TURKEY DYSLEXIA COUNCIL

First Specialization Commission: Counseling and Research Centers and Specific Learning Disability Support Education Program

PROBLEMS ENCOUNTERED IN DIAGNOSING INDIVIDUALS WITH SPECIFIC LEARNING DISABILITY AND SUPPORT EDUCATION SERVICES IN TURKEY AND SOLUTION SUGGESTIONS

It is not allowed to partially or completely copy, press, publish in other sites, make into a book and/or distribute electronically or in any other way without an open and written allowance from Turkey Dyslexia Council and the other contributors. Violation of this rule may lead up to addressing legal measures.

July, 2017

This report was written upon the invitation of Turkey Dyslexia Council by a commission that consists of academicians from universities located in Turkey who are performing in various fields and working in learning disabilities field, NGO’s special education teachers working in the field, speech and language therapists and occupational therapists.

This report, which had been prepared with precise and attentive work for 8 months is the first product of its kind in Turkey and is going to be a guiding light for the law makers and appliers. I thank to all of my professors and my friends who helped and contributed to the commission report.

Atıf TOKAR

Dyslexia Learning Difficulty Association

Chairperson

Commission members who helped writing the report:

Head of the Commission:

Prof. Dr. E. Rüya ÖZMEN – Gazi University, Gazi Education Faculty, Department of Special Education

Vice Chairmen:

Prof. Dr. Şükrü Torun – Anadolu University, Faculty of Health Sciences, Department of Speech and Language Therapy

Prof. Dr. Oya Özkardeş – Istanbul Trade University, Humane and Societal Sciences Faculty Department

Asst. Prof. Nur Karaumur Akçin – Marmara University, Atatürk Faculty of Education, Special Education Department

Atıf Tokar – Head of the Board, Dyslexia Learning Disability Association, Radio and Television Supreme Council Screening and Evaluation Department Supreme Council Specialist

Commission Members:

Prof. Dr. Hülya Kayıhan – Hacettepe University, Faculty of Health Sciences, Department of Occupational Therapy

Asst. Prof. Başak Karateke – Ufuk University, Faculty of Education Sciences, Department of Psychological Counseling And Guidance

Asst. Prof. Meral Huri - Hacettepe University, Faculty of Health Sciences, Department of Occupational Therapy

Asst. Prof. Mukaddes Demirok - The Near East University, Education Sciences Faculty Department

Teaching Assistant Arzu Doğanay Bilgi - Gazi University, Gazi Education Faculty, Department of Special Education

Teaching Assistant Sema Acar – Başkent University, Faculty of Health Sciences, Department of Audiology

Res. Asst. Deniz Kazanoğlu – Anadolu University, Faculty of Health Sciences, Department of Speech and Language Therapy

Res. Asst. Merve Nur Sarıyer – Anadolu University, Faculty of Health Sciences, Department of Speech and Language Therapy

Special Education Expert Ulviye Şener Akın – Ministry of National Education

Hüseyin Duru – Speech and Language Therapy Expert, Anadolu University, Institute of Health Sciences, Department of Speech and Language Therapy

Attorney Burcu Akar Muratoğlu - Lawyer, Dyslexia Learning Disability Association Board Vice Chairman and Law Head Advisor

Expert Psychologist Meryem Oğuzhan - Ankara University Clinical Psychology, Albatros Special Education and Rehabilitation Center Educational Coordinator

Yahya Ünaldı – The Ministry of National Education Ankara Province National Education Special Education Branch President, RDR Expert

Bora Deveci - The Ministry of National Education Ankara Province National Education Special Education Branch President, RDR Expert

Nazlı Deniz Sarı – Head of the Ministry of National Education Special Education and Consultancy Department, Expert

Yunus Polatoğlu - Ministry of National Education Special Education and Consultancy Department General Directorate Mentally Retarded Special Education Teacher

Filiz Kural - The Ministry of National Education Ankara Province National Education Special Education and Consultancy Branch President, Expert

Ayça Ayran – Psychologic Consultant, Dyslexia Learning Disability Association Istanbul Agency Vice Chairman

Psychologist Mehmet Ali Vural –Mersin Toros Government Hospital Children Psychiatry Department, Expert

Bora Ant - Küçükçekmece Research and Guidance Centre – Istanbul – Psychologic Consultant

Seçil Saygılı – Teacher, Çanakkale Professional and Technical Anadolu High School

NGO's

On Behalf of the Turkish Psychologic Consultancy and Guidance Association;

Prof. Dr. Filiz Bilge (Chairman), Hacettepe University Education Faculty Education Sciences Department Guidance and Psychologic Consultant Department

Asst. Prof. Mehmet Palancı (Vice Chairman), Karadeniz Technical University, Fatih Education Faculty, Mentally Retarded Department

On Behalf of the Dyslexia Learning Disability Association;

Müberra Oğuz – Board Vice Chairman, Ministry of National Education Ankara Province Directorate Branch President

Meral Canbek Şahin – Board Member, Electronic Engineer Msc.

Fazilet Tokar – General Secretary, Special Albartos Special Education and Rehabilitation Center Founding Member

On Behalf of Özder

Nimet BARAN – Special Education (Scientific) Expert, ÖZDER Kdz Ereğli President

PREFACE

Turkey Dyslexia Council (TDC) was founded with the permission from Ankara Province Associations Directorate by virtue of the labor of Dyslexia Learning Disability Association in May of 2015.

TDC implemented its first meeting in November 2015 with founding members from 18 cities in Turkey and constituted the president, vice-president and general secretary. After that, the bylaw was formed.

Observants sent by the Ministry of Health and the Ministry of National Education participated in the second meeting of TDC held on 12-13 November 2016. Academicians from Mustafa Kemal University (Hatay), Ankara University (Ankara), Hacettepe University (Ankara) and Gazi University (Ankara), participated in the meeting and shared their evaluations.

TDC General Assembly, decided to establish two committees (Research and Guidance Centers and Research and Guidance Centers Modules; Early Literacy and detecting the risk group at an early stage) at the second meeting, requested an extensive report to be prepared by public establishments, NGO's, academicians and TDC members in the designated period (8 months).

Nowadays, Research and Guidance Centers are leading the children with Specific Learning Disability to acquire education from "Learning Preparation", "Reading and Writing" and "Mathematics" modules. However, even though these regulations were partially carried into effect in 2011, final arrangement were not finished. Children with Specific Learning Disability still need support about their grade-level classes besides of 3 modules mentioned. For this reason, this booklet was prepared with the suggestions from experts working in diagnosis, academic, and application areas as a guideline in clinical settings. Also, considering the fact that nearly 41.600 of the students in Turkey are diagnosed with Specific Learning Disability and are in need of special education, we think that children with specific learning disabilities receiving special education is not luxury but is a right and this booklet may and should be a guideline for law makers.

The booklet in your hands include examples and models from different countries around the world. With these examples in mind, it is aimed to follow the most effective way in the special education which ensures the integration of the children with the Specific Learning Disability into their peers in terms of diagnosis, social, psychological and academic sense.

We believe that this prepared booklet will be helpful for the individuals who has specific learning disability in getting the education they need, accessing professional approaches and methods and also for the administrators working in this field, educators and families.

We thank to everybody who help preparing this booklet.

Attorney Burcu Akar Muratoğlu

Dyslexia Learning Disability Association Board Vice Chairman and Law Head Advisor

PRESENTATION

The future of a country is directly proportional to the quality of education of younger generation in the country. For the acceleration of development, it is crucial to develop training and employment, and to establish policies that will be implemented to support this sub-structure. Projects developed by the individuals who are educated in the field of education for the production and the country's economy increase the welfare level of the country.We must first offer disadvantaged people active participation in life, equality of opportunity among individuals, and educational opportunities that they need at the point of special needs in the field of education.

Dyslexia Learning Disability Association was established in 2013 and since then has carried out many studies in order to meet the needs of individuals who have Specific Learning Disability by creating equal opportunity in the field of education.Our association, which has representatives in nineteen provinces, two counties and two countries, is entitled to receive an international awareness award in 2016.Due to the nature of these studies, it was accepted by the European Dyslexia Association (EDA) as a country representative of Turkey on January 2017.The Dyslexia Learning DisabilityAssociation has established the Turkish Dyslexia Assembly Assembly, which will be a foundation organization in the field of Specific Learning Disability in Turkey, in order to provide a completely different perspective to its studies and to obtain continuous and high quality services. Our assembly which was declared “official” on 24th March 2016 has implemented its first meeting on 12th November 2016 and issues two commissions and in the 8 months following the founding of these commissions the reports in your hands were concluded. The Turkish Dyslexia Council is to create equal opportunities in education by contributing to the development of educational policies for individuals with a Specific Learning Disability in their target countries and by improving the quality of life of the individuals, ensuring confident and independent lives, integrating with the society.

I thank to all of our academicians, NGO representatives teachers and experts who gave their services in teaching and education areas, Dyslexia Learning Disability Association Board and Representatives who supported us in founding commissions, implementing studies in this commission labors started by the Turkey Dyslexia Commission. I hope that the reports that come out of these studies will turn into an opportunity for the future of individuals with a Specific Learning Disability and the development of our country.

Suna Varol Cörüt

Turkey Dyslexia Commission Chairman

Contents

1. Introduction

1.1. Individuals with Specific Learning Disability and Their Characteristics

2. Diagnosing

2.1. Diagnosis Process and Methods and Tools used in Diagnosis in the World

2.1.1. Diagnosis Process and Methods and Tools used in Diagnosis in Different Countries

2.1.2. Diagnosis Process and Methods and Tools used in Diagnosis in the USA

2.2. Diagnosis Process and Methods and Tools used in Diagnosis in Turkey

2.2.1. Problems in Diagnosis Process in Turkey and Possible Solution Suggestions

3. Inclusion

3.1. Types of Inclusive and Support Education Services

3.2. Support Education Services Provided for Individuals with Dyslexia in Turkey, Problems and Possible Solution Suggestions

3.3. Evaluating Support Education Programs Provided for Individuals with Dyslexia in Turkey and Suggestions

4. Multidisciplinary Approach in the Field of Learning Disability and Collaboration Between Experts

4.1. Role of Speech and Language Therapists in Diagnosing and Educating Individuals with Learning Disability

4.2. Role of Occupational Therapists in Diagnosing and Educating Individuals with Learning Disability

1. Introduction

Primarily in this report, individuals with specific learning disability (SLD) and their characteristics were identified. The existing situation in the diagnosis process of specific learning disability in clinic and educational environments was explained in the light of the scientific data gathered up to the present and the measurement tools which are used in diagnosis process were introduced. Besides, the diagnosis process and tools that are used in the diagnosis process in Turkey were described. Within this scope the problems both in clinical and educational environments in the diagnosis process of individuals with specific learning disability in our country were discussed and possible solution suggestions were provided. Also in this report; types of inclusion, inclusive and support education services were mentioned and the support education services provided for individuals with specific learning disability in Turkey, the problems encountered and possible solution suggestions were covered. A brief evaluation of the support education services provided for individuals with specific learning disability was executed and some suggestions were provided. Finally in this report, importance of multidisciplinary approach in the field of learning disability and collaboration between experts was explained and the roles and responsibilities of speech and language therapist and occupational therapist in diagnosis and education of individuals with learning disability were mentioned.

1.1.Individuals with Specific Learning Disability and Their Characteristics

Specific learning disability (SLD) is a disorder which was introduced to the scientific literature in the late 1800's, was given its current name after various name changes and was subjected to different researches about its etiology, types, symptoms and diagnosis process in its 120 year journey. Specific learning disability, due to its nature, had been a field of research in which different scientific areas like medicine, psychology and education sciences cross-over each other.

Specific Learning Disability; is a disorder which, without a global impairment in intelligence, rises to the surface in activities of daily living that requires reading, math and/or writing and needs to be diagnosed with various assessment tools (Şenol, 2006).

The term "children with learning disability" is utilized to describe impairments in one or more of the psychologic processes which includes understanding or using verbal or written language and children who has failure in listening, thinking, speaking, reading,

writing, spelling or mathematical calculation skills due to these impairments (The Individuals with Disabilities Education Act - IDEA, 2004). Among these impairments there are perceptual inadequacy, brain damage, brain function impairment in a minimum level, dyslexia and developmental aphasia. This term does not contain children who have learning disorders which are caused by visual, audial, kinetic, cognitive and emotional inadequacy or environmental, cultural, economic drawbacks (USA Office of Education, 1977). Also, problems in self-regulation, perceiving social life and social interaction behaviors may occur in learning disabilities but these problems does not form a learning disability category on their own.

In DSM V, learning disabilities which are described as neurodevelopmental disorders are mainly taken in 3 types. The first type is dyslexia which is named as reading deficiency. Dyslexia is one of the 3 main components of specific learning disorder which is the overarching diagnosis. *Dyslexia is a genetic based neurodevelopmental disorder which is characterized by impairments in word level reading, analyzing, spelling and fluent oral reading with the presence of adequate intelligence level for the child's age and adequate listening comprehension.* Dyslexia is characterized by not showing adequate progress in word reading proficiency, reading rate and fluency, reading comprehension. The second type is written expression deficiency which is named as dysgraphia. Dysgraphia contains symptoms like not showing adequate performance in oral or written word expression proficiency, grammar and punctuation proficiency and clear and orderly written expression. The third type is numerical disorder which is named as dyscalculia. Dyscalculia comes to sight when there is an inadequate performance in numeric perception, memorizing arithmetical tools, correct and fluent calculation and correct numeric reasoning (Köroğlu, 2013).

When the etiology of specific learning disability is investigated, it can be seen that many factors like; possible brain injuries before, during and after the pregnancy, genetic factors, neurologic function disorders which shows itself with lower cortical stimulation in specific areas of the brain, communication problems between the two hemispheres of the brain, deficiencies in phonological functions and turning letters to sounds, perceptual problems, brain asymmetry – lateralization problems, metacognitive development deficiency, problems in information processing and factors that are present in many disorders' etiology like malnutrition, metabolic diseases, viruses and poisonings (Aslan, 2015). When the factors that are revealed by the etiologic research are examined, it can be

seen that there are many physiologic, cognitive or developmental factors. This information supports that this disorder is a neurologic disorder. Therefore, the assessments tools need to be designed in a fashion which considers all of these factors.

When the prevalence of the learning disability is investigated, even though there is not a country-wide data for Turkey available, in a study conducted by Bingöl (2003) in Ankara, as a result of screening 1129 children between 2nd and 4th grades a rate of 2 percent was detected. In other languages and cultures, learning disability among school children in reading, writing and mathematics fields has a prevalence of 5 to 15 percent (Köroğlu, 2013).

2. Diagnosis

Learning disability can be accompanied by other inadequacy groups (social and emotional inadequacy, mental impairment) or environmental factors (cultural differences, inadequate or inappropriate education) but is not a direct outcome of these circumstances or factors (NJCLD, 1994). Learning disability is a hard-to-diagnose disorder group and students in this group may show different characteristics. For this reason diagnosis should not be made based on a single assessment method. Formal assessment results may be enhanced using in-class assessments and observations (Özmen, 2014)

The most appropriate approach for diagnosing learning disabilities is a full comprehension and application of the diagnosis methods which are currently in use and/or being developed. Currently, assessment approaches aimed towards traditional diagnosis and response to intervention approaches and applications are being used.

Components of learning disability definitions and assessment tools in assessment towards diagnosis;

Components of SLD Definitions	Assessment Tools
I. Psychologic process problems	
IQ tests	WISC-III
(sub-test scatter/verbal)	Stanford-Binet
Sub-test scatter/verbal	Woodcock-Johnson
Performance impairment / Subtest groupings	Kaufman assessment tool (K-ABC)

Visual Perception / Visio-Motor	Bender-Gestalt Woodcock-Johnson WISC-III
Audial perception / Language	Language development test Woodcock-Johnson WISC-III
II. Contradiction Difference between the individual's performances Skill-Accomplishment contradiction	Woodcock-Johnson WISC-III Woodcock-Johnson WISC-III Peabody Individual Accomplishment Test - (PIAT) Written Language Test K-ABC
III. Exclusion Criteria Mental Inadequacy Behavioral Impairment Cultural/Environmental/Economic	Intelligence Test Class Observation Teacher Behavioral Observation Socio-metric planning Investigating school records Child's developmental history

Taken from Bender (2004)

I. **Psychological Processes:** Use of the intelligence tests is based on developmental derangement. The intelligence tests aimed towards detecting developmental derangement or inadequacy in psychological processes are also used to determine if the child has learning disability or not.

Intelligence Tests: In the last years the Wechesler Intelligence Test for Children – III (WISC – III) is commonly used to detect the intelligence level of the children with learning disability. Other common test are Stanford – Binet Intelligence Test and Kaufman Assessment Tool for Children. When calculating the intelligence score, there

are 2 types of scores; an overall score, a verbal score and a performance score. If these 2 scores are imbalanced it is considered as a developmental imbalance and detected as learning disability.

Visual Perception and Motor Tests: Currently, the Gestalt Visual Perception and Visio-Motor Tests, Bender Gestalt Visio-Motor Test and Visual Motor Integration Development Tests are being used. In intelligence tests although there is not any visual perception parameters, fields except visual perception and motor performance are assessed without being focused in a specific area. Therefore, it is not commonly used in assessing learning disabilities.

Audial and Linguistic Skill Evaluation: Psycho-Linguistic Skill Test, Peabody Picture Word Test and Wepman Audial Discrimination Tests are commonly used but their use is quite limited because of low reliability.

II. Inconsistency Criterion: The psychologic process assessments had led to unsuccessfulness/inconsistency term to emerge. Usually, the applicators focus on the inconsistency criteria rather than the psychologic process assessment. According to the inconsistency criterion, skill and success tests are applied. The difference between the standard scores of skill and success is used to diagnose learning disability. Skill – success inconsistency is showing critical inadequacy in some classes in school with the student's existing potential (National Joint Committee on Learning Disabilities, 2005).

Standard Score Inconsistency: The standard score inconsistency method is commonly used in diagnosing learning disabilities (National Joint Committee on Learning Disabilities, 2005). This score difference is used to diagnose learning disability in United States of America. Usually the intelligence and reading proficiency scores are used. The success test scores are subtracted from the intelligence scores. A lot of test's mean is 100 and their standard deviation is 15. It is decided if the child has learning disability according to the difference between the scores. But in America there is not a consensus between different states on how much of a difference there has to be between the success and intelligence scores.

III. **Distinguishing Criterion:** Even though the inconsistency criterions are widely known, distinguishing criterions are not. For example; if there is a child with has learning disability who has secondary behavioral problems how can this child be distinguished from a child with success and behavioral problems? Or how can a child with cultural disadvantage be distinguished from a child with learning disability? Distinguishing criterions have a complex nature. However, children with learning disability may show other disability groups' characteristics. It shouldn't be overlooked that these are not the primary but the secondary causes of learning disability. The child with learning disability may show behavioral or emotional problems because of the environmental disadvantages. Therefore, other difficulties that effect diagnosing learning disability may be; sensory insufficiency, cognitive inadequacy, emotional impairment, difficulty in distinguishing cultural – economic and environmental disadvantages, unclear difference of success and intelligence.

Distinguishing: Intellectual Retardation: In this context, the most important criterion in distinguishing learning disability from intellectual retardation is intelligence quality. Intellectually disabled students have lover intellection scores.

Distinguishing: Emotional and Behavioral Impairments: The difference between emotional problems and learning disability is unclear. Usually emotional behavioral problems effect academic performance negatively and lower academic scores. Besides, it is possible to see the effects of negative behaviors and emotions in learning disability. At this point, additional assessments and observations are needed. Initially, the teachers need to gather evidence that the child's problems are academic problems. The teacher does so with observations and comparisons with peers.

Distinguishing: Medical Impairment: Children who have visual, audial or motor disability can easily be distinguished from learning disability. It constitutes visual, audial and motor problems, unlike perceptual problems and psychologic processes. However, there are children who has both audial and learning or both visual and learning disability. In this case it needs to be clarified if the child's academic unsuccessfulness is caused by visual or audial deficits or learning disability. An additional diagnosis of learning disability may be considered if a child does not show

meaningful increase in academic development even though hearing, visual and motor adaptations and modifications were provided. For this distinguishing teacher-made test are usually utilized.

Distinguishing: Cultural, Environmental, Economic Disadvantage: Even though cultural, environmental and economic disadvantages lead to unsuccessfulness, diagnosis team needs to be distinguish learning disability from these.

Distinguishing: Children Who Show Low Success: Distinguishing between children with learning disabilities and children who show low success because of some other reasons is very difficult (Fuchs & Fuchs, 2006). Response to Intervention approach should be applied. A learning disability diagnosis should not be made without proving the child is having problems in psychologic processes.

Distinguishing: Children with Attention Deficit Hyperactivity Disorder: Both the children with learning disability and children with ADHD may show attention problems and hyperactivity. Teacher observations and interviews may be helpful in distinguishing. Also, the inconsistency criterion may be used here.

2.1. Methods and Scales Used in the Diagnosis Process and Diagnosing Worldwide

In this chapter, diagnosing processes of specific learning disability in certain countries especially in the USA was briefly explained and information about methods and scales used in diagnosis were provided.

2.1.1. Diagnosis Process and Methods and Scales used in Diagnosis in Certain Countries

Germany: In Germany, especially dyslexia diagnosis shows difference between states. Most commonly used tests in diagnosis: Salzbuger Lese-Rechtschreibtest (SLR, Landerl et al., 1997), Raven Progressive Matrices test (Heller et al, 1998) and Lernserver, Klex 11 test which was designed as a computer game program.

Bulgaria: There isn’t a specific test to diagnose SLD in the country. Speech and Language therapists screen the child’s education process starting from school-age. When necessary, they obtain information from the teachers about reading, writing, mathematic. WISC-R and RAVEN Standard Progressive Matrices tests are applied.

The Netherlands: Psycholinguistic Experts and Neurologists are in the diagnosis team. The One-Minute Reading test (van den Bos et al., 1994), Word Reading Accuracy (Jong & Wolters, 2002), Pseudoword Reading test, version B (van den Bos, Spelberg, Scheepstra, & de Vries, 1994) tests are most commonly used in diagnosis.

England: Assessment steps are; skill tests (verbal memory, non-verbal memory), phonologic skills, intelligence and fast processing, reading, spelling, writing, comprehension and mathematic. Assessments take up to 3 hours. Speech and Language therapist is in the diagnosis team. The diagnosis team detects the findings and writes a report about it. Standard tests are: WRAT4 Single Word Reading, Single Word Spelling and Sentence, Comprehension (Wide Range Achievement Test (2006), The Non-word Decoding Test (2003), The British Picture Vocabulary Scale (BPVSIII) (2009), York Assessment of Reading for Comprehension (YARC) (2009). Comprehensive Test of Phonological Processing (CTOPP) (1999) and Wide Range Intelligence Test (WRIT) (2000).

Czech Republic: Diagnosis is conducted by psychologist and special education teachers working in psycho-pedagogic centers or special pedagogic centers. The diagnosis process takes 2 days.

Belgium: Learning disability assessment: In order to support the students who show poor success, teachers in Belgium systematically control he students with school education team, special education teacher and parent interviews. A school manager who follows the parents' approval for assessment make suggestions and determine the experts who are going to provide help in the assessment process (Şener Akın, & Belfiore, 2017). A school psychologist analyses the child's school records and conducts interviews with the parents. Besides, the teacher assesses the child's status with observing in-class behaviors. Mental skills and psychologic processes are assessed. The child's social and emotional behaviors and other characteristics are also considered. Teachers and the education team plan the interventions that assess the child's status. The experts choose from various commercially available education sets in order to work with the children with learning disabilities. A school social work expert or psychologist contacts the parents to buy necessary evaluation tools which are going to be used. Assessment of the students is conducted based on medical, social, psychologic and academic characteristics of the students (Ministère de l'Education, de

la Recherche, et de la Formation [Ministry of Education, Research and Training, 1995). Learning disability diagnosis report should provide information with a summary and a conclusion about these 4 characteristics. The report contains the student's school history and attitude towards education and the student's linguistic mastery. In a research conducted in the late 1990's (Muniz et al, 2001) the Wechsler scales, Wechsler Preschool and First Class Diagnosis Scale's versions in different Europe counties were examined and Wechsler Children Diagnosis Scale – 3rd Print and Wechsler Adult Diagnosis Scale – 3rd Print were used to assess intelligence. Projective tests (Rorschach, Thematic Apperception Test and Children Apperception Test) are also used to assess the individual. Psychologists also use some of the success tests. Parents of the children referred to the learning disability diagnosis services are included to the process and have a say in the diagnosis decision. Information gathered from the parents (child's physical condition, psychologic development, in-home behaviors, school history and other information) is also recorded and reported. These efforts in understanding the child's learning problems is for deciding the best programs for the child. Also the parents can choose the school in which the child is going to get these services. The children's parents are also responsible for the diagnosis and program planning besides the regular education and education administration.

The assessments are usually based on individually managed standard tests and also some clinical tests. Upper education team assesses every single parent and also determines if the child is suitable for the special education in the light of the rules composed by every state education assembly. If a child is suitable for the special education services, the upper education team develops a special education plan containing necessary education tools, behavioral plan and the place, time and frequency of the education. The plan is developed to provide an optimum and fruitful education for the child. The child's special education plan is approved by the parents and reviewed annually. Reassessment is conducted at least once in every 3 years. Students who are not suitable for the special education but need support in academic field are referred to other authorities for getting supportive education (for example: Students who are not successful because of economic disparities).

Australia: Assessment of the diagnosis process in Australia: 3 types of assessments are used to evaluate learning disability in Australia. First assessment information

comes from the response to intervention system. Intense studies aimed for prevention are executed in order to improve reading and writing skills of the children who are in risk of being with learning disability with the help of special education teachers. More intense intervention methods may be utilized if the students are not responding to the intervention. School psychologists and speech therapists regularly provide consultancy about academic problems that may require further assessments (Louden et al. 2000). Second level assessment information is screened via the results of the nation-wide tests which assesses mathematics and reading skills and applied in 3rd, 5th and 7th grades. These success criterions are not directly for diagnosis but may provide important information about the measures to be taken, diagnosis attempts and about the need for pedagogic intervention. Third level assessment information focuses on different conditions on diagnosing learning disability. In this level, school psychologists, education experts and speech pathologists provide massive contribution in the fields which are thought to be the reason of learning disability or contribute to learning. In order to be able to take successful and efficient measures, norm based standardized language, mathematics and illiteracy tests have been developed in the last 10 years in Australia (Education Research Council /ACER, 1997). School psychologists apply reading skills (Decoding, word definition, understanding and fluent oral reading), mathematics, essential terms and recipient and expressive language assessments besides with standardized intelligence tests like Wechsler, Stanford-Binet tests. Commonly used reading language tests in Australia are ACER tests of Basic Skills (ACER, 1997) and Analysis of Reading Skills (3rd press; Neale, 1999). Also, other professionals' (audiologists, neuropsychologists, early childhood educators, vocational therapists, eye doctors, experts, medical doctors and social work experts) services are frequently addressed in this level of assessment. If the student's main language is not English or if the child is from an ethnically minority group, it is suggested that the assessment should be executed in the student's main language. Australia's education system also empowers collaboration between parents and teachers.

2.1.2. Diagnosis Process and Methods and Tools used in Diagnosis in the USA

In the USA the IDEA regulations of 2004 clarify that it is necessary to use the inconsistency between skill and success levels as a tool to determine learning disability. The regulations also state that schools may use the educational response to

intervention model as a part of the diagnosis process. This, emphasizes the necessity of schools taking students who are not responding to the research based education as a part of the assessment process (O'Connor, & Sanchez, 2011). Response to intervention, is a multi-focused systematic intervention series which aims to detect different learning needs, decrease inadequacy diagnosis and regulate the proper diagnosis of learning disability (Mellard & Johnson, 2008). In the USA, towards diagnosing learning disability: (a) only response to intervention, (b) response to intervention or high inconsistency, (c) response to intervention or strengths and limitations model and (d) response to intervention, high inconsistency or strengths and limitations model are applied by different states. Even though every state recognizes the response to intervention model only about half (%48) of the states use the RTI as a diagnosis tool. High inconsistency model is still used commonly. Reschly & Hosp (2004) stated that %96 of the states use the high inconsistency model for diagnosis. Therefore, lots of states don't use this model anymore but nearly half of the states still use this model. There are a lot of research criticizing this method (Kovaleski & Glew, 2006). Vellutino (2001), emphasized the importance of discriminating unsuccessful students who have a high IQ and a low IQ in the high inconsistency model. However lately the most common complaints about the diagnosis process are between states differences in diagnosis methods and low-quality education caused by high inconsistency model (Fuchs & Fuchs, 2006). In this context, the gradual system in which a lot of intervention programs aimed to increase children's academic and other skills is proposed. Learning Disability National Committee (NJCLD, 2005) proposes a 3 graded response to intervention model. Another important point is taking cultural differences into consideration in learning disability diagnosis process.

2.2. Diagnosis Process and Methods and Tools used in Diagnosis in Turkey

A nationwide standardized method has not been established for assessing and diagnosing learning disabilities in Turkey. Application of the assessment method of choose differentiates from teacher to teacher and commonly used assessment tools are not standardized. Quantity and contents of the subtests in assessment tools and interpretation of the scores differentiate from applicator to applicator (Gökçe-Sarıpınar & Erden 2006; Korkmazlar 1992; Öngider, Baykara, & Pekcanlar-Akay, 2008).

Commonly preferred assessment tools include, neuropsychological scales, reading, writing and mathematics evaluation forms, intelligence tests, emotional and

social characteristic tests. Less preferred assessment tools are language evaluation tests, motor skill tests and neurologic assessment tools.

Some assessment tools that are used in diagnosis in Turkey are listed below:

WISC-R Children Intelligence Scale: Is an intelligence test that investigated child's intelligence level with verbal and performance subtests in children aged 6 to 16. Test's profile analysis are used in SLD diagnosis. 3 series in these analysis are considered to be meaningful in Learning Disability Diagnosis. First of these is; having a 15 to 40 points higher verbal intelligence test point from performance intelligence point, second one is; having a performance intelligence score 10 to 30 points higher from verbal intelligence score, third one is; having close verbal and performance intelligence scores but having 7 to 12 points difference between subtests (Turgut, 2008).

Learning Disability Symptom Screening List: Korkmazlar (1992) developed the list as 36 items and later it was revised by Erman (1997) and item count has risen to 88. The list is in a 4 Likert style for parents and teachers to fill. There are; academic success, reading skill, visual perception, audial perception, writing skills, academic skills, working skills, organizing skills, orientation skills, tactile perception, synchronizing, oral expression skills, motor skills, social-emotional behaviors, hyperactivity, attention skills and motivation sub tests.

Specific Learning Disability Tool: This tool includes lots of various screening sub-tests in order to detect areas that may be effected by learning disability. In the tool that has been used for the first time by Korkmazlar (1992) and developed by Erden and Kurdoğlu (2003) there are; reading speed, proficiency, reading comprehension, free writing, dictation, text copying, mathematics (1st to 5th grades), synchronizing, before-after relations, visual perception (Gessel Figures), clock drawing (clock information, visual-spatial perception), right-left discrimination (head test), lateralization (harris lateralization test) sub tests.

*Neuropsychological Tests:*Neuropsychological profiling of specific learning disability was executed by Turgut (2008). In the conducted study some significant differences were detected between the SLD group and the control group in mangina test and line direction test (visual perception based tests), visual and audial numerical series test, audial verbal learning tests (Turgut, 2008).

There no tests available to assess academic skills except for these tests which are quite limited in number. Besides, the tests that were explained above are commonly used in clinical settings and only intelligence tests are used in counseling and research centers.

In our country teachers try to implement educational and physical adaptations for students who are thought to be in need, with the help of the counseling services of the school. Also, the school administrations are responsible to provide supportive services from institutions and/or experts to the students who are in need for special education. But these adaptations are quite limited and the children must be referred to the counseling and research centers as soon as possible. All of the measures taken and support provided should be reported and sent besides with the medical diagnosis to the educational diagnosis screening and assessment team in order to detect special education needs. The diagnosis is describes as the following in the delegated legislation number 573 which was published in the official gazette number 23011 and dated 06.06.1997: “Item 5. The individual’s educational performance is detected, characteristics in development areas are identified and education goals and services are planned according to these assessments and finally the most suitable education environment is determined. The family’s approval and ideas are considered in all stages of diagnosis, assessment and positioning.

2.2.1. Problems in Diagnosis Process in Turkey and Possible Solution Suggestions

Learning disabilities have its place as a special education category in law and regulations. However it remains as a group for which special education services regulated by legal measures are applied rarely. The process of determining learning disabilities is conducted clinically and educationally in order to provide quantity and quality information. Not having adequate amounts of assessment tools is a problem in this context. Students state in psychomotor and cognitive processes is detected using formal assessments and tests based on standardized norms. These tests are intelligence, perception, personality and success tests. However, these tests are not valid and/or reliable enough, they are not easy to use and they are not adequate in detecting the difference between success and skill. Besides, these tests’ contributions to program making and assessment are quite limited. Counseling and research

center staff's professionality, expertize, knowledge and experience limitations are among the difficulties in diagnosing. Also, the fact that there is not any standardizations for the assessment duration and assessment tools in counseling and research centers causes different applications in diagnosis. In this subject, in the "Rehabilitation Center's Contributions to Individuals with Dyslexia Learning Disability, Parents' Expectations and These Establishments' Efficiency Analysis" research conducted in 2006, it was discovered that the parents think the assessments in Counseling and Research Centers does not show their children's true performance and the time reserved for each child is not enough.

It is important to describe the early symptoms of learning disabilities and refer the child to early intervention programs, health and education services. In our country learning disability diagnosis is usually considered in 2nd and 3rd grade students. Early diagnosis promotes early intervention and children who are diagnosed in earlier ages show greater improvements.

In our country, children with disabilities can get inclusive education report after the assessment in counseling centers. However, the fact that the schools do not know enough about learning disabilities and limited number of awareness activities are barriers between these children and adequate education.

Also, parents preferring learning disability stigma over mental inadequacy stigma, inconsistencies in diagnosis and children without learning disability getting learning disability diagnosis make the diagnosing process much problematic in our country.

Also, high teacher expectations, insufficient individualization in classrooms, schools not knowing and not using efficient teaching and strategy education cause wrong diagnosis.

In order to make an appropriate learning difficulty of learning disability diagnosis, the diagnosis should be done with a multifactorial assessment and teamwork and with great caution. With the DSM-V, many important changes in the perception of the SLD term and in the criteria and applications about diagnosing related impairments were introduced. Therefore, intelligence (IQ) assessments which were considered the main aspect of SLD diagnosis, is not needed to make a diagnosis anymore (except for when there is a doupt about

intellectual disability). Also, there is no need to assess the cognitive processing skills with expensive and long neuropsychological tests for SLD diagnosis in DSM-V. In summary; psychological assessments may help building intervention plans but are not necessary to make a diagnosis. This situation can be considered as a positive change with a psychologists shifting from "assessment for diagnosis" to "assessment for intervention" perspective and having more time to discuss about psychoeducation and child centered education with parents and teachers interpretation.

Response to Intervention Model (RTI): The RTI is a multilayered model designed for detecting different educational needs, decreasing insufficiency diagnosis and promoting appropriate diagnosis for learning disability. Also, RTI aims to increase school education quality and synchronize special education and general education (Mellard & Johnson, 2008). Main components of the RTI are; universal screening, scientific based applications, early intervention, screening the student's development systematically and being gradual.

It is stated that the RTI will decrease the number of students who need special education, activate early intervention, provide information for diagnosing inadequacies and decrease the effect of disability in the child's education (Denton et al., 2010). The IDEA regulations of 2004 stated that the states may use the difference between success and skill in order to detect learning disability. These legal regulations suggest that schools may use the RTI in the diagnosis process. The schools need to give attention to the children who does not respond to the scientific based education process in the assessment process. The RTI, which was developed after these regulations, states that the schools may take up to %15 of the federal special education funds for the RTI applications (IDEA, 2014).

This approach includes application of the intervention processes that are usually expected to promote academic improvement in normal conditions. In the situations in which the projected academic improvement cannot be achieved, special learning disability may be considered. A 3 graded model is suggested for this. This model is considered as an alternative approach in the diagnosis process especially in the USA. It is being preferred because of the criticisms for the inconsistency model (Fuchs & Fuchs, 2006). In this field, the RTI which is addressed to provide appropriate development for children with learning disabilities and applied gradually

is commonly used. The National Committee of Learning Disabilities (NJCLD, 2005) suggests a 3 graded system. However, there are different models of the RTI which include more than one grade (Fuchs, Fuchs & Compton, 2012). The RTI may differentiate according to the applied approach. Most commonly used models of the RTI are (a) problem solving approach and (b) Standard intervention protocol approach. RTI aims to provide an education setting which meets individual needs and is based on effective teaching by using efficient educational interventions systematically. In this model, the first grade is scientific based applications in general education classrooms or in other words effective teaching. The second grade is designed for the students who do not respond to the grade one applications and it includes a more intense special education in smaller groups. The third grade is for the students who get inadequate education in grade 2. It is also stated as "placing in special education" (Berkeley, Bender, Peaster, & Saunders, 2009). In order to apply this system; the negative perspective about "not being able to learn" should be changed, the factors causing the problem should be identified, the problem should be assessed and solved in the classroom and teamwork should be embraced.

Effective Teaching and Educational Regulations: Effective teaching and classroom administration techniques should be used in order to make students with learning disabilities more successful. Teaching should be designed according to the student's skill and knowledge level and interests, education programs should be individualized and effective teaching strategies should be utilized. It is important that the special education expert and/or the teacher should know to apply different teaching approaches and teaching techniques in order to realize these applications. If a child is showing symptoms of learning disabilities, the teacher should observe the student, record the student's behaviors and make educational modifications in the classroom. In-service educations should be designed to support the teachers' knowledge, seminars should be organized to increase parents' awareness and pre-school education establishments should organize information and consensus building applications about the pre-diagnosis and pre-referral process of the disadvantaged child. Systematical and planned interventions are thought to contribute to the children's ability to carry on their education in general education classes.

Early Intervention: The kindergartens which are the last step of pre-school education have become a step in which many 1st grade preparation applications are conducted with the latest regulations. Reading and writing preparation activities and mathematics

activities are commonly utilized in this preparation process. A child starts to the primary school no matter he/she has succeeded in this preparation process. Only the parents who does not want to send their children to the primary school too early or curious about the child's school readiness state and some special schools who wants to know if the child is ready for their school address to the school readiness assessments in this step. However in these assessments no information about learning disabilities can be obtained. Learning disabilities come to the surface according to the child's performance in the 1st grade.

Detecting the early symptoms of SLD that come up in the pre-school phase is quite important for early diagnosis and early intervention. It can be seen that children who has specific learning disability has lower word knowledge, show difficulty in taking orders, mix up different letters and words, show difficulty in understanding stories, show audial memory problems like rhythmical counting and doing ordered activities, show difficulty in drawing geometric shapes, copying shapes, perceiving figure-ground relations, doing visual memory tasks, show problems in touch perception tasks like understanding shapes and letters that are drawn to the child's hand, show speech lining problems, time and stimulator organization problems, orientation problems, have problems in differentiating left and right, find his/her way, have problems in putting the right shoe on, have difficulty in learning basic time terms like (yesterday-today-tomorrow, days, seasons etc.), show problems in eye-hand coordination which has an important place in school preparation phase (Aslan, 2015).

When the books and articles written about the diagnosis of the specific learning disabilities, it is seen that mostly school phase criteria is mentioned in order to support the diagnosis process. However, as it was mentioned above, there are many symptoms and signs of specific learning disabilities which can be seen in pre-school phase. Similar to many other disorders, early diagnosis can lead to early intervention and therefore, it can decrease the individuals' disadvantage caused by the SLD.

In our country, the children with SLD cannot benefit from early intervention and special education in time and therefore the intervention becomes less effective and the treatment time and cost increases. It is important to increase systematic early intervention. In order to be able to utilize early symptoms and appropriate screening tools counseling and research center staff should be educated and in-service educations should be organized. In conclusion;

- Conducting multi-factored assessments in the diagnosis process in our country,
- Reviewing and modifying diagnosing tools, embracing a multidisciplinary assessment process and enriching the assessment team with related experts,
- Opening response to intervention model to discussion in diagnosis and taking necessary steps for a Turkey adaptation,
- Making legal regulations for early diagnosis and intervention and taking necessary steps,
- Standardizing diagnosis tools and application steps in counseling and research centers,
- Organizing in-service educations about effective teaching and applicaitons to the teachers who are working with children with SLD,
- Conducting descriptive researches to detect counseling and research centers' staff's occupational sufficiency and organizing in-service educations for the needed areas.
- Educating counseling and research center staff in effective communication in order to communicate with the children and parents more appropriately.
- Providing more family educations in the counseling and research centers.
- Embracing a curriculum based educational assessment rather than a module based assessment in counseling and research centers.
- Developing new assessment tools to be used in counseling and research centers.
- Publishing informative hand-books about SLD in counseling and research centers in order to hand out to the teacher and parents.

3. Inclusion

3.1. Types of Inclusive and Supportive Education

Types of supportive education divide in to two groups; in-class supportive special education services and out-of-class supportive special education services (Kargın, 2004; Sucuoğlu &Kargın, 2006). The advantage of in-class supportive special education is; enabling the children in need to stay in the classroom and having the class teacher as the special education teacher. Both the child in need and the teacher benefit from the in-class supportive special education services. These services may be

provided as, special education consultancy, education through collaboration and/or substitute teacher support.

In the implementation of special education counseling, it is planned to plan more qualified education and training activities for classroom teachers and to present suggestions for the needs of students and teachers in order to apply them. In this application, the special education counselor advises the teacher about the adaptation of teaching, social acceptance, positive classroom climate (Batu, 2013; Batu ve Topsakal, 2003; Kargın, 2004; Sucuoğlu ve Kargın, 2006).

In collaborative teaching two or more teachers (usually class teachers and special education teachers) practice educational activities in the same classroom setting (Batu, 2013). Collaborative teaching means that both teachers share their planning, implementation and evaluation responsibilities of teaching and work together in the same classroom environment (Batu, 2013).

In the supportive teacher support application, both the special education teachers and the general education teachers are responsible from the education of the students, however the special education teachers are more responsible from meeting the needs of the children with disabilities (Kargın, 2004; Sucuoğlu ve Kargın, 2006). If the special education teacher is not available, a supportive (substitute) teacher may be in service. The supportive teacher may support the teacher and/or the student in order to meet the needs of the children with disabilities (Batu, 2013; Friend & Bursuck, 2006).

In the out-of-class supportive special education services; a supportive education room and a mobile special education teacher may be in use (Batu, 2013). In both types of services, the educational needs of special needs students are met out of class. In both types of support education, special education services go directly and only to students. In the practice of supportive education rooms, students are taught in a separate classroom in parallel with the general education classroom in individual or small group form during school hours. In the case of mobile special education teachers, special education teachers provides special education services by going to the houses of the students who cannot continue to the school or going to different schools. Both forms of practice are criticized because they require the student to be separated from the class, to be tagged, to have difficulty in coordinating with educational

activities and objectives in the normal classroom and supportive education, they cause difficulty in establishing expert-teacher collaboration, and inability to provide direct or indirect support education services to the classroom teacher (Batu, 2013; Friend & Bursuck, 2006; Sucuoğlu & Kargın, 2006).

In our country, how the supportive education services will be implemented is determined by laws and regulations. The Special Education Services Regulation (2012), which was prepared on the basis of the provisions of the Decree Law No. 573 dated 30.05.1997 on the Special Education Law, stated that "Special education services for disabled persons should be provided to their families, equipment, educaiton and consultancy services to teachers and school personnel ". In the 23rd article of the same regulation, necessary arrangements are made for the students who continue their education through integration to receive support education service. In this direction, support education services can be provided in the form of in-classroom assistance as well as in supportive education rooms ". According to this, support special education services can be provided; both as in-class support services and as out-of-class support services. However, in the regulation, only the out-of-class support services which are supportive education rooms and/or mobile teacher applications are clarified as how and with whom to apply and there are no clarifications on how and with whom to apply the in-class supportive services. In accordance to this, it will not be wrong to say that out-of-class supportive services are embraced in our country.

3.2. Support Education Services Provided for Individuals with Dyslexia in Turkey, Problems and Possible Solution Suggestions

Although the special education support service in the regulation is defined as educating and counseling individuals with special needs, their families, teachers and school staff, special education support is provided only to the individual in the kind of support rooms and mobile special education teacher services. However, the literature in this field shows that the teachers who are working with children with special needs, especially children with SLD, have needs and need support (Altuntaş, 2010; Doğan, 2013; Engin, Akseki ve Deniz, 2012; Yiğiter, 2005).

The fact that the in-class support special education services cannot be found in the system or the teachers cannot benefit from the support education services in the existing applications is not the only problem in the inclusive education services in our

country. There are a number of important problems in out-of-classroom support education programs, which started to be implemented in 2006, when the Special Education Services Regulation was first published. Some of these are; (a) lack of supportive education classrooms in the schools that have inclusive education applications, (b) lack of supportive education teachers or mobile special education teachers to provide services in the supportive education classrooms, (c) lack of appropriate experts in the Ministry of National Education (DESÖP, 2013). Because of this and similar problems, support special education services for all students with special needs in MoNE's schools cannot benefit adequately from these services and these services cannot be provided in special education and rehabilitation centers (Akdemir-Okta, 2008).

According to the Special Education Services Regulation (2012), individuals who are accepted as eligible for support education by the Special Education Evaluation Board can receive support from special rehabilitation centers. Individuals with special needs and their families receive services from these institutions in the form of individual education, group education, family education and family counseling. The rehabilitation centers employ mandatory personnel in the regulations to implement the support training programs determined in line with the individual requirements of the individuals with special needs.Accordingly, the personnel employed are; (a) special education teacher, (b) guidance teacher or psychologist, (c) child development and education teacher, (d) preschool teacher, (e) physiotherapist, (f) audiologist, and (h) optionally social workers and branch teachers. However, due to the regulations, although the child has requirements in the framework of the modular programs recommended by the counseling and research centers he or she cannot take sessions from a speech and language therapist. In addition, it is not yet possible for the occupational therapists or branch teachers to be legally employed in the rehabilitation centers at the point of meeting the different requirements of these students.

Also, individual education is recommended for the children with SLD in the counseling and research centers but group education is not recommended. It has been determined that the majority of the educators (%97,3) and the families (%82,7) interviewed in the Research on the Contributions of the Rehabilitation Centers on Children with Dyslexia Learning Disability, Parents’ Expectations and the Efficiency

Analysis of these Institutions in 2016 think that group education should be given in rehabilitation centers as well as individual education.

Despite the adoption of integration measures for all individuals with special needs in the legal regulations in Turkey, there is a variety of problems in providing these services because they do not provide a good structure for the provision of support special education services and related services that these individuals need. Problems experienced are; (a) cooperation between establishments, (b) the employment of qualified personnel, (c) training programs, (d) the parent-staff communication and cooperation, (e) finance (DESÖP, 2013).

It is a very important issue to increase the quality and quantity of supportive education services that students with SLD receive both in schools and in rehabilitation centers. In conclusion;

- Support education services should be provided as specified, not only for those with SLD.
- It is a necessity to make legal arrangements to abandon the support education serviced that the students in need receive out-of-class and to provide both the student in need and the teacher to benefit from the in-class support special education services. In addition, legal arrangements should be made to ensure that these services are offered in three different forms: special education counseling, co-operative teaching and assistant teacher support. Also with the new regulations, how and with whom to implement the in-class support education service should be described clearly.
- It will be possible to provide supportive services for the teacher who work with children with SLD with applying actual supportive education models in our country. In order to be able to provide support services such as special education counseling, cooperative education and assistant teacher support in this framework, the special education teachers should be special education counselors and individuals who have a vocational high-school diploma on special education should be special education assistants in the schools that have inclusive education application.

- Regulations should be made to improve the situation of the support rooms in schools, to take the necessary precautions to complete the lack of materials, and to shorten the bureaucratic process.
- It is suggested that the support training period taken in school settings and special education and rehabilitation centers should be increased and more flexible considering the needs of the students.
- Arrangements should be made to open up the cooperation between the school where the students with SLD go, the rehabilitation centers where the students with SLD benefit from the special education services and the specialists who follow the development of the child.
- Regulations should be made to ensure that the supportive training can be carried out in all the branches that the individual with SLD needs (for example; legal arrangements to ensure the employment of teachers in various branches in rehabilitation centers).
- Legal arrangements should be made so that students with SLD receive support services from rehabilitation centers not only in individual but also in group education.

3.3. Evaluating Support Education Programs Provided for Individuals with Dyslexia in Turkey and Suggestions

The first rehabilitation centers in Turkey started to be opened in 1988 with the Social Services Child Protection Agency (SSCPA) Law No. 2828. In these centers where the opening, structure and functioning are connected to SSCPA, children who are more affected by mental disabilities have received support education. On the other hand, with the Regulation of Special Education Courses of Ministry of National Education numbered 25883 in 2005, private education institutions started to provide special education services and support under the permission and supervision of the General Directorate of Private Education Institutions of the Ministry of National Education. The Law No. 5378 on Disabled People, issued in the same year and the new regulations, provided the necessary conditions for rehabilitation centers opened under the SSCPA and continuing its services to be transferred to the Ministry of National Education. After these arrangements, all rehabilitation centers and the support education services provided in these centers passed to the Ministry of Education's permission and supervision in 2006.

Nowadays, the support given in the rehabilitation centers is still being carried out by the Regulation on Special Education Institutions within the General Directorate of Private Education Institutions.Individuals affected by the disability in the rehabilitation centers benefit from support special education services within the framework of the support education programs prepared and implemented by the Ministry of National Education in 2008. One of the support education programs which are prepared by classifying disabilities is Specific Learning Disability Program. This support training program includes Learning Preparation, Literacy and Mathematics Modules. However, the modules and their contents cannot meet the needs of the children with SLD (DESÖP, 2013). Similar results were obtained in the Research on the Contributions of the Rehabilitation Centers on Children with Dyslexia Learning Disability, Parents' Expectations and the Efficiency Analysis of these Institutions in 2016.In this study, opinions of teachers working in rehabilitation centers related to SLD modules were taken. According to this, teachers stated that; modules do not meet the academic needs of students with SLD (reading and writing preparation, concepts, reading, writing and mathematics), that the teaching methods/techniques in the SLD module are not suitable for students and that the scope of modules cannot meet all of the requirements in all areas of development (cognitive, independent life, communication, social and emotional) Etc.) and that the gains in the modules do not meet the needs of SLD students at all age levels, from pre-school to high school, and that the number and diversity of the gains in the modules was not sufficient.

From these modules, the "reading-writing" module was determined as a total of 250 courses and 19 objectives were established.It can be said that these achievements are in a certain hierarchical order.The first three acquisitions deal with recognizing, using, and drawing lines of writing instruments. From the fourth acquisition on, the ability to read and write sounds, syllables, words, sentences, and texts has been identified as an achievement. From the fifteenth acquisition on, the goal was to understand the text, to establish causal relations, to be willing to read, to comply with writing rules and to use punctuation properly.

When we look at the learning processes of children to read, it is necessary that they have some precondition skills in the pre-school period. There is a lack of acquisitions in the relevant module in relation to "phonological awareness", which is one of these prerequisites - even the most important one. In the 6th article of the module explanations,

it is suggested to perform voice sensing and recognition, to read and write letters, to make meaningful syllables, words and phrases. However, it is not specified in which hierarchical order these studies should be carried out.Phonological awareness, which includes many skills such as breaking clauses to words, words to syllables, syllables to letters, distinguishing similarities and differences between letters, recognizing the gap between words, adding and subtracting letters, and changing places and creating new words, is one of the most challenging topics for children with learning disabilities. According to the studies performed, there is a direct relation between impairment in phonological awareness and reading disorder (dyslexia) (Gillon, 2004). For that reason, it is thought to be a be a necessity to put the acquisitions about phonological awareness in "reading-writing" module. With that, the teachers will have a guide in hand.

Also, the commission members' proposals about the modules are below:

- Supportive training programs for individuals with SLD should be updated and reviewed. The number of modules in the program should be increased, the contents of the acquisitions in the modules should be expanded, their number should be increased and more observable-measurable expressions should be written.
- In particular, legal arrangements should be made for the inclusion of occupational therapy and language and speech modules in the framework of the needs of students with SLD and for the benefit of the students who need it.
- Modules should be added to support the training of students with SLD in other disciplines (Foreign Language, Science, etc.).

4. Multidisciplinary Approach in the Field of Learning Disability and Collaboration Between Experts

Given the mechanisms underlying SLD and the disturbances that characterize it, evaluation and diagnosis requires transdisciplinary team work. An evaluation and diagnosis team consisting of neuroscientists, language speech therapists, psychologists, psychiatrists, occupational therapists, child development specialists and specialists should be established.Collaborative employment of SLD-related occupational groups, such as

language and speech therapists, occupational therapists, special education specialists, as is common abroad, should be provided to schools.

4.1. Role of Speech and Language Therapists in Diagnosing and Educating Individuals with Learning Disability

Expert in the SLD diagnosis team differentiate between different countries. It is thought that it is important that the language and speech therapist, as a newly developing profession in our country, is included in this process and take part in the diagnosis team. The effect of verbal language which is the basis of reading-writing development, interrelationship between written and verbal language, the fact that the children who has problems in verbal language often have problems in reading and writing and vice-versa; in this relationship it is thought that an intervention directed to one field will provide improvements in another field, therefore speech and language therapists have an important and direct role in the process. Speech and language therapists can be actively involved in identifying children at risk, evaluating literacy and language skills, creating and implementing appropriate intervention methods (ASHA, 2011).

4.2.Role of Occupational Therapists in Diagnosing and Educating Individuals with Learning Disability

Occupational therapy is a client centered health profession which improves quality of life and health through meaningful and purposeful activities. The main purpose of occupational therapy is to provide participation in activities of daily living by improving the ability of individuals and communities to perform the activities they need or that are expected from them in line with their age, structure and individual characteristics, or by organizing activities and/or the environment so that the individuals can participate effectively.For individuals with learning disabilities, the main goal of occupational therapy is to provide their participation in a variety of physical, social, cultural and institutional settings that they want and / or need to perform different life activities and help them to continue their active living as a part of the society. Eliminating the barriers between the individuals with learning disabilities and living integrated to the society will have a positive impact on health, wellbeing and the development of quality of life while allowing the development of important skills in social life such as self-esteem, motivation and self-perception.

Professional Competencies of Occupational Therapists; The academic qualifications of occupational therapists derive from activity science, medical and social approaches, educational sciences, social sciences and behavioral sciences.Occupational therapists who are competent in evaluating and interfering with human functions in different areas should try to bring out maximum function by adapting the activities that the individual needs or wants to do to the necessities of the activities and the environment in which the activity will take place while considering the individual's physical, emotional, sensory and cognitive skills.

Occupational Therapists' Perspective on Learning Disability; The perspective of occupational therapy on learning disability, theoretical basis of occupational therapy and occupational therapy's paradigm coincides with the actual definition of learning disabilities in our country and in the world, which is; *"It is a developmental disorder of neurological origin that manifests itself in the use of verbal and written language and in speech, reading, writing, spelling, mathematical calculations, social perception, self-management, communication even though the individual's intelligence is normal and above normal. Learning disability may manifest itself in different periods of life and also it can show itself with some early symptoms in the early stages of life. Although learning difficulties can be seen with some cognitive, emotional, sensory, social and psychiatric limitations or cultural differences, extrinsic or inappropriate directive use, such situations are not the main reason of the learning disabilities." The intervention approaches were developed based on the professional paradigm and with the intent to meet the individuals' needs and improve these individuals' participation to the society.*

The philosophy of occupational therapy, in which individuals have different, unique and special characteristics, overlaps with the knowledge that the severity of learning disability may vary from individual to individual and the effects of the disability in the individuals' life may vary accordingly.For example, learning difficulties can affect not only the academic skills of the individual, but also the functions they participate in.For this reason, occupational therapists implement interventions with the intention to lower the effects of learning disabilities on; academic studies, participation to daily activities (self-care, productivity, and free-time), social participation, play, working life, military service, driving / transfer, family and social life. Also, occupational therapists work to improve the coping skills of the individuals with SLD when it comes to these problems. Occupational therapy, which is one of the most important parts of the interdisciplinary

team work, has a lot of studies showing that it is important in terms of early detection of learning difficulties, planning of interventions in order to lower the effects of the disability on functioning of the individual and learning level and early direction.

Occupational Therapy Assessment Process for the Individuals with Learning Disability; Assessment of occupational therapy in individuals with learning disabilities is one of the most important components of the interdisciplinary team. The goal of the occupational therapy assessment is to objectively determine the strengths and weaknesses of the individual with learning disability that affect their social participation and their independence in activities they need and/or want to do. An occupational therapy assessment start with an in-depth interview with the individuals and/or the parents or the caregivers on the individuals' activity history, interests, values, volition, needs, routines and habits. This information enables the occupational therapists to detect the individual's strengths and weaknesses, the individual's priorities and determine the goals for that individual. After this first assessment the occupational therapist uses standardized tests to evaluate the individual's sensory, motor, cognitive skills and to assess the activities and the environment in which the activities are carried on. This process is concluded by combining the results of the interview, observation and standardized assessment tests in order to detect the individual's capacity and the coping strategies used.

Occupational Therapy Interventions for Individuals with Learning Disability; Occupational therapists implement interventions in order to detect the learning strategies of the individuals with learning disability and in order to make their lives more meaningful through teaching learning philosophy. At the same time, with individual-centered therapy approaches directed towards individuals, group-treatment approaches with individuals who work with similar targets, parents, caregivers and school / work personnel (teachers, psychologists, psychological consultants, pre-school educators, colleagues, professional counselors, business coaches, etc.), they try to improve the individual's maximum potential and improve the individual's highest level of social inclusion. Occupational therapists apply these approaches in clinic, hospital, home, school, play area, work area and society settings.

For individuals with learning disabilities, occupational therapy assessments and interventions are life-long in different areas of activity performance areas, from early childhood to advanced age adulthood. These areas of intervention are as follows;

a. **Obtaining Independence in Activities of Daily Living:** Individuals with learning disabilities benefit from skill training for obtaining full independence and from occupational therapy for acquiring habits in basic activities of daily living (self-care, dressing, personal hygiene, eating, self-catering, work / vocational work, education, leisure time activities etc.) and in in-home/community activities of daily living. In this process, occupational therapists' approaches to community-based intervention and the nature of this training in the individual's living space accelerates skill transfer and independence within the community of individuals winning these skills.
b. **Improving Cognitive Skills:** Occupational therapists benefit from cognitive therapy approaches with the aim of improving the attention, perception, memory, and information skillsof individuals with learning disabilities.According to the literature, the development of cognitive functions for individuals with learning disabilities is considered to be one of the most important gains of the individual.
c. **Improving Executive Functions:**Raising awareness about the individual's personal learning and thinking processes and the acquisition of that knowledge defines the individual's task requirements and strategies to cope with different tasks and strategies. Occupational therapists promote the development of these executive functions mentioned above in their applications with individuals with learning disabilities. In addition, teaching methods aim to predict, plan and use feedback while performing various actions. All these approaches help the development of the individuals' executive functions. It is also emphasized by the occupational therapists working on this field that they have a positive influence on activity participation by ensuring activity balance, making and maintaining daily preparation planning, travel preparation, organizing, managing the routine organization of personal items and orienting to different spatial environments.
d. **Game and Leisure Activities:** Occupational therapists support internal control and social-emotional development by not influencing the individual's skills and social development through evaluation and intervention approaches to participation in play and leisure activities of individuals with learning disabilities.
e. **Developing Learning Skills and Education**: Occupational therapists aim to develop the skills of adaptation of individuals to the education system and the development of learning skills,increase the ability to create sensory (visual, auditory, tactile, proprioceptive, vestibular) skills, create appropriate

environments, support processing, organization, strategy development and writing and reading skills and lastly develop academic/non-academic school/educational skills related to school/education in the educational system (pre-school institutions, schools, special education centers, hospitals, etc.).

f. **Developing Specific Learning Skills**: Occupational therapists influence the individuals' activity performance by playing an active role in the acquisition process of the; gaining appropriate speed in writing and reading, appropriate energy usage (applying appropriate pressure to the pen or reading a specific text with appropriate energy and speed etc.) using scissors and orientation skills, writing preparation skills such as text copying, more complex skills that require organizational skills such as preparing homework and specific learning skills such as using computer.

g. **Development of Compensatory Methods and Applications:** In order to increase activity participation of the individuals with learning disabilities, occupational therapists apply attention time increasing methods such as; electronic calendars aimed to computer/keyboard organization skills, using organizers (at home, school, work etc.), pen(pencil adaptors aimed to help pen/pencil grasping. Occupational therapists also apply facilitator strategies such as simplifying instructions in play/work activities and ergonomic strategies such as appropriate chair/desk selection and modifying living environment.

h. **Occupational Therapy in Accompanying Conditions of Learning Disability:** The research findings report that about 50% of individuals with learning disabilities have additional problems such as attention deficit hyperactivity disorder (ADHD), developmental coordination disorder, and impaired sensorial modulation.In the therapeutic intervention of individuals with learning disabilities, occupational therapists use assessment / strategy / treatment interventions to cope with these simultaneous emerging problems as well as learning difficulties.

Attention Deficit Hyperactivity Disorder (ADHD): Occupational therapists provide consultancy to the individual with ADHD and to their parents/caregivers besides with the intervention program with the intention of defining the attention disability of the individuals and developing strategies that regulates the individuals' arousal level, modulates their responses and help the individuals control themselves according to the task and its necessities.

Developmental Coordination Disorder: Occupational therapists help the individuals improve their coordination, balance, synchronization, sequencing, postural control, bilateral integration, appropriate use of force and timing, etc. and thereby increase the participation of the individual in activities that are more common in daily life. Such difficulties can negatively affect the participation of individuals with learning disabilities in self-care, productivity and leisure time activities. Also, inadequateness in these skills can affect the individual's manipulation skills negatively. The intervention also focuses on motion planning and time orientation as well as the execution of spatial movements.

Sensory processing and Modulation Disorders: Occupational therapists help individuals to develop strategies for reorganizing hyper- or hypo-responses to touch, movement, visual, auditory and odor stimuli, often encountered in individuals with learning disabilities, to support the individual's participation in activity. Occupational therapists provide the opportunity to maximize the individual's activity performance by establishing planned sensory diets, taking into account the neurological threshold levels for eliminating the sensory needs of the individual with SLD, and consequently creating intervention programs to reduce these sensitivities.

i. **Military Service Consultancy:** Occupational therapists are expected to be able to adapt individuals with learning disabilities to the military system by providing preparation, support and counseling to prepare individuals with learning disabilities for military service and to develop the ability to cope with the problems encountered in the system (choosing appropriate military outfits, etc.) If work/roles have to be assigned, training can be given to fulfill these works and roles.
j. **Vocational Rehabilitation:** Occupational therapists play an active role in the development of appropriate profession choice, vocational training, individual reorganization/structuring of the workplace, integration of the individual in the workplace, ensuring sustainability at the workplace, and achievement/self-management skills for those with learning disabilities.
k. **Social Participation:** Occupational therapists can positively influence the development of social skills and the ability to express oneself, increasing personal and interpersonal skills for the individuals with learning disaiblities.

In conclusion; Occupational therapists are among the professionals who can play an important role in planning and presenting services based on needs in determining the strengths of individuals who have learning difficulties and evaluating individuals with learning difficulties according to the results in the related literature.Access to occupational therapy services by individuals with learning disabilities is still limited in our country. Herewith, it is very important to include occupational therapy to the assessment, treatment and referring processes of the individuals with learning disability which starts from early childhood and goes through childhood, adolescence, adulthood and old age phases in order to increase these individuals social participation skills and providing adequate access to the full citizenship rights.

References

Akdemir Okta, D. (2008). *Kaynaştırma sınıflarına devam eden işitme engelli olan öğrencilere ve sınıf öğretmenlerine sağlanan özel eğitim hizmetlerinin belirlenmesi*. Unpublished Master's Thesis

Altuntaş, F., (2010). *Sınıf öğretmenlerinin disleksiye ilişkin bilgileri ve dişlektik öğrencilere yönelik çalışmaları.* Unpublished Master's Thesis

Ankara Kalkınma Ajansı & Disleksi Öğrenme Güçlüğü Derneği, (2016). Rehabilitasyon merkezlerinin disleksili bireylere katkısı, velilerin beklentileri ve bu kuruluşların verimlilik analizi projesi. Ankara.

Ankara Kalkınma Ajansı & Disleksi Öğrenme Güçlüğü Derneği, (2013). Dislektik bireylerin profil çıkarımı, eğitim ihtiyaçları, bu bireylere hizmet veren birimlerin eğitim ihtiyaç analizi projesi. Ankara.

Aslan, K. (2015). Özgül öğrenme güçlüğünün erken dönem belirtileri ve erken müdahale uygulamalarına dair derleme. *Hacettepe Üniversitesi Sağlık Bilimleri Fakültesi Journal, 1*(2), 577-588.

Batu, S. (2013). *Kaynaştırma desteği sağlama.* S.Eripek (Ed.). Special Education. Eskişehir. Anadolu Üniversitesi Açıköğretim Fakültesi Yayınları, Press no: 946.

Batu, S., & Topsakal, M. (2003). Özel eğitim danışmanlığı süreci ve bir danışmanlık örneği. *Özel Eğitim Jorunal, 4*(1), 19-29.

Bender, W. N. (2004). *Learning disabilities: Characteristics, identification, and teaching strategies*. Allyn & Bacon.

Berkeley, S., Bender, W.N., Peaster, L.G., & Saunders, L. (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities, 42*(1), 85-95.

Bingöl, A. (2003). Ankara'daki ilkokul 2. ve 4. sınıf öğrencilerinde gelişimsel disleksi oranı. *Ankara Üniversitesi Tıp Fakültesi Jorunal, 56* (2), 67-82.

Doğan, B. (2013). Türkçe ve sınıf öğretmenlerinin okuma güçlüğüne ilişkin bilgileri ve okuma güçlüğü olan öğrencileri belirleyebilme düzeyleri. *Okuma Yazma Eğitimi Araştırmaları, 1*(1), 20-33.

Engelli ve Yaşlı Hizmetleri Genel Müdürlüğü (EYHGM). (2013). Destek özel eğitim hizmetlerinin verimliliğinin araştırılması projesi (DESÖP). Ankara.

Erden, G. & Kurdoğlu, F. (2003) Özgül Öğrenme Güçlüğü-I Kurs Notu. Türk Psikologlar Derneği.

Ergin, İ., Akseki, B., Deniz, E. (2012). İlköğretim okullarında görev yapan sınıf öğretmenlerinin hizmet içi eğitim ihtiyaçları. *Elektronik Sosyal Bilimler Dergisi, 11*(42), 55-66.

Erman, Ö. (1997). Öğrenme bozukluğu ve dikkat eksikliği aşırı hareketlilik bozukluğu olgularının nörofizyolojik ve nöropsikolojik yöntemlerle incelenmesi. Unpublished Expertise Thesis. Ankara University, Faculty of Medicine

Friend, M., & Bursuck, W.D. (2006). *Including students with special needs: A practical guide for classroom teachers*. Boston: Allyn & Bacon A Pearson Education Company.

Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly, 41*(1), 93-99.

Fuchs, D., Fuchs, L. S., & Compton, D. L. (2012). Smart RTI: A next-generation approach to multilevel prevention. *Exceptional Children, 78*, 263-279. Retrieved from http://www.cec.sped.org

Gillon, G. T. (2004). Phonological awareness: From research to practice. Guilford Press. Individuals with Disabilities Education Improvement Act of 2004. http://idea.ed.gov/ (Access date: 26.04.2017).

Gökçe-Sarıpınar, E., & Erden, G. (2010). Okuma güçlüğünde akademik beceri ve duyusal-motor işlevleri değerlendirme testlerinin kullanılabilirliği. *Türk Psikoloji Dergisi. 25(65),* 56-66.

Güngörmüş-Özkardeş, O. (2013). Türkiye'de özel öğrenme güçlüğüne ilişkin yapılan araştırmaların betimsel analizi. *Boğaziçi Üniversitesi Eğitim Journal, 30*(2), 123-153.

Kargın, T. (2004). Kaynaştırma: Tanımı, ilkeleri ve gelişimi. *Özel Eğitim Journal,3*(2), 1-13.

Korkmazlar, Ü. (1992). 6-11 yaş ilkokul çocuklarında özel öğrenme bozukluğu ve tanı yöntemleri. Unpublished Expertise Thesis.

Kovaleski, J. F., & Glew, M. C. (2006). Bringing instructional support teams to scale: Implications of the Pennsylvania experience. *Remedial and Special Education, 27,*16-25.

Köroğlu, E. (2013). Amerikan psikiyatri birliği, ruhsal bozuklukların tanımsal ve sayımsal elkitabı beşinci baskı (DSM-5) Tanı Ölçütleri Başvuru Elkitabı. Hekimler Yayın Birliği, Ankara.

Landerl, K., Fussenegger, B., Moll, K., & Willburger, E. (2009). Dyslexia and dyscalculia:two learning disorders with different cognitive profiles. J. Exp. *Child Psychol. 103,* 309–324.doi: 10.1016/j.jecp.2009.03.006.

Louden, W., Chan, L., Elkins, J., Greaves, D., House, H., Milton, M., et al. (2000) *Mapping the territory.* Canberra, Australia: Commonwealth Department of Education, Training and Youth Affairs.

Mellard, D. F., & Johnson, E. (2008). *RTI: A practitioner's guide to implementing response to intervention.* Thousand Oaks, CA: Corwin Press.

Ministère de l'Education, de la Recherche, et de la Formation [Ministry of Education, Research and Training]. (1995). Circulaire ministérielle fixant le modèle de protocole justificatif à délivrer par les centres psycho-médico-sociaux et les organismes habilités à délivrer le rapport d'inscription dans un des types d'enseignement spécial [Ministerial circular on the protocol to be delivered by the psycho-medico-social centres and the organizations authorized to produce reports for the enrolment in special education]. Brussels, Belgium: Communauté Française de Belgique.

National Joint Committee on Learning Disabilities. (2005). *Responsivenessto intervention and learning disabilities.*

Neale, M. (1999). *Neale analysis of reading ability* (3rd ed.). Melbourne, Australia: ACER Press.

Oakland, T., Mpofu, E., Grégoire, J., & Faulkner, M. (2007). An exploration of learning disabilities in four countries: Implications for test development and use in developing countries. *International Journal of Testing*, *7*(1), 53-70.

O'Connor, R. E., Sanchez, V. I. C. T. O. R. I. A., Kauffman, J. M., & Hallahan, D. P. (2011). Responsiveness to intervention models for reducing reading difficulties and identifying learning disability. *Handbook of special education,* 123-133.

Öngider, N., Baykara, B., Pekcanlar-Akay, A. (2008). Bir çocuk psikiyatrisi polikliniğindeayaktan izlenen olgulardan DEHB ve/veya ÖÖB tanısı konan çocukların WISC-R test sonuçlarının karşılaştırılması. *New Symposium Journal, 46*(1), 17-22.

Özmen, E. R. (2014). Öğrenme problemleri: Önlenmesi ve düzeltilmesi. Bir model önerisi, *Yeni Türkiye Dergisi, 59,*1321-1332.

Reschly, D. J., & Hosp, J. L. (2004). State SLD identification policies and practices. Learning *Disability Quarterly, 27*(4), 197-213.

Scanlon, D. M., & Vellutino, F. R. (1996). Prerequisite skills, early instruction, and success in first-grade reading: Selected results from a longitudinal study. *Developmental Disabilities Research Reviews, 2*(1), 54-63.

Sucuoğlu, B., & Kargın, T. (2006). *İlköğretimde kaynaştırma uygulamaları: Yaklaşımlar, yöntemler ve teknikler*. İstanbul: Morpa Kültür Yayınları.

Şener Akın, U. & Belfiore, J. P. (2017-basımda). *Journal of Evidence-Based Practices for Schools*, 16 (1).

Şenol, S. (2006). Çocuk ve gençlik ruh sağlığı. Hekimler Yayın Birliği, Ankara

Turgut, S. (2008). Özgül öğrenme güçlüğünde nöropsikolojik profil. Yüksek lisans tezi. Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

United States Office of Education. (1977). Definition and criteria for defining students as learning disabled. Federal Register, 42:250, p. 65083. Washington, DC: U.S. Government Printing Office.

Vellutino, F. R. (2001). Further analysis of the relationship between reading achievement and intelligence: Response to Naglieri. *Journal of Learning Disabilities, 34*(4), 306-310.

Yiğitler, S. (2005). *Sınıf öğretmenlerinin özel öğrenme güçlüğüne ilişkin bilgi düzeyleri ile özel öğrenme güçlüğü olan çocukların kaynaştırılmasına yönelik tutumları arasındaki ilişkinin incelenmesi*. Unpublished Master's Thesis.