pronunciation) and encoding (spelling).

\* Students with dyslexia have difficulty reading fluently and spelling words correctly, even after years of instruction.

\* 5% to 20% of the U.S. population have dyslexia and up to 40% of the entire U.S. population experiencing some type of reading difficulty.

\* People with dyslexia who read and write in English read slower (reading never becomes automatic), they spell words as they sound, they usually hate reading, and they may reverse letters and symbols. (Shaywitz, 2001).

Signs of dyslexia.

\* Difficulty decoding

\* Slow reading

\* Confusion of words / letters

\* Trouble with short term memory

\* Getting impulsive

\* Getting frustrated

The research claims that there are two sources of dyslexia: a child might become dyslexic after a head trauma or a severe disease, otherwise it can run in the family. Thus, having a dyslexic parent increases the probability that children will have the same problem, too (Goguadze T, 2005). Moreover, dyslexia is a sort of LD that often runs in families. Thus, a dyslexic parent increases the probability that their children will also have the same problem. Otherwise, it can result from a disease or a head trauma. Families must support their children and never compare dyslexic ones to their more successful siblings. And remedial teachers should know the family history of school difficulties.

The reading process consists of two major components: decoding or word identification, and comprehension or general meaning. The diagnosis of LD reflects a reading difficulty or a phonological weakness. It is a clinical diagnosis based on a thoughtful synthesis of information – from the student's personal and family history and his reading, speaking, spelling, and learning style tests. LD students need a highly structured, cumulative, phonic-based program using observational learning and multi-sensory teaching.

"The sooner dyslexia is treated, the more favorable the outcome. However, it is never too late for people with dyslexia to learn to improve their language skills. " (Perlstein D, 2022). In Israeli remedial classes there are usually up to eight students. Although they have different backgrounds, they have the same problem: dyslexia and other learning disabilities, mainly ADHD and ASD. Therefore, in order to create the program, remedial teachers must find out the following information about each of them:

* the student’s background
* literacy development
* memory
* speed of processing
* phonological processing
* reading and writing in the student’s first / strongest language
* copying: exactly and reversed
* scanning

Reading comprehension is a vital part of the final EFL exam. Although many young Israelis find English difficult they speak it rather well due to films and computer games without translation. Nevertheless, they have severe difficulties when they are supposed to do the reading tasks. Therefore, they should be given a lot of pre-reading tasks in order to elicit as much information as possible. They should also do while- and after-reading tasks. The instructions must be short and simple, otherwise, the students will misunderstand them.

Finally, the teacher should read the text aloud and the students should follow it. It is highly recommended in order to enhance their general understanding.

Dyslexic kids have difficulties in reading, writing, and spelling. They understand the spoken word and love to listen to stories, but they often cannot decipher the exact words when written on a page. Those who delay breaking the phonetic code miss much of the reading practice essential for building fluency and vocabulary. The specific signs of dyslexia, both weakness, and strength vary according to a person's age and educational level. Thus, "a five-year-old child, who struggles to learn letters, will match sounds and letters with difficulty when he is six. When the same kid turns fourteen, he dreads reading out and reads extremely slowly at the age of twenty" (T.Goguadze, 2005). Therefore, they become frustrated, disappointed, and even depressed. As a result, they are often restless because they cannot focus on classroom activities. How can teachers recognize them in the classroom?

* They often push each other and talk too loudly.
* They shout the answers before they hear the whole question.
* They find it difficult to wait for their turn in the game.
* They often insult and hit other students.
* They listen to the teacher and never misbehave but misunderstand the tasks.
* ADHD disturbs them from writing letters and numbers correctly, and they misspell a lot.
* They miss words and confuse grammar structures and word order.
* They do not want to read the text aloud because they fear making mistakes.

Teenagers with LD need a highly structured program using multi-sensory teaching techniques to help them enhance their learning habits and improve their behavior and progress.

**2.4. Autism Spectrum Disorder (ASD)**

"Autism spectrum disorder (ASD) is a highly prevalent neurodevelopmental disorder characterized by impaired social communication and restricted and repetitive behaviors" (Yonsei University College of Medicine, Seoul 03722, Korea., 2015). It combines several previously used definitions of mental syndromes and diseases into one diagnostic unit. It starts in infancy or early childhood, at two years old, or a little later. The primary marker of ASD is persistent impairment of the ability to interact socially, characterized by limited interests and often repetitive behavioral actions. For instance, the child repeatedly makes the same movement with his fingers, arms, or legs. Such a person may have intact intelligence and the ability to live in society, but often ASD is associated with cognitive impairments of varying severity. A single cause of the appearance of ASD has not yet been found. Scientists identify only factors that can affect the likelihood of its occurrence.

The research claims that the reduced asymmetry was mainly related to the thickness of the cortex in different regions of the brain surface. In a healthy brain, this thickness differs between the left and right hemispheres. The cerebral cortex is a thin layer of gray matter covering them. It is the cortex that determines the functioning of the higher nervous activity of a person. "Results of structural Magnetic Resonance Imaging (MRI) studies dealing with total brain volume, regional brain structure, and cortical area are summarized. Using task-based functional MRI (fMRI), many studies have shown dysfunctional activation in critical areas of social communication and restricted and repetitive behaviors." (Yonsei University College of Medicine, Seoul 03722, Korea., 2015).

ASD people are less likely to have the typical asymmetry that determines, for example, the dominant hand when writing. However, the conclusions of these works are pretty contradictory; therefore, the anatomical data obtained by the authors on such a large sample are of interest. Some studies have found that the brain with ASD is too strongly connected, while others are too weak. However, scientists believe patterns emerge from this confusion, such as fewer connections between distant brain parts (and those connections are more fragile) and more ones over short distances. (Katznelson, 2019).

The level of cognitive functions in autism ranges from disability to superintelligence. While it is no longer fashionable to associate autism with low IQ, recent studies show that almost half of children with ASD have average or slightly above-average intelligence. Scientists are beginning to acknowledge that this may be because standard IQ tests do not reflect the cognitive abilities of autistic children. In contrast to the rise in IQ, the overall trajectory of autism symptoms reported by parents, while highly variable among individuals, remained unchanged over this period.

The human brain is anatomically and physiologically prepared from birth to perceive speech. Thus, in one-week-old infants’ brains, human speech sounds are recorded in the left hemisphere, while non-speech sounds are recorded in the right hemisphere. Morphological studies have shown that the dimensions of ​​Wernicke's area (the acoustic-gnostic sensory center of speech located in the posterior sections of the superior temporal gyrus on the left) are more significant in the left hemisphere. Moreover, this asymmetry is revealed already in embryogenesis. (Katznelson, 2019). For this, Wernicke's area serves as the area of ​​the auditory cortex, a part of the superior temporal gyrus. Broca's area is in the inferior frontal gyrus and is part of the motor cortex. Both areas are located in the left hemisphere, while structures in the other hemisphere are less associated with speech.

Considering that most speech centers are in the left hemisphere, he began to be considered the leader in the organization of speech. Nevertheless, one cannot speak of the complete dominance of the left hemisphere in the function of speech. Studies of split-brain patients have shown that the right hemisphere can understand spoken and written language, nouns, and straightforward sentences. Clinical observations also show that if a child who has learned to speak has damage to the speech areas of the left hemisphere, then he develops aphasia or an inability to express speech. "The language segmentation task stimulates a connection between Broca’s area in the left frontal lobe of the brain and Wernicke’s area in the temporal lobe of the brain’s dominant side (the left hemisphere in most). Broca’s area is involved in language production and Wernicke’s in comprehension." (Deweerdt, 2012).

Broca's center is a kinetic-motor verbal analyzer in which primarily proprioceptive information is processed. With the defeat of this center, the so-called Broca's aphasia occurs, characterized by the impossibility of combining individual speech movements into a single speech act. Wernicke's area is a part of the cerebral cortex, which, like Broca's area, is associated with speech. It is involved in the assimilation and understanding of written and oral speech. Aphasia occurs when Wernicke's area is affected, receptive, or fluent. It distinguishes it from motor aphasia, or Broca's aphasia, in which the patient uses meaningful words but cannot connect them and speaks in a "telegraphic" manner. A patient with aphasia can easily connect words, but his phrases are meaningless. (Brennan, 2021).

The group of nerve fibers through which information is transmitted from the auditory cortex to the motor cortex and vice versa allows the coordination of the work of Broca's and Wernicke's areas in humans. If it is damaged, the person cannot repeat the words he has heard. Therefore, the research claims that "connections between Broca’s area and Wernicke’s area, brain regions involved in producing and understanding language, respectively, are [impaired in people with autism](https://www.spectrumnews.org/conference-news/2010/society-for-neuroscience-2010/connections-between-language-areas-impaired-in-autism)." (Geggel, 2013).

ASD is "a wide range of developmental disabilities, have been presumed to be associated with a problem in cortical and sub-cortical dynamics of coordinated activity, often involving enhanced local but decreased long-range coordination over areas of integration." (Luis García Domínguez, 2013). ASD is not only a disorder of social abilities and communication but also of the sensory and motor systems. The brain structure in autism leads to a wide range of sensory and motor impairments. The connection between the department responsible for perception and movement and the cerebral cortex is weakened.

Some studies have found that the brain with ASD is too strongly connected, while others are too weak. These discoveries form the basis of the "intense world" theory.  "The proposed neuropathology is hyper-functioning of local neural microcircuits, best characterized by hyper-reactivity and hyper-plasticity. Such hyper-functional microcircuits are speculated to become autonomous and memory trapped, leading to the core cognitive consequences of hyper-perception, hyper-attention, hyper-memory, and hyper-emotionality."  (Markram K. M., 2010).

The local hyperconnectivity in some brain areas leads to over-functioning, leading to hyper-receptivity to information and extreme work of attention and sensory processing. It does not sound too bad and may explain the geniuses' abilities. Still, the weak connection of distant sites makes it difficult to understand all this incoming information and the ability to prioritize the source of information because the information cannot be adequately integrated. It quickly overloads the mind, so people with ASD try to cope with sensory overload by withdrawing from society or immersing themselves in repetitive activities, which help create a sense of stability and keep an overly bright world within limits. Moreover, although this is an interesting theory, it should be treated with caution until it is adequately studied. The severity of the disorder "depends on the severity of the molecular syndrome expressed in different brain regions, which could uniquely shape the repertoire of symptoms of an autistic child." (Markram K. M., 2010).

"Empirical evidence strongly suggests that individuals with ASD display enhanced rationality: judgments that are more objective and decision-making that is less biased than that of neurotypical individuals." (Liron Rozenkrantz, 2021). People with autism-related disorders are much less likely to make irrational decisions and are less likely to be influenced by their suspicions. Decision-making is a very complex process that involves both intuition and analysis. Intuition allows them to make decisions faster but less accurately, relying on heuristics or "hunches." This analysis requires calculation and "rational" thinking, but this process is slow.

 Recent research has uncovered patterns suggesting that children with autism take longer to sense and respond to facial expressions such as happiness, anger, fear, and other emotions. It is consistent with data from earlier studies, which means that in everyday social situations, which are very dynamic and changeable, people with autism have difficulty, as they often emotionally “fall out” or “lack up” with social interaction partners.

Some forms of emotional expression are easier for people with autism to perceive than others. In general, people with autism have a more challenging time perceiving emotions expressed in the face, voice, or body movements than those described in other ways, such as through writing or music. However, who exactly expresses the emotion, whether a stranger or someone you know, plays a significant role. Recent studies have shown that children with autism respond more typically to emotions expressed by people they know than people they don't know. (Nuske, 2014).

On the one hand, the study claims that a significant difference in decision-making among people on the autism spectrum may be in the amygdala. This brain region plays an essential role in the emotional realm. The study showed that the decision-making process depends on the work of the amygdala. In people with autism spectrum disorder, the amygdala tends to differ from most people — not in size but the density of nerve cells. "While altered structure and activation in limbic and reward brain regions may contribute to difficulties in emotion and reward processing in ASD, they may also confer advantages in decision-making by reducing the influence of reward and emotion on cognition. On the other hand, the study shows, that when controlling for difficulty identifying emotions, ASD individuals are still less influenced by the framing of loss versus gain" (Liron Rozenkrantz, 2021)

**2.5 Heterogeneous classes**

Traditional learning mainly focuses on memorization and sometimes even on cramming, while trying to achieve mastery in a particular subject is much more effective. Besides, "cognitive and learning strategies are those procedures that a student uses to succeed with a task that would be difficult without special effort". (Ylvisaker, 2006). Since dyslexic students are slow learners, they need to train the following cognitive skills that may be useful for learning:

1. Auditory processing.
2. Visual processing.
3. Language processing.
4. Sequential processing.
5. Rapid Automatic Naming.
6. Executive functioning/attention.

Children with intellectual disabilities or ASD may communicate differently than others. When teachers adapt to a child's communication style, they can build trust and friendship and become more effective mentors. Teachers must compose an individual program for each of them if they attend a regular school. In Israel and many other countries, such students have personal assistants who look after them during the breaks and sit next to them during the lessons to help them if necessary. In this case, the vital thing is to build a trusting relationship.

English as a foreign language is rather difficult for Hebrew speakers. Nevertheless, most children learn it quickly and easily due to computer games and films without translation. LD students might speak English fluently but have severe difficulties in the classroom because they often get distracted. Moreover, problems with working memory (WM) and deficits in phonological process cause misspelling and misunderstanding of instructions and tasks. As a result, students get frustrated and give up. To prevent it, remedial teachers use educational technology (ET) that can involve distractible children with ADHD in learning and make them interested and motivated.

ET helps or maintains an individual’s skills. It can be anything, for instance, instructional technology teachers use during the lessons. Thus, computer-based mapping, cellphones or iPads, or calculators are examples of AT and specifically designed devices, such as text-to-speech and speech-to-text. Therefore, students with dyslexia and dysgraphia can avoid frustration due to self-checking exercises on the computer. Those with unreadable handwriting will be able to type and not worry that the teacher will not understand their writing.

Although schools for SEN and LD follow the program of the Ministry of Education, all the students differ, and each one requires an individualized one. The forenamed schools specialize in helping kids to pass the final exams and perhaps to continue their education in college or university. In the same class, some kids suffer from different disorders, maybe more than one. Thus, dyslexia is often accompanied by ADHD; otherwise, kids with ASD may have some other LDs. In addition, they might have problems with seeing, hearing, or physical disability and require special learning technology, which is examined below. To crown it all, many LD and SEN students have emotional problems.

Anyone with experience working and interacting with children and adults with dyslexia and ADHD will say the same. Such students get distracted too easily, miss a lot of information, and need help with their studies. As a result, they get frustrated, depressed, and even give up their studies. Therefore, they need detailed instructions and do activities that catch their attention, for instance – computerized and self—checking tasks. Unlike them, ASD people express their emotions much less. In fact, "they display more rational and less intuitive choice selection (e.g., in the attraction effect or conjunction fallacy) when emotions and reward do not seem to be involved." (Liron Rozenkrantz, 2021).

Working with LD children in heterogeneous classes requires speech and language therapy and occupational therapy. However, they often cannot understand other people's feelings due to a lack of empathy. (Houston, 2019). Educators or parents who want to support the emotional development of a child with autism can use a variety of exercises and games to practice emotion-related skills. It is strongly recommended to start with five basic emotions: joy, sadness, anger, disgust, and surprise. Psychologists and photographers agree that these are the only emotions people can identify by the face. Other emotional states require consideration of body language and situation. So, children with autism can start with the five emotions, as this will allow them to generalize this knowledge with different people and photographs. However, be prepared to teach children more complex emotions.

For these skills, Israeli therapists use card games with photos of different emotions and write the corresponding feeling on the back. In the beginning, two opposite emotions are enough. For example, "happy" and "sad." The adult puts down the photo and asks the child to name the emotion on the card. After that, the child turns the card over and checks whether he is right or wrong. If the child guessed correctly, he or she received a reward. For example, teachers can portray exaggerated emotions, and afterward, they can ask children to show their version of this emotion. An adult and a child or several children can guess feelings, taking a card for themselves in case of a correct answer. Whoever has more cards, as a result, is considered the winner and can receive a prize – usually a cookie or a candy.

**Chapter 3. Contemporary social problems and LD.**

Along with genetic and organic nervous system lesions, social problems also might cause LD in healthy kids. "The term “social problem” is usually taken to refer to social conditions that disrupt or damage society—crime, racism, and the like.Typically, the social problems process begins with claims makers who claim that some condition should be considered a problem, that this problem should be understood in particular ways, and that it needs to be addressed.**"** (Best, 2019)**.**A sociological analysis of the causes of poverty makes it possible to single out the grounds of the macro level (civilizational, economic, political, social) and the causes of the individual or micro level (psychological and socio-psychological).

**3.1. Poverty.**

Poverty is one of the most acute, almost nodal problems in the life of humanity. The emergence of poverty is associated with social stratification in the human community. Therefore, the beginning of this process is lost in the mists of time. The research claims that in ancient times, historical documents recorded social conflicts were associated mainly with property inequality (Rawl, 2021)

Today, when a seemingly civilized society, wealthy and wise, can set and solve global problems, poverty remains one of the most painful problems. Production is growing, incomes are growing, the amount of food, clothing, and all goods consumed by humanity is increasing, and consumption is growing at times on an environmentally dangerous scale. Furthermore, at the same time, the gap between wealth and poverty, luxury and poverty, is widening. "Poverty is measured in two ways – absolute poverty and relative poverty. Absolute poverty looks to the goods and services a regular family cannot obtain. Relative poverty looks at the context of the need and how one social group compares to others." (Fay, 2021). In both cases, children with mental and physical health suffer because their parents cannot afford good medicine and treatment.

The scientific significance of studying the problem of poverty is explained by the fact that this social phenomenon, just like for many centuries in a row, remains just as painful and fraught with profound social upheavals. The persistence of poverty in all its manifestations leads to a severe deterioration of the social situation in developed countries, for instance, the USA, Germany, Great Britain, and others.  It also happens  in those countries where there is a transition to an industrial and post-industrial society. "For a fast-growing country, the transition from a high rate of poverty to a low rate of poverty may happen suddenly and with little change in the pace of overall economic growth." (Rosnick, 2019).

The problem of absolute poverty is especially urgent for Asian, African, and South American countries and, nowadays, for warring countries such as Russia and Ukraine. The beginning of the reforms led to the mass impoverishment of most of the country's population. This phenomenon is rooted in the depths of history. Sociologists, historians, ethnologists, and archaeologists claim that social inequality has accompanied humanity throughout history. Initially, inequality was associated with a difference in social roles and statuses, with the accumulation of significant items in a particular tribal community and then in a separate family. Then inequality intensified with the expansion and consolidation in individual clans of social functions essential for a given society; finally, all these social roles and procedures became a source of accumulation of material wealth, fixed in the formation of colonial estates and classes. (Rosnick, 2019)

The evidence of relative poverty has increased in the course of historical development at the same rate as wealth. To the same extent, the social risks associated with property stratification increased. Gone are the periodic riots, uprisings, and social revolutions; steadily growing mass negative processes replaced them. "Relative poverty is a measurement of [income inequality](https://www.debt.org/blog/liberal-theories-america-consumer-debt/) within a social context. It does not measure hardship or material deprivation, but rather the wealth disparities among income groups". (Fay, 2021). The increase in the wealth of society, identified with industrial, technical, and social progress, has led to a rise in problems: the growth of crime, the emergence of drug trafficking, the development of all types of deviant behavior, the increase of anomie in a variety of ways. As a result, SEN kids grow up without adequate help and gain more and more disorders. "Governments, policymakers, and society at large depend upon precise and timely information about poverty to create and deliver the most effective solutions." (Fay, 2021).

Only active social policy of the state, aimed at social development and the creation of social security in society, can significantly change the situation. The most effective in combating the most extreme manifestations of relative poverty is social work in the regions at the level of social groups, individual families, and individuals. They must do their best to help young children overcome SEN before it is too late and they gain lifelong disability or end up in mental hostels.

**3.2. Wars and conflicts.**

These days wars and conflicts have been occurring in Ukraine, The Middle East, and some African countries. Research shows that a combination of factors such as poverty, economic decline, and dependence on the export of natural resources create conflict situations in all regions. Many of the poorest countries are in a vicious circle where poverty breeds conflict, generating poverty.

The results of wars and conflicts are the most terrible:

1. Loss of life: losses among combatants are only a tiny part of the total number of dead, wounded, and injured. The latter can cause physical and mental disability for life. The deterioration of medical care can lead to an increase in the number of deaths among personnel and civilians. Approximately half of the deaths occur after the declaration of peace. Thus, "BBC News has identified about 3,600 civilian deaths as of mid-June, while the UN has confirmed about 4,700 during the conflict up to the end of the month." (Sarah Habershon, 2022)
2. Landmines: Landmines left on the battlefield turn fertile land into fallow land for years, making it difficult for farmers to produce food. Finding and clearing mines is too costly for many countries. "Thousands of war crimes have been committed against the Ukrainian population for half a year" (Sarah Habershon, 2022).
3. Poverty and isolation: Countries in civil war often face challenges such as high military spending, capital flight, infectious disease outbreaks, low development, and entrenched poverty.
4. Lost childhood: Entire generations of children and young people do not know what a permanent home, youth, and school are. Once the war is over, these young people are unlikely to lead their country on the road to the future. It is not uncommon for them to be drafted into the army.
5. Fleeing and sickness: A considerable number of people are fleeing the fighting. At the same time, refugees often contract diseases and spread them in other countries where they seek asylum.

The consequences of war lead to long-term disorders, for instance, post-traumatic stress disorder (PTSD), depression, and anxiety. Both children and adults may suffer from them for many years or even decades.

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**3.3. Natural disasters**

The devastating effects of natural disasters are felt more in developing countries than in prosperous ones. According to the research, "90 percent of these disaster deaths occur in low-and-middle-income countries." (Schlein, 2016). Like wars, natural disasters also can cause life disabilities. The economic cost of the devastating effects varies. Thus, poor construction often damages capital assets and infrastructures such as housing, schools, factories and equipment, roads, dams, and bridges. As a result of loss of life, the loss of skilled workers, and the destruction of educational infrastructure, which leads to the disruption of schools, human capital is depleting. The country's natural resources may also suffer - hurricanes destroy forests, and storms and droughts lead to decreased soil fertility.

Recurring natural disasters can lead to further economic losses. Fearful of losing their investment, farmers can cut back on investment to increase the productivity of their land in drylands. As a rule, the highest mortality rates are among people with low incomes who live in endangered areas or have easily destructible housing. When Cyclone Nargis hit Myanmar's Ayeyarwaddy Delta in 2008, wind and flooding destroyed one in two families' homes. In Haiti, the 2010 earthquake had the highest death rates among the urban poor in Port-au-Prince, who lived in poorly built, overcrowded housing. (Schlein, 2016).

The poor are also disproportionately affected by the loss of economic assets. Natural disasters destroy farms, livestock, production facilities, and equipment. Families often have to sell assets to meet basic needs – rural families in drought-affected areas sell their livestock to buy food. Because the poor are less able to rebuild these income-generating assets, they may fall into long-term "poverty traps" from which they cannot escape. Reports from around the world - from the Philippines to Ethiopia to Colombia - indicate that poverty levels among disaster-affected communities are often on the rise. (Kaplan, 2017).

Such economic shocks faced by the poor can harm future generations' feelings. School attendance may decrease as parents withdraw their children from school to help raise family income. If droughts and food shortages cause malnutrition among young children, cognitive abilities and potential productivity suffer in later years or even death due to chronic diseases. "While rich countries suffer substantial economic losses from natural disasters, people in poor countries pay with their lives." (Schlein, 2016)

**3.4. Social disintegration**

 Inequality in access to material and cultural goods is a huge problem — severe gaps in the incomes of the population and lack of opportunities to succeed cause social disintegration. Low-income people envy middle-class and wealthy people, which often causes the community to split into warring groups. "For any condition or behavior to be considered a social problem, it must have negative consequences for large numbers of people." (Schmitz, 2012). As a remedial teacher, I have noticed that the more social problems are in society, the more problems with physical and mental health problems kids have, and the fewer opportunities to treat their parents. In many cases, it can be a consequence of social disintegration, especially in working-class or new immigrant neighborhoods in Israel, the USA, Germany, and other highly developed countries. Children whose parents have become bankrupt or lost their jobs are in this risk group. The problem is especially severe if they grow up in single-parent families.

"Despite a wide variety of policy interventions over the last half-century, social disintegration has accelerated, gradually encompassing a larger share of the population." (Kaplan, 2017). For the last decades, an individualistic and self-centered way of life, chasing money the more, the better, envy to wealthier people, and ignoring their children and their needs, also can cause them to be lonely, neglected, and depressed. Thus, I have taught kids with special education needs from all ways of life: some of them came from large families with low-income, and some were children of professors, directors of factories, and successful business people. Nevertheless, they ended up in a special education school. In addition, since the Russian-Ukrainian war started, many refugees have come to Israel with severe psychological problems. Moreover, their children often feel unaccepted in their new schools due to culture shock and the inability to speak Hebrew.

The result of social disintegration is social isolation, that is, the rejection of an individual or social group from other individuals or social groups as a result of the termination or sharp reduction of social contacts and relationships.

**3.5. Bad parenting and its consequences.**

As a remedial teacher, I have noticed that a lot of my students come from dysfunctional families, which has undoubtedly affected their mental health. Some have been removed from such families and placed in boarding schools. As a result, they are aggressive, hyperactive, and have severe problems with memory and the ability to study. Therefore, that is also one of the reasons for learning disabilities.

There are many reasons for bad parenting: unemployment, drugs, alcohol, aggression, and crimes. Thus, unemployment and displacement of people from the labor market destroy social cohesion. If one or both parents have lost their jobs or become bankrupt, material insecurity does not enable them to provide their children with good education and health care. Moreover, parents might suffer from depression. If they cannot find new positions, the consequences might be severe, for instance, causing them to have alcohol or drug addiction which often happens in poor neighborhoods.

The presence of alcoholism, drugs, or another type of chemical dependence in one of the family members disrupts and sometimes destroys healthy, harmonious intra-family relationships. Naturally, all family members suffer, especially children. And this problem is now considered a family disease. Most family members living with such a patient have disorders referred to as "codependency". Living in a dysfunctional family in a state of constant stress leads to low self-esteem, denial of one's problems, and loss of control over the patient's behavior and one's own feelings, life, etc.

What is codependency? Some common codependency symptoms include:

* Low self-esteem
* Familial dysfunction
* Depression
* Anxiety
* Stress
* Low emotional clarity

(Renzoni, 2022)

Codependency is fertile ground for the emergence of various psychosomatic diseases: neurosis, hypertension, depression, peptic ulcer, headaches, angina pectoris, etc. According to medical studies, 65-80% of sons and 15-20% of daughters of parents with alcoholism and drug addiction become sick people with various forms of dependence on psychoactive substances upon reaching adulthood. Children inevitably take on the so-called survival roles. In addition, they represent a high-risk group for developing a similar disease. They also have an increased incidence of other psychopathological disorders that require special correction: neurotic disorders, alienation, mental retardation, etc. (Renzoni, 2022). As a result, life in a dysfunctional family leads to aggression, verbal and physical violence, and crimes. Children often run away from aggressive parents and become homeless. Moreover, they start using drugs and become involved in street crimes.

**3.6. Overcoming difficult social situations.**

"A wide variety of elements that are often considered separate from society are partially a product of it." (Kaplan, 2017). The fight against poverty, alcoholism, drugs, unemployment, crime, and the consequences of wars and natural disasters, is intricate and complex - it all depends on the severity and general situation in a particular country. In countries stricken by war or natural disasters, swift and effective actions are required to sustain economic growth and widespread prosperity and alleviate the suffering of the people and communities directly affected by these horrific events. Lost livelihoods need to be rebuilt or replaced with new ones. The problems and difficulties are common to most countries, and understanding them is essential to ensure that strategies and actions contribute to reducing the inevitable human suffering when a war begins or a natural disaster strikes.

While the prevention of wars and especially natural disasters often do not depend on the governments, they must try their best to prevent such social problems as crime, drugs, unemployment, and bad parenting. Prevention is aimed at avoiding possible physical, psychological or socio-cultural conflicts among individuals and "risk groups"; preserving, maintaining, and protecting a usual standard of living and health of people; assisting them in achieving their goals and revealing their internal potential.

For instance, the most important factor that aggravates the health of the family as a whole and significantly complicates treatment is the mother's alcoholism or drug addiction. And it is impossible not to note the most severe consequences of influence on offspring. Alcohol and psychoactive substances cause physical underdevelopment, fetal deformity, disruption of the internal organs, delays and mental development disorders, congenital diseases of the central nervous system, fetal withdrawal syndrome, and a high percentage of stillbirths. And as a result - abandoned children, disabled children in need of social assistance, and an increase in the number of homeless children merging into a criminal environment. (Renzoni, 2022).

To sum up, social prevention creates the prerequisites for the regular socialization of the individual based on the priority of the principles of legality and morality. In this regard, we can agree with the point of some researchers of social work problems that the entire population needs prevention. However, there are categories of the population that need it more. These are children, teenagers, and persons leading immoral lifestyles. At the same time, social service specialists' approaches to these categories of people should not be based on negative aspects but on the positive potential inherent in them. The modern social work process departs from the former medical model, which was focused only on treating physical or mental diseases. Today it seems crucial to find the causes of the disease and the social and psychological factors that caused negative consequences. (Rawl, 2021).

**Chapter 4: Inclusive practices in SEN schools**

**4.1 The importance of a dyslexia-friendly atmosphere in the classroom.**

As mentioned above, remedial teachers need to be not only lecturers but facilitators as well. They are supposed to help learners to understand the material and to imply it in practical ways. If they create a dyslexia-friendly atmosphere in the classroom so that kids will feel comfortable and ready to get help and make progress. Therefore, they guide them much more than in regular school. That is why in SEN schools in Israel, there are no more than eight students in each class so that their teachers will provide individual support to each one (Koifman, 2020).

While the regular teacher tells students what to do, the facilitator asks their questions. The teacher lectures from the front, and the facilitator supports from the back. Moreover, the facilitator enables students to develop learning skills and critical thinking and to provide their own conclusions. One of the main parts of learning shared with facilitators is the life context of the material. Thus, the topics in the textbook or on an online resource should be connected to emotions and how kids usually react to them. The goal of the learner is central in considering what is learned.

Learner confidence is a crucial factor in success. First, they need to get success-orienting material, and if they get high grades, they will be motivated to do more and more challenging tasks following the curriculum. Moving from easy materials to difficult ones must be based on their previous and current skills and knowledge, which should be developed step-by-step to enhance their confidence. If the tasks are too easy, students get bored, and if they are too complicated, they feel discouraged and unconfident.

Although all the kids are different, cooperative learning works well in SEN classes. In contrast to individual learning, it supposes asking and answering questions and jigsaw activities in small groups and/or pairs. Such group activities include, for example, mutual surveys, mosaic methods, and structured debates. Peer-to-peer questioning is a technique in which students ask each other questions and answer them themselves. It can be convenient, for example, when discussing what has been read. A mosaic method is an approach in which individual students become experts in certain aspects of a significant topic and talk about them to other participants. In structured polemics, the teacher invites students to consider the subject of study from opposing points of view and, by moderating the discussion, helps them find a compromise. " As a bonus, your students are being social while they’re working in cooperative learning. That could be an advantage or disadvantage for you, depending on the class." (Zook, 2018)

What is more, due to cooperative learning, students  not only gain academic achievement but learning all the necessary skills of the 21st century, such as

\* active learning and learning strategies

\* creativity

\* critical thinking and analysis

\* collaboration

\* leadership, and social influence

\* debate and negotiation

(Koifman, 2020)

Projects, book reports, and other assignments are also examples that can be done in pairs or small groups. It is also one of the ways to apply constructivism in the classroom is to allow students to choose for in-depth study of those aspects of it that will most interest them when considering a significant topic. For example, the teacher might give the class to write a project about Holocaust, and then each student chooses the topic that is closest to him and writes a report on it. This topic is one of the most popular in Israel because it is a part of its history. Moreover, Israeli senior students visit concentration camps in Poland and often choose to write projects about Auschwitz-Birkenau or Treblinka. They usually decide who in the group will make a collage of pictures, who will make a plan, who will write, and who will correct mistakes. Later they give a presentation in front of the class in turn.

**4.2. ASD and learning languages.**

ASD children often have perseveration – they often "get stuck" on the same topic or subject. In this case, they seem obsessed or cannot switch from them. (Morin, 2022). Thus, students who study EFL can recite the same verse, retell the same story or explain the difference between Present Simple and Present Progressive tenses even if nobody asked them to do it. They might realize some grammar tenses very well and ignore others. The same happens when they catch specific words from the topic, pay attention to some episodes in the story for reading comprehension and skip the others. ASD people often cannot realize other people's feelings and emotions. As a result, they misunderstand the story or lose the plot thread. Moreover, they do not notice that other people get tired and do not want to listen to them anymore.

"When it comes to foreign languages, neurodivergent students may experience cognitive processing delays even when their intellect is intact. Some foreign language learning activities such as listening and speaking require a quick reaction, and the described delays may lead to a failure to conduct them successfully." (Papers, 2022). To enhance the process of studying EFL, teachers should use such activities as role-playing in various social situations, for instance, in a store, in the airport, in a hotel, or at the doctor's. Moreover, it is a fun and age-appropriate way to work on social and communication skills in a foreign culture. It also provides an opportunity to discuss the features of these skills in their native language. Furthermore, the technique of small talk is helpful for ASD kids in real life because it enables them to make social contacts.

Studying a foreign language has a very significant potential for developing children with ASD. It enables children to learn speaking skills through role-play activities, making exciting dialogues with peers, and observation. They also help train language skills such as regulating volume, speed, and intonation of oral speech. Learning the grammar of a foreign language helps improve understanding of aspects of the language, such as sentence structure. Memorizing phrases and colloquial clichés will provide an opportunity to expand the existing vocabulary of both a foreign and a native language. Discussing cultural differences and different social situations will also be incredibly beneficial. The language for such children will become much more straightforward, transparent, and logical.

Learning English provides many opportunities to develop language and communication skills while providing children with a more balanced and varied education. In addition, it helps train the brain to multitask. If people need to speak two languages to different people simultaneously, they must be able to shift without effort from one structure to the other. It might be difficult even for neurotypical people, but ASD ones need to develop the skill of moving from one place, activity, or language to another. Therefore, improving this skill could help them learn to transition less challenging. That is why many remedial EFL teachers offer kids with ASD to play a game of translator or interpreter, improving their vocabulary, transition and communication skills.

**4.3. Cognitive learning as a way of overcoming LD.**

"Although dyslexia is called a learning disability, it does not mean that one is unable to learn." (Warren, 2021). Many LD children have a high IQs and learn differently. The diagnosis of LD reflects a reading difficulty, but LD students have many accommodations, for instance, computerized or oral exams.  Identifying the problem of LD is the key to protecting children against reading failure. Knowing the child's intelligence level as much as possible is essential for accurate diagnosis and individual learning programs.

"Dyslexia is a learning difference that often requires multisensory instruction and cognitive remediation. Therefore, specific cognitive skills that may come quickly for most students may require additional attention and training for many LD students." (Warren, 2021). The ability of the brain's mental process to pick up and store information through experience, senses, and thought is known as cognition. It is the mental process of gaining knowledge and understanding through the senses, experience, and thought.

Traditional learning mainly focuses on memorization and sometimes even on cramming, while trying to achieve mastery in a particular subject is much more effective. Besides, "cognitive and learning strategies are those procedures that a student uses to succeed with a task that would be difficult without special effort". (Ylvisaker, 2006). Since dyslexic students are slow learners, they need to train the following cognitive skills that may be useful for learning:

1. Auditory processing.
2. Visual processing.
3. Language processing.
4. Sequential processing.
5. Rapid Automatic Naming.
6. Executive functioning/attention.

The forenamed skills make learning easier and enable students to store new information in their memory for a long time. (Warren, 2021).

# Other fundamental aspects of cognitive learning are comprehension, memory, and application. First, for cognitive learning, students must understand why they are learning. The next step is understanding and memorizing all the necessary information. It discourages cramming the material because it is not very effective. Finally, cognitive learning supposes applying new knowledge and skills in life situations.

**4.4. Assistive and educational technology in special education**

"An assistive technology (AT) device refers to “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability” (Garguilo, 2016). Furthermore, educational technology (ET) combines computer hardware, software, and educational theory and practice to facilitate learning. (Wikipedia). The devices are tools that students use, for instance, mobile phones, laptops, computers, and personal devices for the blind of the deaf. They also may be screens and smart boards for frontal work, both in a real classroom and online.

According to WHO, "AT is any device or system that allows individuals to perform tasks they would otherwise be unable to do or increases the ease and safety with which tasks can be performed. It is a broad term that refers to any low or high-tech tool that can be used to enable student learning." (NSW government, 2022). Some high-tech equipment is supposed to help students with severe physical disabilities who come to school in wheelchairs. Moreover, if you have blind students, you can use special tools, such as "text-to-speech" (spoken words that appear on the computer screen while being typed). Deaf students can use the braille system of special computer software for learning disabilities.

"AT provides for the consideration, selection, acquisition, and implementation of assistive technology devices and tools for students with disabilities." (Garguilo, 2016) Moreover, it can help people in difficult situations, for instance, preventing their kids or elderly parents from getting lost. Furthermore, the forenamed Amit Saban, one of the alumni of our school, invented a GPS for soldiers of the Israeli Defense Force (IDF). Despite LD, Saban " launched a startup that makes “smart” ID tags with built-in GPS technology that can help soldiers and civilians in distress, and even prevent abductions." (Yakov, 2015).

Due to ET and AT, students with LD can be creative and make a difference, as Amit Saban did. Although he had problems with dyslexia and dysgraphia when he was our student, he invented a device that has probably helped thousands of soldiers. He became " an outstanding high school scholar and a member of the gifted students’ program at Tel Aviv University. His smart ID tag earned him first place in a youth startup competition sponsored by Google. (Yakov, 2015)".  Due to that device, thousands of soldiers of the IDF, as well as young kids or senile elderly people, have escaped getting lost or being kidnapped since 2015. Therefore, it can be used both for AT army and caregiving services.

Assistive Technology Services (ATS) enable SEN individuals to overcome their challenges and get better results in learning. Along with specific devices, software, or equipment, ATS also includes direct training and instruction to the individual, a family, and a  care team. The use of ATS increases their independence and learning autonomy. Students are entitled to screening for AT as part of the Individualized Education Program (IEP) system. (Murray, 2020). Thus, SEN schools are responsible for buying ATS from specialists who provide them.

"An assistive technology specialist can provide ATS; however, these individuals may be infrequent within a school system. In that case, special education teachers, speech-language pathologists, occupational therapists, and instructional technologists may be responsible for providing assistive technology services" (Garguilo, 2016). One of the first AT was Braille for the blind in the 19th century.

The providers are [rehabilitation engineers](https://en.wikipedia.org/wiki/Rehabilitation_engineering), [occupational therapists](https://en.wikipedia.org/wiki/Occupational_therapist), [physical therapists](https://en.wikipedia.org/wiki/Physical_therapy), [speech-language pathologists](https://en.wikipedia.org/wiki/Speech_and_language_pathology), suppliers, educators, and other professionals specializing in assistive technology issues. (Wikipedia, n.d.). Therefore, they specialize in different fields and develop different devices depending on the unique needs of disabled people. Mainly they are technology professionals, seating and mobility specialists, rehabilitation engineering technologists, remedial teachers, psychologists, physiotherapists, and psychiatrists.

Not all organizations and individuals can afford ATS because it might be expensive. Nevertheless, specialist disability accommodation (SDA) helps to stimulate the market to produce high-quality, contemporary, accessible, and well-designed housing for participants with SDA funding in their plan. SDA funding is paid directly to SDA providers to cover the building and maintenance costs. Participants pay a reasonable rent contribution and other day-to-day living costs such as electricity bills, for instance, Israeli high-tech companies. Around 100 companies in Israel deal with the high-tech assistive sector. They produce AT devices for people with hearing, sight, and mobility problems. "In recent years, a growing number of Israeli startups have started down a new path, focusing their attention and skills on the assistive technology world, which includes products and services that help disabled people improve their lives." (Luzi, 2017). The same companies provide cognitive and communication ATS for people with severe mental disorders, young kids, and elderly people. They also produce smart boards and computer technology for SEN schools throughout the country, including Beit Ekstein, where I teach.

ATS is provided for students with disabilities, and IEP teams are supposed to select assistive technology for each student. They are supposed for reading, writing, and mathematic skills. An assistive technology decision is usually made by a special commission that consists of such specialists as a physician, a psychologist, a psychiatrist, a remedial teacher, and others. It can be time-consuming and challenging because not all devices suit all students. Nevertheless, tools and devices of different types are available, enhancing IEP teams' decision-making progress.

**4.5. Levels of assistive technology.**

One way assistive technology is often categorized is through the level of technology. While typically, one conceptualizes assistive technology as low-tech (minimum technology) or high-tech (sophisticated technology), other conceptualizations also exist, including the following ones:

a) *Mnemonic*

This way works well in developing memory and other cognitive abilities. Moreover, students with learning disabilities often struggle while doing mathematical tasks. Since they are very slow learners, it takes them much more time to think, and they make mathematic progress at a rate of approximately one-half that of their regular peers. The mnemonic technique mainly deals with associations. For instance, they associate geometric shapes with something similar when they study geometry. When they learn the multiplication table, they find rhymes when necessary. When they research grammar tenses in EFL, their teacher advises them to pay attention to auxiliary verbs that repeat or some other repetition. Using visuals to teach grammar constructions of mathematic formulas is strongly recommended. Graphic organizers are also related to mnemonic technology.

*b). No-tech.*

There can be table games, for instance, flashcards, pictures with words, or dominos. Before ET and AT were implemented, such a technique was prevalent in the 20th century. Such games are still popular, especially in developing countries where schools cannot afford computer technology. Moreover, kids can make such games themselves. Thus, in our school, they like making them, and I sometimes use the whole lesson to allow them to have fun. Moreover, pencil grips can also serve as a low-tech writing-based assistive technology to support students with dysgraphia. They help those who have unreadable handwriting, and with the help of such grips, they write more clearly.

*c).* *Low-tech*

These AT are generally not very expensive. Mainly they are tools or devices that do not require much training and are typically not sophisticated. For instance, they are binder clips to turn pages, work pages in larger fonts, adapted pencils, highlighters, the Braille system for blind people - and other things that enhance organizing information.

*d). Mid-tech***.**

These ATare battery-operated tools or devices that require some instructions and training. SEN students learn how to press buttons and which ones are right for special operations. For instance, a calculator or an electronic dictionary can be used during tests in SEN classes.

*e). High-tech*

These AT are the most sophisticated devices and tools. Therefore,  they have a higher cost and require more training. They are commonly associated with computer-based technology, for instance, "text-to-speech" and "e-readers or supported e-text" for reading; "speech-to-text" and "word prediction" for writing. And "virtual manipulatives" and "computer-assisted instruction" for mathematics.  (Garguilo, 2016)

**4.6. Purposes of assistive technology and give an example of each type.**

According to WHO, AT, from cognitive problems to physical impairment, has been categorized into seven areas:

1. *Communication*. The devices, for instance, *Proloquo2Go and Visual Scene Display*, enable communication between children and adults with complex communication needs. Such disorders are autism, central palsy, Down syndrome, aphasia, and others. People with the forenamed disorders require AT can be complicated and range from sophisticated computerized communication systems and software programs to a simple handle on a telephone.
2. *Hearing.* People with hearing disorders, whether they were born deaf or became one after severe diseases or traumas, use such AT as *FaceTime* and *Sign 4 Me*. The most common device is a tiny radio station with its frequency and a microphone that the speaker wears. Such devices can be used at home, in classrooms, in meetings, and boarding schools for kids with hearing disabilities. Entirely deaf people use wake-up alarms as special bracelets that can be worn on their wrists or visual indicators that start blinking when the doorbell rings. For communication, they use text telephones and speech recognition programs.
3. *Vision.* In the 20th century, many blind people used the *Braille* system, walking canes, and service dogs (Dahler, 2017). Nowadays, devices of artificial sight have been invented, for instance, *Color ID* and *Money Reader*. (Hortizuela, 2020). They also use screen readers on computers, iPads, and buttons on mobile phones. When messages come, they hear special signals and use text-to-speech software to read them.
4. *Organization.* Lack of organization, which often happens to people with memory disorders and ADHD, can be a barrier to students’ progress at school and to performing everyday tasks and assignments. Therefore, people with forenamed disorders can use such devices as *Notability, Reminder,* and *Watch-Minder.* (Garguilo, 2016). They can be mid-tech and high-tech electronic organizers and other AT. As for low-tech AT, people use calendars, daily planners and organizers, office depots, and staplers.
5. *Activities for daily living*. AT solutions may include switches to control computers, remote-control devices for television, computer, air-conditioning, driving aids, automatic door openers, and others. They also have rehabilitation services for people with travel mobility needs that enable people to move horizontally or vertically and climb stairs.
6. *Writing.* In Israeli SEN schools, students with unreadable handwriting use such devices as handwriting tools (pencil grips, lined or graph paper), keyboards and touchscreens, and speech-to-text. These tools are good if they still use traditional textbooks and notebooks. Nevertheless, more and more schools use electronic devices which do not require handwriting. Quite the contrary, computers, iPods, and mobile phones provide such services as word prediction, spell- and grammar checks, and graphic organizers.

1. *Reading.* A wide range of AT tools is available to help individuals who struggle with reading, for instance, audiobooks and graphic organizers. Audiobooks help kids to understand the content of the text better because they see and hear it at the same time. It is beneficial for audio and visual learners. Graphic organizers help kids understand the text's details and do reading comprehension tasks better. While each tool works differently, they help by presenting the text as speech. They facilitate decoding, reading fluency, and comprehension as integral parts of learning. (Garguilo, 2016)

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# **4.7. Student-centered learning.**

"Student-centered classrooms include students in planning, implementation, and assessments."  (McCartny, 2015). It is not only an orientation towards the assimilation of a certain amount of knowledge by students but also the development of their personality and cognitive and creative abilities. The space of such a lesson is a system of conditions in which the awakening of the inner sources of human consciousness is carried out. The purpose of the lesson is to create conditions for the manifestation of the cognitive activity of students.

Means to achieve this goal:

- the use of various forms and methods of educational activities that allow revealing the subjective experience of students;

- creating an atmosphere of interest for each student in the work of the class;

- stimulating students to make statements, use various ways of completing tasks without fear of making a mistake, getting the wrong answer;

- assessment of the student's activity not only by the final result but also by the process of achieving it;

- encouraging the student's desire to find his own way of working, to analyze the ways of work of other students during the lesson, to choose and master the most rational ones;

- the creation of pedagogical situations of communication in the classroom, allowing each student to show initiative, independence, and selectivity in the ways of working, creating an environment for the natural self-expression of the student.

Most LD students do not want teachers to tell them what to do and how. They mainly do such activities that interest them. How they will perceive English as a foreign language depends on the teachers. They usually like studying and making progress, but they do it differently. Therefore, we must have some lesson plans in store and try our best to involve them in the process of learning so that they will be able to pass the final exam in the 12th grade.

An essential feature of a student-centered lesson is the reliance on psychophysical prerequisites that allow the student to master the program material successfully. For instance, it requires an individual task card. Classifying such task cards and their flexible use in the lesson requires additional effort from the teacher. Still, with this, the lesson will become personality-oriented in the true sense of the word. Working with subjective experience in the classroom requires particular forms of student-teacher interaction. It should consider not only the intellectual but also the emotional-volitional, motivational-need characteristics of each student. In a student-centered lesson, the teacher must take on the role of coordinator, organizer of the dialogue, polylogue, and assistant. Thus, a teacher-facilitator helps kids to work in groups and is responsible for the personal realization of each child.

When the individualized education program (IEP) teams make assistive technology decisions, they may try to match an assistive technology device or tool for each student before recommending it. In Israel, IEP teams consist of different specialists, as it was said above. Moreover, some high-tech companies cooperate with SEN schools, mental hospitals, and old people's homes and provide them with ATS. The national ministry of education helps provide AT to schools. It provides educators professional development related to using AT through face-to-face conferences and online in-service courses, tutorials, or webinars.

IEP teams are required to consider AT for all students with disabilities. AT can be represented in multiple ways—for instance, as accommodation for long- or short-term objectives. It is selected by IEP and implemented to help a student to meet his individual goals. According to IEP teams, AT is the responsibility of the school to cover the costs. However, schools are not required to pay for all assistive technology if they have sponsors, for instance, high-tech companies. Otherwise, schools buy AT with the help of donations so that students' families will not have to pay too much.

In my opinion, I can use this knowledge both for life and for work. AT can be helpful not only to people with disabilities but also to facilitate our life in general. For instance, audiobooks are suitable for people who like reading books but have no time to read. Therefore, audiobooks solve this problem perfectly well because people can listen to them on the way to work or while doing home chores. However, for those who have disabilities, AT is incredibly vital.  If I buy some technology for my private lessons or open my school, I can make my classes more expensive or spend less time writing articles, assignments, or blog posts.

Many people with learning disabilities, and not only, feel that they do not have as many opportunities as other people have. In this case, the best solution is to use no-tech and low-tech devices that everybody can afford. Moreover, students can make such things themselves and are eager to use table games, graphic organizers, charts, and unique pictures during the lessons. Such activities made them interested in studies and motivated them to progress more. AT and ET have made a real revolution in studies for the last decades.

**Chapter 5. Results of the study.**

**5.1 Good parents and schools shape kids' brain.**

The first people responsible for their children's development are their parents, relatives, friends, and the neighborhood. In the modern world, there are many problems in family and family education. The parent's primary responsibility is the upbringing of children and the formation of the child's personality from the first years of his life. Increasing parents' responsibility for children's upbringing and deepening the interaction between the family and public organizations involved in the upbringing of the younger generation is closely related to solving the problem of pedagogical education of parents. "The relationship with parents is a key predictor of well-being." (Ottovordemgentschenfelde, 2015)

A family is a collective whose members are interconnected by specific responsibilities. Being a family team member, the child also enters into a system of existing relationships, thanks to which he comprehends the norms of social behavior. The influence of the family microclimate on forming a person's personality is significant. The family is the school of the child's feelings. Observing the relationships of adults, their emotional reactions, and feeling the whole variety of manifestations of the feelings of people close to him, the child acquires moral and emotional experience. In a calm environment, the baby is quiet. He is characterized by a sense of security and emotional balance.

The second step is the formation of children's development in kindergarten.  The teacher of a preschool institution acts not only as a teacher of children but also as an educator of parents. The actual task of pedagogy is to show parents that the family plays an essential role in shaping a person's personality. Raising your child is excellent art since the education process is a continuous work of the parents' hearts, minds, and will. The comprehensive upbringing of the child, preparing him for life in society, is the primary social task solved by the community and the family.

The following serious test of a person on the way to a formed worldview is schooling. On average, this period lasts about 12 years, and with each year of such adolescent socialization, we lay the foundation for our future moral principles and ideals. School, which kids start when they are five or six years old, is a reasonably competitive environment where most of us first encounter real difficulties interacting with other people. Building relationships with peers, rich friendships, and first sympathy - all this school experience leaves a significant imprint on the further formation of our personality.

To a large extent, the level of development of a person during this period will depend on the nature of the upbringing that his parents adhere to. To reach their full potential, teenagers must convey the value of gaining knowledge and instill valuable habits in them. Otherwise, upon completion of training, he may not be ready for the next stage of socialization - student life.

In complex cases, parents turn to the teacher for advice. Educators of preschool institutions are well aware of the patterns of development of a child of preschool age and the methods of his upbringing and do everything possible to assist parents in mastering the basics of pedagogical knowledge. In conversations with parents about the role of family education, the teacher emphasizes how many-sided the influence of parents on the emerging personality: he talks about the style of relations of all family members, the orientation of their interests and needs, and creating an appropriate moral microclimate.

The effectiveness of pedagogical influences largely depends on the family microclimate: a child is more amenable to educational influences if he grows up in an atmosphere of mutual sympathy. This is a positive factor if benevolence and love reign in the child's family. Conversely, children with mental disorders and personality problems grow up in an atmosphere of cold alienation and constant conflicts. It is in the family that the child's interests, needs, and value orientations are first formed.

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The child is active and curious by nature, he quickly absorbs everything he sees and hears around, and the mood of adults is transmitted to him. It is essential to determine the emotional impressions he receives: positive or negative; what manifestations of adults he observes: friendliness, caring, tenderness, friendly faces, calm tone, humor or fuss, nervousness, grouchiness, envy, pettiness, gloomy faces. All this is a kind of alphabet of feelings - the first brick in the future building of personality.

The child's relationship with the world arises long before his birth, but only with the emergence of joint activities with parents (then with adults and peers) do these relationships acquire a trustworthy source of development of the baby's personality. The child carries out his life activity thanks to the presence of these intersecting and interpenetrating systems, two worlds: the world of adults (parents, relatives, and teachers) and the world of children (in the neighborhood, kindergarten, and school), each of which objectively and subjectively affect the social and emotional development of the child.

The foundations for a favorable socio-emotional development of the baby are laid during infancy. Emotional compatibility arises in the "adult-child" dyad at an early age. Meaningful, emotionally warm relationships between a parent and a child lead an infant already in the first year of life to a positively colored perception of the environment, to “trust in the world.” For these qualities to remain leading throughout preschool, parents must constantly provide the child with psychological and emotional support and avoid rigidly regulated living conditions. This has a positive effect on the development of the individual and is a kind of prevention of neurosis and other mental disorders. (Melinda Smith, 2022).

**5.2. If your child differs from others**

You were so excited when you were expecting a baby, other relatives also were pleased when he or she was born… But some time passed, and you noticed that he or she could not sit, walk or speak when it is high time to do that… Otherwise, the child's physical development is good, but he or she is hyperactive, aggressive, and misbehaves most of the time… "When it comes to healthy development, there is a wide range of “typical.” But if your child is not meeting the milestones for his or her age, or you suspect a problem, share your concerns with your child’s doctor immediately. Do not wait." (Melinda Smith, 2022). Finally, you take him to the doctors, who say he has ADD, ADHD, ASD, or other severe disorders. No doubt, it is a real challenge for the family.

A disabled child, especially one with a mental disorder, is a real challenge for the family.  Some families accept the child's diagnosis and work it out, and some break up. Not everybody realizes that it is fundamentally vital to pull themselves together; the state of an adult directly affects the child. The faster the parent learns and starts to deal with the child, the more chances he has to adapt to the situation. "If your child is developmentally delayed, or if you have observed other red flags for autism, schedule an appointment with your pediatrician right away." (Melinda Smith, 2022). Cooperation with pediatricians, psychologists, and psychiatrists is crucial for the child's potential development and adaptation to his future life in society.

Unfortunately, sometimes parents and relatives, having found out about a severe diagnosis of the child, blame themselves, then each other. A mutual clarification of the reasons reaches the point that the husband's relatives suspect the genetic history of the wife in what happened, and the wife's family, on the contrary. Husbands often leave their wives and sick children, and the number of single-parent families extends. Left-alone mothers get depressed and cannot bring up their children well or focus only on sick ones, while healthy kids lack attention.

Moreover, mothers who go into depression for a year or two lose precious time treating and training their kids. They have trouble doing such things as "…taking children out to the park, reading books or even talking. The lack of these important daily interactions can have long-term negative consequences on the brain development and overall health." (Mastergeorge, 2014). Otherwise, they cannot afford high-qualified specialists whose consultations and special lessons may be costly. However, the older the child becomes, the more difficult it is for him to catch up, to catch up with his peers. As a result, they may end up on the street and be involved in crimes, or their sickness may get worse and worse, and they will be placed in closed boarding schools or psychiatric hospitals for their whole lives.

It is strongly recommended to women, despite the tension, to keep the family involved with all its members in working with the child. From experience as a remedial teacher, I can say that in complete families, children are more likely to be corrected, and progress in behavior is faster - autistic people are susceptible and impressionable. There was a case when a divorced mother was trained, worked with a child, and achieved success. She took her ex-husband to the particular courses and explained that she was not a bad parent, but the child had a severe health condition. There are examples when subsequently, families converged. Moreover, many of our graduates not only pass all the final exams but also do military service in IDF (Israeli defense force). Not only boys but girls as well are eager to join the Israeli Army.

**5.3. The role of the school in shaping personality.**

In the upbringing of children, the school plays a huge and vital role since, after the family, it is one of the most important and socially significant institutions that influence the formation of a holistic and socially active personality. At the same time, the effectiveness of educational work directly depends on how closely parents and teachers interact with each other. In other words, only under full cooperation between the school and parents can form a highly moral, cultural, creative, and socially mature personality.

Teachers occupy a special place in the development of a child's personality. In addition, the degree of a comfortable finding the child in the school team largely depends on these people. They control the level of assimilation of educational material, the successes and failures of each student individually and the entire class as a whole, issues of relationships in the class team, and each child's upbringing.

"Adolescence has numerous ramifications on the behavioral, emotional, cognitive, psychological, and social levels" (Zaher Accariya, 2016). Therefore, for the most influential work on educating students, the teacher needs to have complete information about the formative role of the family and the dependence of this role on the value priorities of each of its members. Possession of such information helps the class or primary school teacher foresee how relationships in the child's family can affect his personal development, behavioral reactions, and character. Therefore, teachers use various forms of communication with parents, allowing them to find all the features of relationships in each family.

Only the joint efforts of teachers and parents can give positive results. Educating is purposeful, and comprehensively developing personality is only possible if parents and teachers unite in tandem. Only in the joint well-coordinated activity of this tandem the child develops consciousness and accumulates the experience of correct behavior in different situations. Thanks to the unified requirements of teachers and parents, children's will is strengthened: they become more persistent in achieving their goals and noticeably more active and committed to overcoming difficulties.

Students diagnosed with LD need much more attention from their parents and teachers because they "have difficulty adjusting to social frameworks, functioning in various social situations, dealing with feelings of failure, and delaying gratification. Many LD students exhibit low self-esteem, isolation, and a tendency toward mood swings" (Zaher Accariya, 2016). Parents can share information about their child that will help teachers succeed; for example, their opinions about how the child communicates, what activities he likes to participate in and what he should avoid, and how to support his excellent behavior. Working with parents is vital to building unity, cooperation, and ongoing dialogue to best serve the child with a developmental disability.

Children with intellectual disabilities or ASD may communicate differently than others. When teachers adapt to a child's communication style, they can build trust and friendship and become more effective mentors. Teachers must compose an individual program for each of them if they attend a regular school. In Israel and many other countries, such students have personal assistants who look after them during the breaks and sit next to them during the lessons to help them if necessary. In this case, the vital thing is to build a trusting relationship. (Innovations, 2022)

**5.4. Discussion. Miracle or hard work?**

Many famous and successful people had LD and difficult childhood. Is their success a miracle or hard work? In my opinion, the latter is more likely. Nevertheless, a lot depends on their families, mental condition, and motivation.

Among successful and famous people, you can often meet those who either grew up in a rough neighborhood, had dyslexia and other learning difficulties or had an ASD. As was written above, such children have very little chance of being successful in their future. In Israel, they are categorized as "endangered kids." Nevertheless, we know many famous and rich people whose childhood was rather tricky

Many factors influence the formation of a person’s personality, views, and perception of the world. However, scientists attribute the most important of them to nothing more than the environment. The circle of communication, the information consumed, the places visited, and the location of residence. No matter how we would like it, these things largely dictate our intellectual, spiritual, and psychological development. Thus, growing up in a rough neighborhood "can affect how adolescents’ brain function…. It can alter the communication between brain regions involved in planning, goal-setting, and self-reflection." (Adetunji, 2021). Life in a dysfunctional family also leads to mental diseases, aggression, verbal and physical violence, and crimes.

One of the most famous actors of our time, Leonardo DiCaprio, grew up in a challenging environment. His grandparents were emigrants, and his mother and father did not manage to break into the people. Because of this, they could hardly provide for their families. Leo spent his early years in a troubled area where you can hear a gunshot in the middle of the night, which is constantly written about in crime reports. His mother had to work several jobs, forcing her to return home late at night. Perhaps all this reinforced the desire of little DiCaprio to change the situation, and at the age of 14, he set out to become an actor, actively trying to get on the set. He succeeded, and since then, the situation has changed a lot. (Molloy, 2014)

There are also many dyslexics among famous people. As children, famous people with dyslexia and dysgraphia faced difficulties in school. The inability and impossibility of learning to read and write on an equal basis with peers provoked ridicule and condemnation by students and sometimes even teachers. For instance, Carol Greider, a famous scientist, believes she had dyslexia as a child. At school, she was transferred to classes for lagging. She could not cope with the development of the school curriculum on par with her peers. Nevertheless, she found a way out: as she could hardly read even in syllables, she compensated for the gap in her skills with the ability to memorize information in detail. It was this experience that helped her achieve tremendous success in the study of chemistry and anatomy. In 2009, Carol received the Nobel Prize in Medicine or Physiology for her discovery of telomerase. This medical research has significantly contributed to the development of biochemical cancer therapy. The quantity of dyslexic politicians, artists, musicians, and film directors is enormous. (Vaccarino, 2013).

Moreover, we know many people with ASD who made a difference in the world. Thus, Albert Einstein had difficulty making contact with other people. He did not study well at school, and he had trouble expressing his thoughts. The future scientist could not find a job because he did not like communicating with people. He could not stand being touched by people. Mozart was also one of the famous people with autism. Like many autistic people, he was characterized by a lack of facial expressions and stereotypical movements of arms and legs. He also had sensitive hearing, and too sharp and loud sounds caused pain to him. Moreover, Mozart often changed his mood. However, despite having an autistic disorder, he became an outstanding composer. There is also evidence that Charles Darwin had autism. He loved to spend time alone since childhood. But he was the most intelligent person and created the evolutionary doctrine, which is still adhered to (Innovations, 2022).

Nevertheless, not all people were diagnosed with LD on time since its study and identification began relatively recently. A timely diagnosis allows them to cope with the symptoms early and correct further self-development. Many talented people did not have such an opportunity, but with the help of their families or independently, they found ways out and learned to cope with all the obstacles in their path. The crucial thing is developing their memory and imagination. Thus, many famous people with LD did not even suspect it, but they were motivated, did not despair, did not lose heart, and, contrary to the opinion of others, went ahead with their dream.

A person's personality is first formed in the family. Parents and other close relatives are responsible for his development and physical and mental health. It is essential for parents at different moments of their lives to become: moderators - coordination of the child's actions; facilitators - to support the inner fullness of the child; competency trainers - the development of qualities (among which are stress resistance and readiness for change, the ability to work in a system of complete uncertainty, and responsibility); navigators - to help correctly determine the vector of life direction; producers - building a long-term line for the child (generators of the child's ideas, create conditions for their implementation, and regulate all stages of the performance of the future project).

The reality in which a person progresses and achieves his life goals is considered the environment. Moreover, in most cases, the nature of this environment is influenced by geographical, material, social, and family factors. Interacting with other individuals is not less important in the course of socialization. We cannot develop spiritually, psychologically, or socially outside of human society. According to the Israeli Association of People with LD, "… a student is defined as LD when two conditions are met: 1) there is a significant gap between the student’s academic achievements and those expected at his/her age level or of his/her class peers; 2) there is a gap between academic achievement and intellectual skill" (Zaher Accariya, 2016). Therefore, remedial teachers, if necessary, are supposed to complete an individual program for each student in order to help him/her succeed in school because it will allow him to be happy and prosperous in the future and probably to be famous and wealthy like Leonardo DiCaprio or Carol Greider.

Thus, people with ASD have more opportunities to make a career in mathematics, computer science, and other fields that require such abilities as observation and noticing small details that regular people ignore. Moreover, people with dyslexia often have a rich imagination that manifests itself from an early age. The support and help of their parents, who believed in their uniqueness and potential, helped them develop their talents and achieve worldwide recognition.

Despite the challenges and many trials, dealing with LD and social challenges provides a unique opportunity for families and educators to come together to help their children and adapt to the challenges to build relationships and strengthen family ties. Many families have turned their initial fear and denial into a life filled with family support. Coming together to support a child with LD creates an opportunity for family awareness and growth that would otherwise be unknown to them. It is hard for families, and there may be scars, but it is a good life experience.

Students diagnosed with LD need much more attention from their parents and teachers because they "have difficulty adjusting to social frameworks, functioning in various social situations, dealing with feelings of failure, and delaying gratification. Many LD students exhibit low self-esteem, isolation, and a tendency toward mood swings" (Zaher Accariya, 2016). Parents can share information about their child that will help teachers succeed; for example, their opinions about how the child communicates, what activities he likes to participate in and what he should avoid, and how to support his excellent behavior. Working with parents is vital to building unity, cooperation, and ongoing dialogue to best serve the child with a developmental disability.

The formation of personality occurs throughout life, and this is significantly influenced by the social environment, which, among other things, launches programs laid down by nature. On the one hand, the human agent changes the world by creating systems. On the other hand, the surrounding world or the social environment is directly involved in developing a person's personality: it sets his interests and horizons and forms "pictures of the world" and skills. A person can use the positive influence of the social environment on his development and eliminate its harmful effects, or he can go with the flow, following social stereotypes.

**Conclusion**

Learning is the process that accompanies people's development for their whole life. The researchers claim that people are products of their social and cultural worlds and that to understand children and their needs, we must understand their background, including the social, cultural, psychological, and medical contexts in which they develop. If necessary, students with dyslexia and other LD should be diagnosed as early as possible to receive the appropriate individual program based on cognitive learning strategies and psychological and medical support. Therefore, each LD child gets a unique curriculum. It describes the general background of the child, the number of children, the social surroundings, and the physical and mental health condition.

While learning to read improves awareness of the sound structure of words, phonological awareness is distinct from either phonics or the ability to read and spell. A slow reader or someone who confuses letters misses much information and misunderstands the text. As a result, he lacks the necessary skills to grasp the required information in the text and do the reading tasks. In this way, cognitive learning strategies help him to do such tasks better and enhance his general studies.

If a child is not lagging in development and meets all the milestones for his age, but his family lives in a rough neighborhood, this may adversely affect his development. The research claims that many children in poor areas have mental and physical health problems. "Growing up in a poor or disadvantaged neighborhood can affect how adolescents’ brain function…. It can alter the communication between brain regions involved in planning, goal-setting, and self-reflection." (Adetunji, 2021). Mainly they are working-class or immigrant neighborhoods whose inhabitants are unemployed, uneducated, or do menial jobs with low-income levels.

For the time being, the child's brain is plastic and subject to any influence, especially since he has no life experience – therefore, developmental miswiring might happen (Adetunji, 2021). Moreover, teenagers are much more interested in friends if young children mostly spend time with their parents after kindergarten and school. There is no doubt that friends become the authority for him - then there may be a danger that he can adopt bad habits from them, such as smoking, drinking, and drug use. " Neighborhood collective efficacy and organizational participation were associated with better mental health, after accounting for neighborhood concentrated disadvantage. Collective efficacy mediated the effect of concentrated disadvantage." (Xue, 2005).

Nowadays, people with SEN and other disabilities have much more opportunities to be independent due to ATS than in the 20th century. Moreover, they are simple to use. People only have to press buttons to turn the devices on or off. Complicated ones include direct training and instruction to the users. Mnemonic, low-tech, and mid-tech AT are low-cost or even free. High-tech AT is expensive, but sponsorship or contracts may help SEN schools to provide their students with all the necessary ATS.

Some families cannot afford AT or do not want to buy it because of the high cost, but it is strongly recommended because it can ease the life of a disabled person.

"And while anyone can buy equipment, more benefits are seen when a certified AT Professional can assess what will work for someone and then train that person and their caregivers on how to use it." Moreover, "to minimize abandonment, IEP teams need to consider the potential stigmatization associated with using devices or tools and ensure that students, teachers, other educators, and parents all receive the training to use the technology." (Garguilo, 2016).

ET suggests using appropriate tools' techniques, and processes to make teaching and learning easier. In the case of teaching SEN students, it helps teachers to use multi-sensory teaching so that the students' senses, memory, and cognition will work better to improve the outcomes of their studies. The use of technology in teaching and learning makes the process more effective and dynamic, especially in SEN classes. It can also allow the teacher to become a facilitator, moderator, and learner simultaneously because all the teachers learn themselves while teaching. In accordance with the Israeli Ministry of Education and the National Association for people with LD most lessons are computerized. AT benefits the students who need it. It can help them access and succeed in the general education curriculum and daily living skills. Thus, audiobooks are designed following the curriculum so that all the necessary texts for reading are downloadable. The devices for hearing, vision, speech- and cognitive development are also provided by mid-tech and high-tech companies, which often sponsor SEN schools.

During the lessons, students use personal iPads and mobile phones. If necessary, they use text-to-speech, speech-to-text, and other AAC apps to participate in curriculum and everyday life activities. Their mobile devices and apps also provide AT and instructional technology. Remedial teachers and other education professionals help them to operate the devices and other ATS that IEP teams have approved. In other words, educators must think critically about devices and apps and validate their educational use, including those used for educational assistive technology purposes.

Thus, remedial teachers must match any suitable methods to each student to involve them into the process of learning and probably to help them to believe in themselves, to try their best to overcome learning difficulties and succeed. No child left behind!

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